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Financial Accounting and Tax Principles

Tom Rolfe



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Contents

The CIMA Learning System	xvii
Acknowledgements	xvii
How to use the CIMA <i>Learning System</i>	xvii
Study technique	xix
Financial Accounting and Tax Principles	xxi
1 Principles of Business Taxation – Introduction	1
Learning Outcomes	1
1.1 Introduction	1
1.2 Taxation as a source of government revenue	2
1.3 Principles of taxation	2
1.3.1 Canons of taxation	2
1.3.2 The American Institute of Certified Public Accountants’ (AICPA) statement – Guiding Principles of Good Tax Policy: A Framework for Evaluating Tax Proposals	3
1.4 Basic tax terminology	3
1.4.1 Direct taxes	3
1.4.2 Indirect taxes	4
1.4.3 Incidence	4
1.4.4 Taxable person	4
1.4.5 Competent jurisdiction	4
1.4.6 Hypothecation	5
1.4.7 Withholding responsibilities	5
1.4.8 Tax rate structure	5
1.4.9 The tax gap	6
1.5 Tax bases and classification of taxes	6
1.6 Sources of tax rules	6
1.7 Summary	8
Revision Questions	9
Solutions to Revision Questions	11
2 Direct Taxes on an Entity’s Profits and Gains	13
Learning Outcome	13
2.1 Introduction	13
2.2 The corporate tax base	14
2.2.1 Schedular systems of corporate taxation	14
2.2.2 Classification of income	15
2.2.3 Expenditure	16
2.2.4 Capital gains	19
2.3 Nominal corporate tax rates	21

2.4	The interaction of the corporate tax system with the personal tax system	21
2.4.1	Classical system	21
2.4.2	Imputation system	21
2.4.3	Partial imputation system	22
2.4.4	Split rate systems	22
2.4.5	Examples to illustrate the difference between traditional and imputation systems	22
2.5	Rules recharacterising interest as dividends	23
2.6	Treatment of losses	23
2.6.1	Trading losses	23
2.6.2	Capital losses	23
2.6.3	Cessation of business	24
2.7	The concept of tax consolidation	24
2.7.1	Capital losses and tax groups	25
2.8	Summary	25
	Revision Questions	27
	Solutions to Revision Questions	31

3 Indirect Taxes and Employee Taxation 33

	Learning Outcome	33
3.1	Introduction	33
3.2	Indirect taxes collected by the entity	34
3.2.1	Unit taxes and <i>ad valorem</i> taxes	34
3.3	Consumption taxes	34
3.3.1	Single-stage sales taxes	34
3.3.2	Multi-stage sales taxes	34
3.4	Value-added tax (VAT)	35
3.4.1	Transactions liable to VAT	36
3.5	Indirect taxes paid by the entity	38
3.5.1	Excise duties	38
3.5.2	Property taxes	38
3.5.3	Wealth taxes	38
3.6	Employee taxation	39
3.6.1	The employee as a separate taxable person subject to a personal income tax regime	39
3.6.2	Social security contributions	40
3.6.3	Other payroll taxes	41
3.7	Use of employer reporting and withholding to ensure compliance and assist tax collection	41
3.8	Summary	41
	Revision Questions	43
	Solutions to Revision Questions	45

4 Administration of Taxation 47

	Learning Outcomes	47
4.1	Introduction	47

4.2	The need for record-keeping and record retention	48
4.2.1	Corporate income tax	48
4.2.2	Sales tax or VAT	48
4.2.3	Overseas subsidiaries	49
4.2.4	Employee taxes and social security	49
4.3	The need for deadlines for reporting (filing returns) and tax payments	49
4.4	Types of powers of tax authorities to ensure compliance with tax rules	50
4.4.1	Power to review and query filed returns	50
4.4.2	Power to request special reports or returns	50
4.4.3	Power to examine records (generally extending back some years)	51
4.4.4	Powers of entry and search	51
4.4.5	Exchange of information with tax authorities in other jurisdictions	51
4.5	Tax avoidance and tax evasion	51
4.5.1	Tax evasion	52
4.5.2	Tax avoidance	52
4.5.3	Statutory general anti-avoidance provisions and case law regimes	52
4.6	Forum on tax administration	53
4.7	Summary	53
	Revision Questions	55
	Solutions to Revision Questions	57
5	International Taxation	59
	Learning Outcome	59
5.1	Introduction	59
5.2	The Organisation for Economic Co-operation and Development (OECD) – Model tax convention	59
5.3	The concept of corporate residence	60
5.3.1	Place of control and central management of an entity	60
5.3.2	Place of incorporation	60
5.3.3	Place of control and place of incorporation	60
5.4	The OECD Articles of the model convention with respect to taxes on income and on capital	61
5.5	Withholding tax	62
5.6	Underlying tax	62
5.7	Means of establishing a taxable presence in another country	63
5.7.1	Subsidiary	63
5.7.2	Branch	63
5.8	Double taxation treaties	64
5.8.1	The OECD model tax convention	64
5.8.2	Principles of relief for foreign taxes	65
5.9	Summary	65
	Readings	67
	Revision Questions	77
	Solutions to Revision Questions	79

6	Taxation in Financial Statements	81
	Learning Outcome	81
6.1	Introduction	81
6.2	Calculation of current tax	82
6.3	Accounting for current tax	82
6.4	Calculation of deferred tax	83
6.4.1	Introduction to deferred tax	83
6.4.2	Timing difference approach	84
6.4.3	Temporary difference approach	85
6.4.4	Deferred tax assets	87
6.4.5	Tax losses	87
6.5	Accounting for deferred tax	88
6.6	Income tax charge	89
6.7	Disclosure	90
6.8	Summary	90
	Revision Questions	91
	Solutions to Revision Questions	95
7	The IASC and the Standard-Setting Process	101
	Learning Outcomes	101
	Learning Aims	101
7.1	The need for regulation of financial statements	102
7.2	Variation from country to country	102
7.2.1	Sources of finance and capital markets	102
7.2.2	The political system	102
7.2.3	Entity ownership	103
7.2.4	Cultural differences	103
7.3	Harmonisation versus standardisation	103
7.3.1	The need for harmonisation of accounting standards	103
7.4	Elements that might be expected in a regulatory framework for published accounts	104
7.4.1	Local law that applies to entities	104
7.4.2	Locally adopted accounting standards	105
7.4.3	Local stock exchange requirements	105
7.4.4	International body requirements	105
7.4.5	International accounting standards	105
7.4.6	Locally developed or international conceptual framework for accounting	105
7.5	Generally accepted accounting practice (GAAP)	105
7.6	The International Accounting Standards Committee Foundation (IASC Foundation)	106
7.6.1	Structure of the IASC Foundation	107
7.6.2	IASC Foundation	107
7.6.3	The International Accounting Standards Board (IASB)	108
7.6.4	The International Financial Reporting Interpretations Committee (IFRIC)	108
7.6.5	The Standards Advisory Council (SAC)	109

7.7	Objectives of the IASC Foundation	109
7.8	The International Organisation of Securities Commissions (IOSCO)	109
7.9	Local regulatory bodies	110
	7.9.1 Convergence activities	110
	7.9.2 International reaction	110
7.10	The standard-setting process	111
	7.10.1 Development of a standard	112
	7.10.2 Other aspects of due process	112
	7.10.3 Co-ordination with national standard-setting	112
	7.10.4 Benchmark treatments and allowed alternatives	113
7.11	Ways in which IFRS's are used by countries	113
	7.11.1 Adoption as local GAAP	113
	7.11.2 Model for local GAAP	113
	7.11.3 Persuasive influence in formulating local GAAP	113
	7.11.4 Local GAAP developed with little or no reference to IFRS's	114
7.12	Summary	114
	Revision Questions	115
	Solutions to Revision Questions	117
8	Regulatory Framework	121
	Learning Outcome	121
8.1	Introduction	121
8.2	The development of the Framework	122
	8.2.1 Purpose of the Framework	
	8.2.2 Status of the Framework	122
	8.2.3 Scope of the Framework	122
8.3	The Framework	123
	8.3.1 The objective of financial statements	123
	8.3.2 Underlying assumptions	123
	8.3.3 The qualitative characteristics of financial information	124
	8.3.4 The elements of financial statements	125
	8.3.5 Recognition of the elements of financial statements	126
	8.3.6 Measurement of the elements of financial statements	126
	8.3.7 Concepts of capital and capital maintenance	127
8.4	Usefulness of a conceptual Framework	127
8.5	The IASB's Framework and the standard-setting process	128
8.6	Summary	128
	Revision Questions	129
	Solutions to Revision Questions	131
9	The Role of the External Auditor	135
	Learning Outcome	135
9.1	External audit	135
	9.1.1 The purpose of an audit	135
	9.1.2 The auditor's duties	136
	9.1.3 The powers of auditors	137
	9.1.4 The audit process	137

9.2	The audit report	138
	Independent auditor's report	138
9.2.1	A closer look at the report	140
9.3	Qualified reports	142
9.3.1	Materiality	143
9.3.2	The wording of a qualified report	144
9.3.3	Independent auditor's report showing qualified opinion	145
9.3.4	Independent auditor's report, adverse opinion	146
9.4	Summary	147
	Readings	149
	Revision Questions	159
	Solutions to Revision Questions	161

10 Published Financial Statements 163

	Learning Outcome	163
	Learning aims	163
10.1	Introduction	163
10.2	General requirements	164
10.2.1	Purpose of financial statements	164
10.2.2	Responsibility for financial statements	164
10.2.3	Components of financial statements	164
10.2.4	Fair presentation and compliance with IFRSs	165
10.2.5	Other requirements affecting the preparation of financial statements	166
10.3	The balance sheet	167
10.3.1	Specimen balance sheet	167
10.3.2	Information to be presented on the face of the balance sheet	168
10.3.3	Information to be presented either on the face of the balance sheet or in the notes	171
10.3.4	Share capital and reserves disclosures	172
10.3.5	The current/non-current distinction	173
10.3.6	Current assets	174
10.3.7	Current liabilities	174
10.4	The income statement	174
10.4.1	Specimen income statement	174
10.4.2	Information to be presented on the face of the income statement	175
10.4.3	Information to be presented either on the face of the income statement or in the notes	176
10.5	Changes in equity	178
10.5.1	First format for the Statement of changes in equity	179
10.5.2	Second format – a statement of income and expense and a reconciliation note	181
10.6	Notes to financial statements	181
10.6.1	Structure	181
10.6.2	Accounting policies	182

10.7	An illustrative question	182
10.8	Summary	187
	Revision Questions	189
	Solutions to Revision Questions	197
11	Reporting Financial Performance	209
	Learning Outcome	209
11.1	Introduction	209
11.2	IAS 18 Revenue recognition	209
	11.2.1 Introduction	209
	11.2.2 Sale of goods	210
	11.2.3 Rendering of services	210
	11.2.4 Interest, royalties and dividends	210
	11.2.5 Disclosure requirements	210
11.3	Profit or loss for the period	211
	11.3.1 Extraordinary items	211
	11.3.2 Profit or loss from ordinary activities	212
11.4	Definitions – Accounting policies, accounting estimates and errors	213
11.5	Changes in accounting policies	213
	11.5.1 Treatment and disclosure	214
11.6	Changes in accounting estimates	215
11.7	Errors	215
	11.7.1 Treatment and disclosure	216
11.8	Discontinuing operations	217
	11.8.1 Objective	217
	11.8.2 Definition of a discontinued operation	218
	11.8.3 Measurement of a non-current asset (or disposal group)	219
	11.8.4 Presentation and disclosure	220
11.9	Segment reporting	223
	11.9.1 Business and geographical segments	223
	11.9.2 Segment results	224
	11.9.3 Reporting formats	224
	11.9.4 Reportable segments	224
	11.9.5 Segment accounting policies	225
	11.9.6 Disclosure	225
11.10	Summary	227
	Revision Questions	229
	Solutions to Revision Questions	233
12	Cash Flow Statements	237
	Learning Outcome	237
12.1	Introduction	237
12.2	Objective of IAS 7 Cash flow statements	238
12.3	Cash flow statement format	238
	12.3.1 Cash flows from operating activities	239
	12.3.2 Cash flows from investing activities	241

	12.3.3	Cash flows from financing activities	241
	12.3.4	Increase (or decrease) in cash and cash equivalents during period	241
12.4		A worked example	242
	12.4.1	Worked example	242
	12.4.2	Cash flow from operations	244
	12.4.3	Cash flows from investing activities	247
	12.4.4	Cash flows from financing activities	248
	12.4.5	The cash flow statement	248
12.5		Interpreting a cash flow statement	249
12.6		Summary	249
		Revision Questions	251
		Solutions to Revision Questions	257
13		Non-current Tangible Asset Standards	263
		Learning Outcome	263
13.1		IAS 16 property, plant and equipment	263
	13.1.1	Objective	263
13.2		Revision of some definitions in IAS 16	263
	13.2.1	Property, plant and equipment	264
	13.2.2	Carrying amount	264
	13.2.3	Cost	264
	13.2.4	Depreciable amount	264
	13.2.5	Depreciation	264
	13.2.6	Fair value	264
	13.2.7	Impairment loss	264
	13.2.8	Recoverable amount	264
	13.2.9	Residual value	264
	13.2.10	Useful life	264
13.3		Recognition	265
	13.3.1	Elements of cost	265
	13.3.2	Self-constructed assets	265
13.4		Measurement	265
	13.4.1	Cost model	265
	13.4.2	Revaluation model	266
13.5		Subsequent expenditure	266
13.6		Accounting for depreciation	266
	13.6.1	Review of useful life	267
	13.6.2	Depreciation method	267
13.7		Retirements and disposals	268
13.8		Revaluation of assets	269
	13.8.1	Revaluation surplus	269
	13.8.2	Revaluation deficits	270
	13.8.3	Disposal of a revalued asset	270
13.9		Disclosure requirements	271
13.10		IAS 23 borrowing costs	272
	13.10.1	Introduction	272
	13.10.2	The benchmark treatment	272
	13.10.3	The allowed alternative treatment	272

13.10.4	Interest rate	272
13.10.5	Period of capitalisation	272
13.10.6	SIC2-Consistency-Capitalisation of borrowing costs	273
13.10.7	Disclosure	273
13.11	Available for sale financial assets	273
13.12	Summary	273
	Revision Questions	275
	Solutions to Revision Questions	279
14	Accounting for Leases	283
	Learning Outcome	283
14.1	Introduction	283
14.2	Key definitions	284
14.3	Characteristics of leases	284
14.3.1	Finance leases	284
14.3.2	Operating leases	285
14.3.3	Leases of land and buildings	285
14.4	Accounting for operating leases	286
14.4.1	Rent-free period	286
14.4.2	Cashback incentives	287
14.5	Disclosures for operating leases	287
14.6	Accounting for finance leases	288
14.7	Calculating the implied interest on finance leases	289
14.7.1	In advance/in arrears	294
14.8	Disclosures for finance leases	295
14.9	Summary	296
	Revision Questions	297
	Solutions to Revision Questions	301
15	Inventories and Construction Contracts	307
	Learning Outcome	307
15.1	Introduction	307
15.2	IAS 2 Inventories	307
15.2.1	Definition of Inventories	307
15.2.2	Measurement	308
15.2.3	Determining cost	308
15.2.4	Costs not included in cost of inventory	308
15.2.5	Allocation of overheads	308
15.2.6	Calculation of costs	309
15.2.7	Allowed alternative method	310
15.2.8	Disclosures for inventories	310
15.3	IAS 11 construction contracts	310
15.3.1	General principle	310
15.3.2	Accounting treatment	311
15.3.3	Sales revenue	312
15.3.4	Recognisable contract profits	313
15.3.5	Expected contract losses	314
15.3.6	Uncertain outcome	315

15.3.7	Inventories	316
15.3.8	Receivables	316
15.3.9	Payables	317
15.3.10	Provisions for foreseeable losses	318
15.3.11	Disclosure requirements	318
15.3.12	Illustrations from IAS 11	318
15.3.13	A comprehensive example	322
15.4	Summary	324
	Revision Questions	325
	Solutions to Revision Questions	331
16	Non-current Intangible Assets	335
	Learning Outcome	335
16.1	Introduction	335
16.1.1	Objective of IAS 38 intangible assets	335
16.1.2	Recognition and initial measurement	336
16.1.3	Internally generated goodwill	336
16.1.4	Internally generated intangible asset	337
16.1.5	Subsequent expenditure	338
16.1.6	Subsequent measurement	339
16.1.7	Amortisation	339
16.1.8	Impairment losses	340
16.1.9	Retirements and disposals	340
16.1.10	Disclosure	340
16.2	Purchased goodwill	341
16.2.1	Purchased goodwill – recognition and measurement	341
16.2.2	Negative purchased goodwill	341
16.3	IAS 36 impairment of assets	341
16.3.1	Introduction	341
16.3.2	Procedures to check for impairment	342
16.3.3	Recognition and measurement of an impairment loss	342
16.4	Disclosure of impairments	345
16.5	Summary	345
	Revision Questions	347
	Solutions to Revision Questions	351
17	Share Capital Transactions	357
	Learning Outcome	357
17.1	Introduction	357
17.2	IAS 1 Requirements	358
17.2.1	Interests of shareholders	358
17.2.2	Disclosures	358
17.3	Different classes of shares	359
17.4	IAS 32 Financial Instruments Disclosure and Presentation	360
17.5	Issue of shares	361
17.5.1	Process	361
17.5.2	Accounting for the issue of shares	362

17.5.3	Share issue costs, redemption costs and dividends	366
17.5.4	Redeemable Shares	366
17.5.5	Convertible Debt	367
17.6	Bonus issues	367
17.6.1	Process	367
17.6.2	Accounting for a bonus issue	368
17.7	Accounting for a rights issue	369
17.8	Accounting for treasury shares	369
17.9	The purchase and redemption of shares	370
17.9.1	Purchases out of distributable profits	371
17.10	Summary	373
	Revision Questions	375
	Solutions to Revision Questions	379
18	Recognition and Disclosure of Other Significant Accounting Transactions	383
	Learning Outcome	383
18.1	Introduction	383
18.2	IAS 10 Events after the balance sheet date	383
18.2.1	Introduction	383
18.2.2	Definitions	384
18.2.3	Adjusting events	384
18.2.4	Non-adjusting events	385
18.3	Proposed dividends	385
18.4	Going concern	385
18.5	Disclosure requirements of IAS 10	385
18.6	IAS 37 Provisions, Contingent Liabilities and Contingent Assets	386
18.6.1	Introduction	386
18.6.2	Provisions	386
18.6.3	Provision for warranties	387
18.7	Contingent liabilities and contingent assets	387
18.8	Problems with IAS 37 as regards contingencies	388
18.9	Related party disclosures	389
18.10	Definitions	389
18.10.1	Exclusions	390
18.11	Disclosure	390
18.11.1	Disclosure of control	390
18.11.2	Disclosure of transactions and balances	390
18.11.3	Examples of related party transactions	391
18.12	Summary	391
	Revision Questions	393
	Solutions to Revision Questions	397
19	Working Capital Ratios	399
	Learning Outcome	399
	Learning aims	399
19.1	Introduction	399

19.2	Working capital management	399
19.2.1	The investment decision	400
19.2.2	The financing decision	401
19.3	Working capital ratios	402
19.3.1	Illustration	402
19.3.2	Liquidity ratios	403
19.3.3	The current ratio	403
19.3.4	The quick ratio	403
19.4	Efficiency ratios	404
19.4.1	Inventory turnover	404
19.4.2	Receivables turnover	405
19.4.3	Payables turnover	405
19.5	The working capital cycle	406
19.6	Shortening the working capital cycle	408
19.7	Summary	408
	Revision Questions	409
	Solutions to Revision Questions	413

20 Sources of Short-term Finance and Types of Investment

		415
	Learning Outcomes	415
20.1	Introduction	415
20.2	Sources of short-term finance	416
20.2.1	Trade credit	416
20.2.2	Overdrafts	416
20.2.3	Term loans	417
20.2.4	Factoring	417
20.3	Export finance	417
20.3.1	Export factoring	418
20.3.2	Bill of exchange	418
20.3.3	Documentary credits	419
20.3.4	Forfeiting	419
20.4	Managing cash surpluses	420
20.5	Debt yields	420
20.5.1	Interest yield	420
20.5.2	Yield to maturity (redemption yield)	420
20.5.3	Coupon rate	421
20.6	Short-term investments	422
20.6.1	Treasury bills	422
20.6.2	Bank deposits	422
20.6.3	Certificates of deposit	422
20.6.4	Money-market accounts	422
20.6.5	Local authority deposits	422
20.6.6	Commercial paper	423
20.6.7	Local authority bonds	423
20.6.8	Corporate bonds	423

20.6.9	Government bonds	423
20.6.10	Risk and return	423
20.7	Summary	424
	Revision Questions	425
	Solutions to Revision Questions	427
21	Working Capital: Receivables and Payables	429
	Learning Outcomes	429
21.1	Introduction	429
21.2	Managing receivables	429
21.3	The credit cycle	430
21.3.1	Credit control	430
21.3.2	Payment terms	431
21.3.3	Cash discounts	431
21.3.4	Methods of payment	432
21.3.5	The stages in debt collection	433
21.4	Age analysis of trade receivables	433
21.5	Credit insurance	434
21.6	Factoring	434
21.7	Assessing the effectiveness of credit control	437
21.8	Evaluating a change in credit policy	438
21.9	Trade payables	439
21.10	The payment cycle	439
21.10.1	Cash discounts	440
21.10.2	Methods of payment	440
21.11	Age analysis of trade payables	441
21.12	Summary	441
	Readings	445
	Revision Questions	447
	Solutions to Revision Questions	451
22	Working Capital: Inventory	457
	Learning Outcome	457
22.1	Introduction	457
22.2	Inventory management	457
22.3	The nature of inventory	458
22.3.1	Raw materials	458
22.3.2	Work-in-progress	458
22.3.3	Finished goods	458
22.4	The costs of inventory	458
22.4.1	Holding costs	458
22.4.2	Order costs	458
22.4.3	The cost of running out of inventory	458
22.4.4	Unit cost	459
22.5	Inventory control policy	459
22.5.1	Dependent or independent demand	459

22.6	Inventory control systems	459
22.6.1	Reorder level system	459
22.6.2	Periodic review system	460
22.6.3	Mixed systems	461
22.7	Economic order quantity (EOQ)	461
22.7.1	Comments on Figure 22.3	461
22.8	Quantity discounts	463
22.9	Lead times	464
22.9.1	Lead times with constant demand	465
22.10	Just-in-time (JIT) purchasing	465
22.11	Summary	466
	Readings	467
	Revision Questions	473
	Solutions to Revision Questions	477
23	Working Capital: Cash	483
	Learning Outcomes	483
23.1	Introduction	483
23.2	Cash management	483
23.2.1	The time value of money	484
23.3	Cash budgets	484
23.3.1	Preparation of cash budgets	485
23.3.2	Managing cash deficits	487
23.3.3	Float	488
23.4	Cash-management models	488
23.4.1	The Baumol model	488
23.4.2	The Miller–Orr model	489
23.5	Efficient-cash management	491
23.6	The link between cash, profit and the balance sheet	491
23.7	Summary	494
	Revision Questions	495
	Solutions to Revision Questions	501
	Preparing for the Examination	509
	Revision technique	509
	Getting down to work	510
	Tips for the final revision phase	510
	Format of the examination	510
	Revision Questions I	513
	Solutions to Revision Questions I	537
	Revision Questions II	553
	Solutions to Revision Questions II	585
	November 2005 Examinations	633
	Index	663
	May 2006 Exam	

The CIMA *Learning System*

Acknowledgements

Every effort has been made to contact the holders of copyright material, but if any here have been inadvertently overlooked the publishers will be pleased to make the necessary arrangements at the first opportunity.

We would also like to thank Luisa Robertson for her invaluable contribution as reviewer and author of previous editions of this text.

How to use the CIMA Learning System

This *Financial Accounting and Tax Principles Learning System* has been devised as a resource for students attempting to pass their CIMA exams, and provides:

- a detailed explanation of all syllabus areas;
- extensive ‘practical’ materials, including readings from relevant journals;
- generous question practice, together with full solutions;
- an exam preparation section, complete with exam standard questions and solutions.

This Learning System has been designed with the needs of home-study and distance-learning candidates in mind. Such students require very full coverage of the syllabus topics, and also the facility to undertake extensive question practice. However, the Learning System is also ideal for fully taught courses.

The main body of the text is divided into a number of chapters, each of which is organised on the following pattern:

- *Detailed learning outcomes* expected after your studies of the chapter are complete. You should assimilate these before beginning detailed work on the chapter, so that you can appreciate where your studies are leading.
- *Step-by-step topic coverage*. This is the heart of each chapter, containing detailed explanatory text supported where appropriate by worked examples and exercises. You should work carefully through this section, ensuring that you understand the material being explained and can tackle the examples and exercises successfully. Remember that in many cases knowledge is cumulative: if you fail to digest earlier material thoroughly, you may struggle to understand later chapters.

- *Readings and activities.* Most chapters are illustrated by more practical elements, such as relevant journal articles or other readings, together with comments and questions designed to stimulate discussion.
- *Question practice.* The test of how well you have learned the material is your ability to tackle exam-standard questions. Make a serious attempt at producing your own answers, but at this stage don't be too concerned about attempting the questions in exam conditions. In particular, it is more important to absorb the material thoroughly by completing a full solution than to observe the time limits that would apply in the actual exam.
- *Solutions.* Avoid the temptation merely to 'audit' the solutions provided. It is an illusion to think that this provides the same benefits as you would gain from a serious attempt of your own. However, if you are struggling to get started on a question you should read the introductory guidance provided at the beginning of the solution, and then make your own attempt before referring back to the full solution.

Having worked through the chapters you are ready to begin your final preparations for the examination. The final section of the CIMA *Learning System* provides you with the guidance you need. It includes the following features:

- A brief guide to revision technique.
- A note on the format of the examination. You should know what to expect when you tackle the real exam, and in particular the number of questions to attempt, which questions are compulsory and which optional, and so on.
- Guidance on how to tackle the examination itself.
- A table mapping revision questions to the syllabus learning outcomes allowing you to quickly identify questions by subject area.
- Revision questions. These are of exam standard and should be tackled in exam conditions, especially as regards the time allocation.
- Solutions to the revision questions. As before, these indicate the length and the quality of solution that would be expected of a well-prepared candidate.

If you work conscientiously through this CIMA *Learning System* according to the guidelines above you will be giving yourself an excellent chance of exam success. Good luck with your studies!

Guide to the Icons used within this Text



Key term or definition



Equation to learn



Exam tip to topic likely to appear in the exam



Exercise



Question



Solution



Comment or Note

Study technique

Passing exams is partly a matter of intellectual ability, but however accomplished you are in that respect you can improve your chances significantly by the use of appropriate study and revision techniques. In this section we briefly outline some tips for effective study during the earlier stages of your approach to the exam. Later in the text we mention some techniques that you will find useful at the revision stage.

Planning

To begin with, formal planning is essential to get the best return from the time you spend studying. Estimate how much time in total you are going to need for each subject that you face. Remember that you need to allow time for revision as well as for initial study of the material. The amount of notional study time for any subject is the minimum estimated time that students will need to achieve the specified learning outcomes set out earlier in this chapter. This time includes all appropriate learning activities, for example, face-to-face tuition, private study, directed home study, learning in the workplace, revision time, etc. You may find it helpful to read *Better exam results* by Sam Malone, CIMA Publishing, ISBN: 075066357X. This book will provide you with proven study techniques. Chapter by chapter it covers the building blocks of successful learning and examination techniques.

The notional study time for Managerial level – *Financial Accounting and Tax Principles* is 200 hours. Note that the standard amount of notional learning hours attributed to one full-time academic year of approximately 30 weeks is 1200 hours.

By way of example, the notional study time might be made up as follows:

	Hours
Face-to-face study: up to	60
Personal study: up to	100
‘Other’ study – e.g. learning in the workplace, revision, etc.: up to –	<u>40</u>
	<u>200</u>

Note that all study and learning-time recommendations should be used only as a guideline and are intended as minimum amounts. The amount of time recommended for face-to-face tuition, personal study and/or additional learning will vary according to the type of course undertaken, prior learning of the student, and the pace at which different students learn.

Now split your total time requirement over the weeks between now and the examination. This will give you an idea of how much time you need to devote to study each week. Remember to allow for holidays or other periods during which you will not be able to study (e.g. because of seasonal workloads).

With your study material before you, decide which chapters you are going to study in each week, and which weeks you will devote to revision and final question practice.

Prepare a written schedule summarising the above – and stick to it!

The amount of space allocated to a topic in the study material is not a very good guide as to how long it will take you. For example, ‘Summarising and Analysing Data’ has a weight of 25 per cent in the syllabus and this is the best guide as to how long you should spend on

it. It occupies 45 per cent of the main body of the text because it includes many tables and charts.

It is essential to know your syllabus. As your course progresses you will become more familiar with how long it takes to cover topics in sufficient depth. Your timetable may need to be adapted to allocate enough time for the whole syllabus.

Tips for effective studying

- (1) Aim to find a quiet and undisturbed location for your study, and plan as far as possible to use the same period of time each day. Getting into a routine helps to avoid wasting time. Make sure that you have all the materials you need before you begin so as to minimise interruptions.
- (2) Store all your materials in one place, so that you don't waste time searching for items around the house. If you have to pack everything away after each study period, keep them in a box, or even a suitcase, which won't be disturbed until the next time.
- (3) Limit distractions. To make the most effective use of your study periods you should be able to apply total concentration, so turn off the TV, set your phones to message mode, and put up your 'do not disturb' sign.
- (4) Your timetable will tell you which topic to study. However, before diving in and becoming engrossed in the finer points, make sure you have an overall picture of all the areas that need to be covered by the end of that session. After an hour, allow yourself a short break and move away from your books. With experience, you will learn to assess the pace you need to work at. You should also allow enough time to read relevant articles from newspapers and journals, which will supplement your knowledge and demonstrate a wider perspective.
- (5) Work carefully through a chapter, making notes as you go. When you have covered a suitable amount of material, vary the pattern by attempting a practice question. Preparing an answer plan is a good habit to get into, while you are both studying and revising, and also in the examination room. It helps to impose a structure on your solutions, and avoids rambling. When you have finished your attempt, make notes of any mistakes you made, or any areas that you failed to cover or covered only skimpily.
- (6) Make notes as you study, and discover the techniques that work best for you. Your notes may be in the form of lists, bullet points, diagrams, summaries, 'mind maps', or the written word, but remember that you will need to refer back to them at a later date, so they must be intelligible. If you are on a taught course, make sure you highlight any issues you would like to follow up with your lecturer.
- (7) Organise your paperwork. There are now numerous paper storage systems available to ensure that all your notes, calculations and articles can be effectively filed and easily retrieved later.

Paper P7 – Financial Accounting and Tax Principles

First examined in May 2005

Syllabus outline

The syllabus comprises:

Topic	Study Weighting
A Principles of Business Taxation	20%
B Principles of Regulation of Financial Reporting	10%
C Single Entity Financial Accounts	45%
D Managing Short-term Finance	25%

Learning aims

Students should be able to:

- describe the types of business taxation rules and requirements likely to affect an enterprise (in respect of itself and its employees);
- describe and discuss how financial reporting can be regulated and the system of International Accounting Standards;
- prepare statutory accounts in appropriate form for a single enterprise;
- assess and control the short term financial requirements of a business entity.

Assessment strategy

There will be a written examination paper of 3 hours, with the following sections.

Section A – 50 marks

A variety of compulsory objective test questions, each worth between 2 and 4 marks. Mini-scenarios may be given, to which a group of questions relate.

Section B – 30 marks

Six compulsory short answer questions, each worth 5 marks. A short scenario may be given, to which some or all questions relate.

Section C – 20 marks

One question, from a choice of two, worth 20 marks. Short scenarios may be given, to which questions relate.

Learning outcomes and syllabus content

A – Principles of Business Taxation – 20%

Learning outcomes

On completion of their studies students should be able to:

- identify the principal types of taxation likely to be of relevance to an incorporated business in a particular country, including direct tax on the enterprise's trading profits and capital gains, indirect taxes collected by the enterprise, employee taxation, withholding taxes on international payments;

- (ii) describe the features of the principal types of taxation likely to be of relevance to an incorporated business in a particular country (e.g. in terms of who ultimately bears the tax cost, withholding responsibilities, principles of calculating the tax base);
- (iii) describe the likely record-keeping, filing and tax payment requirements associated with the principal types of taxation likely to be of relevance to an incorporated business in a particular country;
- (iv) describe the possible enquiry and investigation powers of taxing authorities;
- (v) identify situations in which foreign tax obligations (reporting and liability) could arise and methods for relieving foreign tax;
- (vi) explain the difference in principle between tax avoidance and tax evasion;
- (vii) describe sources of tax rules and explain the importance of jurisdiction;
- (viii) explain and apply the accounting rules contained in IAS 12 for current and deferred taxation.

Syllabus content

- Concepts of direct versus indirect taxes, taxable person and competent jurisdiction.
- Sources of tax rules (e.g. domestic primary legislation and court rulings, practice of the relevant taxing authority, supranational bodies, such as the EU in the case of value-added/sales tax, and international tax treaties).
- Direct taxes on enterprise profits and gains:
 - the principle of non-deductibility of dividends and systems of taxation defined according to the treatment of dividends in the hands of the shareholder (e.g. classical, partial imputation and imputation);
 - the distinction between accounting and taxable profits in absolute terms (e.g. disallowable expenditure on revenue account, such as entertaining, and on capital account, such as formation and acquisition costs) and in terms of timing (e.g. deduction on a paid basis, tax depreciation substituted for book depreciation);
 - the nature of rules recharacterising interest payments as dividends;
 - potential for variation in rules for calculating the tax base dependent on the nature or source of the income (schedular systems);
 - the need for rules dealing with the relief of losses;
 - the concept of tax consolidation (e.g. for relief of losses and deferral of capital gains on asset transfers within a group).
- Indirect taxes collected by the enterprise:
 - in the context of indirect taxes, the distinction between unit taxes (e.g. excise duties based on physical measures) and *ad valorem* taxes (e.g. sales tax based on value);
 - the mechanism of value-added/sales taxes, in which businesses are liable for tax on their outputs less credits for tax paid on their inputs, including the concepts of exemption and variation in tax rates depending on the type of output and disallowance of input credits for exempt outputs.
- Employee taxation:
 - the employee as a separate taxable person subject to a personal income tax regime;
 - use of employer reporting and withholding to ensure compliance and assist tax collection.
- The need for record-keeping and record retention that may be additional to that required for financial accounting purposes.
- The need for deadlines for reporting (filing returns) and tax payments.
- Types of powers of tax authorities to ensure compliance with tax rules:

- power to review and query filed returns;
- power to request special reports or returns;
- power to examine records (generally extending back some years);
- powers of entry and search;
- exchange of information with tax authorities in other jurisdictions.
- International taxation:
 - the concept of corporate residence and the variation in rules for its determination across jurisdictions (e.g. place of incorporation versus place of management);
 - types of payments on which withholding tax may be required (especially interest, dividends, royalties and capital gains accruing to non-residents);
 - means of establishing a taxable presence in another country (local enterprise and branch);
 - the effect of double tax treaties (based on the OECD Model Convention) on the above (e.g. reduction of withholding tax rates, provisions for defining a permanent establishment);
 - principles of relief for foreign taxes by exemption, deduction and credit.
- The distinction between tax avoidance and tax evasion, and how these vary among jurisdictions (including the difference between the use of statutory general anti-avoidance provisions and case law based regimes).
- Accounting treatment of taxation and disclosure requirements under IAS 12.

Note: Examples of general principles should be drawn from a ‘benchmark’ tax regime (e.g. the UK, USA, etc.) or an appropriate local tax regime. Details of any specific tax regime will NOT be examined.

B – Principles of Regulation of Financial Reporting – 10%

Learning outcomes

On completion of their studies students should be able to:

- (i) explain the need for regulation of published accounts and the concept that regulatory regimes vary from country to country;
- (ii) explain potential elements that might be expected in a regulatory framework for published accounts;
- (iii) describe the role and structure of the International Accounting Standards Board (IASB) and the International Organisation of Securities Commissions (IOSCO);
- (iv) explain the IASB’s Framework for the Presentation and Preparation of Financial Statements;
- (v) describe the process leading to the promulgation of an international accounting standard (IAS);
- (vi) describe ways in which IAS’s can interact with local regulatory frameworks;
- (vii) explain in general terms, the role of the external auditor, the elements of the audit report and types of qualification of that report.

Syllabus content

- The need for regulation of accounts.
- Elements in a regulatory framework for published accounts (e.g. local law relating to enterprises, local GAAP, review of accounts by public bodies).

- GAAP based on prescriptive versus principles-based standards.
- The role and structure of the IASB and IOSCO.
- The IASB's *Framework for the Presentation and Preparation of Financial Statements*.
- The process leading to the promulgation of a standard practice.
- Ways in which IAS's are used: adoption as local GAAP, model for local GAAP, persuasive influence in formulating local GAAP.
- The powers and duties of the external auditors, the audit report and its qualification for accounting statements not in accordance with best practice.

C – Single Entity Financial Accounts – 45%

Learning outcomes

On completion of their studies students should be able to:

- (i) prepare financial statements in a form suitable for publication, with appropriate notes;
- (ii) prepare a cash flow statement in a form suitable for publication;
- (iii) explain and apply the accounting rules contained in IAS's dealing with reporting performance, tangible non-current assets and inventories;
- (iv) explain the accounting rules contained in IAS's governing share capital transactions;
- (v) explain the principles of the accounting rules contained in IAS's dealing with disclosure of related parties to a business, construction contracts (and related financing costs), research and development expenditure, intangible non-current assets (other than goodwill on consolidation), impairment of assets, post-balance sheet events, contingencies and leases (lessee only).

Syllabus content

- Preparation of the financial statements of a single enterprise, including the statement of changes in equity (IAS 1).
- Preparation of cash flow statements (IAS 7).
- Reporting performance: recognition of revenue, measurement of profit or loss, extraordinary items, prior period items, discontinuing operations and segment reporting (IAS 1, 8, 14, 18 & IFRS 5).
- Property, Plant and Equipment (IAS 16): The calculation of depreciation and the effect of revaluations, changes to economic useful life, repairs, improvements and disposals.
- Inventories (IAS 2).
- Issue and redemption of shares, including treatment of share issue and redemption costs (IAS 32 and IAS 39), the share premium account, the accounting for maintenance of capital arising from the purchase by an enterprise of its own shares.
- The disclosure of related parties to a business (IAS 24).
- Construction contracts and related financing costs (IAS 11 & 23): determination of cost, net realisable value, the inclusion of overheads and the measurement of profit on uncompleted contracts.
- Research and development costs (IAS 38): criteria for capitalisation.
- Intangible Assets (IAS 38) and goodwill (excluding that arising on consolidation): recognition, valuation and amortisation.
- Impairment of Assets (IAS 36) and its effect on the above.
- Post-balance sheet events (IAS 10).

- Provisions and contingencies (IAS 37).
- Leases (IAS 17) – Operating and finance leases in the books of the lessee.

D – Managing Short-term Finance – 25%

Learning outcomes

On completion of their studies students should be able to:

- calculate and interpret working capital ratios for business sectors;
- prepare and analyse cash flow forecasts over a 12-month period;
- identify measures to improve a cash forecast situation;
- compare and contrast the use and limitations of cash management models and identify when each model is most appropriate;
- analyse trade *receivable* information;
- evaluate *receivable* and *payable* policies;
- evaluate appropriate methods of inventory management;
- identify alternatives for investment of short-term cash surpluses;
- identify sources of short-term funding;
- identify appropriate methods of finance for trading internationally.

Syllabus content

- Working capital ratios (e.g. receivable days, inventory days, payable days, current ratio, quick ratio) and the working capital cycle.
- Working capital characteristics of different businesses (e.g. supermarkets being heavily funded by payables) and the importance of industry comparisons.
- Cash flow forecasts, use of spreadsheets to assist in this in terms of changing variables (e.g. interest rates, inflation) and in consolidating forecasts.
- Variables that are most easily changed, delayed or brought forward in a forecast.
- The link between cash, profit and the balance sheet.
- The Baumol and Miller–Orr cash management models.
- The credit cycle from receipt of customer order to cash receipt.
- Evaluation of payment terms and settlement discounts.
- Preparation and interpretation of age analyses of receivables and payables.
- Establishing collection targets on an appropriate basis (e.g. motivational issues in managing credit control).
- The payment cycle from agreeing the order to make payments.
- Centralised versus decentralised purchasing.
- The relationship between purchasing and inventory control.
- Principles of the economic order quantity (EOQ) model and criticisms thereof.
- Types and features of short-term finance: trade payables, overdrafts, short-term loans and debt factoring.
- Use and abuse of trade payables as a source of finance.
- The principles of investing short term (i.e. maturity, return, security, liquidity and diversification).
- Types of investments (e.g. interest-bearing bank accounts, negotiable instruments including certificates of deposit, short-term treasury bills, and securities).
- The difference between the coupon on debt and the yield to maturity.
- Export finance (e.g. documentary credits, bills of exchange, export factoring, forfaiting).

Principles of Business Taxation – Introduction



LEARNING OUTCOMES

After completing this chapter you should be able to:

- ▶ describe the features of the principal types of taxation likely to be of relevance to an incorporated business in a particular country (e.g. in terms of who ultimately bears the tax cost, withholding responsibilities, and principles of calculating the tax base);
- ▶ describe sources of tax rules and explain the importance of jurisdiction.

Learning aims

The learning aim of this part of the syllabus is that students should be able to ‘describe the types of business taxation rules and requirements likely to affect an entity (in respect of itself and its employees)’.

The topics covered in this chapter are as follows:

- concepts of direct versus indirect taxes, taxable person and competent jurisdiction;
- sources of tax rules.

1.1 Introduction

Principles of business tax account for 20 per cent of the Financial accounting and tax principles syllabus and therefore 20 per cent of the examination paper. In the first six chapters of this text we will cover general principles of taxation. General principles should apply in most countries and are not specific to any one country. In your studies you can use examples of general principles drawn from a ‘benchmark’ tax regime (e.g. the UK, USA, etc.) or an appropriate local tax regime. This text mainly refers to the UK tax system, but any system could be used to illustrate general principles.



Knowledge of specific tax regimes is NOT REQUIRED and details of any specific tax regime will NOT be examined. If an examination question requires a tax computation the question will be based on a fictitious country with fictitious tax rules and tax rates. The question will provide all the information, including tax rates, required to prepare the answer.

In the first part of this chapter we will consider general principles of taxation, basic tax terminology and the classification of taxes. The chapter will then conclude with a consideration of the sources of tax rules in a country.

1.2 Taxation as a source of government revenue

It has been said that ‘what the government gives it must first take away’. The economic resources available to society are limited, so an increase in a government’s expenditure will mean a reduction in the spending capacity of the private sector. Taxation is the main means by which a government raises revenue to meet its expenditure. Taxation may also be used by a government as a means of influencing economic decisions or controlling the economy; in this way taxation will also reflect prevailing social values and priorities in a country. This characteristic helps explain why no two countries’ tax systems will be identical in every respect and it also explains why governments continually change their tax systems.

Revenue raised from taxation is needed to finance government expenditure on items such as the health service, retirement pensions, unemployment benefit and other social benefits, education, financing government borrowing (interest on government stocks), etc.

1.3 Principles of taxation

No tax system is perfect, but an ‘ideal’ tax should conform to certain principles if it is to achieve its objectives without producing negative effects.

1.3.1 Canons of taxation

In 1776 Adam Smith in his book *The Wealth of Nations* proposed that a ‘good’ tax should have the following characteristics:

- *Equity*. It should be fair to different individuals and should reflect a person’s ability to pay.
- *Certainty*. It should not be arbitrary, it should be certain.
- *Convenience*. It should be convenient in terms of timing and payment.
- *Efficiency*. It should be administratively efficient with a relatively small cost of collection as a proportion of the revenue raised. It should not cause economic distortion by affecting the behaviour of taxpayers.

These principles still apply today, in a modern tax system the three major principles of taxation are:

- *Efficiency*. A tax should be easy and cheap to collect. It is in pursuit of this objective that so much tax is collected ‘at source’, by deduction from income as it arises. The UK PAYE (pay-as-you-earn) tax on salaries and wages is an example.

- *Equity.* It is important that tax should be fairly levied as between one taxpayer and another. For example, in the UK, tax legislation is often very complex, both to reduce the opportunities to avoid the tax and to promote fairness, although this is not always achieved.
- *Economic effects must be considered.* The ways in which tax is collected can have profound economic effects which must be taken into account when formulating a tax policy.

Tax reliefs can stimulate one sector, while the imposition of a heavy tax can stifle another. For example, special allowances for capital expenditure may encourage investment in industry, while imposing heavy taxes on cigarettes and alcoholic drink may operate to discourage sales.

1.3.2 The American Institute of Certified Public Accountants' (AICPA) statement – *Guiding Principles of Good Tax Policy: A Framework for Evaluating Tax Proposals*

The AICPA's Guiding Principles of Good Tax Policy: A Framework for Evaluating Tax Proposals, lists 10 principles for determining if an existing tax or a proposal to modify a tax rule follows good tax policy. The framework also recognises that it is not always possible to incorporate all ten principles into tax systems and that some balancing is needed.

The 10 principles are:

1. equity and fairness,
2. transparency and visibility,
3. certainty,
4. convenience of payment,
5. economy in collection,
6. simplicity,
7. appropriate government revenues,
8. minimum tax gap,
9. neutrality,
10. economic growth and efficiency.

Most of these are included in Section 1.3.1, those that need additional explanation are:

- *Appropriate government revenues:* The tax system should enable the government to determine how much tax revenue is likely to be collected and when.
- *Minimum tax gap:* The tax gap is the difference between the amount of tax owed and the amount of tax collected. A tax should be structured to minimise non-compliance.

1.4 Basic tax terminology



This section explains some basic taxation terms that are used in the following chapters and that you need to understand and possibly use to answer questions in the examination.

1.4.1 Direct taxes

A direct tax is one that falls directly on the person or entity who is expected to pay it. For example, the UK corporation tax is a direct tax. The formal incidence and effective incidence

of a direct tax is usually the same, although in some situations if it is known in advance that tax will have to be paid it may be possible to charge a higher rate for the work so that the tax due will be covered.

A direct tax is levied on an individual or entity so it can be designed to take account of certain individual or entity circumstances, for example, family size, financial commitments, level of investment in non-current assets, etc.

1.4.2 Indirect taxes

An indirect tax is one that is levied on one part of the economy with the intention that it will be passed on to another. For example, in the UK value-added tax (VAT) is levied on all businesses involved with the production and distribution of a good for a final customer. In most cases the VAT will be added to the final price paid by the customer.

As an indirect tax is not levied on the eventual payer of the tax it cannot be related to the individual circumstances of that taxpayer.

1.4.3 Incidence

The incidence of tax refers to the distribution of the tax burden. The incidence of a tax is on the person who actually pays it. For example, the incidence of an income tax is on the tax payer as it is the tax payer who is assessed and pays the tax.

Incidence can be split into two elements:

- *Formal incidence*: The person or entity who has direct contact with the tax authorities. For example, the formal incidence of a sales tax (or VAT) will be on the entity making the sale. It is the entity making the sale that must account for the transaction and pay the tax collected to the revenue collection authorities.
- *Effective (or actual) incidence*: The person or entity who ends up bearing the cost of the tax as they cannot pass it on to someone else. If a sales tax is added to the selling price it is passed on to the customer and it is actually the customer who ends up paying the tax. The effective incidence is on the customer.

1.4.4 Taxable person

A taxable person is the person accountable for the payment of a tax. Tax is levied on the taxable person who is responsible for its payment. For example, in the UK, traders have to register for VAT as a taxable person, they can then charge VAT to customers and recover VAT paid to their suppliers (see Chapter 3 for more details on VAT).

1.4.5 Competent jurisdiction

Jurisdiction can be interpreted as meaning power. The tax authority must have the legal power to assess and collect the taxes. Taxation is either the sole responsibility of central government or combined responsibility of central government and local authorities within a country. The responsible authorities will pass one or more taxation laws. The primary characteristic of any law is that it is enforceable by sanction (i.e. fine, imprisonment, etc.). An unenforceable law will be ignored. Before a court can order enforcement, it must be competent to hear and determine the alleged non-compliance with the law.

For example, UK legislation is applicable to UK subjects and to non-UK subjects who by entering the UK, whether for a long or short time, have made themselves subject to UK jurisdiction. UK statutes apply within the UK as jurisdiction is territorial.

For an entity to be subject to tax in a country it must first be proved to be within that country's legal power to apply its tax rules to the entity. The competent jurisdiction is therefore the country whose tax laws apply to the entity.

The basis of jurisdiction can vary between countries, making it difficult to determine and collect taxes from multinational entities (see Chapter 5 for a discussion of the jurisdiction of multinational entities).

1.4.6 Hypothecation

Hypothecation means that the products of certain taxes are devoted to specific types of expenditures. For example, a tax on motor vehicles could be hypothecated (devoted entirely) to expenditure on building and maintaining roads. Earmarking is an informal hypothecation of taxes. Hypothecation is unpopular with Chancellors/Ministers of Finance as it considerably reduces their choices in public expenditure decisions.

1.4.7 Withholding responsibilities

Persons or entities paying various types of income to persons or entities abroad are usually required by the law of a country to deduct tax from the income before making a payment. The tax deducted is called withholding tax and it is the responsibility of the person or entity making the payment to correctly deduct it. The person or entity making the deduction is responsible for paying the tax deducted to the tax authorities and preparing the correct documents to properly account for it (see Section 5.5 for more detail on withholding taxes).

1.4.8 Tax rate structure

Direct taxes are assessed on individuals, so it is possible to set tax rates that cause marginal and average rates of tax to change according to the size of the individual's tax base. The government's political objectives and current social objectives determine the level of tax and the way rates vary with income. The three possibilities are:

- progressive taxes, which take an increasing proportion of income as the income rises;
- proportional taxes, which take the same proportion of income as income rises;
- regressive taxes, which take a decreasing proportion of income as income rises.

Example of rate structures

A earns \$95,000 profit for the year.

B earns \$42,000 profit for the year.

In country 1 the tax on profits is 20% on all earned profits.

In country 2 the tax on profits is 0% on the first \$20,000; 10% on amounts between \$20,001 and \$50,000 and 30% on amounts over \$50,001.

How much tax would A and B be subject to in each of the countries?

		<i>Total tax</i>	<i>Effective tax rate</i>	<i>Type</i>
Country 1				
A	$\$95,000 \times 20\%$	\$19,000	20%	Proportional
B	$\$42,000 \times 20\%$	\$8,400	20%	Proportional
Country 2				
A	$(\$30,000 \times 10\%) +$ $(\$45,000 \times 30\%)$	\$16,500	17.4%	Progressive
B	$\$22,000 \times 10\%$	\$2,200	5.2%	Progressive

Indirect taxes cannot normally be progressive on the individual as they are either assessed on:

- the number of goods (excise duty); or
- the value (VAT) of the goods.

These taxes can only be progressive or regressive on the individual if different rates of tax are charged on different goods. For example, if higher rates of tax are charged on goods that tend to be bought by those on higher incomes the indirect tax could be said to be progressive.

1.4.9 The tax gap

The tax gap is the difference between actual tax revenue received and the amount that would have been received had 100% of the amount due been collected. Tax authorities aim to minimise the tax gap by collecting as high a proportion of the tax due as possible.

1.5 Tax bases and classification of taxes

A tax base is something that is liable to tax. Taxes can be classified by tax base, that is, by what is being taxed. Taxes may be based on:

- *income* – for example, income taxes and taxes on an entity's profits;
- *capital or wealth* – for example, taxes on capital gains and taxes on inherited wealth;
- *consumption* – for example, excise duties and sales taxes/VAT.

For example, in the USA the Federal government taxes income as its main source of revenue. State governments use taxes on income and consumption, while local governments rely almost entirely on taxing property and wealth.

A more detailed classification of taxes is that used by the Organisation for Economic Cooperation and Development (OECD 1976), taxes are grouped in to categories similar to those above and then each group is sub-divided into more detailed headings. The OECD classifications are used to assist when comparing one country with another see Table 1.1.



You do not need to learn the full OECD classification, but you must know the main categories of tax.

1.6 Sources of tax rules

The nature of tax rules vary considerably from one country to another, however it is possible to categorise the sources and influences on those rules. Within any country the balance between each source will be different but in most countries the same elements will

Table 1.1 The OECD Classification of taxes

1000	<i>Taxes on goods and services</i>
1100	Taxes on the production, sale, transfer, leasing and delivery of goods and rendering of services
1110	General taxes
1120	Taxes on specific goods and services
1121	Excises
1122	Fiscal monopolies
1123	Customs and import duties
1124	Taxes on exports
1125	Taxes on specific services
1126	Other taxes
1200	Taxes in respect of ownership and use of, or permission to use, goods or to perform activities
1210	Recurrent taxes
1211	Paid by households in respect of motor vehicles
1212	Paid by others in respect of motor vehicles
1213	Paid in respect of other goods
1220	Other taxes
2000	<i>Taxes on income, profits and capital gains</i>
2100	Paid by households and institutions
2110	On income and profits
2120	On capital gains
2200	Paid by corporate entities
2210	On income and profits
2220	On capital gains
3000	<i>Social security contributions</i>
3100	Paid by employees
3200	Paid by employers
3300	Paid by self-employed or non-employed persons
4000	<i>Taxes on employers based on payroll or manpower</i>
5000	<i>Taxes on net wealth and immovable property</i>
5100	Recurrent taxes on net wealth
5110	Paid by households
5120	Paid by corporate entities
5200	Recurrent taxes on immovable property
5210	Paid by households
5220	Paid by entities
5230	Paid by institutions, etc.
5300	Non-recurrent taxes on net wealth and immovable property
5310	On net wealth
5320	On immovable property
6000	<i>Taxes and stamp duties on gifts, inheritances and on capital and financial transactions</i>
6100	On gifts and inheritances
6110	Gifts
6120	Inheritances
6200	On capital and financial transactions
7000	<i>Other taxes</i>
7100	Paid solely by entities
7200	Other

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be present to a greater or lesser extent. The main sources of tax rules in a country are usually:

- Domestic primary legislation, all tax systems are based on primary legislation either at central government level or at local authority level or both. In some countries the legislation is very detailed and specific setting out every possible item of income and expense. In other countries the legislation is less detailed and is supplemented by court rulings, or case law.
- The practice of the relevant taxing authority will create precedents which will be followed in the future. Tax authorities sometimes issue guidelines or interpretations which are aimed at clarifying the taxation legislation.
- Supranational bodies may issue directives which the government of a country has to include in their legislation, for example, European Union directives on VAT.
- International tax treaties signed with other states are also a source of tax rules as the agreements often vary the countries own tax regulations.

1.7 Summary

This introductory chapter sets out general tax principles, basic terminology, classification models for taxation and sources of tax rules. You need to learn these definitions and be prepared to use them to answer questions in the examination.

Revision Questions

1

? Question 1

Which of the following is not one of Adam Smith's characteristics of a good tax?

- (A) Equity
- (B) Certainty
- (C) Simplicity
- (D) Efficiency

(2 marks)

? Question 2

In no more than 15 words define 'incidence of tax'.

(2 marks)

? Question 3

An indirect tax is a tax that:

- (A) is levied directly on an individual
- (B) is based on earnings of an individual
- (C) is paid indirectly to the tax authorities
- (D) is levied on one person with the intention that it is passed on to another

(2 marks)

? Question 4

List the three main tax bases used in developed countries.

(2 marks)

? Question 5

Which of the following is not usually a source of tax rules in a country?

- (A) Domestic primary legislation
- (B) International tax treaties
- (C) The practice of the tax authorities
- (D) International law

(2 marks)

**Question 6**

With reference to an entity paying tax, which of the following is the best definition of 'competent jurisdiction':

- (A) The country whose laws apply to the entity
- (B) Any country where the entity has operations
- (C) Any country where the entity has an office
- (D) Any country where the entity has employees

(2 marks)

**Question 7**

The effective incidence of a tax is

- (A) the date the tax is actually paid
- (B) the person or entity that finally bears the cost of the tax
- (C) the date the tax assessment is issued
- (D) the person or entity receiving the tax assessment

(2 marks)

**Question 8**

An entity sells furniture and adds a sales tax to the selling price of all products sold.

A customer purchasing furniture from the entity has to pay the cost of the furniture plus the sales tax.

The customer therefore bears the cost of the sales tax.

This is referred to as

- (A) formal incidence
- (B) indirect incidence
- (C) effective incidence
- (D) direct incidence

(2 marks)

**Question 9**

BM has a taxable profit of \$30,000 and receives a tax assessment of \$3,000.

BV has a taxable profit of \$60,000 and receives a tax assessment of \$7,500.

BM and BV are resident in the same tax jurisdiction.

This tax could be said to be

- (A) a progressive tax
- (B) a regressive tax
- (C) a direct tax
- (D) a proportional tax

(2 marks)

Solutions to Revision Questions

1

Solution 1

The correct answer is (C), see Section 1.3.1.

Solution 2

The incidence of a tax is the person who actually pays it. See Section 1.4.3.

Solution 3

The correct answer is (D), see Section 1.4.2.

Solution 4

The tax bases are:

- Income
- Capital or wealth
- Consumption

See Section 1.5.

Solution 5

The correct answer is (D), see Section 1.6.

Solution 6

The correct answer is (A), see Section 1.4.5.

Solution 7

The correct answer is (B), see Section 1.4.3.



Solution 8

The correct answer is (C), see Section 1.4.3.



Solution 9

The correct answer is (A), see Section 1.4.8.

Direct Taxes on an Entity's Profits and Gains

2

LEARNING OUTCOME

After completing this chapter you should be able to:

- ▶ identify the principal types of taxation likely to be of relevance to an incorporated business in a particular country, including direct tax on the entity's trading profits and capital gains, indirect taxes collected by the entity, employee taxation, withholding taxes on international payments.

Note: To fully complete this learning outcome chapters 2 and 3 must be completed.

The topics covered in this chapter are as follows:

- Direct taxes on entity profits and gains:
 - the principle of non-deductibility of dividends and systems of taxation defined according to the treatment of dividends in the hands of the shareholder (e.g. classical, partial imputation and imputation);
 - the distinction between accounting and taxable profits in absolute terms (e.g. disallowable expenditure on revenue account, such as entertaining, and on capital account, such as formation and acquisition costs) and in terms of timing (e.g. deduction on a paid basis, tax depreciation substituted for book depreciation);
 - the nature of rules recharacterising interest payments as dividends;
 - potential for variation in rules for calculating the tax base dependent on the nature or source of the income (schedular systems);
 - the need for rules dealing with the relief of losses.

2.1 Introduction

In the first part of this chapter we will consider the corporate tax base and some of the general principles applied to the determination of taxable profits. We will examine the concept of trading income and the adjustments to income and expenditure that are required to calculate taxable trading income. We will then discuss capital gains and relief available to

entities for their capital gains. This chapter then examines different corporate income tax systems that can be used in a country and then looks at the treatment of losses and their application to groups of entities.

Direct taxation on entities can be referred to using a number of different terms, for example, corporate income tax, income tax and corporation tax are all used. In this chapter, for consistency, we will refer to all these direct taxes on entities as corporate income tax, except examples which directly refer to the UK corporation tax.

2.2 The corporate tax base

Income arising from all sources is usually included in an entity's tax base, whether:

- earnings from trading and other activities;
- gains from disposal of investments and assets;
- other non-business income.

Internationally, there are large differences in the definition of taxable income and therefore large differences in the tax base between countries. In some countries, such as Germany and France, taxable income is closely linked to the accounting profit shown in the income statement. Taxable profit therefore varies with the particular accounting rules used in the country. The accounting rules may also be driven to a large extent by the taxation laws. In countries such as the USA and the UK there are substantial differences between accounting profits and taxable income, although the nature of the differences varies from country to country or even year to year.

In all countries, income is based on the accounting profit shown in an entity's financial statements, computed using generally accepted accounting practice in a particular country. In order to calculate taxable profit some adjustments are usually required by statute, although the type and number of adjustments will vary by country. These adjustments can give rise to deferred taxation (see Chapter 6 for a discussion on deferred taxation). The following sections cover the revenue and expenditure that can and cannot be included.

2.2.1 Schedular systems of corporate taxation

As stated above it is common practice for countries to include all of an entity's earnings in their corporate income tax computations. An entity may receive income from several sources:

- trading profit,
- capital gains,
- interest received,
- rent received,
- patent royalties,
- other sources.

If all earnings are treated in the same way there is little need to separate them when computing the tax charge for the year. However, some governments want more control over what is and is not taxed and at what rate. This is achieved by using a number of schedules for the tax calculations. Each schedule will relate to a specific type of income and will have specific rules that define how income should be measured and what

expenditure will be allowed (if any). There may be a separate rate of tax applicable to each schedule.

In the UK corporation tax system, the main headings are referred to as 'Schedules', and some of the Schedules are divided into 'Cases'. Each schedule/case has its own specific rules for calculating the taxable income. After the taxable income for each schedule/case has been calculated a total taxable income is prepared by adding all the schedule/case taxable incomes together. The entity's capital gains are then added on to give the total taxable profit for the period. The UK schedules and cases relevant for company taxation are:

UK Corporation tax schedules	
Schedule A	Income from land and property
Schedule D	
Case I	Profits of a trade or business
Case III	Interest, etc., receivable
Case V	Dividends received from foreign companies
Case VI	Any income not chargeable under another Schedule or Case

Other items included in an entity's total profit for corporation tax purposes:

Capital gains
Surpluses on disposal of intangible assets

We will first consider income from a trade or business then capital gains.

2.2.2 Classification of income

In computing an entity's corporate income tax liability, the first step is to take the entity's income statement and compute taxable profits. If the tax system uses a schedular system then separate figures for each category will need to be calculated by examining the entity's income statement and allocating incomes and expenditures to each tax category.

In arriving at the trading profit to be included in the entities total taxable profit, certain expenses charged in the income statement have to be disallowed because they are not deductible for tax purposes. It is also necessary to remove any non-trading income that is taxable under other categories and capital gains. We need to calculate:

- What moneys received or receivable are taxable as trading income?
- What moneys expended or expendable can be deducted from those receipts?

As stated above income is generally based on the profit shown in the entity financial statements, computed on generally accepted accounting practice. For example, in the UK the requirement is that the profit of a trade, profession or vocation must be computed on an accounting basis which gives a true and fair view.

The income statement is then adjusted for tax purposes because not every item received is a taxable receipt of the trade, profession or vocation. Nor is every item of expenditure an allowable deduction for tax purposes. We will first consider receipts then deductions.

2.2.2.1 Income

Income could be either a profit or gain of the trade. A profit is income, whereas a gain is capital in nature. Most countries make a clear distinction between capital gains and revenue profits for tax purposes with, for example, capital gains tax and income tax. Any item credited to

the income statement must be examined to determine if it is revenue or capital in nature. The questions that need to be asked are:

- (a) Does the income arise directly from the trade?
- (b) Is it a revenue or capital receipt?
- (c) Is it a part of the profits of the year under review or of some other year?
- (d) Is it taxable under any other category? For example, rents.
 - Non-trading receipts are usually treated separately for tax purposes.
 - Capital receipts will be dealt with under capital gains tax rules.
 - If the receipt relates to other years it will probably be taxed in that year.
 - Receipts taxable under other categories are deducted from income and dealt with under the rules relating to the other categories.

2.2.3 Expenditure

The starting point for determining the profits or gains of a trade is the profit per the financial statements. An item of expenditure or other debit to the income statement will be an allowable deduction in arriving at the trading profit, provided that either:

- it is revenue and not capital expenditure and is not prohibited by any provisions in the tax statute; or
- it is not specifically disallowed by the tax legislation.

We will consider expenditure under the following three sub-headings:

- depreciation,
- disallowable expenditure,
- allowable expenditure.

2.2.3.1 Depreciation

Depreciation is by far the most common item of capital debited in the income statement. A deduction in respect of depreciation is a deduction that is related to the capital assets of the business and is therefore never allowable.

Depreciation provided in accounts is replaced by a standard deduction available for most, but generally not all, types of capital expenditure. The reason for this adjustment is that taxpayers can adopt a range of different depreciation rates and accounting policies. A standard deduction common to all taxpayers is fairer for tax purposes, and can also be used to provide investment incentives for businesses; generous allowances can be used to encourage capital expenditure on specific types of asset or in specific areas of the country. The standard deduction is usually referred to as tax depreciation or (as in the UK) capital allowances.

The main categories of expenditure qualifying for tax depreciation are usually:

- plant and machinery (very broadly defined to include vehicles, computers, etc.);
- buildings.

Although buildings, plant and machinery are the main types of asset that all countries allow for tax depreciation, any non-current asset could be included, for example, research and development of a capital nature is allowable for capital allowances in the UK.

The way that depreciation is allowed for tax varies from country to country. All countries allow some form of charge to income for the use of assets. Most countries allow the declining balance method of calculating tax depreciation on plant and machinery and the majority

use straight line method for calculating tax depreciation on buildings (see Chapter 13 for an explanation of the methods of depreciation).

In some systems such as the UK, it is not necessary to calculate every asset separately, all assets of a similar type can be 'pooled' and treated as one large asset.

Incentives granted to encourage capital expenditure are usually in the form of accelerated tax depreciation, by allowing depreciation at a higher rate in the early years of the assets useful economic life. This practice is sometimes known as an initial allowance or first-year allowance. For example, in the UK small companies can claim 100% first-year allowances on some types of asset. Incentives can be used to encourage expenditure on assets generally or to help achieve a government objective, for example, in the UK expenditure incurred by any business on the purchase of motor cars with low CO₂ emissions will qualify for a 100 per cent first-year allowance.

When an asset qualifying for tax depreciation is disposed of a balancing charge or balancing allowance may arise. The total claimed for tax depreciation over the life of the asset must equal the original cost less sale proceeds. If there is a difference a balancing adjustment will be made in the year of disposal.



In your examination you will not be tested on any specific country's system of tax depreciation or depreciation rates. If computation questions are set the details will be given along with all the tax rates needed to answer the question.

The following example illustrates the approach required in questions.

Example 2.A

HL commenced business on 1 June 2001, making up the first accounts for the year to 31 May 2002. The entity's purchases and sales of fixed assets were as follows:

<i>Purchases</i>			\$
2001	1 June	Industrial building	260,000
	1 June	Plant	47,000
2004	1 June	Plant	58,000
<i>Sales</i>			
2004	31 May	Plant bought on 1 June 2001	9,500

HL qualifies for accelerated first-year allowance on the plant at the rate of 50% for the first year. The second and subsequent years will be at 25% on the reducing balance method. The industrial building qualifies for an annual tax depreciation allowance of 5% on the straight line basis.

Calculate HL's tax depreciation for the years ended 31 May 2002, 2003 and 2004.

Solution

		<i>Industrial building</i>	<i>Plant</i>	<i>Total tax depreciation for year</i>
		\$	\$	\$
01/06/2001	Purchase	260,000	47,000	
31/05/2002	First year allowance		(23,500)	}
	Tax depreciation for the year	(13,000)		} 36,500
	Balance at 31/05/2002	247,000	23,500	
31/05/2003	Tax depreciation for the year	(13,000)	(5,875)	18,875
	Balance at 31/05/2003	234,000	17,625	
31/05/2004	Disposal		(9,500)	
	Balancing allowance		(8,125)	}
	Tax depreciation for the year	(13,000)		} 21,125
	Balance at 31/05/2004	221,000	0	
01/06/2004	Purchase		58,000	

This means that in the year to 31 May 2002 HL has a tax allowance for \$36,500 tax depreciation. This will be deducted from HL's taxable profits before HL's tax liability is calculated.

In the year to 31 May 2003 HL receives an allowance for \$18,875 tax depreciation and in the year to 31 May 2004 \$21,125. This final amount includes a balancing allowance for the plant disposed of. The plant disposed of during the year cost \$47,000 in 2001 and then received tax depreciation allowances of \$23,500 and 5,875 leaving a tax written down balance of \$17,625. When the plant was sold \$9,500 was received leaving a balance of \$8,125 to be written off as a balancing allowance.

2.2.3.2 Disallowable expenditure

Disallowable expenditure is expenditure that has been incurred and charged to the income statement but is not allowable for tax purposes. The expenditure therefore has to be added back on to the profit for the year to arrive at taxable profits.

Any expenditure that is deemed to be capital in nature will not usually be allowable expenditure when computing trading profits. For example:

- Losses on sale of non-current assets (also gains on sale).
- Legal, surveyors' and other fees related to capital matters; for example, new buildings, plant, etc.
- Repairs to assets purchased in a run-down condition, only the part attributable to use in the current trade is allowable.

Even if an item of expenditure is revenue expenditure it may be specifically prohibited as a deduction by the tax legislation, for example, in the UK expenses incurred in entertaining customers are specifically disallowed. Specifically disallowed items will vary from country to country, they also vary within a country from one year to another. The following items are often specifically disallowed:

- any disbursements or expenses of maintenance of the parties, their families or establishments, or any sums expended for any other domestic or private purposes distinct from the purposes of the trade, profession or vocation;
- any capital withdrawn from the business;
- any capital employed in improvements of the premises;
- any sum recoverable under an insurance;

- any expenditure on entertaining customers;
- any annuity or other annual payment (other than interest);
- donations to political parties;
- expenses that relate to an earlier year and arose in that earlier year.

Payments that are incidental to the winding up of a business are not normally allowed. The principle which emerges is that you cannot deduct costs pertaining to the winding up of an entity because they are not laid out in earning profits. The same applies to the costs of acquiring a going concern, expenditure that is incidental to the transfer of ownership is not normally allowable.

2.2.3.3 Allowable expenditure

An item of expenditure or other debit to the income statement can usually be assumed to be an allowable deduction in arriving at the trading profit. Apart from the specifically disallowed items in Section 2.2.3.2 the tax legislation may also specifically allow certain expenditure items. Each country is different but the following are often allowed:

- interest paid,
- advertising,
- charitable subscriptions,
- hire purchase interest,
- legal expenses,
- losses caused by employee fraud,
- pensions (including voluntary pensions for former employees),
- wages and salaries,
- trade subscriptions,
- welfare expenses, for example, canteens, social club expenses, etc.,
- repairs,
- taxes paid to lower levels of government.

2.2.4 Capital gains

Gains arising on the disposal of investments and other assets are not usually covered by income tax rules and are not included in trading income. Capital gains tax attempts to tax those gains made on disposal of various types of investments and other assets. The assets included in the tax base vary from country to country. For example, in the UK the most important type of transaction covered by capital gains tax is the sale of listed stocks and shares. The UK also has a large number of assets that are exempt from capital gains tax. The principle is usually that all assets are chargeable unless exempted, but the list of exemptions can be fairly long. In the UK exemptions include:

- private motor vehicles,
- chattels (tangible movable property) sold for less than £6,000,
- chattels, which are wasting assets (i.e. those with a life of less than 50 years), for example, boats, caravans, animals,
- qualifying corporate bonds.

In addition to exempt *assets* there can also be exemptions for certain types of *disposals* of assets, for example, in the UK exempt disposals include:

- gifts to a non-profit-making body of land, buildings, works of art and the like, provided that the gift is for the public benefit and public access is allowed;

- sale of works of art and the like to approved UK national or local institutions (e.g. art galleries or museums)
- Gifts of any type of asset for charitable purposes to an approved charity.

In principle, the calculation of the gain or loss on a disposal is simply proceeds of sale less cost or value at a date specified in the tax legislation. Additional costs incurred to acquire the asset, improve it or dispose of it may be allowed to be deducted from the gain.

In some countries the calculation is based on original cost but a few countries such as the UK allow the original cost to be indexed when calculating the gain. In periods of high inflation, a tax on capital gains would be unfair if based on the simple comparison of cost and sale proceeds. Some allowance for the effect of inflation over the period of ownership is needed. For example, in the UK this is done by allowing the cost to be adjusted to current prices using an index published by government, the retail price index. The movement in the index over the period of ownership is used to increase the original cost of the asset. Indexation cannot turn a capital gain into a loss, it merely reduces the gain to zero.

Example 2.B – Indexation of the cost of an asset

An asset, which cost \$10,000 in February 1988, was sold in April 2003 for \$20,000. Retail price indices were:

February 1988	103.7
April 2003	180.0

The calculation of the chargeable gain will be:

	\$	\$
Proceeds of sale		20,000
Cost	10,000	
Indexation		
$\$10,000 \times (180.0 - 103.7) / 103.7$		
i.e. $\$10,000 \times 0.736$	<u>7,360</u>	
Total allowable cost		17,360
Chargeable gain		<u>2,640</u>

2.2.4.1 Rollover relief

When an entity sells a business asset it may give rise to a chargeable capital gain which, in most countries will be included in the entity's corporate income tax calculation. In some countries when an asset is replaced by another business asset, it is possible to defer the charge to tax until the replacement asset is sold. When the replacement asset is sold, any gain arising on that disposal may also be able to be deferred. There may be no limit to how often this deferral can take place. For example, in the UK, for an entity with a continuous existence, the deferral can be for an indefinite time, provided that the conditions are fulfilled. This relief from capital gains tax is sometimes known as rollover relief. Rollover relief allows a *deferral* of the payment of the corporate income tax on the gain till a later date, providing a cash flow advantage and allowing the corporate income tax to be paid in depreciated currency at a later date.

In a few countries rollover relief may also apply to intangible assets.

2.3 Nominal corporate tax rates

Corporate income tax rates vary considerably from one country to another. All countries have corporate income taxes at the central government level. Some countries have special lower rates for smaller entities while others have one rate for all entities. In some countries entities also have to pay taxes to other levels of government, for example, the USA and Canada. Any comparison of tax rates between countries is distorted by the range of treatments used for the calculation of the tax base.

2.4 The interaction of the corporate tax system with the personal tax system

Dividends are appropriations of profit and are not usually allowed to be deducted from income when calculating taxable profits. When dividends are paid to individual shareholders the amount received has already been taxed. If it is then taxed in the hands of the shareholder it is effectively being taxed twice.

The economic effect of corporate taxes depends on the system of corporate income tax that is used. The four main systems for taxing entity profits, that are discussed below are:

- classical system,
- imputation system,
- partial imputation system,
- split rate systems.

2.4.1 Classical system

A classical system of corporate income tax does not differentiate between an entity's retained earnings and its distributed earnings and treats the shareholders as completely independent of the entity.

Under a classical system the entity is liable for corporate income tax on all its taxable income and gains, whether they are distributed or not. The shareholder is liable to income tax on dividends received from the entity and capital gains tax on any taxable gains made on the disposal of their shares.

The classical system is relatively easy to understand and administer but causes two main problems:

- Double taxation of dividends, distributed income is subject to corporate income tax and then to personal income tax.
- It causes a bias against distributing dividends, as distribution causes double taxation, non-distribution will avoid double taxation.

2.4.2 Imputation system

Under imputation systems of corporate income tax all or part of the underlying corporate income tax on distributions is imputed to the shareholders as a tax credit, therefore avoiding the problem of double taxation of dividends. With systems using the full imputation system all of the underlying corporate income tax is passed to the shareholder as a tax credit. A full imputation system is economically neutral between debt and equity finance.

2.4.3 Partial imputation system

With systems using the partial imputation system only part of the underlying corporate income tax is passed to the shareholder as a tax credit.

2.4.4 Split rate systems

Split rate systems of corporate income tax distinguish between distributed profits and retained profits and charge a lower rate of corporate income tax on distributed profits so as to avoid the double taxation of dividends. Applying the lower rate for distributed dividends can operate under an imputation or classical system.

2.4.5 Examples to illustrate the difference between traditional and imputation systems

Example 2.C

Country X uses the classical system for corporate income tax. The entity's taxable profits are subject to 15% tax and shareholders are subject to income tax at 25% on all dividends received.

Country Y uses a full imputation system for corporate income tax. Entity taxable profits are subject to 30% tax. Shareholders receive a tax credit for the full amount of tax paid and are not subject to any further tax on dividends.

CT has taxable profits of \$100,000 and decides to distribute 50% as dividends.

Calculate the total tax paid by CT and the shareholders assuming that they are resident first in country X and then in Y.

<i>Country X</i>	\$	\$
Corporate income tax paid by CT	$100,000 \times 15\%$	15,000
Shareholders total income tax on dividends	$50,000 \times 25\%$	12,500
Total tax due if resident in country X		<u>27,500</u>
<i>Country Y</i>		
Corporate income tax paid by CT	$100,000 \times 30\%$	30,000
Shareholders total income tax on dividends	Nil	0
Total tax due if resident in country Y		<u>30,000</u>

Example 2.D

Country X and Country Y use the same rates of tax as in example 2C.

CD has taxable profits of \$100,000 and decides to distribute 90% as dividends.

Calculate the total tax paid by CD and the shareholders assuming again that they are resident in each country.

<i>Country X</i>	\$	\$
Corporate income tax paid by CD	$100,000 \times 15\%$	15,000
Shareholders total income tax on dividends	$90,000 \times 25\%$	22,500
Total tax due if resident in country X		<u>37,500</u>
<i>Country Y</i>		
Total tax due if resident in country Y (as Example 1)		<u>30,000</u>

Conclusion, in countries using the classical system the total amount of tax paid depends on the amount of the profit that is paid as a dividend to shareholders. If less profit is distributed to shareholders less tax is paid. In countries with a full imputation system the corporate income tax is imputed to the shareholders receiving the dividend, so the total tax paid is not affected by the level of profits distributed as dividend.

2.5 Rules recharacterising interest as dividends

Interest on high-yield debt can cause otherwise profitable entities to have very low taxable incomes. This has caused some governments to consider limiting the amount of interest that can be charged to profits as an expense. For example, in the USA certain types of high-yield debt are limited to the amount that can be set against the entity's taxable income. For certain types of debt instrument where the yield is more than six points above the federal rate, the excess will be treated as a dividend. The result is that the issuing entity does not receive a tax deduction for the excess interest.

2.6 Treatment of losses

Trading and capital losses are usually dealt with separately under the legislation applicable to each.

2.6.1 Trading losses

Trading losses are calculated in the same way as trading profits. In the period when a trading loss occurs the entity cannot claim a tax refund. The main ways of relieving the loss is by setting it off against profits in other periods or transferring it to another group entity (see Section 2.8 below).

All countries allow the loss to be set off against future profits, some countries limit the time that losses can be carried forward while others, such as the UK have no limit on the time allowed to recover the loss. The methods used to relieve losses can include:

- (a) Carry forward of trading loss to offset against future trading income derived from the same trade.
- (b) Offset against other income and chargeable gains of the same accounting period.
- (c) Offset against other income and chargeable gains of one or more previous accounting periods.
- (d) Group relief (see Section 2.8).

2.6.2 Capital losses

In principle, capital losses are calculated in the same way as capital gains. Capital losses are sometimes allowed to be deducted from trading income but most countries keep capital losses completely separate from trading activities. In most countries, capital losses are offset against chargeable gains of the same accounting period. Any balance of loss is carried forward to be relieved against the first available chargeable gains. For example, in the UK capital losses can be carried forward without time limit, they cannot be carried back to previous periods and cannot be set against any other income.

Example 2.E – To illustrate the treatment of losses

Country Z has the following tax regulations:

- Taxable profits are subject to tax at 25%.
- Capital gains are added to profits from trading to give taxable profits.
- Trading losses can be carried forward indefinitely but cannot be carried back to previous years.
- Capital gains/losses cannot be offset against trading gains/losses or *visa versa*.

LL started trading in 2002 and has the following profits/losses

	Trading profit/(loss) \$000	Capital profit/(loss) \$000
2002	(300)	400
2003	550	0
2004	700	(150)

Calculate the tax payable by LL in each year.

	Trading profit/(loss)	Capital profit/(loss)	Taxable profit	Tax due at 25%
2002		400	400	100
Loss carried forward	(300)			
2003	(550 – 300) = 250	0	250	62.50
Loss carried forward	0	0		
2004	700	(150)	700	175
Loss carried forward	0	(150)		

Note that in 2002 the trading loss cannot be offset against the capital gain and in 2004 the capital loss cannot be offset against the trading profit. This is a very common situation that applies in many countries.

2.6.3 Cessation of business

If an entity makes a loss in its last 12 months of operation, its scope for relief under the rules we have considered so far is limited, since there can be no carry-forward. To remedy this most countries have special provisions in the legislation, for example, in the UK a *terminal loss* relief exists, by which the loss may be carried back for up to 3 years to be set against total profits.

2.7 The concept of tax consolidation

The concept of tax consolidation is where for tax purposes a group is recognised so that entities within that group can transfer losses between themselves. If one entity in a group makes a loss while others are making profits, it is possible, subject to conditions, to transfer the benefit of the loss where it can most advantageously be relieved. If a loss is not transferred to another group entity it could be carried forward for several years before it can be used to offset tax payable on future profits. If it is transferred to another group entity they can use this years loss to offset against this years profits and therefore reduce the total group tax bill for the year.

The tax legislation that sets out the requirements for a group to be recognised varies considerably from country to country. Some countries only allow groups to consist of resident entities others allow overseas entities to be included to the extent that they have

profits/losses within the country. The requirements that need to be met for a tax group to be recognised will be set out in the tax legislation and will usually be different from that required to recognise a group for accounting purposes. For example, the UK requirement for a tax group is that there must be a direct or indirect holding of at least 75 per cent whereas for accounting purposes this will usually be 50 per cent.

Most countries have restrictions on the transfer, or surrender of losses between members of the group, which will limit the time or amount that can be surrendered. For example, in the UK only losses of the current accounting period may be surrendered, and they may only be offset against the claimant entity's profits for the same period.

Non-trading losses may also be able to be surrendered to other entities in the group.

2.7.1 Capital losses and tax groups

Different rules may apply to tax groups for capital gains. For example, the UK requirement for a capital gains tax group is different to a trading income tax group. The capital gains tax group is a group where one entity owns at least 75 per cent of another entity which, in turn, owns at least 75 per cent of a third entity. In capital gains all that is required is to first of all have the successive 75 per cent holdings and a situation where the last entity in the list is an 'effective subsidiary' (over 50 per cent of the shares being controlled) of the first entity. In the above example the first entity controls ($75\% \times 75\% =$) 56 per cent of the third entity, making it an effective subsidiary. All of these entities will be in the same group for capital gains.

Capital losses are also different from trading and non-trading losses in that capital losses can not usually be transferred from one entity to another. In the UK all that is available is the right to transfer assets between members of the same capital gains tax group without triggering off a capital gain or loss. The asset is transferred on a 'no gain, no loss' basis. Where an asset, which will result in a capital loss, is about to be sold to a third party by a group member and another group member is about to sell an asset to a third party which would give rise to a chargeable gain, then this rule can be extremely helpful. The asset can be transferred at no loss to the entity making a sale at a profit. When the two assets are in the *same* entity, that entity could sell both assets to third parties and set the loss off against the gain.

2.8 Summary

In this chapter, we have discussed the two main methods of direct taxation that apply to entities, corporate income tax and capital gains tax. We have discussed the alternative systems of corporate income tax and their impact on the double taxation of dividends. We also considered the distinction between accounting and taxable profits; the treatment of losses and the concept of tax consolidation.

Revision Questions

2

? Question 1

A schedular system of corporate income tax means:

- (A) A method used to calculate the corporate income tax payable
- (B) A system that has a number of schedules which set out how different types of income should be taxed
- (C) A system that has a number of schedules which set out when tax returns and tax payments should be made
- (D) A system that has a number of schedules which set out the various tax rates **(2 marks)**

? Question 2

Accounting depreciation is replaced by tax depreciation:

- (A) To reduce the amount of depreciation allowed for tax
- (B) To increase the amount of depreciation allowed for tax
- (C) To ensure that standard rates of depreciation are used by all organizations for tax purposes
- (D) So that the government can more easily manipulate the amount of tax organizations pay **(2 marks)**

? Question 3

KM commenced business on 1 June 2002, making up the first accounts for the year to 31 May 2003.

The entity's purchases and sales of fixed assets were as follows:

<i>Purchases</i>			\$
2002	1 June	Industrial building	300,000
	1 June	Plant	40,000
2004	1 June	Plant	60,000
<i>Sales</i>			
2004	31 May	Plant bought on 1 June 2001	12,000

KM qualifies for accelerated first-year allowance on the plant at the rate of 50% for the first year. The second and subsequent years will be at 25% on the reducing balance method. No additional charge will result if the asset is disposed of early.

The industrial building qualifies for an annual tax depreciation allowance of 4% on the straight line basis.

Calculate KM's tax depreciation for the year ended 31 May 2004. **(4 marks)**

? Question 4

The following is a list of payments which an organization may incur during a year:

- (i) capital withdrawn from the business,
- (ii) interest paid,
- (iii) legal expenses,
- (iv) payments for domestic expenses of the directors,
- (v) advertising.

Which two of the above items of expenditure will normally be disallowed for corporate income tax purposes?

- (A) (i) and (iii)
- (B) (i) and (iv)
- (C) (ii) and (iv)
- (D) (iii) and (v)

(2 marks)

? Question 5

Rollover relief:

- (A) allows deferral of the payment of corporate income tax on gains arising from the disposal of a business asset
- (B) allows stock values to be rolled over, replacing cost of purchases with current values
- (C) allows trading losses to be carried forward or rolled over to future periods
- (D) allows capital losses to be carried forward or rolled over to future periods **(2 marks)**

? Question 6

An imputation system of corporate income tax means:

- (A) All the underlying corporate income tax on the dividend distribution is passed as a credit to the shareholders
- (B) The organization pays corporate income tax on its profits and the shareholder pays income tax on the dividend received
- (C) Withholding tax paid on dividends is passed as a credit to shareholders
- (D) A percentage of the underlying tax is passed as a credit to shareholders **(2 marks)**

? Question 7

Country W has the following tax regulations:

- Taxable profits are subject to tax at 25%
- Capital gains are added to profits from trading to give taxable profits
- Trading losses can be carried forward indefinitely but cannot be carried back to previous years
- Capital gains/losses cannot be offset against trading gains/losses or visa versa

LN started trading in 2002 and has the following profits/losses

	<i>Trading profit/(loss) \$000</i>	<i>Capital profit/(loss) \$000</i>
2002	(350)	0
2003	200	0
2004	700	(150)

Calculate the amount of tax due for 2004.

(3 marks)

DIRECT TAXES ON AN ENTITY'S PROFITS AND GAINS

Solutions to Revision Questions

2

✓ Solution 1

The correct answer is (B), see Section 2.2.1.

✓ Solution 2

The correct answer is (C), see Section 2.2.3.1.

✓ Solution 3

		<i>Industrial building</i>	<i>Plant</i>	<i>Total tax depreciation for year</i>
		\$	\$	\$
01/06/2002	Purchase	300,000	40,000	
31/05/2003	First year allowance		(20,000)	}
	Tax depreciation for the year	(12,000)		} 32,000
	Balance at 31/05/2003	288,000	20,000	
31/05/2004	Disposal		(12,000)	
	Balancing allowance		(8,000)	}
	Tax depreciation for the year	(12,000)		} 20,000
	Balance at 31/05/2004	276,000	0	
01/06/2004	Purchase		60,000	

The tax depreciation for the year to 31/05/2004 is \$20,000.

✓ Solution 4

The correct answer is (B), see Sections 2.2.3.2 and 2.2.3.3.

✓ Solution 5

The correct answer is (A), see Section 2.2.4.1.



Solution 6

The correct answer is (A), see Section 2.5.2.



Solution 7

	<i>Trading profit/(loss) \$000</i>	<i>Capital profit/(loss) \$000</i>	<i>Taxable profit \$000</i>	<i>Tax due at 25% \$000</i>
2002				
Loss carried forward	(350)			0
2003	$(200 - 200) = 0$	0	0	0
Loss carried forward	$(350 - 200) = 150$	0		
2004	$(700 - 150) = 550$	(150)	550	137.50
Loss carried forward	0	(150)		

The tax due in 2004 is \$137,500.

Indirect Taxes and Employee Taxation

3

LEARNING OUTCOME

After completing this chapter you should be able to identify the principal types of taxation likely to be of relevance to an incorporated business in a particular country, including direct tax on the entity's trading profits and capital gains, indirect taxes collected by the entity, employee taxation, withholding taxes on international payments.

The syllabus topics covered in this chapter are as follows:

- Indirect taxes collected by the entity:
 - In the context of indirect taxes, the distinction between unit taxes (e.g. excise duties based on physical measures) and *ad valorem* taxes (e.g. sales tax based on value).
 - The mechanism of value added/sales taxes, in which businesses are liable for tax on their outputs less credits for tax paid on their inputs, including the concepts of exemption and variation in tax rates depending on the type of output and disallowance of input credits for exempt outputs.
- Employee taxation:
 - The employee as a separate taxable person subject to a personal income tax regime.
 - Use of employer reporting and withholding to ensure compliance and assist tax collection.

3.1 Introduction

In Chapter 1, we defined an indirect tax as one that is levied on one part of the economy with the intention that it will be passed on to another. In this chapter we are going to examine the types of indirect taxation that an entity may get involved with, either collecting the tax on behalf of government or paying the tax themselves.

In the first part of this chapter we will consider the main type of consumption tax, tax on sales, in its two main forms sales tax and value-added tax. We then consider other consumption taxes that could affect an entity, including excise duties, property taxes and wealth taxes. In the final part of the chapter we conclude with a discussion on employee taxation and pay-as-you-earn systems.

3.2 Indirect taxes collected by the entity

3.2.1 Unit taxes and *ad valorem* taxes

Taxes on consumption can be categorised in several ways.

1. Selective or general consumption taxes:
 - (a) Selective consumption taxes – those levied on particular products, such as oil products, motor vehicles, alcohol and tobacco.
 - (b) General consumption taxes – those levied on a wide range of goods and services, most of which are taxed on a percentage of value basis.
2. Specific or *ad valorem* taxes
 - (a) Specific or unit taxes – taxes that are based on the weight or size of the tax base, for example an excise duty of \$5 per bottle of whiskey or \$1 per 100 gram of tobacco.
 - (b) *Ad valorem* taxes – based on values, these taxes are usually expressed as a percentage of the tax base, for example, a 5 per cent sales tax is calculated as 5 per cent of the selling price before tax.

3.3 Consumption taxes

In theory a general sales tax system could take one of many different forms, in practice there are two main types in use throughout the world the single level retail sales tax and value-added tax (VAT) systems. Sales taxes could be single- or multi-stage taxes.

3.3.1 Single-stage sales taxes

Single-stage sales taxes apply at one level of the production/distribution chain only; they can be applied to any one of the following levels:

- the manufacturing level;
- the wholesale level;
- the retail level.

There are very few countries using single stage sales taxes, virtually no country uses a single level sales tax at the manufacturing or wholesale level. The USA is the main example of a country using a retail sales tax, although the USA retail sales tax operates at the individual state government level rather than federal government level.

3.3.2 Multi-stage sales taxes

A multi-stage sales tax charges tax each time a product or its components is sold in the chain from manufacturer, assembler, wholesaler to retailer. There are two types of multi-stage taxes:

- A cumulative or cascade tax which does not allow credit for taxes paid on transfers between levels, this means that taxes paid at each stage are not refunded and are therefore treated as a business cost.
- VAT and similar systems where credit is allowed for tax paid on purchases and traders are reimbursed all of the tax that they have paid. In these systems the entire tax burden is usually passed on to the consumer.

Almost all countries have adopted VAT systems or are considering its adoption.

Example 3.A Multi-stage cumulative tax

A manufacturer, M produces refrigerators. These are sold first to a wholesaler, W, who sells in turn to a retailer, R. Finally, R sells to the ultimate consumer, C. The prices at which these transactions take place (excluding sales tax) are as follows:

- M sells to W for \$100
- W sells to R for \$160
- R sells to C for \$300

The country levies a multi-stage cumulative tax at the rate of 5% each time a sale is made. Calculate the sales tax due by each entity and in total.

		<i>Tax due</i>
M's sale to W	\$100 × 5%	\$5
W's sale to R	\$160 × 5%	\$8
R's sale to C	\$300 × 5%	\$15
Total tax due		\$28

Each entity has to charge tax and then pay it to the tax authorities. The tax paid is not recoverable. The total tax due in this example is \$28.

3.4 Value-added tax (VAT)

Value-added tax is not a tax on profits or gains, and is not even eventually borne by most businesses to a material extent. Nevertheless, it is important to businesses, because its charge and collection enter into many, even most, business transactions. Ultimately, VAT falls mainly on the final consumer of goods or services. However, all those involved in the chain of transactions between the manufacturer and the retailer are first charged VAT and then pass it on to the next person in the chain. The standard rate of VAT varies from one country to another; even in Europe where all countries in the European Union must have a VAT system the rates are very varied. Most countries have more than one rate of VAT; sometimes many different rates are used. One rate often used is a 'zero' rate, we will see the significance of this later.

Example 3.B VAT

Use the details in Example 3.A, but instead of a sales tax the country now has a VAT system, with VAT at 17.5%. Calculate the VAT finally due from C and the amount paid by M, W and R.

The VAT finally due from C is:

$$\$300 \times 17.5\% = \$52.50$$

This is collected by R who pays it over to the tax authorities, along with the VAT due on other sales. But R first deducts all the VAT suffered on its *inputs*, its purchases. This will include the VAT charged by W on the supply of the refrigerator, and VAT suffered on items such as stationery, telephone and other overhead costs of goods and services. The overall effect on M, W and R is that most of the VAT paid by them on their *inputs* (purchases) is deducted when accounting for VAT on their *outputs* (sales).

Input tax is VAT paid on purchases. Output tax is VAT charged on sales or services provided.

Considering only the VAT relating to the sale and purchase of one refrigerator, the accounting will be as follows:

Entity	Input tax \$	Output tax \$	VAT paid \$
M			
Sale to W		17.50	17.50 paid by M
W			
Purchase from M	17.50		
Sale to R		28.00	10.50 paid by W
R			
Purchase from M	28.00		
Sale to C		52.50	<u>24.50</u> paid by R
Total suffered by C			<u>52.50</u>

The overall effect on M, W and R is nil. Each has collected VAT on making a sale and paid this over to Customs and Excise, first deducting any VAT paid on purchases and other inputs. C, the ultimate consumer, pays \$52.50 and has no-one to pass it on to. He or she thus bears the tax which has been collected by the tax authorities in the three stages shown. This is an oversimplification of the actual process as each registered trader has to submit a return, usually quarterly, showing VAT collected on outputs and VAT suffered on inputs. The difference must be paid to the tax authorities within a specified time after the period end.

3.4.1 Transactions liable to VAT

Most business transactions are within the scope of VAT, which has to be accounted for whenever there is a *taxable supply*. A taxable supply means the supply of goods or services in the course of business, other than supplies that are exempt for one reason or another.

A supply of goods or services in the course of business must be one of the following types of supply:

- *standard-rated* – within the scope of VAT and taxable at the standard rate;
- *subject to a higher or lower rate* – within the scope of VAT and taxable at the appropriate rate;
- *zero-rated* – within the scope of VAT and taxable at 0 per cent;
- *exempt* – an activity on which VAT is not charged.

A further possibility is that the transaction is outside the scope of VAT – examples in the UK include some forms of compensation and the transfer of a business as a going concern.

3.4.1.1 Exemption and zero-rating

At first sight there appears to be no practical difference between zero-rating and exemption, but there is an important difference. If a trade or business is concerned with transactions that are zero-rated (e.g. in the UK the supply of most types of food), no VAT is charged on sales but the supplier may obtain a refund of VAT suffered on input costs to the business.

If, on the other hand, the transaction is exempt, again no VAT is charged on sales but the VAT suffered on costs relating to exempt supplies will not usually be able to be recovered.

The following are examples of UK zero-rated transactions:

- sale of most types of food (but not restaurant meals, etc.);
- printed matter including books, newspapers, etc.;
- children's clothing and footwear;
- transport (by bus, ships, aircraft, but not taxi fares and the like);

- exports;
- drugs and medicines supplied on prescription.

Although the exact list of zero-rated supplies will vary from one country to another the general principle of zero-rated supplies is fairly universal.

The following are examples of UK exempt transactions:

- insurance;
- postal services;
- finance, for example, banking operations;
- betting, gaming and lotteries;
- education (if non-profit-making);
- health services provided by doctors, dentists, etc.

Although the exact list of exempt supplies will vary from one country to another the general principle of exempt supplies is fairly universal.

3.4.1.2 Partially exempt trades

A business could conduct several activities, resulting in some of its sales being standard-rated, some zero-rated, and some ‘exempt’.

Such businesses are *partially exempt*. This means that their right to offset input tax is restricted.

To calculate the proportion of input tax which is deductible, a method that is ‘practical, accurate and fair’ must be agreed. The standard method is to divide input tax into three, as shown in Table 3.1.

Table 3.1 VAT treatment for partially exempt businesses

Input tax category	VAT treatment
(a) Input tax on costs only incurred in making taxable supplies (whether standard-rated or zero-rated)	Reclaimable in full
(b) Input tax on costs only incurred in making exempt supplies or for any other activity (outside scope)	Not reclaimable at all
(c) Other input tax (partly for items used in making taxable supplies – ‘unattributable VAT’)	Reclaimable pro rata

The pro-rata calculation to establish the recoverable input VAT is made by apportioning the ‘unattributable’ input VAT (above) in the same ratio as the value of *all* taxable supplies bears to total supplies.

Entities are required to register for VAT when their *taxable* supplies (*including zero-rated supplies*) exceed the registration threshold. The registration threshold varies from country to country but is designed to exempt small entities from the problems caused by having to keep VAT records. Exempt sales are generally *excluded* in determining whether a business has reached the registration threshold.

Entities can usually choose to register before their turnover reaches the level for compulsory registration. Only registered entities can charge VAT on sales or recover VAT paid on purchases.

3.5 Indirect taxes paid by the entity

3.5.1 Excise duties

Excise duties are specific taxes on certain commodities. As noted above 'specific' or 'unit' taxes are based on the weight or size of the tax base.

From the revenue authority's point of view the characteristics of commodities most suitable for excise duties are:

- few large producers;
- inelastic demand with no close substitutes;
- large sales volumes; and
- easy to define products covered by the tax.

The four main product groups, universally subject to excise duties; alcoholic drinks, tobacco and tobacco products, mineral oils and motor vehicles all share these characteristics.

Special reasons cited for the existence of specific excise duties include:

- to discourage over-consumption of products which may harm the consumer or others, for example duty on tobacco and alcohol;
- to alter the distribution of income by taxing 'luxuries', for example, in the USA there are excise duties on heavy tyres, fishing equipment, firearms and airplane tickets;
- to seek to allow for externalities, so that the social and environmental cost of consuming the product is paid for by the consumer, for example, excise duty on tobacco to help pay for the increased cost of healthcare of smokers;
- to place the burden of paying the tax on the consumer of the product/service, for example, excise duty on petrol and diesel is used by some governments to build and maintain roads, bridges and mass transit systems.

Excise duties tend to have very high yields and low cost of collection, so they are attractive to governments.

In recent years the number of products covered by specific excise duties has generally decreased in most countries, although the four product groups universally subject to excise duties, listed above, have not been affected.

VAT is usually payable on the goods as well as the excise duty. Excise duties have to be paid by entities and unlike VAT the amount is not repayable. The duty must therefore be treated as part of the cost of the item purchased.

3.5.2 Property taxes

Taxes on immovable property exist in many countries. The tax base is usually the capital value of the property although in some countries it is the annual rental value. The tax is usually on land and buildings but a few countries and some states in the USA also tax other items of personal property such as cars, boats and livestock.

3.5.3 Wealth taxes

The tax base for a wealth tax is usually total wealth. The problem with total wealth is measuring and valuing all of the assets in the tax base. For example, total wealth may be deemed to include rights to a future pension, life insurance policies, etc. These assets are notoriously

difficult to value. Problems also occur in areas such as antiques, collections and similar articles; for example stamp collections.

Despite the difficulties, wealth taxes are levied in a number of countries. Wealth taxes can apply to:

- individuals only;
- entities only; or
- individuals and entities.

In countries where a wealth tax exists for entities, an entity's wealth, that is a measure of their asset value, will be taxed each year.

3.6 Employee taxation

3.6.1 The employee as a separate taxable person subject to a personal income tax regime

Personal income tax paid by an employee varies from country to country as the result of the interaction of a number of different choices made by governments, for example:

- the way that the assessable earnings are measured, the basis of assessment;
- the way deductible expenses are calculated;
- the schedule of rates used to calculate tax payable.

3.6.1.1 Basis of assessment

Many countries such as the UK make a distinction between persons employed, earning a wage or salary and subject to tax under the employment income rules and self-employed person taxable under income tax rules. The normal basis of assessment for employed persons can vary from country to country; it could be based on any of the following:

- the amount actually received in the tax year, for example, in the UK;
- the amount earned in the previous year, for example, in France;
- the average of the previous two years earnings, for example, in Switzerland.

The assessment will cover basic salary or wage, commissions, fees, gratuities, profit-sharing payments, bonuses and benefits-in-kind. Pensions received after the cessation of employment are also usually taxable. Some expenses may be deductible.

3.6.1.2 Deductible expenses

There is wide variation of deductible expenses between different countries. In the UK for expenses to be deductible from income, they must be 'incurred wholly, exclusively and necessarily in the performance of the duties'. Expenses that could meet this definition may include:

- professional subscriptions;
- donations to charity and through a payroll deduction scheme;
- retirement annuity premiums;
- contributions to personal pension plans;
- costs of security assets or services included in emoluments.

3.6.1.3 Benefits-in-kind

Benefits-in-kind are non-cash benefits given by the employer to an employee as part of a remuneration package, often in lieu of further cash payments. In the UK senior employees and directors often have a remuneration package that includes a number of benefits-in-kind. The tax regulations provide for a number of these benefits to be included in the tax base. The range of benefits-in-kind given to employees varies enormously between countries and their tax treatment varies just as much.

In the UK the following benefits are free of tax for all employees, although they may be taxed in other countries:

- employer's contribution to approved pension scheme;
- restaurant or canteen facilities available to all employees;
- relocation costs (up to £8,000 maximum);
- provision of job-related living accommodation.

In the UK, the following benefits are taxable on all employees, although they may not be taxable in some countries:

- beneficial living accommodation (unless job-related);
- vouchers exchangeable for cash, goods or services;
- credit tokens.

In the UK the following benefits are taxable on directors and employees receiving £8,500 per year or more only:

- cars (based on percentage of list price);
- fuel for cars;
- vans;
- provision of other assets;
- beneficial loans;
- additional expenses connected with provision of living accommodation;
- private medical insurance;
- scholarships;
- round-sum expense allowances.

3.6.2 Social security contributions

Social security contributions are not always regarded as taxes. However they are assessed on individuals and deducted from earnings in the same way as employee taxation is deducted. Social security contributions constitute a significant tax burden on employees and employers, in some countries employee social security contributions may be more than their income tax each month.

Social security rates are progressive but usually less so than income tax, they are based on an employee's monthly earnings, without any adjustments for expenses or family circumstances. The employee pays a percentage of earnings, usually up to a maximum contribution per month.

The employer also has to make a payment; this usually has no maximum and is based on a percentage of the employees pay.

3.6.3 Other payroll taxes

In some countries governments also impose other payroll taxes, for example, in the USA in addition to social security contributions there is a separate unemployment compensation tax.

3.7 Use of employer reporting and withholding to ensure compliance and assist tax collection

The bulk of income tax revenues in developed countries are provided by wage and salary earners. In most countries tax from employment income is collected by the employer using deduction at source; employers withhold tax along with social security contributions from the current earnings of employees.

The deductions are calculated using tables provided by the tax authorities and information about the total allowances to which each employee is entitled is given in the form of a code number. Employers deduct the tax from employees pay each month and then pay the tax and social security contributions to the tax authorities on a monthly basis. For example, the UK system of tax deducted at source is known as the pay-as-you-earn (PAYE) system.

This arrangement has a number of advantages:

- the tax is collected earlier than systems that assess earnings at the end of the year, this improves the governments cash flow;
- it makes payment of taxes easier for individuals as there is not one large bill to pay, this reduces defaults and late payments;
- most of the administration costs are borne by the employers instead of government.

Other taxes are also withheld by employers or entities making the payment. For example in the USA property taxes are collected by banks and other entities along with mortgage payments.

3.8 Summary

This chapter has considered indirect taxes and their impact on entities. We started with a consideration of sales taxes and VAT then continued with other indirect taxes. The final section considered employee taxation and the operation of advance payment systems.

Revision Questions

3

? Question 1

Country IDT has a duty that is levied on vehicle fuel oils at 10% of their resale value before sales tax. This duty is a:

- (A) *Ad valorem* tax
- (B) Specific unit tax
- (C) Direct tax
- (D) Value added tax

(2 marks)

? Question 2

In no more than 25 words define 'benefits-in-kind'.

(2 marks)

? Question 3

Country IDT has a duty that is levied on all drinks of an alcoholic nature where the alcohol is above 20% by volume. This levy is \$2 per 1 litre bottle. This duty could be said to be:

- (A) *Ad valorem* tax
- (B) Specific unit tax
- (C) Direct tax
- (D) Value added tax

(2 marks)

? Question 4

List three advantages of requiring employers to deduct employee tax from employees pay each month.

(3 marks)

? Question 5

Country V has a VAT system which allows organizations to reclaim input tax paid. VAT is at 15% of selling price.

B manufactures sports shoes and sells them to C, a wholesaler. C resells them to D a retailer. D eventually sells them to E for \$120. The prices at which transactions take place (excluding VAT) are as follows:

- B sells to C for \$50
- C sells to D for \$80

Calculate the VAT due from B, C and D. (3 marks)

? Question 6

An entity purchases products from a foreign entity. These products cost \$21 each and on import are subject to an excise duty of \$4 per item and VAT at 20%. If the entity imports 100 items, how much do they pay the tax authorities?

- (A) \$400
- (B) \$420
- (C) \$500
- (D) \$900

(2 marks)

? Question 7

An entity purchases raw materials for \$1,100 and pays VAT at standard rate on them. The materials are used to produce two products X and Y. The entity sells 200 units of product X at \$5 each and 400 units of product Y at \$4 each. Product X is zero rated for VAT purposes and product Y is standard rated.

Assume that there are no other transactions affecting the VAT payments and that the standard rate of VAT is 20%.

At the end of the period the entity pays the net amount of VAT due to the tax authorities. How much VAT was paid:

- (A) \$100
- (B) \$300
- (C) \$320
- (D) \$520

(2 marks)

? Question 8

If a product is exempt for VAT purposes it means that an entity:

- (A) Can charge VAT on sales at standard rate and cannot reclaim input taxes paid
- (B) Cannot charge VAT on sales and can reclaim input taxes paid
- (C) Cannot charge VAT on sales and cannot reclaim input taxes paid
- (D) Can charge VAT on sales and can reclaim input taxes paid

(2 marks)

Solutions to Revision Questions

3

✓ Solution 1

The correct answer is (A), see Section 3.2.

✓ Solution 2

Benefits-in-kind are non-cash benefits given by the employer to an employee, often in lieu of further cash payments, see Section 3.6.1.3.

✓ Solution 3

The correct answer is (B), see Section 3.2.

✓ Solution 4

The advantages are:

- the tax is collected earlier than systems that assess earnings at the end of the year, this improves the governments cash flow;
- it makes payment of taxes easier for individuals as there is not one large bill to pay, this reduces defaults and late payments;
- most of the administration costs are borne by the employers instead of government.
See Section 3.7.

✓ Solution 5

<i>Entity</i>	<i>Input tax</i> \$	<i>Output tax</i> \$	<i>VAT paid</i> \$
B			
Sale to C		7.50	7.50 paid by B
C			
Purchase from B	7.50		
Sale to D		12.00	4.50 paid by C
D			
Purchase from C	12.00		
Sale to E		18.00	6.00 paid by D
<i>Total suffered by E</i>			<u>18.00</u>

See Section 3.4.

**Solution 6**

Excise duty payable is usually added to the cost of the goods, the total being subject to VAT. The correct answer is (D), see Section 3.4.

**Solution 7**

The entity can reclaim input tax paid and sets this off against VAT charged at the standard rate:

VAT charged at standard rate	$(400 \times \$4) \times 20\%$	=	\$320
Input VAT paid	$\$1,100 \times 20\%$	=	\$220
VAT paid to tax authorities			\$100

The correct answer is (A), see Section 3.4.

**Solution 8**

The correct answer is (C), see Section 3.4.1.1.

Administration of Taxation

4

LEARNING OUTCOMES

After completing this chapter you should be able to:

- ▶ describe the likely record-keeping, filing and tax payment requirements associated with the principal types of taxation likely to be of relevance to an incorporated business in a particular country;
- ▶ describe the possible enquiry and investigation powers of taxing authorities;
- ▶ explain the difference in principle between tax avoidance and tax evasion.

The syllabus topics covered in this chapter are as follows:

- the need for record-keeping and record retention that may be additional to that required for financial accounting purposes;
- the need for deadlines for reporting (filing returns) and tax payments;
- types of powers of tax authorities to ensure compliance with tax rules:
 - power to review and query filed returns;
 - power to request special reports or returns;
 - power to examine records (generally extending back some years);
 - powers of entry and search;
 - exchange of information with tax authorities in other jurisdictions;
- the distinction between tax avoidance and tax evasion, and how these vary among jurisdictions (including the difference between the use of statutory general anti-avoidance provisions and case law based regimes).

4.1 Introduction

In the first part of this chapter we will consider the need for entities to keep and retain records. Second, we consider the need for deadlines and the various types of powers that tax authorities may enjoy. We conclude the chapter with a discussion on tax avoidance and tax evasion.

4.2 The need for record-keeping and record retention

The requirement for entities to keep records is usually included in tax legislation, which will usually set out minimum time limits for the retention of the records. Failure to maintain the correct records to support the tax return will usually render the entity liable to a financial penalty.

The range of records required to be kept for tax purposes will frequently be wider than those required to support the financial statements as any type of document or record may be needed, for example, copies of contracts. Records need to be kept to support all types of tax that the entity has to pay to the tax authorities, whether the tax has been collected from others or is due from the entity in its own right. In other words records will usually need to be kept for the following:

- corporate income tax, including capital gains;
- sales tax or VAT;
- excise duties, for example, in relation to sales of fuel oils;
- employee taxes, social security contributions and other payroll taxes deducted at source from employee salaries and wages.

4.2.1 Corporate income tax

All tax payers need to keep records to enable them to accurately prepare their financial statements in accordance with generally accepted accounting principles. The financial statements are the starting point of the calculation of taxable profits for the period. Entities therefore have to keep all of the records required to support their financial statements and also the additional documents required to support the adjustments made to those statements when completing their tax returns.

4.2.2 Sales tax or VAT

In countries where sales tax or VAT is used appropriate records need to be kept. For example, in the UK registered persons are required to keep adequate records and to retain them for 6 years. Records must show details of all taxable goods and services received or supplied, and all exempt supplies made.

The records required to be kept include all business documents, such as:

- orders and delivery notes;
- relevant business correspondence;
- purchases and sales books;
- cashbooks and other account books;
- purchase invoices and sales invoices;
- records of daily takings such as till rolls;
- annual accounts, including income statements;
- import and export documents;
- bank statements and paying-in slips;
- VAT account;
- credit or debit notes issued or received.

Records may be computerised or maintained by a computer bureau, provided that they can be made available to the tax authorities when required.

The above list shows how much detail is usually required to be kept to justify tax returns when required to do so by the tax authorities.

4.2.3 Overseas subsidiaries

A further example of the detailed records required is where a resident entity has an overseas subsidiary. In some cases the tax authorities may be concerned about transfer pricing between the subsidiary and its parent. Tax authorities sometimes, for example, in the USA, have powers to require entities to provide them with detailed records providing evidence of the method used to calculate prices used in transactions between the subsidiary and its parent. Entities, therefore, have to keep detailed records of price calculations in case the tax authorities require them to be submitted (note you do not need to know any details about transfer pricing).

4.2.4 Employee taxes and social security

In countries where employee tax and social security contributions are deducted from employees pay each week or month, the employer will need to keep detailed records of the employees pay and also the amounts of tax and social security that have been deducted. At the year end the employer will also need to complete a number of returns for government that show the total deducted from each employee, the employers contribution for each employee, and an analysis of the total amounts deducted. The employer will also have to provide details of amounts deducted, usually on standard government forms, to employees.

4.3 The need for deadlines for reporting (filing returns) and tax payments

Tax authorities set deadlines for taxpayers to submit tax returns and pay outstanding tax. There may be different deadlines for income tax and corporate income tax, sales tax and VAT.

There are generally three options available to tax authorities when collecting corporate income tax:

- The tax authorities prepare an assessment, based on information provided by the entity and notify the entity of the amount of tax due.
- The entity prepares a tax return and files this along with their computations of tax due.
- The entity self assesses the tax due and pays the amount of tax it thinks is due.

In countries where an assessment is raised by the tax authorities, entities will be required to submit tax returns after their accounting year end. The tax return will usually require a range of information to be provided in addition to the copy of the financial statements. The tax authorities may also require additional information from the entity before raising an assessment on the entity, which will have to be paid within a certain time limit.

Countries using a pay and file type of system, require the corporate income tax to be estimated by the entity and paid by a certain deadline. For example in the UK corporation tax

for small and medium entities must be paid within 9 months of the end of the accounting period. The corporation tax return, with supporting calculations has to be submitted within 12 months of the end of the accounting period. Upon receipt of the corporation tax return the tax authorities calculate the tax due and adjust the amount paid by issuing a demand for further payment or making a refund for any amounts overpaid.

In countries using self assessment, entities have to estimate the amount of corporation tax that they will be due to pay for the year and pay it, often in advance of the year end. For example in the UK, large entities have to estimate their corporation tax liability and then pay their corporation tax in four equal instalments, two within the period and two after the end of the tax period. They still have to submit a tax return which must include a self-assessment calculation and be supported by the relevant financial accounts.

The deadline for filing returns and paying the tax will vary from country to country, but a deadline is required for the following reasons:

- without any deadline entities would not know when payment was required;
- it enables the tax authorities to forecast their cash flows more accurately;
- without a deadline there is no reference point for late payment, it would be difficult to enforce any penalties for entities not paying;
- if tax is deducted from employees at source and not paid to the tax authorities fairly quickly there is more chance of an entity spending the amount deducted instead of paying it to the tax authorities.

4.4 Types of powers of tax authorities to ensure compliance with tax rules

Revenue authorities generally have powers to inflict penalties for various offences related to corporation tax and sales tax/VAT. For example, late filing of a tax return may attract a fixed penalty and unpaid tax may be subject to interest on the balance due.

4.4.1 Power to review and query filed returns

Tax authorities generally have the power to review and query corporation tax returns that have been filed. The tax legislation will usually specify deadlines limiting the time available for the tax authorities to decide to open an investigation. The tax authorities generally have the power to request any document, etc., relevant to their enquiry. The legislation will specify time limits allowed to comply with the request and will also provide for penalties for non-compliance.

Tax authorities usually have the power to check and query sales tax and VAT returns. There are usually a range of penalties in the legislation which apply to late submission of returns and misdeclaration of tax due.

4.4.2 Power to request special reports or returns

Tax authorities may have the power to request a special report to be made on an entity or to require an entity to complete special returns. They may take this type of action if they believe that the entity is not providing full or accurate information.

4.4.3 Power to examine records (generally extending back some years)

The tax authorities generally have the power to examine any records that support the corporate income tax return. As the tax return is based on the financial accounts this means that they also have the power to examine any documents or records that support the financial accounts.

If the tax authorities suspect fraud or serious understatement of the amount of corporate tax due they usually have the power to require the entity to allow them access to their records going back, in some cases as far as the tax authorities wish. For example, in the UK in cases of fraud the tax authorities can go back 20 years.

Sales tax and VAT legislation usually includes provisions for officers of the tax authority to visit the premises of registered entities from time to time to confirm that the regulations are being complied with.

4.4.4 Powers of entry and search

Tax authorities do not have the power of entry and search of an entity's premises in all countries. Some countries allow the tax authorities full and free access to an entity's business premises but other countries require a search warrant to be issued first. All countries allow access, with a search warrant if necessary, in fraud cases. In cases where fraud or some other contravention of the tax legislation is suspected tax authorities also generally have the power to seize documents.

Sales tax and VAT legislation often give officers of the tax authority a statutory right to enter premises at any reasonable time and to inspect goods and records to confirm that sales tax or VAT returns are complete and accurate.

4.4.5 Exchange of information with tax authorities in other jurisdictions

Tax authorities generally have the power to pass on information to foreign tax authorities as long as there is a tax treaty with the foreign country. The tax treaty will set out the terms and conditions that need to apply before information will be provided.

4.5 Tax avoidance and tax evasion

The causes of tax avoidance and evasion include high tax rates, imprecise laws, insufficient penalties and apparent inequity. When any of these situations apply, tax avoidance and evasion will tend to increase. For example:

- high tax rates make evasion or avoidance more rewarding and also make it worthwhile spending more on tax advice and using more complex schemes;
- imprecise laws mean that the letter of the law is not tight enough to stop avoidance and the spirit of the law may be unclear. In chapter 1 we saw that one of the canons of taxation was certainty, imprecise laws lead to uncertainty;
- insufficient penalties mean that it is more rewarding to evade tax and risk getting caught, even if caught the penalty will not be very severe;
- apparent inequity can lead to an increased desire to evade tax and also make tax avoidance and evasion more socially acceptable.

4.5.1 Tax evasion

Tax evasion is the illegal manipulation of the tax system to avoid paying taxes. Tax evasion is the intentional disregard of the legislation in order to escape paying taxes; it can include falsifying tax returns and claiming fictitious expenses.

4.5.2 Tax avoidance

Tax avoidance is tax planning to the extent that the affairs of the entity are legally arranged in such a way as to minimise the corporation tax liability. Although tax avoidance is strictly legal and within the letter of the law it is usually contrary to the spirit of the law. Many tax avoidance schemes exploit loopholes in the legislation, which the tax authorities try to close as soon as the loophole has been identified.

4.5.3 Statutory general anti-avoidance provisions and case law regimes

As mentioned above, one approach to tax avoidance schemes is to try and close loopholes in the tax system as soon as they are identified. This stops others exploiting the loophole but does not usually apply retrospectively and so those already using the loophole will be able to continue using it. One problem with this approach is that closing loopholes means passing more legislation, thus making the tax system more and more complex; it may also create other (unintended) loopholes which can be exploited. Tax authorities therefore use other administrative methods of minimising both tax avoidance and tax evasion. The methods used can be summarised into four categories:

- (i) reducing opportunity;
 - (ii) increasing the perceived risk;
 - (iii) reducing the overall gain;
 - (iv) changing social attitudes towards evasion and avoidance.
- (i) Reducing opportunity by:
 - deducting tax at source whenever possible, for example, interest payments and wages and salaries; if not possible use third party reporting;
 - simplifying the tax structure to minimise opportunities for evasion and false returns. For example minimising the number of reliefs, allowances, rebates and exemptions within the tax system will reduce the number of false deductions.
 - (ii) Increasing the perceived risk by:
 - setting up an efficient system of auditing tax returns and payments to maximise revenue from given resources. This should be well publicised so that it increases the perceived risk of being found out;
 - developing good communications with other tax administrations.
 - (iii) Reducing the overall gain by:
 - carrying out regular reviews of the penalty structure, with appropriate publicity for increased penalties.
 - (iv) Changing social attitudes towards evasion and avoidance by:
 - encouraging, developing and maintaining an honest and customer friendly tax administration;

- creating a tax system which is perceived as equitable to all parties;
- governments trying to encourage an increasing commitment of the population to obey the law.

The overall objective for tax authorities is to reduce the tax gap (see Section 1.4.9).

In countries using a system of common law, case law developed in the courts is very important. Over time the cases decided by the courts will interpret and develop the tax legislation. Case law can evolve over time with decisions gradually developing and to some extent even reflecting changing social attitudes. For example, in the UK, anti-avoidance cases have been brought to the courts regularly over the years with the revenue authorities challenging avoidance schemes. The results of the court cases can then be relied upon in future court cases, although they may then be further refined by the court. In this way the case law is developed over time. The UK courts also look at the substance of the transaction instead of the legal form. For example, a UK court case (*Ramsey Ltd v IRC*) found that in a tax avoidance scheme, although each transaction was perfectly legal they were in total self cancelling; their only effect was to reduce tax and therefore should be disregarded for tax purposes. Another tax avoidance case (*Furniss v Dawson*) found that steps inserted in a series of transactions that had no commercial purpose other than to avoid tax, should be disregarded. A later tax avoidance case (*Craven v White*) limited this by finding that the series of transactions had to be set up with an intended result that was known at the time the transactions started.



You do not need to remember any case names for your examination, these cases are here to illustrate the principle of case law, you only need to understand the principle.

4.6 Forum on tax administration

In January 2004 the OECD launched its new Forum on Tax Administration. The Forum is an initiative to promote the dialogue on strategic tax administration issues and to facilitate the exchange of best practices between tax authorities in different countries.

4.7 Summary

This chapter has reviewed some of the administrative aspects of taxation. We have looked at the need for records and their retention; the need for deadlines and the general powers that a tax authority would be expected to have. We have also considered the differences between tax avoidance and tax evasion.

Revision Questions

4

? Question 1

Which of the following taxes is an entity unlikely to need to keep additional detailed records for:

- (A) Corporate income tax
- (B) VAT
- (C) Employee tax deducted from salaries
- (D) Property tax

(2 marks)

? Question 2

In no more than 30 words define the meaning of 'tax avoidance'.

(2 marks)

? Question 3

List four possible powers that a tax authority may have to help them enforce tax regulations.

(4 marks)

? Question 4

Which ONE of the following powers is a tax authority least likely to have granted to them?

- (A) Power of arrest.
- (B) Power to examine records.
- (C) Power of entry and search.
- (D) Power to give information to other countries' tax authorities.

(2 marks)

? Question 5

Requirements

- (i) Explain the difference between tax avoidance and tax evasion. (2 marks)
- (ii) Briefly explain the methods that governments can use to reduce tax avoidance and tax evasion. (3 marks)

(Total marks = 5)

Solutions to Revision Questions

4

✓ **Solution 1**

The correct answer is (D), see Section 4.2.

✓ **Solution 2**

Tax avoidance is tax planning to the extent that the affairs of the entity are legally arranged in such a way as to minimise the corporate income tax liability.

See Section 4.5.2.

✓ **Solution 3**

Any four of the following:

- power to review and query filed returns;
- power to request special reports or returns;
- power to examine records (generally extending back some years);
- powers of entry and search;
- power to exchange of information with tax authorities in other jurisdictions.

See Section 4.4.

✓ **Solution 4**

The correct answer is (A), see Section 4.4.

✓ **Solution 5**

- (i) **Tax avoidance** – Tax planning to the extent that the affairs of an entity are legally arranged in such a way as to minimise the tax liability. Although tax avoidance is strictly legal and within the letter of the law, it is usually contrary to the spirit of the law. Many tax avoidance schemes exploit loopholes in the legislation.

Tax evasion – The illegal manipulation of the tax system is to avoid paying taxes. Tax evasion is the intentional disregard of the legislation in order to escape paying taxes; it can include falsifying tax returns and claiming fictitious expenses.

(ii) A traditional response by governments is often to close loopholes by passing more legislation, but this can create additional opportunities for avoidance. More effective methods are:

Reducing opportunity by:

- deducting tax at source whenever possible;
- simplifying the tax structure to minimise opportunities for evasion and false returns.

Increasing the perceived risk by:

- setting up an efficient system of auditing tax returns and payments to maximise revenue from given resources;
- publicising a system of auditing so that it increases the perceived risk of being found out;
- developing good communications with other tax administrations.

Reducing the overall gain by:

- carrying out regular reviews of the penalty structure, with appropriate publicity for increased penalties.

Changing social attitudes towards evasion and avoidance by:

- encouraging, developing and maintaining an honest and customer-friendly tax administration;
- creating a tax system which is perceived as equitable to all parties;
- trying to encourage an increasing commitment of the population to obey the law.

International Taxation

5

LEARNING OUTCOME

After completing this chapter you should be able to:

- ▶ identify situations in which foreign tax obligations (reporting and liability) could arise and methods for relieving foreign tax.

The syllabus topics covered in this chapter are as follows:

- International taxation:
 - the concept of corporate residence and the variation in rules for its determination across jurisdictions (e.g. place of incorporation versus place of management);
 - types of payments on which withholding tax may be required (especially interest, dividends, royalties and capital gains accruing to non-residents);
 - means of establishing a taxable presence in another country (local entity and branch);
 - the effect of double tax treaties (based on the OECD Model Convention) on the above (e.g. reduction of withholding tax rates, provisions for defining a permanent establishment);
 - principles of relief for foreign taxes by exemption, deduction and credit.

5.1 Introduction

This chapter considers aspects of international taxation. We start with a consideration of the term residence; we then consider withholding taxes and different ways of an entity establishing a taxable presence. The chapter concludes with a discussion of double taxation treaties and the methods used to relieve foreign tax.

5.2 The Organisation for Economic Co-operation and Development (OECD) – Model tax convention

The OECD's taxation work covers a broad range of activities, including tax evasion, harmful tax practices, electronic commerce and environmental taxes. In relation to international taxation the OECD has published a Model tax convention which is a model

tax treaty that can be used by countries when drafting their double tax treaties. We will refer to the OECD model tax convention throughout this chapter, see the readings at the end of the chapter for a copy of the relevant sections of the OECD model tax convention.

5.3 The concept of corporate residence

Corporate income tax is usually a residence-based tax, whether corporate income tax will be charged depends on the residence, for tax purposes, of any particular entity.

The test for establishing residence of an entity varies from one country to another, the main types of test are discussed below.

5.3.1 Place of control and central management of an entity

Using this basis the country from where control of the group is exercised is deemed to be the country of residence for tax purposes. The place where directors' meetings are held is usually an important criterion when examining the exercise of control.

5.3.2 Place of incorporation

The second method is a simple matter of fact as it will be absolutely clear which country an entity has been incorporated in. If a country uses the place of incorporation as a basis, any entity registered in that country will be deemed to be resident in that country for tax purposes, no matter where control is exercised.

5.3.3 Place of control and place of incorporation

Some countries, for example the UK, use both bases to establish whether an entity has residence for tax purposes. In these countries an entity will be regarded as resident if it meets either of the above criteria. For example an entity is regarded as resident in the UK:

- if it was incorporated in the UK; or
- if it was incorporated outside the UK but control and central management is exercised within the UK.

This can lead to problems of double residence for taxation purposes. For instance if an entity is registered in one country and its place of control and central management is in another country it could be regarded as resident in both countries if the first country bases their residence requirement on place of incorporation and the second country uses place of management. The OECD model tax convention sets out a basis for resolving this problem, we will consider this in the next section.

5.4 The OECD Articles of the model convention with respect to taxes on income and on capital

The OECD – *Articles of the model convention with respect to taxes on income and on capital* (hereafter referred to as the OECD model) defines the meaning of residence in Article 4 – Resident, paragraph 1, as follows:

“For the purposes of this Convention, the term ‘resident of a Contracting State’ means any person who, under the laws of that State, is liable to tax therein by reason of his domicile, residence, place of effective management or any other criterion of a similar nature.”

The OECD model defines person in Article 3 to include entities as follows:

“the term ‘person’ includes an individual, a company and any other body of persons.”

Article 4, paragraph 3, gives preference to the concept of place of control and central management:

“Where by reason of the provisions of paragraph 1 a person other than an individual is a resident of both Contracting States, then it shall be deemed to be a resident only of the State in which its place of effective management is situated.”

Note the OECD model’s use of the words ‘contracting states’ refers to the countries that are party to the treaty.

An OECD discussion document published in May 2003 proposed changes to the commentary on the OECD model. These changes were aimed at strengthening the application of the effective management concept.

“24. As a result of these considerations, the ‘place of effective management’ has been adopted as the preference criterion for persons other than individuals.

24.1 An entity may have more than one place of management, but it can have only one place of effective management at any one time.

24.2 The place of effective management is the place where the key management and commercial decisions that are necessary for the conduct of the entity’s business are in substance made. i.e. the place where the actions to be taken by the entity as a whole are, in fact, determined. All the relevant facts and circumstances must be examined to determine the place of effective management.

24.3 The place of effective management is ordinarily the place where the most senior person or group of persons (for example a board of directors) makes its decisions which normally corresponds to where it meets.”

Therefore under the OECD model an entity will have residence in the country of its effective management. With the OECD model the concept of residence will only apply when there is no clear place of effective management or the place of effective management is in a third party country not party to the double tax treaty under consideration. The OECD discussion paper proposed changing Article 4, paragraph 3, of the OECD model to the following:

“3. Where by reason of the provisions of paragraph 1 a person other than an individual is a resident of both Contracting States, then its status shall be determined as follows:

- a) it shall be deemed to be a resident only of the State in which its place of effective management is situated;
- b) if the State in which its place of effective management is situated cannot be determined or if its place of effective management is in neither State, it shall be deemed to be a resident only of the State with which its economic relations are closer

c) if the State with which its economic relations are closer cannot be determined, it shall be deemed to be a resident of the State from the laws of which it derives its legal status.”

From this it should be clear that under an OECD model based tax treaty, residence due to place of incorporation will only apply if effective management and primary economic activity do not resolve the problem.

5.5 Withholding tax

In many countries, payments made abroad are subject to a ‘withholding tax’. In Chapter 1, we defined a withholding tax as ‘a tax deducted from a payment at source before it is made to the recipient abroad’. As countries cannot tax individuals in foreign countries a withholding tax ensures that the government gains at least some revenue from such payments. The type of payments normally subject to withholding tax include:

- interest,
- royalties,
- rents,
- dividends,
- capital gains.

A Country will often have different rates of withholding tax for each of the above categories. Withholding tax is also deducted from payments between entities of the same group established in different countries; thus causing difficulties for business; including time consuming formalities, cashflow losses and sometimes double taxation.

Double taxation treaties between countries aim to reduce or eliminate withholding taxes and double taxation.

5.6 Underlying tax

If an entity receives a dividend from an overseas entity in which it holds at least a minimum percentage of the voting power, relief is also sometimes given for the tax on the profits out of which the dividend was paid. This tax is referred to as the underlying tax. The underlying tax is calculated as the gross amount of dividend received by the entity as a proportion of the after tax profits of the foreign entity times the tax paid on those profits. This is the proportion of foreign tax paid on the profits that relates to the gross amount of the dividend paid to the entity.

Example 5.A

H owns 30% of the equity shares in S, an entity resident in a foreign country. H receives a dividend of \$36,000 from S, the amount received is after deduction of withholding tax of 20%. S had before tax profits for the year of \$400,000 and paid corporate income tax of \$100,000. Calculate the underlying tax that H can claim for double taxation relief.

Solution

H receives \$36,000 net, this represents 80% of the gross amount, therefore the gross amount is \$45,000 ($\$36,000 / 0.80$).

The after-tax profits of S are $\$400,000 - \$100,000 = \$300,000$.

The underlying tax is then $\$45,000 / \$300,000 \times \$100,000 = \$15,000$

5.7 Means of establishing a taxable presence in another country

A key decision that entities with trading interests abroad have to make is whether to run an overseas operation as a branch of the entity, which is merely an extension of the entity's business or to incorporate (in the overseas country) a newly formed subsidiary. There are many non-tax factors that influence this decision, however taxation can also have an impact on the decision. The main taxation considerations in the decision between the two options are considered below.

5.7.1 Subsidiary

- An overseas subsidiary, set up in an overseas country and controlled from abroad may be able to escape tax on its profits, but the holding entity would be liable to tax on dividends received.
- Losses made by the non-resident subsidiary would not be available for a group loss relief. None of the advantages of being in a group can usually be enjoyed by a non-resident entity.
- A non-resident subsidiary cannot claim tax depreciation and any assets transferred to it by the parent may cause the parent to become subject to capital gains tax on the transfer.
- There might be a major problem in establishing that such a newly formed overseas subsidiary was not resident in the country of its parent. The subsidiary would probably be a fully owned subsidiary and would almost certainly be effectively managed by the parent.
- There could be transfer pricing problems. When the parent trades with an overseas subsidiary, the opportunity might be taken to effect the transactions at a price which effectively transfers profit from the home country to the overseas destination.

5.7.2 Branch

Where a resident entity runs an overseas operation as a branch of the entity the following taxation implications usually arise:

- Corporate income tax will be payable by the resident entity on any profits earned by the branch. There will usually be relief for any foreign tax paid on these profits.
- Any capital gains made by the branch are also subject to the resident entity's tax whereas an overseas subsidiary will not generally cause the holding entity to be taxed on its capital gains.
- Assets can be transferred to the branch without triggering a capital gain.
- Tax depreciation can usually be claimed on any qualifying assets used in the trade of the branch.
- Losses sustained by the branch are usually immediately deductible against the resident entity's income.
- The specific tax law of the resident entity's country may apply to the specific character of a variety of overseas activities, some may qualify for favourable tax treatment on investment activities.
- Any money transferred from the overseas branch to the resident entity is not normally considered to be a dividend.

5.8 Double taxation treaties

There are two different approaches to taxing entities in a country:

1. the territorial approach to taxation: each country has the right to tax income earned inside its borders;
2. the worldwide approach: claims the right to tax income arising outside its border if that income is received by a corporation deemed resident within the country.

The worldwide approach leads to double taxation as income will usually be taxed in the country where it is earned and again in the country where the holding entity is resident. For example, an entity resident in the UK will generally be liable to UK corporate income tax on its income from all sources worldwide. It may also be liable to overseas tax to the extent that its overseas activities fall within the tax net of other countries. Double-tax relief, as its name implies, exists to reduce the heavy tax burden so arising. In essence, its effect is to ensure that the taxpayer finally suffers tax at no more than the higher of the two, home or overseas tax rate.

Most countries applying the worldwide approach grant some form of relief from double taxation. Double tax relief is given according to the terms of double-tax agreements that a country has entered into, for example, the UK has entered into tax treaties with most countries in the world. In this section we are going to consider the principles followed in most double taxation agreements.

5.8.1 The OECD model tax convention

Cross-border investment would be seriously impeded if there was a danger that the returns on such investments were taxed twice. The OECD model and the worldwide network of tax treaties based upon it help to avoid that danger by providing clear consensual rules for taxing income and capital.

The OECD model tax treaty says that business profits of an entity of a contracting state shall be taxable only in that state unless the entity carries on a business in the other contracting state through a permanent establishment in that state. If the entity carries on business in the other state its business profits may be taxed in the other state to the extent that they are attributable to the permanent establishment.

5.8.1.1 Provisions for defining a permanent establishment

The OECD model in Article 5 paragraphs 1–3 contains the following definition:

1. For the purposes of this Convention, the term ‘permanent establishment’ means a fixed place of business through which the business of an entity is wholly or partly carried on.
2. The term ‘permanent establishment’ includes especially:
 - a) a place of management;
 - b) a branch;
 - c) an office;
 - d) a factory;
 - e) a workshop, and
 - f) a mine, an oil or gas well, a quarry or any other place of extraction of natural resources.
3. A building site or construction or installation project constitutes a permanent establishment only if it lasts more than twelve months.

If an entity has a permanent establishment in a country it can be taxed in that country causing a possible problem of double taxation.

5.8.2 Principles of relief for foreign taxes

Double taxation treaties can provide for the relief of foreign taxation by one of three possible methods:

- *Exemption:* The parties to the agreement set out the categories of income that are partially or completely exempt from tax in one country or the other.
- *Tax credit:* The treaty may allow the tax paid in one country to be allowed as a tax credit in the other country. Tax relief is therefore provided by deducting foreign tax suffered from tax due in the country of residence. This is by far the commonest form of relief. It will be given under a double-tax agreement or, if no such agreement exists some countries will give it unilaterally. If the foreign tax rate is higher than the country of residence rate, the tax relief will be limited to the tax due using the lower rate. Some tax in high taxation countries may not therefore be fully relieved.
- *Deduction:* It is almost always better for the taxpayer to claim the reliefs described above so that foreign tax suffered is deducted from tax due in the country of residence. There are a few instances when it will be preferable to make a claim to deduct the foreign tax from the foreign income and bring the net sum into charge to tax in the home country. This could be beneficial if, for example, the entity has a loss in the home country.

5.9 Summary

In this chapter, we have discussed the meaning of residence and permanent establishment. We have considered problems of double taxation and double taxation treaties as well as ways of mitigating double taxation.

Readings

5

The following is an extract of the relevant articles (those relating to personal tax and other items not on your syllabus have been excluded) from the OECD model. This is here to show you the level of detail and the topics covered in a taxation treaty between two countries. You need to be aware of the topics covered and the definitions used, but you do not need to learn the model and you will not be required to quote from the model in the examination.

Articles of the model convention with respect to taxes on income and on capital

[as they read on 28 January 2003]

CHAPTER I

SCOPE OF THE CONVENTION

Article 1

PERSONS COVERED

This Convention shall apply to persons who are residents of one or both of the Contracting States.

Article 2

TAXES COVERED

1. This Convention shall apply to taxes on income and on capital imposed on behalf of a Contracting State or of its political subdivisions or local authorities, irrespective of the manner in which they are levied.
2. There shall be regarded as taxes on income and on capital all taxes imposed on total income, on total capital, or on elements of income or of capital, including taxes on gains from the alienation of movable or immovable property, taxes on the total amounts of wages or salaries paid by entities, as well as taxes on capital appreciation.
3. The existing taxes to which the Convention shall apply are in particular:
 - a) (in State A):
 - b) (in State B):
4. The Convention shall apply also to any identical or substantially similar taxes that are imposed after the date of signature of the Convention in addition to, or in place of, the

existing taxes. The competent authorities of the Contracting States shall notify each other of any significant changes that have been made in their taxation laws.

CHAPTER II

DEFINITIONS

Article 3

GENERAL DEFINITIONS

1. For the purposes of this Convention, unless the context otherwise requires:
 - a) the term 'person' includes an individual, a company and any other body of persons;
 - b) the term 'company' means any body corporate or any entity that is treated as a body corporate for tax purposes;
 - c) the term 'entity' applies to the carrying on of any business;
 - d) the terms 'entity of a Contracting State' and 'entity of the other Contracting State' mean respectively an entity carried on by a resident of a Contracting State and an entity carried on by a resident of the other Contracting State;
 - e) the term 'international traffic' means any transport by a ship or aircraft operated by an entity that has its place of effective management in a Contracting State, except when the ship or aircraft is operated solely between places in the other Contracting State;
 - f) the term 'competent authority' means:
 - (i) (in State A):
 - (ii) (in State B):
 - g) the term 'national', in relation to a Contracting State, means:
 - (i) any individual possessing the nationality or citizenship of that Contracting State; and
 - (ii) any legal person, partnership or association deriving its status as such from the laws in force in that Contracting State;
 - h) the term 'business' includes the performance of professional services and of other activities of an independent character.
2. As regards the application of the Convention at any time by a Contracting State, any term not defined therein shall, unless the context otherwise requires, have the meaning that it has at that time under the law of that State for the purposes of the taxes to which the Convention applies, any meaning under the applicable tax laws of that State prevailing over a meaning given to the term under other laws of that State.

Article 4

RESIDENT

1. For the purposes of this Convention, the term 'resident of a Contracting State' means any person who, under the laws of that State, is liable to tax therein by reason of his domicile, residence, place of management or any other criterion of a similar nature, and also includes that State and any political subdivision or local authority thereof. This term, however, does not include any person who is liable to tax in that State in respect only of income from sources in that State or capital situated therein.
2. Where by reason of the provisions of paragraph 1 an individual is a resident of both Contracting States, then his status shall be determined as follows:
 - a) he shall be deemed to be a resident only of the State in which he has a permanent home available to him; if he has a permanent home available to him in both States, he

- shall be deemed to be a resident only of the State with which his personal and economic relations are closer (centre of vital interests);
- b) if the State in which he has his centre of vital interests cannot be determined, or if he has not a permanent home available to him in either State, he shall be deemed to be a resident only of the State in which he has an habitual abode;
 - c) if he has an habitual abode in both States or in neither of them, he shall be deemed to be a resident only of the State of which he is a national;
 - d) if he is a national of both States or of neither of them, the competent authorities of the Contracting States shall settle the question by mutual agreement.
3. Where by reason of the provisions of paragraph 1 a person other than an individual is a resident of both Contracting States, then it shall be deemed to be a resident only of the State in which its place of effective management is situated.

Article 5

PERMANENT ESTABLISHMENT

1. For the purposes of this Convention, the term 'permanent establishment' means a fixed place of business through which the business of an entity is wholly or partly carried on.
2. The term 'permanent establishment' includes especially:
 - a) a place of management;
 - b) a branch;
 - c) an office;
 - d) a factory;
 - e) a workshop, and
 - f) a mine, an oil or gas well, a quarry or any other place of extraction of natural resources.
3. A building site or construction or installation project constitutes a permanent establishment only if it lasts more than twelve months.
4. Notwithstanding the preceding provisions of this Article, the term 'permanent establishment' shall be deemed not to include:
 - a) the use of facilities solely for the purpose of storage, display or delivery of goods or merchandise belonging to the entity;
 - b) the maintenance of a stock of goods or merchandise belonging to the entity solely for the purpose of storage, display or delivery;
 - c) the maintenance of a stock of goods or merchandise belonging to the entity solely for the purpose of processing by another entity;
 - d) the maintenance of a fixed place of business solely for the purpose of purchasing goods or merchandise or of collecting information, for the entity;
 - e) the maintenance of a fixed place of business solely for the purpose of carrying on, for the entity any other activity of a preparatory or auxiliary character;
 - f) the maintenance of a fixed place of business solely for any combination of activities mentioned in subparagraphs a) to e), provided that the overall activity of the fixed place of business resulting from this combination is of a preparatory or auxiliary character.
5. Notwithstanding the provisions of paragraphs 1 and 2, where a person – other than an agent of an independent status to whom paragraph 6 applies – is acting on behalf of an entity and has, and habitually exercises, in a Contracting State an authority to conclude contracts in the name of the entity, that entity shall be deemed to have a permanent establishment in that State in respect of any activities which that person undertakes for

the entity, unless the activities of such person are limited to those mentioned in paragraph 4 which, if exercised through a fixed place of business, would not make this fixed place of business a permanent establishment under the provisions of that paragraph.

6. An entity shall not be deemed to have a permanent establishment in a Contracting State merely because it carries on business in that State through a broker, general commission agent or any other agent of an independent status, provided that such persons are acting in the ordinary course of their business.
7. The fact that a company which is a resident of a Contracting State controls or is controlled by a company which is a resident of the other Contracting State, or which carries on business in that other State (whether through a permanent establishment or otherwise), shall not of itself constitute either company a permanent establishment of the other.

CHAPTER III

TAXATION OF INCOME

Article 6

INCOME FROM IMMOVABLE PROPERTY

1. Income derived by a resident of a Contracting State from immovable property (including income from agriculture or forestry) situated in the other Contracting State may be taxed in that other State.
2. The term 'immovable property' shall have the meaning which it has under the law of the Contracting State in which the property in question is situated. The term shall in any case include property accessory to immovable property, livestock and equipment used in agriculture and forestry, rights to which the provisions of general law respecting landed property apply, usufruct of immovable property and rights to variable or fixed payments as consideration for the working of, or the right to work, mineral deposits, sources and other natural resources; ships, boats and aircraft shall not be regarded as immovable property.
3. The provisions of paragraph 1 shall apply to income derived from the direct use, letting, or use in any other form of immovable property.
4. The provisions of paragraphs 1 and 3 shall also apply to the income from immovable property of an entity.

Article 7

BUSINESS PROFITS

1. The profits of an entity of a Contracting State shall be taxable only in that State unless the entity carries on business in the other Contracting State through a permanent establishment situated therein. If the entity carries on business as aforesaid, the profits of the entity may be taxed in the other State but only so much of them as is attributable to that permanent establishment.
2. Subject to the provisions of paragraph 3, where an entity of a Contracting State carries on business in the other Contracting State through a permanent establishment situated therein, there shall in each Contracting State be attributed to that permanent establishment the profits which it might be expected to make if it were a distinct and

separate entity engaged in the same or similar activities under the same or similar conditions and dealing wholly independently with the entity of which it is a permanent establishment.

3. In determining the profits of a permanent establishment, there shall be allowed as deductions expenses which are incurred for the purposes of the permanent establishment, including executive and general administrative expenses so incurred, whether in the State in which the permanent establishment is situated or elsewhere.
4. Insofar as it has been customary in a Contracting State to determine the profits to be attributed to a permanent establishment on the basis of an apportionment of the total profits of the entity to its various parts, nothing in paragraph 2 shall preclude that Contracting State from determining the profits to be taxed by such an apportionment as may be customary; the method of apportionment adopted shall, however, be such that the result shall be in accordance with the principles contained in this Article.
5. No profits shall be attributed to a permanent establishment by reason of the mere purchase by that permanent establishment of goods or merchandise for the entity.
6. For the purposes of the preceding paragraphs, the profits to be attributed to the permanent establishment shall be determined by the same method year by year unless there is good and sufficient reason to the contrary.
7. Where profits include items of income which are dealt with separately in other Articles of this Convention, then the provisions of those Articles shall not be affected by the provisions of this Article.

Article 10

DIVIDENDS

1. Dividends paid by a company which is a resident of a Contracting State to a resident of the other Contracting State may be taxed in that other State.
2. However, such dividends may also be taxed in the Contracting State of which the company paying the dividends is a resident and according to the laws of that State, but if the beneficial owner of the dividends is a resident of the other Contracting State, the tax so charged shall not exceed:
 - a) 5 per cent of the gross amount of the dividends if the beneficial owner is a company (other than a partnership) which holds directly at least 25 per cent of the capital of the company paying the dividends;
 - b) 15 per cent of the gross amount of the dividends in all other cases.The competent authorities of the Contracting States shall by mutual agreement settle the mode of application of these limitations.

This paragraph shall not affect the taxation of the company in respect of the profits out of which the dividends are paid.
3. The term 'dividends' as used in this Article means income from shares, 'jouissance' shares or 'jouissance' rights, mining shares, founders' shares or other rights, not being debt-claims, participating in profits, as well as income from other corporate rights which is subjected to the same taxation treatment as income from shares by the laws of the State of which the company making the distribution is a resident.
4. The provisions of paragraphs 1 and 2 shall not apply if the beneficial owner of the dividends, being a resident of a Contracting State, carries on business in the other Contracting State of which the company paying the dividends is a resident through a

permanent establishment situated therein and the holding in respect of which the dividends are paid is effectively connected with such permanent establishment. In such case the provisions of Article 7 shall apply.

5. Where a company which is a resident of a Contracting State derives profits or income from the other Contracting State, that other State may not impose any tax on the dividends paid by the company, except insofar as such dividends are paid to a resident of that other State or insofar as the holding in respect of which the dividends are paid is effectively connected with a permanent establishment situated in that other State, nor subject the company's undistributed profits to a tax on the company's undistributed profits, even if the dividends paid or the undistributed profits consist wholly or partly of profits or income arising in such other State.

Article 11

INTEREST

1. Interest arising in a Contracting State and paid to a resident of the other Contracting State may be taxed in that other State.
2. However, such interest may also be taxed in the Contracting State in which it arises and according to the laws of that State, but if the beneficial owner of the interest is a resident of the other Contracting State, the tax so charged shall not exceed 10 per cent of the gross amount of the interest. The competent authorities of the Contracting States shall by mutual agreement settle the mode of application of this limitation.
3. The term 'interest' as used in this Article means income from debt-claims of every kind, whether or not secured by mortgage and whether or not carrying a right to participate in the debtor's profits, and in particular, income from government securities and income from bonds or debentures, including premiums and prizes attaching to such securities, bonds or debentures. Penalty charges for late payment shall not be regarded as interest for the purpose of this Article.
4. The provisions of paragraphs 1 and 2 shall not apply if the beneficial owner of the interest, being a resident of a Contracting State, carries on business in the other Contracting State in which the interest arises through a permanent establishment situated therein and the debt-claim in respect of which the interest is paid is effectively connected with such permanent establishment. In such case the provisions of Article 7 shall apply.
5. Interest shall be deemed to arise in a Contracting State when the payer is a resident of that State. Where, however, the person paying the interest, whether he is a resident of a Contracting State or not, has in a Contracting State a permanent establishment in connection with which the indebtedness on which the interest is paid was incurred, and such interest is borne by such permanent establishment, then such interest shall be deemed to arise in the State in which the permanent establishment is situated.
6. Where, by reason of a special relationship between the payer and the beneficial owner or between both of them and some other person, the amount of the interest, having regard to the debt-claim for which it is paid, exceeds the amount which would have been agreed upon by the payer and the beneficial owner in the absence of such relationship, the provisions of this Article shall apply only to the last-mentioned amount. In such case, the excess part of the payments shall remain taxable according to the laws

of each Contracting State, due regard being had to the other provisions of this Convention.

Article 12

ROYALTIES

1. Royalties arising in a Contracting State and beneficially owned by a resident of the other Contracting State shall be taxable only in that other State.
2. The term 'royalties' as used in this Article means payments of any kind received as a consideration for the use of, or the right to use, any copyright of literary, artistic or scientific work including cinematograph films, any patent, trade mark, design or model, plan, secret formula or process, or for information concerning industrial, commercial or scientific experience.
3. The provisions of paragraph 1 shall not apply if the beneficial owner of the royalties, being a resident of a Contracting State, carries on business in the other Contracting State in which the royalties arise through a permanent establishment situated therein and the right or property in respect of which the royalties are paid is effectively connected with such permanent establishment. In such case the provisions of Article 7 shall apply.
4. Where, by reason of a special relationship between the payer and the beneficial owner or between both of them and some other person, the amount of the royalties, having regard to the use, right or information for which they are paid, exceeds the amount which would have been agreed upon by the payer and the beneficial owner in the absence of such relationship, the provisions of this Article shall apply only to the last-mentioned amount. In such case, the excess part of the payments shall remain taxable according to the laws of each Contracting State, due regard being had to the other provisions of this Convention.

Article 13

CAPITAL GAINS

1. Gains derived by a resident of a Contracting State from the alienation of immovable property referred to in Article 6 and situated in the other Contracting State may be taxed in that other State.
2. Gains from the alienation of movable property forming part of the business property of a permanent establishment which an entity of a Contracting State has in the other Contracting State, including such gains from the alienation of such a permanent establishment (alone or with the whole entity), may be taxed in that other State.
3. Gains from the alienation of ships or aircraft operated in international traffic, boats engaged in inland waterways transport or movable property pertaining to the operation of such ships, aircraft or boats, shall be taxable only in the Contracting State in which the place of effective management of the entity is situated.
4. Gains derived by a resident of a Contracting State from the alienation of shares deriving more than 50 per cent of their value directly or indirectly from immovable property situated in the other Contracting State may be taxed in that other State.
5. Gains from the alienation of any property, other than that referred to in paragraphs 1, 2, 3 and 4, shall be taxable only in the Contracting State of which the alienator is a resident.

CHAPTER IV

TAXATION OF CAPITAL

Article 22

CAPITAL

1. Capital represented by immovable property referred to in Article 6, owned by a resident of a Contracting State and situated in the other Contracting State, may be taxed in that other State.
2. Capital represented by movable property forming part of the business property of a permanent establishment which an entity of a Contracting State has in the other Contracting State may be taxed in that other State.
3. Capital represented by ships and aircraft operated in international traffic and by boats engaged in inland waterways transport, and by movable property pertaining to the operation of such ships, aircraft and boats, shall be taxable only in the Contracting State in which the place of effective management of the entity is situated.
4. All other elements of capital of a resident of a Contracting State shall be taxable only in that State.

CHAPTER V

METHODS FOR ELIMINATION OF DOUBLE TAXATION

Article 23 A

EXEMPTION METHOD

1. Where a resident of a Contracting State derives income or owns capital which, in accordance with the provisions of this Convention, may be taxed in the other Contracting State, the first-mentioned State shall, subject to the provisions of paragraphs 2 and 3, exempt such income or capital from tax.
2. Where a resident of a Contracting State derives items of income which, in accordance with the provisions of Articles 10 and 11, may be taxed in the other Contracting State, the first-mentioned State shall allow as a deduction from the tax on the income of that resident an amount equal to the tax paid in that other State. Such deduction shall not, however, exceed that part of the tax, as computed before the deduction is given, which is attributable to such items of income derived from that other State.
3. Where in accordance with any provision of the Convention income derived or capital owned by a resident of a Contracting State is exempt from tax in that State, such State may nevertheless, in calculating the amount of tax on the remaining income or capital of such resident, take into account the exempted income or capital.
4. The provisions of paragraph 1 shall not apply to income derived or capital owned by a resident of a Contracting State where the other Contracting State applies the provisions of the Convention to exempt such income or capital from tax or applies the provisions of paragraph 2 of Article 10 or 11 to such income.

Article 23 B

CREDIT METHOD

1. Where a resident of a Contracting State derives income or owns capital which, in accordance with the provisions of this Convention, may be taxed in the other Contracting State, the first-mentioned State shall allow:
 - a) as a deduction from the tax on the income of that resident, an amount equal to the income tax paid in that other State;
 - b) as a deduction from the tax on the capital of that resident, an amount equal to the capital tax paid in that other State. Such deduction in either case shall not, however, exceed that part of the income tax or capital tax, as computed before the deduction is given, which is attributable, as the case may be, to the income or the capital which may be taxed in that other State.
2. Where in accordance with any provision of the Convention income derived or capital owned by a resident of a Contracting State is exempt from tax in that State, such State may nevertheless, in calculating the amount of tax on the remaining income or capital of such resident, take into account the exempted income or capital.

Revision Questions

5

? Question 1

Which of the following could NOT be used to indicate an organisation is resident in a country?

- (A) Place of effective management
- (B) Buying or selling goods in a country
- (C) Place of incorporation
- (D) Close economic relations with a country

(2 marks)

? Question 2

In no more than 15 words define the meaning of a 'branch'.

(2 marks)

? Question 3

Which of the following would NOT normally be subject to a withholding tax?

- (A) Rents
- (B) Dividends
- (C) Interest
- (D) Profits

(2 marks)

? Question 4

A double taxation treaty between two countries usually allows relief of foreign tax through a number of methods. Which one of the following is NOT a method of relieving foreign tax?

- (A) Refund
- (B) Exemption
- (C) Tax credits
- (D) Deduction

(2 marks)



Question 5

The OECD model tax convention defines a permanent establishment to include a number of different types of establishments:

- (i) A place of management
- (ii) A warehouse
- (iii) A workshop
- (iv) A quarry
- (v) A building site that was used for 9 months

Which of the above are included in the OECD's list of permanent establishments?

- (A) (i), (ii) and (iii) only
- (B) (i), (iii) and (iv) only
- (C) (ii), (iii) and (iv) only
- (D) (iii), (iv) and (v) only

(2 marks)

Solutions to Revision Questions

5

 **Solution 1**

The correct answer is (B), see Section 5.3.

 **Solution 2**

A branch of the entity is merely an extension of the entity's business, see Section 5.7.

 **Solution 3**

The correct answer is (D), see Section 5.5.

 **Solution 4**

The correct answer is (A), see Section 5.8.2.

 **Solution 5**

The correct answer is (B), see Section 5.8.1.1.

Taxation in Financial Statements



LEARNING OUTCOME

After completing this chapter you should be able to:

- ▶ explain and apply the accounting rules contained in IAS 12 for current and deferred taxation.

The syllabus topics covered in this chapter are as follows:

- Accounting treatment of taxation and disclosure requirements under IAS 12.

6.1 Introduction

In this chapter we will discuss the treatment of taxation in financial statements. The taxation system will vary from country to country, so this chapter focuses on the general principles of accounting for tax as prescribed in IAS 12 *Income Taxes*.



Questions requiring the preparation of financial statements almost always require some calculation or adjustment to tax. The calculation of current tax or deferred tax may also feature as a five mark question or as an objective test question.

Tax in financial statements may consist of three elements:

- current tax expense;
- adjustments to tax charges of prior periods (results of over/under provisions);
- transfers to or from deferred tax.

We will discuss each of these elements in turn.



IAS 12 refers to *Income taxes*, this means any taxes on profits and gains payable by the entity, including corporate income taxes and capital gains tax.

6.2 Calculation of current tax

IAS 12 includes the following definitions:

- *Current tax*: The amount of income taxes payable (recoverable) in respect of the taxable profit (loss) for a period.
- *Taxable profit(loss)*: Profit (loss) for a period, determined in accordance with the local tax authorities rules, upon which income taxes are payable (recoverable).
- *Tax expense*: The total of income tax for the period plus any charge in respect of deferred tax.

As we have seen in earlier chapters the tax system will vary from country to country. In Chapter 2, we considered types of income and systems of corporate income tax. We also looked at different methods of calculating taxable profits. We will now use this knowledge to move on to discuss taxation in financial statements.

There is one further aspect to consider when calculating current tax, that is, different ways of treating the tax on dividend income received by an entity. IAS 12 does not specifically mention how entities should deal with dividend income but the general principle is acknowledged.

There are two ways of treating dividends received in the financial statements:

1. The dividend received has already suffered tax and is not usually taxed again in the hands of the receiving entity, so the dividend is ignored when calculating taxable profits. To calculate the current tax simply apply the income tax rate to the entity's taxable profits.
2. The dividend is grossed up and the recipient of the dividend shows the gross equivalent of the dividend received as a credit in the income statement and includes the tax on the dividend as part of the tax charge for the year.



Any examination question should specify how tax is to be calculated if it does not use the first method.

6.3 Accounting for current tax

Once calculated the income tax payable will be recorded as an expense in the income statement. The tax is normally recorded and paid at a later date, the amount which remains unpaid should be shown separately under current liabilities. The income tax charge is recorded as:

Debit	Income tax expense (Income statement)
Credit	Income tax liability (Balance sheet)

Being the recording of the income tax expense for the year.

The tax calculated for the current year is estimated by the entity for the period. However, the actual amount that is paid some time later may be slightly different than the estimate. In this case there will be an over or under provision of tax for prior periods. This difference will adjust the current tax charge that is included in the tax expense for the current period.

Example 6.A

The current tax charge for 20X1 is estimated at \$36,000. This amount is recorded in the income statement for the year ended 31 December 20X1:

Debit	Income tax expense	\$36,000
Credit	Income tax liability	\$36,000
Being the recording of the income tax expense for the year.		

The actual amount paid on 27 March 20X2 is \$35,005. The payment is recorded as:

Debit	Income tax liability	\$35,005
Credit	Bank	\$35,005
Being the payment of the income tax expense for 20X1		

In 20X1 a liability of \$36,000 was created and the following period \$35,005 was debited against it. This leaves \$995 included within the liability account.

This overprovision of income taxes will adjust the income tax expense that is recorded in the 20X2 income statement. Let us assume the tax charge for 20X2 is estimated at \$40,000. The liability that must be included in the financial statements is \$40,000 because that is what we are expecting to pay in early 20X3. However, there is already a liability amount existing of \$995 and so the liability only requires to be increased by a further \$39,005.

The current tax charge (including the expense for 20X2 and the adjustment for 20X1) can be recorded as one entry:

Debit	Income tax expense	\$39,005
Credit	Income tax liability	\$39,005
Being the recording of the income tax expense for 20X2.		

Or as two entries:

Debit	Income tax expense	\$40,000
Credit	Income tax liability	\$40,000
Being the recording of the income tax expense for 20X2.		

Debit	Income tax liability	\$995
Credit	Income tax expense	\$995
Being the reversal of the overprovision from 20X1.		

6.4 Calculation of deferred tax**6.4.1 Introduction to deferred tax**

Deferred taxation arises from differences between profit calculated for accounting purposes and profit for tax purposes. Differences may arise from temporary or permanent factors.

6.4.1.1 Permanent difference

Where an expense charged in the income statement is not allowed for income tax purposes, a permanent difference occurs. This difference will not reverse in future periods and need only be accounted for in the tax computation. In the case of a disallowable expense the amount of the expense will be added back to profits in arriving at taxable profits within the computation (see disallowed expenses in Section 2.2).

6.4.1.2 Temporary difference

A temporary difference arises when an expense is allowed for both accounting and tax purposes, but there is a difference in the timing of the allowance. Consider the tax relief given for capital expenditure. In many countries relief for tax purposes is given at a faster

rate than most entities chose for accounting for depreciation in the financial statements. In Section 2.2.3.1, we looked at the need for tax depreciation to be used instead of accounting depreciation. The effect of using tax depreciation may be that in the first year the tax depreciation exceeds the accounting depreciation, giving a lower tax charge, since accounting depreciation is added back to accounting profit and tax depreciation is then deducted in arriving at taxable profits for taxation purposes. In subsequent periods tax depreciation is likely to fall below the accounting depreciation charge and result in future increased taxes payable. It is the likelihood of a future tax liability that drives the need for some provision for this tax that is being deferred to future periods.

Example 6.B

An item of plant and machinery is purchased by U in 20X0 for \$300,000. The asset's estimated useful life is 6 years, following which it will have no residual value. Plant and machinery is depreciated on a straight line basis.

Tax depreciation for this item is given at 25% on the straight line basis for the first 4 years.

Let us first calculate the figures that would appear in the *financial statements* over the 6-year life of the asset:

	20X0	20X1	20X2	20X3	20X4	20X5
	\$000	\$000	\$000	\$000	\$000	\$000
Financial statements						
Opening carrying value	300	250	200	150	100	50
Accounting depreciation charge	<u>50</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>50</u>
Carrying value (balance sheet date)	<u>250</u>	<u>200</u>	<u>150</u>	<u>100</u>	<u>50</u>	<u>0</u>

Depreciation is charged at \$50,000 per annum (\$300,000/6 years).

Now let us look at how this asset would be treated for *tax purposes*:

	20X0	20X1	20X2	20X3	20X4	20X5
	\$000	\$000	\$000	\$000	\$000	\$000
Tax computation						
Carrying value	300	225	150	75	0	0
Tax depreciation	<u>75</u>	<u>75</u>	<u>75</u>	<u>75</u>	<u>0</u>	<u>0</u>
(Tax written down value)	<u>225</u>	<u>150</u>	<u>75</u>	<u>0</u>	<u>0</u>	<u>0</u>

We can see from comparing the two above tables that the carrying value of the asset per the accounts differs from the tax written down value. The annual reduction in the carrying value applied by the entity (that is accounting depreciation) differs from the reduction applied in the tax computation. By the end of the asset's useful life the two have caught up, as they both show the asset with a carrying value of 0, but the different treatment over the 6 years creates the accounting problem that is known as deferred tax.

There are generally two ways to look at the need for deferred tax:

- the timing difference approach;
- the temporary difference approach.

6.4.2 Timing difference approach

The timing difference approach focuses on the impact to the income statement by calculating the amount of tax payable on income accounted for to date. Using the data from Example 6.B, we can see that tax depreciation is given in advance of accounting depreciation being charged. In arriving at taxable profit we add back accounting depreciation and deduct tax depreciation. Let us look at the impact this has on the income statement.

Example 6.C

Assume that accounting profit for each of the years is \$400,000 and the tax rate is 30%. We would expect to pay \$120,000 in tax in each year. However, we have invested in plant and machinery and have been granted tax depreciation in respect of this item, so the calculation of taxable profits for 20X0 is as follows;

	20X0
	\$000
Tax computation	
Accounting profit	400
Add back accounting depreciation charge	50
	<u>450</u>
Less tax depreciation	(75)
Taxable profits	<u>375</u>
Tax at 30%	<u>112.5</u>

We pay \$112,500 in tax as opposed to \$120,000 because we have capital investment which has earned tax depreciation in the early years. The situation reverses in future years however when tax depreciation falls to \$0 and accounting depreciation is still being charged to the income statement.

Profits of \$400,000 in 20X4 and a tax rate of 30%, would result in tax to pay of \$120,000. However the taxable profits would be calculated as:

	20X4
	\$000
Tax computation	
Accounting profit	400
Add back accounting depreciation charge	50
	<u>450</u>
Tax at 30%	<u>135</u>

The tax payable has increased from \$120,000 to \$135,000 due to the add back of accounting depreciation.

The accounting treatment prudently requires that in the early years when tax depreciation exceeds accounting depreciation and the taxable profits are reduced, that we provide for the future increased taxable profits by creating a provision for deferred tax and releasing this provision to cover the increased tax charge when tax depreciation falls below the accounting depreciation charge.

6.4.3 Temporary difference approach

The second approach to deferred tax focuses on the balance sheet impact of the differences and calculates the tax that would have been paid if the net assets of the entity were realised at book value at the balance sheet date. A temporary difference is the difference between the carrying amount of an asset or liability in the balance sheet and its tax base (its value for tax purposes).

It is this approach that is adopted by IAS 12 for the recognition and measurement of deferred tax assets and liabilities and therefore we will concentrate on this approach for the remainder of the chapter.

Example 6.D

Let us use the information from example 6.B:

An item of plant and machinery is purchased by U in 20X0 for \$300,000. The asset's estimated useful life is 6 years, following which it will have no residual value. Plant and machinery is depreciated on a straight line basis. Tax depreciation for this item is given at 25% on a straight line basis for the first 4 years.

The figures for accounting and for taxation purposes would be as follows (from example 6B):

	20X0 \$000	20X1 \$000	20X2 \$000	20X3 \$000	20X4 \$000	20X5 \$000
Financial statements						
Opening carrying value	300	250	200	150	100	50
Accounting depreciation charge	<u>50</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>50</u>
Carrying value (balance sheet date)	<u>250</u>	<u>200</u>	<u>150</u>	<u>100</u>	<u>50</u>	<u>0</u>
Tax computation						
Carrying value	300	225	150	75	0	0
Tax depreciation	<u>75</u>	<u>75</u>	<u>75</u>	<u>75</u>	<u>0</u>	<u>0</u>
Tax written down value	<u>225</u>	<u>150</u>	<u>75</u>	<u>0</u>	<u>0</u>	<u>0</u>
Taxable temporary differences						
Carrying value (per accounts)	250	200	150	100	50	0
Tax written down value	<u>225</u>	<u>150</u>	<u>75</u>	<u>0</u>	<u>0</u>	<u>0</u>
Temporary difference	<u>25</u>	<u>50</u>	<u>75</u>	<u>100</u>	<u>50</u>	<u>0</u>

The provision for deferred tax under the temporary difference method is based on what tax would become payable if the assets were realised at book value at the balance sheet date. We compare the carrying value of the item per the accounts with the tax base, which is the value of the item for tax purposes (which in the case of fixed assets is usually the tax written down value).

Example 6.E

Using data in example 6D to illustrate the deferred tax impact.

The asset purchased above by U is sold at the end of 20X2 for \$180,000 when the carrying value of the asset is \$150,000 and the tax written down value is \$75,000. The taxable profit and resulting tax charge are calculated as follows:

<i>Accounting profit</i>	<i>\$000</i>	<i>Tax computation</i>	<i>\$000</i>
Proceeds	180	Proceeds	180
Carrying value 20X2	<u>150</u>	Tax written down value 20X2	<u>75</u>
Accounting profit	<u>30</u>	Profit per tax computation	<u>105</u>
Tax on profit at 30%	<u>9</u>	Tax on profit at 30%	<u>31.5</u>

Based on the accounting records we would expect to earn \$30,000 profit on sale of the asset. However due to accelerated tax depreciation, the tax written down value is considerably lower than the book value and so the gain on sale that would be recognised for tax purposes is \$31,500. The additional \$22,500 (\$31,500 – \$9,000) tax that would be payable if the asset was sold must be provided for under the temporary differences method.

The table below shows the movement on the deferred tax liability account in the balance sheet and the charge/(release) to the income statement in each of the six years of the asset's useful life.

	20X0 \$000	20X1 \$000	20X2 \$000	20X3 \$000	20X4 \$000	20X5 \$000
Temporary differences						
Carrying value (per accounts)	250	200	150	100	50	0
Tax written down value	<u>225</u>	<u>150</u>	<u>75</u>	<u>0</u>	<u>0</u>	<u>0</u>
Temporary difference	<u>25</u>	<u>50</u>	<u>75</u>	<u>100</u>	<u>50</u>	<u>0</u>
Deferred tax provision required (at a rate of 30%)	<u>7.5</u>	<u>15</u>	<u>22.5</u>	<u>30</u>	<u>15</u>	<u>0</u>

The provision for deferred tax increases in the first four years of the asset's life. This is the period that tax depreciation is applied which causes differences between the balance sheet carrying value and the tax written down value. This taxable temporary difference then reduces in the last two years as the book value reduces to the asset's residual value of nil.

The deferred tax provision required is calculated at the tax rate (in this case 30%). This provision represents the additional tax the entity would pay on the gain if the asset was sold any time within its useful life, based on the tax written down value as opposed to the asset's book value.

6.4.3.1 Tax base

IAS 12 states that a temporary difference is the difference between the carrying value of an asset or liability and its tax base. The tax base is the amount attributed to that asset or liability for tax purposes. Consider the four scenarios below:

1. *Non-current assets:* The detailed illustration above dealt with a tax-deductible non-current asset. Its tax base was the tax written down value at the balance sheet date. This is normally the case for non-current assets.
2. *Revalued non-current assets:* The temporary difference is defined as the difference between the carrying value of an asset and its tax base. As the tax base will remain the same an upwards revaluation of a non-current asset will result in an increase in the deferred taxation provision.
3. *Accrued interest:* An entity has recorded accrued interest receivable of \$5,000 in its accounts to 31 December 20X1. The interest receivable will only be taxed, however, when it is received. At 31 December 20X1 the asset has a tax base of nil and a carrying value (the value included in receivables in the balance sheet) of \$5,000. At 31 December 20X1 a temporary difference of \$5,000 occurs. A deferred tax provision is required in respect of this difference of \$1,500 (\$5,000 at a rate of 30%).
4. *Pension costs:* In the year ended 30 June 20X3 an entity made provision for unfunded pension costs of \$400,000. Tax relief on this item will be given when the retirement benefits are actually paid. The carrying value of the liability is \$400,000 at 30 June 20X3, however the tax base of the liability at that date is nil. It has no amount attributed to it for tax purposes until the liability is settled (when the benefits are actually paid). This creates a deductible temporary difference at 30 June 20X3 and a deferred tax asset must be recognised in the accounts. Assuming a rate of 30%, the deferred tax asset of \$120,000 would be included in the balance sheet.

6.4.4 Deferred tax assets

Deferred tax assets arising from deductible temporary differences should be recognised in the financial statements provided that it is probable that future taxable profits will be available for this asset to be utilised.

A deferred tax asset can arise from the following:

- deductible temporary difference,
- unused tax losses,
- unused tax credits.

A *deductible* temporary difference is a temporary difference that will result in a deduction from future taxable profits when sold or realised, for example the pension costs referred to above that will be given tax relief when the benefits are paid. (This is in contrast to the *taxable* temporary difference that was created by the tax depreciation given on the purchase of the fixed asset which if sold would create an additional tax charge on the increased gain on sale.)

6.4.5 Tax losses

Some tax authorities may permit the tax effect of losses to be carried forward and offset against future taxable profits. IAS 12 requires that these unused tax credits be recognised as

assets, where it is probable that the entity will make future profits against which these losses can be offset.

Example 6.F

In 20X1 Delta made losses of \$20,000. The associated tax credit on the losses (assuming a rate of 30%) is \$6,000. This will be recorded in 20X1 as:

Dr	Income tax deferred asset (balance sheet)	\$6,000
Cr	Tax credit (income statement)	\$6,000

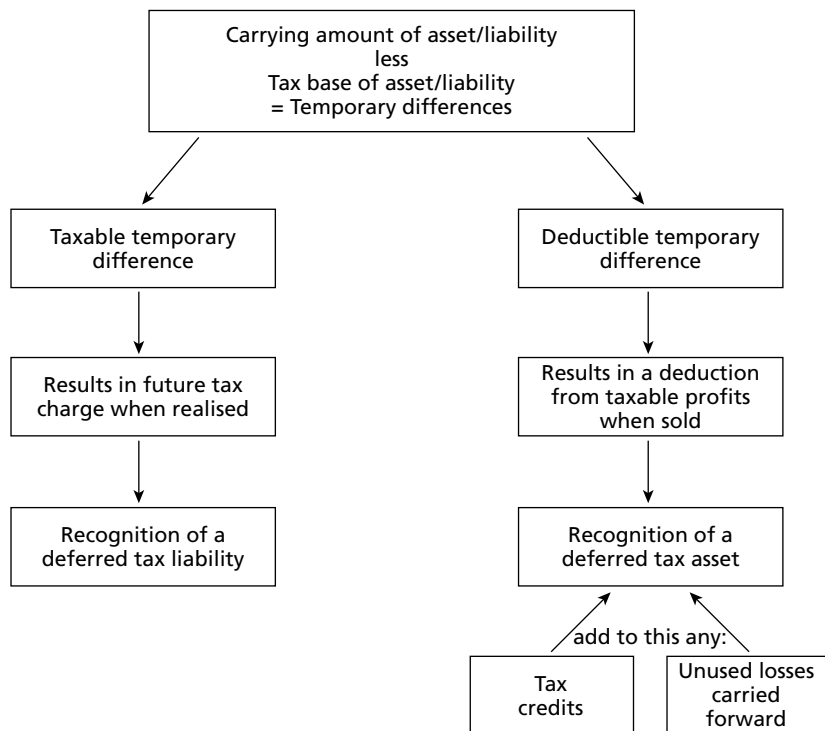
Being the recording of the income tax credit for 20X1.

In 20X2, Delta made profits of \$24,000. The tax charge for 20X2 is calculated as $30\% \times \$24,000 = \$7,200$. Delta can offset the tax on the 20X1 losses against the tax on the 20X2 profits. This will be recorded as:

Dr	Income tax expense	\$7,200
Cr	Income tax deferred credit	\$6,000
Cr	Income tax liability	\$1,200

Being the recording of the income tax expense for 20X2.

In summary, the calculation of deferred tax assets and liabilities is as follows:



6.5 Accounting for deferred tax

Once the deferred tax position has been calculated the accounting treatment is relatively straight forward. In the case of a deferred tax liability the provision is created or increased by:

Dr	Income tax charge (Income statement)
Cr	Deferred tax provision (Balance sheet)

Any reduction or release of the provision is recorded as:

Dr	Deferred tax provision (Balance sheet)
Cr	Income tax charge (Income statement)

Consider the deferred tax position created in example 6D where temporary differences result from accelerated tax depreciation for the purchase of plant and machinery:

	20X0	20X1	20X2	20X3	20X4	20X5
	\$000	\$000	\$000	\$000	\$000	\$000
Temporary difference						
Carrying value (per accounts)	250	200	150	100	50	0
Tax written down value	<u>225</u>	<u>150</u>	<u>75</u>	<u>0</u>	<u>0</u>	<u>0</u>
Temporary difference	<u>25</u>	<u>50</u>	<u>75</u>	<u>100</u>	<u>50</u>	<u>0</u>
Deferred tax provision required (at a rate of 30%)	<u>7.5</u>	<u>15</u>	<u>22.5</u>	<u>30</u>	<u>15</u>	<u>0</u>
Charge (credit) to income statement in respect of changes in the deferred tax provision	<u>7.5</u>	<u>7.5</u>	<u>7.5</u>	<u>7.5</u>	<u>(15)</u>	<u>(15)</u>

The deferred tax provision required in 20X0 is \$7,500. This will be recorded as:

Dr	Income tax charge (Income statement)	\$7,500
Cr	Deferred tax provision (Balance sheet)	\$7,500

Being the deferred tax provision in respect of plant and machinery

In 20X1 to 20X3 the provision requires to be increased by \$7,500 in each of these years and so the journal above will occur in 20X1, 20X2 and 20X3.

In 20X4 the required provision at 31 December is \$15,000, however the existing liability in the balance sheet is \$30,000. The reduction of the provision from \$30,000 to \$15,000 creates a release to the income statement of \$15,000. It will be recorded as:

Dr	Deferred tax provision (Balance sheet)	\$15,000
Cr	Income tax charge (Income statement)	\$15,000

The same journal entry will be required in 20X5 as the provision is reduced from \$15,000 to nil.

6.6 Income tax charge

The income tax charge that appears in the income statement will include the following:

- the tax charge for the year (estimated based on profits);
- any under/overprovision of income tax from previous year;
- any increase in/release from the provision for deferred tax.

The balance sheet will include a current liability for income tax that will be paid in the following period. The liability will be for the estimated amount. When the tax is actually paid then this will lead to an over/under provision of income tax, discussed earlier at Section 6.3.

The balance sheet will also include any deferred tax liabilities or assets.

6.7 Disclosure

IAS 12 disclosure requirements include the following:

- the major components of tax expense should be disclosed separately (for example current tax expense, adjustments for overprovision, amount for deferred tax expense or release, etc);
- tax expense relating to extraordinary items;
- tax expense relating to discontinuing operations;
- an explanation of the difference between accounting and taxable profits;
- details of temporary differences and the amount of deferred tax assets and liabilities that have been recognised in the financial statements as a result of those differences.

6.8 Summary

Having completed this chapter we can now account for current tax, including adjustments for over/under provisions.

We can explain the need for deferred tax, calculate the required provision or asset and account for it in the financial statements. We can also explain the main disclosure requirements of IAS 12 in respect of current and deferred tax.

Revision Questions



? Question 1

The corporate income tax estimate for the current year is \$420,000. The settlement of corporate income tax due for last year resulted in a credit balance of \$10,000 outstanding on the income tax account. Deferred tax was estimated to require an increase of \$18,000 in the balance sheet provision. The corporate income tax charge for the year in the income statement and the current liability due in less than one year, corporate income tax on the balance sheet should be:

	Income statement	Balance Sheet
(A)	\$448,000	\$430,000
(B)	\$412,000	\$410,000
(C)	\$428,000	\$420,000
(D)	\$392,000	\$420,000

(3 marks)

? Question 2

Timing differences arise because of:

- (A) the timing of the entity's tax payments
- (B) the time of year when a transaction occurs
- (C) expenses are charged to the income statement in one period and to taxable profits in another period
- (D) some items of expenditure are disallowed for tax purposes.

(2 marks)

? Question 3

An asset cost \$200,000 and had an estimated useful life of ten years, with no residual value. Accounting depreciation was calculated on the straight-line basis. Capital allowances were given at 25 per cent on a reducing balance basis. Assume corporate income tax at 30 per cent. At the end of the second year of operation the deferred tax provision on the balance sheet should be:

- (A) \$9,000
- (B) \$14,250

- (C) \$18,000
 (D) \$47,500

(2 marks)

? Question 4

List the three elements included in the heading 'Income tax expenses' in the income statement. (3 marks)

? Question 5

In no more than 30 words define the meaning of 'permanent difference'. (2 marks)

? Question 6

WS prepares its financial statements to 30 June. The following profits were recorded from 20X1 to 20X3:

20X1	\$100,000
20X2	\$120,000
20X3	\$110,000

The entity provides for tax at a rate of 30% and incorporates this figure in the year end accounts. The actual amounts of tax paid in respect of 20X1 and 20X2 were \$28,900 and \$37,200.

Requirements

- Calculate the tax charge for each of the three years and prepare the accounting entries to record the tax charge and the subsequent payments of tax.
- Prepare extracts from the income statement and balance sheet of WS for each of the 3 years, showing the tax charge and tax liability. (5 marks)

? Question 7

On 1 January 20X2 C had a credit balance brought forward on its deferred tax account of \$1.5m. There was also an opening credit balance of \$4,000 on its income taxation account, representing the remaining balance after settling the liability for the year ended 31 December 20X1. The entity has made profits in 20X2 of \$3m that are subject to a tax rate of 30%. The deferred tax provision required is estimated at \$1.7m at 31 December 20X2.

Requirements

- Calculate the income tax charge that will appear in the income statement for 20X2 and prepare the accounting entries to record the current income tax charge and any movement on the deferred tax account.
- Prepare the extracts from the balance sheet for the year ended 31 December 20X2 in respect of income tax and deferred tax. (5 marks)

? Question 8

S purchases an item of plant and machinery costing \$400,000 in 20X0 which qualifies for 50% capital allowances in the first two years. S's policy in respect of plant and machinery is to charge depreciation on a straight line basis over 4 years.

Requirement

Assuming there are no other capital transactions in the period and a tax rate of 30% over the 4 years, calculate the income statement and balance sheet impact of deferred tax from 20X0 to 20X3. **(4 marks)**

? Question 9

HW buys an asset in 20X1 costing \$80,000 that qualifies for an immediate 100% tax relief on cost. HW plans to depreciate the asset on a straight line basis over 4 years. HW has accrued \$30,000 for tax due for the year ended 31 December 20X1.

In 20X2 HW makes \$120,000 profit that is subject to tax at 30%. During the year \$28,600 is paid in respect of tax on profits of 20X1. There were no additions to non-current assets in the year.

Requirements

Calculate the tax charge for 20X2 and any movement in deferred tax for the year.

Draft the extracts from the income statement and balance sheet in respect of income tax and deferred tax. **(5 marks)**

? Question 10

RS has two accounting adjustments in 20X2 that create temporary differences for deferred tax purposes:

- (i) At the year end \$40,000 of accrued interest receivable has been included in the accounts. It is expected to be received in Spring 20X3 and it will be taxed only on receipt.
- (ii) A provision of \$80,000 has been made for unfunded pension costs. Tax relief on this will be given only when the retirement benefits are actually paid.

Requirement

Calculate the deferred tax impact of these adjustments for the year end accounts of RS, assuming an effective tax rate of 30%. **(3 marks)**

? Question 11

AC made the following payments during the year ended 30 April 2005:

	<i>\$000</i>
Operating costs (excluding depreciation)	23
Finance costs	4
Capital repayment of loans	10
Payments for the purchase of new computer equipment for use in AC's business	20

AC's revenue for the period was \$45,000 and the corporate income tax rate applicable to AC's profits was 25%. The computer equipment qualifies for tax allowances of 10% per year on a straight line basis.

Calculate AC's tax payable for the year ended 30 April 2005. **(3 marks)**



Question 12

AB acquired non-current assets on 1 April 2003 costing \$250,000. The assets qualified for accelerated first year tax allowance at the rate of 50% for the first year. The second and subsequent years were at a tax depreciation rate of 25% per year on the reducing balance method.

AB depreciates all non-current assets at 20% a year on the straight line basis.

The rate of corporate income tax applying to AB for 2003/04 and 2004/05 was 30%. Assume AB has no other qualifying non-current assets.

Requirements

Apply IAS 12 *Income Taxes* and calculate:

- (a) the deferred tax balance required at 31 March 2004;
- (b) the deferred tax balance required at 31 March 2005;
- (c) the charge to the income statement for the year ended 31 March 2005. **(5 marks)**

Solutions to Revision Questions



✓ Solution 1

The correct answer is (C), see Section 6.3.

The credit balance on the corporate income tax account means that there was an over-provision last year. The over-provision of \$10,000 can be deducted from the current year's estimate. The increase in deferred tax needs to be included under the tax charge for the year. The income statement would show the income tax expense as \$428,000, the note to the income statement would show the \$428,000 made up as follows:

	\$
Estimate of current year's corporation tax charge	420,000
Over-provision previous year	(10,000)
Increase in deferred tax provision	<u>18,000</u>
	<u>428,000</u>

The balance sheet current liability for corporation tax would be the estimate for the current years tax charge, \$420,000.

✓ Solution 2

The correct answer is (C), see Section 6.4.

Expenses are charged to the income statement in one period and to taxable profits in another period, giving rise to temporary timing differences. Income may also be credited to profit and loss in one period and be taxable in another period.

✓ Solution 3

The correct answer is (B) see Section 6.4.3.

	\$
Cost	200,000
Two years' accounting depreciation at 10% per year is	<u>40,000</u>
Carrying value in accounts	<u>160,000</u>
Cost	200,000
Two years' tax depreciation at 25% is	<u>87,500</u>
Tax written down value	<u>112,500</u>
Temporary difference (160,000 – 112,500)	<u>47,500</u>
Tax at 30%	<u>14,250</u>

**Solution 4**

The three elements that make up income tax expense (see Section 6.6) are:

- current tax expense;
- adjustments to tax charges of prior periods (results of over/under provisions);
- transfers to or from deferred tax.

**Solution 5**

A permanent difference is where an expense charged in the income statement is not allowed for income tax purposes. A permanent difference will not reverse in future periods, see Section 6.4.1.1.

**Solution 6**

(a) The tax charge for each of the three years can be calculated as follows:

<i>Year</i>	<i>Profits</i>	<i>Tax charge based on profits @ 30%</i>	<i>Tax actually paid in respect of previous year</i>	<i>(Over)/under provision</i>	<i>Income statement charge</i>
20X1	\$100,000	\$30,000			\$30,000
20X2	\$120,000	\$36,000	\$28,900	(\$1,100)	\$34,900
20X3	\$110,000	\$33,000	\$37,200	\$1,200	\$34,200

The tax charge recorded in 20X1 is \$30,000 and \$28,900 is then actually paid resulting in an over provision of \$1,100.

The tax charge recorded in 20X2 is \$36,000 and \$37,200 is then actually paid resulting in an under provision of \$1,200.

The income statement charge is calculated as tax on profits plus any under provision/less any over provision.

The amounts will be recorded as follows:

In 20X1

Dr	Tax charge (income statement)	\$30,000
Cr	Tax liability (balance sheet)	\$30,000

Being the recording of the estimated tax charge for 20X1.

In 20X2

Dr	Tax liability (balance sheet)	\$28,900
Cr	Bank	\$28,900

Being the payment of tax in respect of the year ended 20X1.

Dr	Tax charge (income statement)	\$34,900
Cr	Tax liability (balance sheet)	\$34,900

Being the recording of the estimated tax charge for 20X2 (\$36,000 estimated tax less the over provision in 20X1 of \$1,100 – estimated \$30,000 and paid \$28,900).

In 20X3

Dr	Tax liability (balance sheet)	\$37,200
Cr	Bank	\$37,200

Being the payment of tax in respect of the year ended 20X2.

Dr	Tax charge (income statement)	\$34,200
Cr	Tax liability (balance sheet)	\$34,200

Being the recording of the estimated tax charge for 20X3 (\$33,000 estimated tax plus the under provision in 20X2 of \$1,200 – estimated \$36,000 and paid \$37,200).

(b)

<i>Income Statement extract</i>	20X1	20X2	20X3
Tax charge on profits	\$30,000	\$36,000	\$33,000
(Over)/under provision of tax		(\$1,100)	\$1,200
Tax charge for the year	<u>\$30,000</u>	<u>\$34,900</u>	<u>\$34,200</u>
<i>Balance sheet extract</i>	20X1	20X2	20X3
Current liabilities			
Income tax liability	\$30,000	\$36,000	\$33,000



Solution 7

(a) Income tax charge

	\$000	\$000
Tax on profits 30% × \$3m	900	
Less over-provision in 20X1	<u>(4)</u>	
Current tax charge		896
Deferred tax provision required	1,700	
Deferred tax provision b/f	<u>1,500</u>	
Increase in provision required		<u>200</u>
Total charge to income statement		<u>1096</u>

Accounting entries

Dr	Income tax charge (income statement)	896
Cr	Income tax liability (balance sheet)	896
	Being the current tax charge for 20X2.	
Dr	Income tax charge (income statement)	200
Cr	Deferred tax provision (balance sheet)	200

Being the increase required to the deferred tax provision for 20X2.

(b) Balance sheet extract

Current liabilities	
Income tax (\$4,000 + \$896,000)	\$900,000
Non-current liabilities	
Deferred tax	\$1,700,000



Solution 8

	20X0	20X1	20X2	20X3
	\$000	\$000	\$000	\$000
Carrying value	400	300	200	100
Accounting depreciation	<u>(100)</u>	<u>(100)</u>	<u>(100)</u>	<u>(100)</u>
Closing carrying value	<u>300</u>	<u>200</u>	<u>100</u>	<u>0</u>
Opening balance for tax purposes	400	200	0	0
Tax depreciation	<u>(200)</u>	<u>(200)</u>	<u>0</u>	<u>0</u>
Tax written down value (tax base)	<u>200</u>	<u>0</u>	<u>0</u>	<u>0</u>
Temporary difference (carrying value – tax base)	100	200	100	0
Deferred tax provision required at 30%	30	60	30	0
Charge/(release) to income statement	30	30	(30)	(30)



Solution 9

Year ended 31 December 20X2

	\$	\$
Current tax charge $\$120,000 \times 30\%$		36,000
Less over provision in 20X1 $(\$30,000 - \$28,600)$		<u>(1,400)</u>
		34,600
Deferred tax:		
Carrying value of asset $(\$80,000 - \text{depreciation } \$40,000, 2 \text{ years})$	40,000	
Tax base $(\$80,000 - \text{capital allowances given } \$80,000)$	0	
Temporary difference	<u>40,000</u>	
Deferred tax required @ 30%	<u>12,000</u>	
Release to income statement for reduction in deferred tax $(18k - 12k)$		<u>(6,000)</u>
Total charge to income statement		<u>28,600</u>

31 December 20X1	\$
First year allowance 100%	80,000
Less depreciation	20,000
Timing difference	<u>60,000</u>
Deferred tax @ 30%	<u>18,000</u>

Income statement extract 20X2

Income tax charge	
Tax charge on profits	\$36,000
Less overprovision in 20X1	(1,400)
Reduction in deferred tax	<u>(6,000)</u>
	<u>\$28,600</u>

Balance sheet extract 20X2

Current liabilities	
Income tax liability	\$36,000
Non-current liabilities	
Deferred tax $(\$18,000 - \$6,000)$	\$12,000



Solution 10

	\$	\$
Deferred tax:		
Carrying value of asset	40,000	
Tax base (value for tax purposes at 31 December 20X2)	0	
Taxable temporary difference	<u>40,000</u>	
Deferred tax liability (at 30%)		12,000
Carrying value of liability – pension costs	80,000	
Tax base (value for tax purposes at 31 December 20X2)	0	
Deductible temporary difference	<u>80,000</u>	
Deferred tax asset (at 30%)		<u>24,000</u>

**Solution 11**

Revenue	\$000	\$000
Operating costs	23	45
Finance costs	4	
Tax allowances – computer	<u>2</u>	<u>29</u>
Tax @ 25%		16 4

**Solution 12**

<i>Tax depreciation</i>	\$	
Purchase cost at 1 April 2003	250,000	
First year allowance at 50%	<u>125,000</u>	
	125,000	
Tax depreciation second year at 25%	<u>31,250</u>	
Tax written down value	<u>93,750</u>	
<i>Accounting depreciation</i>	\$	
Purchase cost at 1 April 2003	250,000	
Straight line depreciation at 20%	<u>50,000</u>	
	200,000	
Straight line depreciation at 20%	<u>150,000</u>	
Accounting book value	<u>150,000</u>	
<i>Deferred tax provision:</i>	<i>at 31 March 2004</i>	<i>at 31 March 2005</i>
	\$	\$
Accounting book value	200,000	150,000
Tax written down value	<u>125,000</u>	<u>93,750</u>
	75,000	56,250
Tax at 30% on \$56,250 =	22,500	16,875
Change in deferred tax = 22,500 – 16,875 =	<u>5,625</u>	
Balance sheet at 31 March 2005		
Deferred tax	\$16,875	

Income statement for the year ended 31 March 2005

Income tax expense – reduction in deferred tax \$5,625 credit

The IASC and the Standard-Setting Process

7

LEARNING OUTCOMES

After completing this chapter you should be able to:

- ▶ explain the need for regulation of published accounts and the concept that regulatory regimes vary from country to country;
- ▶ explain potential elements that might be expected in a regulatory framework for published accounts;
- ▶ describe the role and structure of the International Accounting Standards Board (IASB) and the International Organisation of Securities Commissions (IOSCO);
- ▶ describe the process leading to the promulgation of an international accounting standard (IAS);
- ▶ describe ways in which IAS's can interact with local regulatory frameworks.

Learning Aims

The learning aim of this part of the syllabus is that students should be able to:

‘describe and discuss how financial reporting can be regulated and the system of *International Accounting Standards*.’

The syllabus topics covered in this chapter are as follows:

- the need for regulation of accounts;
- elements in a regulatory framework for published accounts (e.g. company law, local GAAP, review of accounts by public bodies);
- GAAP based on prescriptive versus principles-based standards;
- the role and structure of the IASB and IOSCO;
- the process leading to the promulgation of a standard practice;
- ways in which IAS's are used: adoption as local GAAP, model for local GAAP, persuasive influence in formulating local GAAP.

7.1 The need for regulation of financial statements

Financial statements and reports for shareholders and other users are prepared using principles and rules that can be interpreted in different ways. To provide guidance and try and ensure that they are interpreted in the same way each time some form of regulation is required.

In Section 2.2, we noted that taxable profits are based on accounting profit and that the number and type of adjustments required to compute taxable profits varies from country to country. Part of this variation was due to the differences in the tax regulations but part of them was due to the different approaches to the calculation of accounting profit. In Section 2.2, we noted that in some countries taxable income is closely linked to the accounting profit and that accounting rules are largely driven by taxation laws. These countries are usually known as code law countries; countries where the legal system originated in Roman law. These countries tend to have very detailed laws relating to trading entities and accounting standards are usually embodied within the law. Accounting regulation in these countries is usually in the hands of the government and financial reporting is a matter of complying with a set of legal rules.

In other countries the common law system is used, common law is based on case law and tends to have less detailed regulations. In countries with common law systems the accounting regulation within the legal system is usually kept to a minimum; with detailed accounting regulations produced by professional organisations or other private sector accounting standard setting bodies.

Whichever system is adopted there is a need for every country to have a system for regulating the preparation of financial statements and reports.

7.2 Variation from country to country

Accounting and information disclosure practices around the world are influenced by a variety of economic, social and political factors. In addition to the legal system and tax legislation discussed in Section 7.1, a range of other factors that contribute to variations between the accounting regulations of countries are discussed below. The wide range of factors influencing the development of accounting regulations have resulted in a wide range of different systems, this has made it difficult and time consuming to try and harmonise accounting practices around the world. With the growth in international investing there is a growing need for harmonisation of financial statements between countries.

7.2.1 Sources of finance and capital markets

There is more demand for financial information and disclosure where a higher proportion of capital is raised from external shareholders rather than from banks or family members. Stock markets rely on published financial information by entities. Banks and family members are usually in a position to be able to demand information directly from the entity, whereas shareholders have to rely on publicly available information.

7.2.2 The political system

The nature of regulation and control exerted on accounting will reflect political philosophies and objectives of the ruling party, for example, environmental concerns.

7.2.3 Entity ownership

The need for public accountability and disclosure will be greater where there is a broad ownership of shares as opposed to family ownership or government ownership.

7.2.4 Cultural differences

The culture within a country can influence societal and national values which can influence accounting regulations.

7.3 Harmonisation versus standardisation

Harmonisation tends to mean the process of increasing the compatibility of accounting practices by setting bounds to their degree of variation.

Standardisation tends to imply the imposition of a rigid and narrower set of rules. Standardisation also implies that one technically correct method can be identified for every aspect of accounting and then this can be imposed on all preparers of accounts.

Due to the variations between countries discussed above in Sections 7.1 and 7.2 full standardisation of accounting practices is very unlikely. Harmonisation is more likely, as the agreement of a common conceptual framework of accounting may enable a closer harmonisation of accounting practices. See Section 7.7 for a discussion on some recent harmonisation developments.

7.3.1 The need for harmonisation of accounting standards

Each country has its own accounting regulation, financial statements and reports prepared for shareholders and other uses are based on principles and rules that can vary widely from country to country. Multinational entities may have to prepare reports on activities on several bases for use in different countries, and this can cause unnecessary financial costs. Furthermore, preparation of accounts based on different principles makes it difficult for investors and analysts to interpret financial information. This lack of comparability in financial reporting can affect the credibility of the entity's reporting and the analysts' reports and can have a detrimental effect on financial investment.

The increasing levels of cross-border financing transactions, securities trading and direct foreign investment has resulted in the need for a single set of rules by which assets, liabilities and income are recognised and measured.

The number of foreign listings on major exchanges around the world is continually increasing and many worldwide entities may find that they are preparing accounts using a number of different rules and regulations in order to be listed on the various markets.



Exercise

Briefly explain possible benefits that could accrue from the development of a single set of accounting standards that could be applied in all countries.



Solution

Multi-national entities could benefit:

1. from access to a wider range of international finance opportunities. If international standards were widely accepted the international financial markets would be accessible by a wider range of entities. This could have the effect of reducing financing costs;
2. there could be improved management control as all parts of the entity would be reporting using one consistent basis;
3. there would be greater efficiency in accounting departments as they would not have to spend time converting data from one accounting basis to another;
4. consolidation of subsidiaries results to prepare group accounts would be much easier.

Investors should benefit by being able to compare the results of different entities more easily and be able to make more informed investment decisions.

It would be easier for international economic groupings such as the EU to function, as the preparation of economic data would be easier.

7.4 Elements that might be expected in a regulatory framework for published accounts

There are several potential elements that might be expected in a regulatory framework within a particular country. The main ones are:

- local law that applies to entities;
- locally adopted accounting standards;
- local stock exchange requirements;
- international body requirements;
- international accounting standards;
- locally developed or international conceptual framework for accounting.

Every country is different, potentially every one of the above could be different if two countries are compared. Let us briefly consider each of these elements in turn.

7.4.1 Local law that applies to entities

Every country passes its own laws some that relate to entities in that country. There are two main forms of law:

- the roman law approach where *everything* is specified in the law directly;
- the anglo-saxon common law approach where the legislation is more general and the courts interpret the legislation that becomes case law.

Local legal requirements will have to be followed by entities. In some countries the legal system embodies the accounting standards that entities are required to follow (see Section 7.1).

7.4.2 Locally adopted accounting standards

Each country will have their own local version of accounting standards. These local standards will be developed using local processes that reflect the social, economic and political factors of the country, or the country could choose to adopt international accounting standards, see Section 7.10.

7.4.3 Local stock exchange requirements

The local stock exchange may have further requirements for listed entities, which are additional to the other legal requirements that apply to all entities in the country.

7.4.4 International body requirements

International bodies can often have a significant influence on the regulatory requirements within a country. For example, European Union directives apply to all countries within Europe, however when they are embodied in local legislation they apply to entities. Another example of an international organisation influencing local regulations is the The International Organisation of Securities Commissions (IOSCO), see Section 7.7.

7.4.5 International accounting standards

International accounting standards are having an increasing influence on local accounting standards. This is discussed in detail in Section 7.10.

7.4.6 Locally developed or international conceptual framework for accounting

Some countries, such as the UK and USA have developed their own conceptual framework of accounting. Countries that have not developed their own conceptual framework may have adopted the IASB's Framework. See Chapter 8 for a discussion on the IASB's Framework.

Where a conceptual framework exists it will assist in the development of accounting standards and generally accepted accounting practice.

7.5 Generally accepted accounting practice (GAAP)

GAAP encompasses the conventions, rules and procedures necessary to define accepted accounting practice at a particular time. It includes not only broad guidelines of general application but also detailed practices and procedures. GAAP includes local legislation requirements, accounting standards and any other locally applicable regulations. GAAP is also dynamic and will change over time as new or different requirements become generally accepted.

GAAP will therefore vary from one country to another as different regulations apply in different countries. The IASB's convergence programme is aimed at reducing these differences over time.

GAAP can be based on legislation and accounting standards that are either:

- very prescriptive in nature, setting out in detail every possible permutation that an accountant may come across; or
- principles-based accounting standards, which set out principles but are not very specific and do not include many detailed requirements for their application.



Exercise

List the possible advantages of having GAAP based on prescriptive standards versus GAAP based on principles.



Solution

You will probably have a number of points, the following is not intended to be an exhaustive list. Your answer could have included the following:

Advantages of GAAP based on prescriptive standards:

- precise, the requirements will be clear and well understood;
- there will be one 'correct' way of dealing with every item, it does not need professional judgement to be used when deciding how to treat an item;
- it should be more obvious when an entity does not follow GAAP;
- can be taught/learnt more easily;
- it should ensure that similar items are treated in the same way.

Advantages of GAAP on principles:

- It will be harder to construct ways of avoiding the requirements of individual standards, for example, a prescriptive standard may set out definitions or specify values that should be used when applying a standard. If an actual value is specified it may be possible for some entities to construct various means of avoiding the application of that requirement. Whereas if the standard sets out general principles it is much harder to avoid the standard's requirements as a principle will apply no matter what value is put on it.
- The requirements in certain situations will need to be applied using professional judgement, which can help ensure that the correct application is used. Whereas a prescriptive standard would require a certain treatment to be used, regardless of the situation, which could lead to similar items being treated the same way even if the circumstances are very different.
- Principles-based GAAP should ensure that the spirit of the regulations are adhered to, whereas the prescriptive system is more likely to lead to the letter of the law being followed rather than the spirit.

IFRSs are principle-based standards.

7.6 The International Accounting Standards Committee Foundation (IASC Foundation)

In March 2001, the IASC Foundation was formed as a not-for-profit corporation. The IASC Foundation is the parent entity of the International Accounting Standards Board (IASB).

From 1 April 2001 the IASB assumed the accounting standard-setting responsibilities from its predecessor body, the International Accounting Standards Committee. The

restructuring of the IASC resulted from the recommendations made in the report, *Recommendations on Shaping IASC for the Future*. The overall objectives and principles remain consistent with the original set-up. However, the revised format brings a new committee structure and some changes to the standard-setting process.

7.6.1 Structure of the IASC Foundation

The IASC Foundation is an independent organisation having two main bodies: the Trustees and the IASB. The structure also includes the Standards Advisory Council and the International Financial Reporting Interpretations Committee.

A graphical representation of the structure is given in Figure 7.1. The role of each committee will be discussed in turn.

7.6.2 IASC Foundation

The Trustees have responsibility for governance and fundraising, and for publishing an annual report on the IASC’s activities, including audited financial statements and priorities for the coming year. They will review annually the strategy of the IASC and its effectiveness and will approve the annual budget and determine the basis of funding.

The Trustees also appoint the members of the IASB, the Standards Advisory Council and the International Financial Reporting Interpretations Committee. Although the Trustees will decide on the operating procedures of the committees in the IASC family, they will be excluded from involvement in technical matters relating to accounting standards.

The Trustees must have sufficient financial knowledge and experience to allow them to fully appreciate the issues that are relevant to the IASC and the ability to meet the Committee’s time commitment. Trustees will normally serve for a term of 3 years, renewable once.

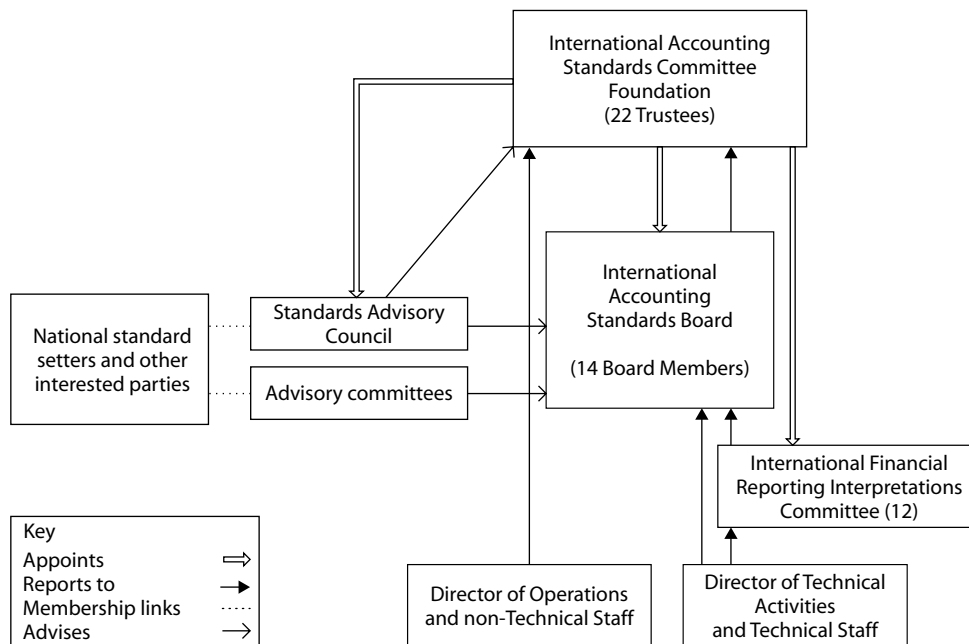


Figure 7.1 Structure of the IASC Foundation.

Source: <http://www.iasb.org/about/structure.asp>

Reproduced with permission of the IASC Foundation.

The mix of trustees must be representative of the world's capital markets and therefore are appointed as follows:

- six from North America;
- six from Europe;
- six from the Asia/Oceania region;
- four from other areas giving overall geographic balance.

The IASC also defines the experience required for trustees to be appointed in order to ensure a balance of professional backgrounds. Two of the 22 will usually be senior partners from prominent international accounting firms. Preparers, users and academics should also be represented and the remaining 11 will be selected on the basis that they bring strong public interest backgrounds.

7.6.3 The International Accounting Standards Board (IASB)

The IASB has 14 members, 12 of whom are full-time employees. Appointment of members is based primarily on their having sufficient technical expertise to ensure the IASB has the experience to tackle the relevant business and economic issues.

The Trustees appoint one of the full-time members as chairman of the IASB, who is also the chief executive of the IASC. The current chairman is Sir David Tweedie, former chairman of the UK's Accounting Standards Board. Seven of the full-time members of staff are responsible for liaising with national standard-setters in order to promote the convergence of accounting standards.

IASB members are appointed for a term of five years, renewable once. The terms are staggered to ensure continuity of members.

The IASB has complete responsibility for all IASC technical matters, including the preparation and publication of international financial reporting standards (IFRS) and exposure drafts; withdrawal of IFRSs and final approval of interpretations by the International Financial Reporting Interpretations Committee.

IASB publishes its standards in a series of pronouncements called International Financial Reporting Standards (IFRSs). The IASB have also adopted all existing pronouncements issued by the IASC referred to as International Accounting Standards (IASs). The two have the same status and existing pronouncements will continue to be referred to as IASs. The manual will follow this format, using the generic term IFRS to apply to all IFRSs and IASs. The term IAS will only be used to refer to specific IASs only.

The standard-setting process is discussed in detail in Section 7.8.

7.6.4 The International Financial Reporting Interpretations Committee (IFRIC)

The IFRIC is a committee of the IASB that assists the IASB in establishing and improving standards of financial accounting and reporting for the benefit of users, preparers and auditors of financial statements.

The IASC Foundation Trustees established the IFRIC in March 2002 when it replaced the previous interpretations committee, the Standing Interpretations Committee (SIC).

The IFRIC provides timely guidance on the application and interpretation of IFRSs, normally dealing with complex accounting issues that could, in the absence of guidance, produce wide-ranging or unacceptable accounting treatments. In this way IFRIC promotes the rigorous and uniform application of IFRSs.

The IFRIC produces draft interpretations, which are open to public comment. If no more than three (of 12) of its voting members have voted against an interpretation, the IFRIC will ask the IASB to approve the final interpretation for issue. Published interpretations are numbered sequentially. Compliance with IFRSs requires compliance with the relevant IFRIC interpretations.

7.6.5 The Standards Advisory Council (SAC)

The Standards Advisory Council comprises 30 members or more, appointed by the trustees for renewable terms of three years. This committee is intended to provide a forum for wider participation for those with an interest in the standard-setting process, so its members have diverse geographical and professional backgrounds.

The Standards Advisory Council meets at least three times a year with the objectives of:

- giving advice to the board on agenda decisions and priorities for future work;
- informing the Board of public views on major standard-setting projects;
- giving other advice to the board or the Trustees.

7.7 Objectives of the IASC Foundation

The objectives of the IASC are as follows:

- to develop, in the public interest, a single set of high-quality, understandable and enforceable global accounting standards that require high-quality, transparent and comparable information in financial statements and other financial reporting to help participants in the world's capital markets and other users make economic decisions;
- to promote the use and rigorous application of those standards taking account of the needs of small- and medium-sized entities.
- to bring about convergence of national accounting standards and international accounting standards to high-quality solutions.

The IASC's financial support derives primarily from the professional accountancy bodies, the International Federation of Accountants (IFAC), and from contributions by entities, financial institutions and accounting firms. More than 150 professional accounting bodies in over 100 countries are members of IASC.

7.8 The International Organisation of Securities Commissions (IOSCO)

Securities commissions are the bodies responsible for the regulation of the stock markets in their country. IOSCO encourages international investment by making stock market regulations more consistent between countries.

In 1995, IOSCO's Technical Committee agreed the core set of standards that IASC would develop. It was agreed that, should the core standards be acceptable to the IOSCO Technical Committee, IOSCO would recommend endorsement of IFRSs for cross-border capital raising and listing purposes in all global markets.

The process is now complete, and in May 2000 IOSCO recommended that its members permit incoming multinational issuers to use these standards to prepare their financial statements for cross-border offerings and listings. A number of outstanding substantive issues remain for IASC to address and these obstacles must be overcome before the full impact of the IOSCO resolution can be achieved. Several global, regional and national organisations are involved in the activities working towards this aim. IASB staff and IOSCO continue to work together to resolve the outstanding issues and to identify areas where new IASB standards are required. IOSCO representatives sit as observers on the IFRIC.

7.9 Local regulatory bodies

Worldwide acceptance of IFRSs is to some extent dependent on the promotion by local regulatory bodies. The professional accountancy bodies are well represented on the membership of IASC. The G7 Finance Ministers and Central Bank Governors have also committed themselves to the promotion of IFRSs by ensuring that private sector institutions in their respective countries comply with internationally agreed principles, standards and codes of best practice. Furthermore, they called on all countries that participate in global capital markets similarly to commit to comply with IFRSs.

7.9.1 Convergence activities

IASB must meet with the Standards Advisory Council before it can confirm its technical agenda. Then it works with the chairs of the national accounting standard-setters to co-ordinate their agendas and priorities. The IASB then provides details of how it is co-operating with other key standard-setters and regulatory agencies worldwide towards achieving convergence of accounting standards.

7.9.2 International reaction

7.9.2.1 Europe

In June 2000, the European Commission issued a Communication proposing that all listed entities in the EU would be required to prepare their consolidated financial statements using IFRSs from 2005. EU Member States may extend this to permit non-publicly traded entities to prepare their financial statements in accordance with IFRSs.

In late 2001 the EU published its Fair Value Directive. This formed part of the process to change the EU's legal framework that allowed EU-listed entities to adopt IFRSs from 1 January 2005.

Many entities already state that their financial statements are prepared in accordance with IFRSs. In 2004 there were around 350 publicly listed entities that complied with IFRSs, in 2005 this is approximately 7000 publicly listed entities.

7.9.2.2 USA

The US Securities and Exchange Commission (SEC) is responsible for the regulation of the debt and equity securities markets in the US. In 1996 SEC expressed its support for the IASC's objective of developing accounting standards that could be used for preparing accounts used in cross-border offerings. SEC committed itself to working with IASC and with other regulatory bodies through its membership of IOSCO, towards developing a comprehensive set of international accounting standards.

In addition, it stated that it would consider allowing the resulting standards to be used by foreign issuers offering securities in the US once the IOSCO review was completed. When the review was completed in 2000, SEC issued a release for public comment requesting feedback on a range of issues associated with the potential acceptance of IFRSs, including:

- feedback on the overall issue of developing a global financial structure to support increasingly globalised capital markets;
- feedback on the perceived quality of IFRSs and the supporting structure that would be required where issuers and auditors are multinational organisations, issuing information in many countries;
- significant concerns about the possibility of the US SEC accepting IFRSs, and comment on whether SEC should revisit its requirement for all financial statements to be reconciled to US GAAP;
- issuers', investors' and auditors' experiences of applying IFRSs in practice.

The release does not comment on the next stage of this project but gives an indication of the impact that the acceptance of IFRSs could have on worldwide capital markets.

Securities sales by foreign issuers in the US markets have grown dramatically during the 1990s, both in terms of the amount of capital raised and the number of issuers. This is no doubt why SEC feels that it must have an integral role in the development of a set of internationally accepted standards. In December 2003, SEC publicly welcomed the release of FASB proposals that would modify several aspects of US accounting standards to be consistent with the guidance on those issues provided by IASs. The proposals are a result of efforts by both FASB and IASB to improve convergence activities between the two sets of standards.

The SEC recognised that foreign entities registered with the SEC may be changing from local GAAP to IFRSs. The SEC issued "First time application of international financial reporting standards" effective from May 2005. This amends the information required to be provided by foreign entities registered with the SEC adopting IFRSs for the first time prior to or for its first financial year starting on or after 1 January 2007. Entities will have to file two years reconciliations of the IFRS statements to US GAAP instead of the usual three years.

Many countries already endorse IFRSs, and IFRSs are especially useful for developing countries that do not yet have a national standard-setting body.

7.10 The standard-setting process

The IASC Constitution permits the IASB to work in whatever way it considers most effective and cost efficient. The Board may form advisory committees or other specialist

technical groups to advise on major projects. The Board may outsource detailed research or other work to national standard-setters.

7.10.1 Development of a standard

The process for the development of a standard involves the following steps:

- During the early stages of a project, IASB may establish an Advisory Committee to advise on the issues arising in the project. Consultation with this committee and the Standards Advisory Council occurs throughout the project.
- IASB may develop and publish *Discussion Documents* for public comment.
- Following receipt and review of comments, IASB develops and publishes an *Exposure Draft* for public comment.
- Following the receipt and review of comments, the IASB may hold a public hearing or carry out field tests. The IASB issues a final IFRS, along with any dissenting view expressed by an IASB member.

When the IASB publishes a standard, it also publishes a *Basis of Conclusions* to explain publicly how it reached its conclusions and to provide background information that may help users apply the standard in practice.

7.10.2 Other aspects of due process

Each IASB member has one vote on technical matters and the publication of a Standard, Exposure Draft, or final IFRIC Interpretation requires approval by eight of the Board's 14 members.

Other decisions, including agenda decisions and the issue of a Discussion Paper, require a simple majority of the Board members present at a meeting, provided the meeting is attended by at least 50 per cent of the members.

Meetings of the IASB, SAC and IFRIC are open to public observation. Where IASB issues Exposure Drafts, Discussion Documents and other documents for public comment, the usual comment period is 90 days. Draft IFRIC Interpretations are exposed for a 60-day comment period.

7.10.3 Co-ordination with national standard-setting

IASB is currently exploring ways in which it can integrate its standard-setting process more closely with those of national standard-setters. The Board is currently investigating the possibility that the procedure for projects that have international implications would include the following:

- IASB and national standard-setters co-ordinating their work plans so they can be reviewing an issue at the same time enabling each party to play a full part in developing international consensus.
- National standard-setters could consider this international consensus when voting on their own national standards, although they would not be required to vote for the IASB's preferred solution.
- IASB and national bodies would continue to issue their own exposure drafts, but may consider issuing them at the same time and invite comments on any significant differences in proposed accounting treatments.

7.10.4 Benchmark treatments and allowed alternatives

In some IFRSs there are alternative treatments for a transaction or event. One is designated the 'benchmark' treatment. This is not necessarily to be taken as the preferred treatment. The term 'benchmark' reflects the Board's intention of identifying a point of reference when making its choice between alternatives.

7.11 Ways in which IFRS's are used by countries

A country choosing to adopt international standards can apply them in a number of ways:

- adoption as local GAAP;
- model for local GAAP;
- persuasive influence in formulating local GAAP.

Alternatively local GAAP can be developed with little or no reference to IFRSs.

7.11.1 Adoption as local GAAP

Some countries, particularly countries where the accounting profession is not well developed, take international accounting standards and adopt them as their local standards with very little or no amendments. This approach has the advantage of being quick to implement after the decision is taken. The disadvantage is that it may not take into account any specific local traditions or variations. Examples include Honduras, Armenia, Bangladesh and Bahrain.

There have also been some examples where countries have changed their approach, for example, Malawi used 'IAS's adapted for use in Malawi' then in 2001 they changed to full adoption of IFRSs.

7.11.2 Model for local GAAP

Some countries use international accounting standards, but amend them to reflect local needs and conditions. These countries change some of the IASB standards to suit local needs and may also develop some local standards to cover topics for which there is no international standard. Examples include Tanzania, Egypt and Malaysia.

7.11.3 Persuasive influence in formulating local GAAP

Countries with a track record in setting accounting standards already had standards in place before the original IASC was formed. As these standards pre-dated IFRSs they often did not conform with them. Many countries in this position have been working for many years to narrow the gap between their local standards and IFRSs. This usually takes the form of all new or revised standards being developed to take account of international standards and comply with them in all material respects. Although most of the standards now comply with IFRSs they are often different in some way. Examples include Brazil, India, Japan and Australia.

7.11.4 Local GAAP developed with little or no reference to IFRS's

As mentioned in Section 7.11.3 some countries have accounting standards that pre-date IFRSs and whereas most have adjusted their standards in an attempt to converge with IFRSs some have made no attempt. Others that may not pre-date IFRSs have decided to develop their own standards and make no real attempt to comply with IFRSs. Examples in this category include Jamaica, China and Colombia, although China has now decided to develop new accounting standards that are in harmony with IFRSs.

7.12 Summary

Having completed this chapter you should be able to discuss briefly the need for the regulation of published accounts and be able to identify the reasons why regulatory regimes vary. You should be able to explain the objectives, role and structure of the IASC Foundation and its various bodies and be able to describe the relationship that IASC has with both IOSCO and the national regulatory bodies. In addition, you can now explain the IASBs standard-setting process and describe different ways that countries use IFRSs.

Revision Questions

7

? Question 1

A committee of the International Accounting Standards Board (IASB) is known as the IFRIC.

What does IFRIC stand for?

- (A) International Financial Reporting Issues Committee
 - (B) International Financial Recommendations and Interpretations Committee
 - (C) International Financial Reporting Interpretations Committee
 - (D) International Financial Reporting Issues Council
- (2 marks)**

? Question 2

Which of the following is *not* a function of the International Accounting Standards Board?

- (A) Issuing accounting standards
 - (B) Withdrawing accounting standards
 - (C) Developing accounting standards
 - (D) Enforcing accounting standards
- (2 marks)**

? Question 3

The international accounting standards committee foundation (IASC foundation) has two main bodies:

- (i) International Accounting Standards Board
- (ii) International financial reporting interpretations committee
- (iii) Standards advisory council
- (iv) Trustees

The two committees reporting to the IASC foundation are:

- (A) (i) and (ii)
 - (B) (i) and (iv)
 - (C) (ii) and (iii)
 - (D) (iii) and (iv)
- (2 marks)**

? Question 4

Which of the following would not normally be expected to be included in the elements of a regulatory framework for published accounts:

- (A) Local law that applies to entities
- (B) Local taxation regulations
- (C) Local stock exchange regulations
- (D) A conceptual framework for accounting (2 marks)

? Question 5

List three ways in which IFRSs can be implemented in a country. (3 marks)

? Question 6

The existing procedures for setting international accounting standards are now well established.

Required

- (a) Explain the roles of the following in relation to International Accounting Standards:
- (i) The International Accounting Standards Committee (IASC) Foundation;
 - (ii) The International Accounting Standards Board (IASB);
 - (iii) The International Financial Reporting Interpretations Committee (IFRIC). (5 marks)

? Question 7

Explain how the standard-setting authority approaches the task of producing a standard, with particular reference to the ways in which comment or feedback from interested parties is obtained. (5 marks)

? Question 8

The Technical Committee of the International Organisation of Securities Commissions (IOSCO) and the IASC agree that there is a compelling need for high-quality, comprehensive international accounting standards.

Required

Discuss briefly why the development of international accounting standards is considered to be important. (5 marks)

? Question 9

Explain the role that IOSCO has played in the development and promotion of international accounting standards. (5 marks)

Solutions to Revision Questions

7

Solution 1

The correct answer is (C), see Section 7.6.4.

Solution 2

The correct answer is (D), see Section 7.6.3.

Solution 3

The correct answer is (B), see Section 7.6.1.

Solution 4

The correct answer is (B), see Section 7.4.

Solution 5

Three ways in which IFRSs can be implemented are:

- adoption as local GAAP
- model for local GAAP
- persuasive influence in formulating local GAAP

See Section 7.11.

Solution 6

- (i) The IASC Foundation

The IASC Foundation is an independent organisation having two main bodies: the trustees and the IASB. The Trustees have responsibility for governance and fundraising and will publish an annual report on IASC's activities, including audited financial statements and priorities for the coming year. They will review annually the strategy of the IASC and its effectiveness and will approve the annual budget and determine the basis of funding.

The Trustees also appoint the members of the IAS Board, the Standards Advisory Council and the International Financial Reporting Interpretations Committee. Although the Trustees will decide on the operating procedures of the committees in the IASC family, they will be excluded from involvement in technical matters relating to accounting standards.

(ii) The IASB

The Board has complete responsibility for all IASC technical matters, including the preparation and issuing of International Financial Reporting Standards and Exposure Drafts, and final approval of Interpretations by the International Financial Reporting Interpretations Committee. Some of the full-time members of staff are responsible for liaising with national standard-setters in order to promote the convergence of accounting standards.

IASB publishes its standards in a series of pronouncements called International Financial Reporting Standards (IFRSs). It has also adopted the standards issued by the board of the International Accounting Standards Committee.

The Board may form advisory committees or other specialist technical groups to advise on major projects and may outsource detailed research or other work to national standard-setters.

(iii) The *International Financial Reporting* Interpretations Committee (IFRIC)

The IFRIC provides timely guidance on the application and interpretation of IFRSs, normally dealing with complex accounting issues that could, in the absence of guidance, produce wide-ranging or unacceptable accounting treatments.



Solution 7

The process for the development of a standard involves the following steps:

- During the early stages of a project, the IASB may establish an Advisory Committee to advise on the issues arising in the project. Consultation with this committee and the Standards Advisory Council occurs throughout the project.
- The IASB may develop and publish Discussion Documents for public comment.
- Following receipt and review of comments, the IASB develops and publishes an Exposure Draft for public comment.
- Following the receipt and review of comments, the IASB issues a final International Financial Reporting Standard.

When the IASB publishes a standard, it also publishes a Basis of Conclusions to explain publicly how it reached its conclusions and to provide background information that may help users apply the standard in practice.

Each IASB member has one vote on technical matters and the publication of a Standard, Exposure Draft, or final IFRIC Interpretation requires approval by eight of the Board's 14 members. Other decisions including agenda decisions and the issue of a Discussion Paper, require a simple majority of the Board members present at a meeting, provided that the meeting is attended by at least 50 per cent of the members.

Meetings of the IASB, SAC and IFRIC are open to public observation. Where the IASB issues Exposure Drafts, Discussion Documents and other documents for public comment, the usual comment period is 90 days. Draft IFRIC Interpretations are exposed for a 60-day comment period.



Solution 8

Investment decisions are largely based on financial information and analysis. Financial reports, which are prepared for shareholders, potential shareholders and other users, are, however, based on principles and rules that vary from country to country. This makes comparability and transparency of financial information very difficult. Some multinationals may have to prepare reports on activities on several bases for use in different countries and this can cause an unnecessary financial burden and can damage the credibility of financial reports.

The increasing levels of cross-border financing transactions and securities trading have highlighted the need for financial information to be based on a single set of rules and principles.

An internationally accepted accounting framework is also beneficial to developing countries that cannot bear the cost of establishing a national standard-setting body.



Solution 9

Worldwide acceptance of IFRSs will to some extent be dependent on other recognised bodies accepting and promoting their use. IOSCO is looking to the IASC to provide mutually acceptable international accounting standards for use in multinational securities markets.

In 1995, IASC agreed with IOSCO to develop a core set of standards. The standards were identified and, if completed to a satisfactory level, IOSCO would consider endorsing the core standards for cross-border capital-raising and listings in all global markets.

The IASC completed the core standards by 1999 and presented them for technical review by IOSCO. IOSCO had commented on the drafts as they progressed.

In May 2000 IOSCO recommended that its members permit incoming multinational users to use these standards to prepare their financial statements for cross-border trading and listings. There are a number of outstanding issues that are to be addressed by the IASC, but this was considered to be a significant development in gaining acceptance of IFRSs.

Regulatory Framework

8

LEARNING OUTCOME

After completing this chapter you should be able to: explain the IASB's Framework for the Presentation and Preparation of Financial Statements.

The syllabus topic covered in this chapter is as follows:

- ▶ IASBs Framework for the Presentation and Preparation of Financial Statements.

8.1 Introduction

One of the major challenges for those communicating financial information is the enormous range of potential users of that information. In addressing technical problems or developments it is important to consider the context within which the problem has arisen and how the solution fits in with the objective of providing useful financial information.

The increasing complexity of financial transactions and the need for guidance on suitable and consistent treatment in financial reporting has created a vastly increased workload for standard-setters. As a result they find themselves dealing with issues that vary in detail but that have the same underlying technical issues: how should this be recorded? how should this be measured? how should this be presented to users?

As the number of accounting rules and standards increases it is important that the standard-setters provide a set of rules that are based on principles that can be applied consistently to ensure that the overall objectives of financial reporting are met. Many, including the UK ASB and the US FASB, have developed conceptual Frameworks that establish a broad set of accounting principles on which their standards and accounting rules are based.

The IASB's conceptual Framework is the *Framework for the Preparation and Presentation of Financial Statements* (hereafter referred to as the IASB Framework or the Framework) published by the IASC in 1989. This chapter will discuss the purpose of the Framework, and explain the Framework in detail, including the definitions of assets and liabilities. The chapter concludes with a discussion of the usefulness of the Framework. This is an important chapter as the Framework's concepts underpin all of the IFRSs and will be referred to throughout the following sections.

8.2 The development of the Framework

8.2.1 Purpose of the Framework

According to the *Framework*, its purposes are to:

- assist the Board in the development of future IFRSs and in its review of existing IFRSs;
- assist the Board in promoting harmonisation of regulations, accounting standards and procedures relating to the presentation of financial statements by providing a basis for reducing the number of alternative treatments permitted by IFRSs;
- assist national standard-setting bodies in developing national standards;
- assist preparers of financial statements in applying IFRSs and in dealing with topics that have yet to be covered in an IFRS;
- assist auditors in forming an opinion as to whether financial statements conform with IFRSs;
- assist users of financial statements that are prepared using IFRSs;
- provide information about how the IASB has formulated its approach to the development of IFRSs.

8.2.2 Status of the Framework

The Framework does not have the status of an accounting standard and does not override any IFRS where conflicts arise. Generally, IFRSs are less prescriptive in nature than other national standards, and so the Framework is referred to more frequently by preparers of financial statements, and particularly where an accounting issue is not dealt with specifically by an IFRS.

Some IFRSs still permit alternative treatments of certain transactions. As the IASB continues to reduce the number of alternative treatments, it is expected that the number of conflicts between standards and the Framework will decrease. *The required* treatments within the IFRSs will then be consistent with the principles outlined in the Framework.

8.2.3 Scope of the Framework

The Framework applies to the general-purpose financial statements of both private and public entity's, A full set of financial statements prepared using IFRSs will normally include a balance sheet, an income statement, a cash flow statement and any notes to the accounts which form an integral part of the accounts.

To ensure that the Framework helps to provide useful information, it is important to identify the users of the financial information.

The Framework identifies the following users of financial statements:

- investors,
- employees,
- lenders,
- suppliers,
- other trade creditors,
- customers,
- governments and their agencies,
- the public.

The Framework identifies that not all the needs of these users can be met and does not indicate that the needs of one set of users are more important than any other. The Framework does point out, however, that financial statements that meet the needs of investors will generally also meet the needs of other users.

8.3 The Framework

The Framework covers the following main topics:

- the objective of financial statements;
- underlying assumptions;
- the qualitative characteristics of financial information;
- the elements of financial statements;
- recognition of the elements of financial statements;
- measurement of the elements of financial statements;
- concepts of capital maintenance.

8.3.1 The objective of financial statements

The Framework states that ‘the objective of financial statements is to provide information about the financial position, performance and changes in financial position of an entity that is useful to a wide range of users in making economic decisions’.

Information about the *financial position* is primarily provided in the *balance sheet*. The resources the entity controls, its financial structure, liquidity and solvency all affect the financial position.

Information about *performance* is primarily found in the *income statement*. Performance measures, particularly profitability, are required to help assess the entity’s ability to generate future cash flows from trading and other activities. It also helps users evaluate how effective the entity is at using its resources.

Information about *changes in financial position* is held primarily in a *cash flow statement*. This is a useful illustration of the entity’s investing, financing and operational activities and how these activities have affected the financial position over the reporting period.

The Framework goes on to say, ‘financial statements prepared for this purpose meet the common needs of most users’. Financial statements do not provide all the information that users may need to make economic decisions as they illustrate the financial effects of past transactions. Users are expected to use this reliable historic information to help them evaluate future performance and make their economic decisions.

8.3.2 Underlying assumptions

There are two underlying assumptions outlined in the Framework.

1. *Going concern*. Financial statements are normally prepared on the assumption that an entity is a going concern and will continue in operation for the foreseeable future. Any intention to liquidate or significantly reduce the scale of its operations would require the accounts to be prepared on a different basis and this basis would have to be disclosed.

2. *Accruals basis of accounting.* Financial statements are prepared on the accrual basis of accounting where the effects of transactions are recognised when they occur and are recorded and reported in the accounting periods to which they relate, irrespective of cash flows arising from these transactions.

8.3.3 The qualitative characteristics of financial information

Qualitative characteristics are the attributes that make the information useful to users. The four principal characteristics are:

1. understandability,
2. relevance,
3. reliability,
4. comparability.

8.3.3.1 Understandability

An essential quality of financial information is that it is readily understandable by users. For this purpose, users are assumed to have a reasonable knowledge of business and economic activities and accounting and a willingness to study the information with reasonable diligence, information on complex issues should be included if relevant and should not be excluded on the grounds that it is too difficult for the average user to understand.

8.3.3.2 Relevance

To be useful, information must be relevant to the decision-making needs of users. Information is relevant when it influences the economic decisions of users by helping them to evaluate past, present or future economic events or confirming, or correcting, their past evaluations.

Financial statements do not normally contain information about future activities; however, historical information can be used as the basis for predicting future financial position and performance. The users will then use their predictions as the basis for their decision-making.

An example of this could be where the financial statements show the profitability of a division that has been sold during the year. The users then know to eliminate that division's resources and profitability in evaluating performance of the total entity for next year.

Information that helps users assess the future performance and financial position of an entity is likely to be relevant. An item is likely to be relevant by virtue of its nature and materiality. Information is material if its omission or misstatement could influence the decision making of users.

Information can be relevant because of its nature irrespective of materiality. For example, if an entity has commenced operating activities in a country with an unstable economy, this could change the users' assessment of the overall risk that the entity is exposed to and as a result change the users' assessment of the entity's future results. Irrespective of the materiality of that segment's results, the information may be disclosed.

Information should be released on a timely basis to be relevant to users.

8.3.3.3 Reliability

To be useful, information must also be reliable. Information is reliable when it is free from material error and bias and can be considered by users to be a faithful representation of the underlying transactions and events.

Faithful representation	To be reliable the information must faithfully represent the transactions it is intended to represent
Substance over form	To show a faithful representation, the transactions must be accounted for and presented on the basis of their commercial reality rather than their legal form. Only by applying substance over form will users see the effects of the economic reality of the transactions
Neutrality	To be reliable, information must be neutral, that is, free from bias
Prudence	Many estimates are made in the preparation of financial statements, for example, stock valuation, estimated useful lives of assets, recoverability of debts. Being cautious when exercising judgement in arriving at these estimates is known as prudence. This is a generally accepted concept in accounts preparation. The concept does not, however, extend to including excess provisions, overstating liabilities or understating income or assets. This would bias the information and make it unreliable to users
Completeness	To be reliable the information must be complete. An omission can cause information to be false or misleading and therefore unreliable

8.3.3.4 Comparability

Comparability of financial information is vital to users in their decision making. The ability to identify trends in performance and financial position and compare those both from year to year and against other entities assists users in their assessments and decision making.

It is important that users are able to understand the application of accounting policies in order to compare financial information. To achieve comparability users must be able to identify where an entity has changed its policy from one year to the next and where other entities have used different accounting policies for similar transactions.

The requirement of IFRSs to disclose accounting policies adopted and the inclusion of prior periods' comparative figures helps promote comparability.



You must learn the qualitative characteristics and be able to explain them as they are regularly examined.

8.3.4 The elements of financial statements

The Framework provides definitions of the elements of financial statements. These definitions, applied together with the recognition criteria, provide guidance as to how and when the financial effect of transactions or events should be recognised in the financial statements.

Asset	An asset is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity;
Liability	A liability is a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow of resources from the entity;
Equity	The residual interest in the assets of the entity after deducting all its liabilities;
Income	Increases in economic benefits during the accounting period in the form of inflows or enhancements of assets or decreases of liabilities that result in increases in equity, other than those relating to combinations from equity participants;
Expenses	Decreases in economic benefits during the accounting period in the form of outflows or depletions of assets that result in decreases in equity, other than those relating to distributions to equity participants.



You must learn and be able to describe all of these definitions as they underpin the IFRSs. The most important from the examination viewpoint are the definitions of asset and liability.

As you work through this manual remember to refer back to these definitions. They are part of the conceptual Framework and the IFRSs will refer to the definitions where relevant. When you are studying a module on assets or liabilities, for example leases or inventories, refer back to these definitions and consider how the Framework helps entities with the classification and recognition of the effects of transactions – after all, that is what it is intended to do.

8.3.5 Recognition of the elements of financial statements

To be recognised the item must meet the definition of an element (given above). The Framework then has a further two criteria which must be met for an item to be recognised:

1. it is probable that any future economic benefit associated with the item will flow to or from the entity; and
2. the item has a cost or value that can be measured with reliability.

In the *first criterion*, the idea of *probability* is used regularly in the preparation of financial statements, for example the probability that your credit customers will pay in order that you can reliably include receivables in the balance sheet.

The assessment of the degree of uncertainty that an event will take place must be completed using the evidence available when the financial statements are prepared.

Where economic benefits are to arise over time, any related expenses should be systematically recognised over the same periods and matched with the income. Where no future benefits are anticipated, expenses should be recognised immediately.

The *second criterion* requires that a *monetary value* be attached to the item. For some transactions this is straightforward but often the value we attach to items has to be estimated. This is acceptable, provided that it is a reasonable estimate and does not undermine reliability (a qualitative characteristic noted above).

Where information is relevant to users it should not be excluded from the financial statements because it fails to meet the recognition criteria. For example, where a contingent liability exists at the balance sheet date but cannot be measured with any degree of certainty, it fails the second recognition criteria; however, due to its nature and existence it should be disclosed to users on the grounds that it is relevant.

8.3.6 Measurement of the elements of financial statements

Once it is decided that an item is to be recognised in the financial statements it is then necessary to decide on what basis it is to be measured. To be included in the financial statements the item must have a monetary value attached to it.

The Framework refers to four measurement bases that are often used in reporting, being historic cost, current cost, realisable value and present value. It highlights that historic cost

is the most commonly adopted although often within a combination of bases, for example, valuing inventories using the lower of cost and net realisable value.

8.3.7 Concepts of capital and capital maintenance

8.3.7.1 Concepts of capital

The Framework refers to two concepts of capital: financial concept of capital and physical concept of capital.

Most entities adopt the financial concept of capital which deals with the net assets or equity of the entity. If, instead of being primarily concerned with the invested capital of the entity, the users are concerned with, for example, the operating capability of the entity, then the physical concept of capital should be used.

8.3.7.2 Determining profit

Under the financial concept of capital a profit is earned if the financial amount of the net assets at the end of the period is greater than that at the beginning of the period, after deducting any distributions to and contributions from owners.

Under the physical concept of capital a profit is earned if the physical productive capacity (or operating capacity) of the entity (or the resources or funds needed to achieve that capacity) at the end of the period is greater than that at the beginning of the period, after deducting any distributions to and contributions from owners.

8.3.7.3 Capital maintenance

In general terms, an entity has maintained its capital if it has as much capital at the end of the period as it had at the beginning of the period. The key in capital maintenance is deciding which concept is being adopted, because this then defines the basis on which profit is calculated.

Financial capital maintenance is measured in either nominal monetary units or units of constant purchasing power.

Physical capital maintenance requires the adoption of the current cost basis of measurement – an appreciation of what it would cost to replace assets at current prices.

The main difference between the two is how they treat the effects of increases in prices of assets and liabilities.

8.4 Usefulness of a conceptual Framework

As was mentioned earlier in this chapter, one of the major challenges for those communicating financial information is the *number and variety of users* of that information. It is difficult to assess its ultimate usefulness when you are unsure how the information is being used and by whom.

It would be almost impossible to address all technical issues in a business context that would meet the needs of every user. It is therefore important that all users appreciate the general principles of financial reporting – if you like, *the theory of how things should be treated*.

A conceptual Framework goes some way to providing this. It gives *guidance on the broad principles* on how items should be recorded, on how they should be measured and how they should be presented.

Where there are no standards specifically covering an issue, a conceptual Framework provides a *point of reference* for preparers of financial information. The Framework can provide guidance on how like items are treated and gives definitions and criteria that can be used in deciding the recognition and measurement of the item.

Where, in general, *accounting standards are less prescriptive*, a conceptual Framework can assist in this way also.

Accounting standards deal with a variety of specific technical issues. The existence of a conceptual Framework can *remove the need to address the underlying issues over and over again*. For example, the Framework gives definitions of assets and liabilities. These definitions must be met for items to be included in financial statements. This is an underlying principle, and as the accounting standards are based on the principles within the Framework they need not be dealt with fully in each of the standards.

The increasing complexity of the business environment has resulted in a great number of specific accounting standards being developed. It is vital that each standard is developed within the broad Framework of principles. A conceptual Framework will assist standard-setters to develop specific accounting standards that follow a *consistent approach to recognition and measurement*.

The increased complexity of business provides a second challenge – the pace at which technical issues are raised and must be addressed. The process of creating a new accounting standard can be a long one, but where a conceptual Framework exists the issue can be dealt with temporarily by *providing a short-term solution*. Providing the treatment is consistent with the principles within the Framework then it will meet the criteria for useful information. This would be an acceptable solution until a specific standard was developed.

8.5 The IASB's Framework and the standard-setting process

We discussed above how a conceptual Framework can be useful in a regulatory environment. Many of the points raised above are true for the Framework and the IASB's standard-setting process. It will provide a reference point for those developing standards and help them provide consistent guidance. It does remove the need to address the underlying principles in each individual standard.

Where new technical issues and problems are raised and not covered specifically by an accounting standard, a short-term solution is provided by the IASB until it can be addressed fully. The International Financial Reporting Interpretations Committee (discussed in Chapter 7) issues such guidance and can use the Framework to ensure that the guidance it provides is consistent with the agreed underlying principles.

8.6 Summary

Having completed this chapter we can now explain the purpose, status and scope of the Framework. We can identify the main topics included in the Framework and explain briefly what they cover. A number of points have been discussed, illustrating how useful a conceptual Framework can be. We can use these points together with the IASB's objectives of the Framework to evaluate its relationship to the standard-setting process.

Revision Questions

8

? Question 1

The IASB's *Framework* includes reliability as one of the characteristics that make financial information useful.

- (i) Complete
- (ii) Predictive value
- (iii) Confirmatory value
- (iv) Neutrality
- (v) Faithful representation

Which of the characteristics above are listed in the *Framework* as making financial information reliable?

- (A) (i), (iv) and (v)
- (B) (ii), (iii) and (iv)
- (C) (ii) and (iii)
- (D) (ii) and (v)

(2 marks)

? Question 2

The Framework for the Preparation and Presentation of Financial Statements has a number of purposes, including:

- assisting the Board in the development of future IFRSs and in its review of existing IFRSs;
- assisting the Board in promoting harmonisation of regulations, accounting standards and procedures relating to the presentation of financial statements by providing a basis for reducing the number of alternative treatments permitted by IFRSs;
- assisting preparers of financial statements in applying IFRSs and in dealing with topics that have yet to be covered in an IFRS.

Requirement

Discuss how a conceptual Framework could help IASB achieve these objectives.

(12 marks)

? Question 3

The IASB's *Framework for the Preparation and Presentation of Financial Statements* (Framework) lists the qualitative characteristics of financial statements.

- (i) Comparability
- (ii) Relevance
- (iii) Prudence
- (iv) Reliability
- (v) Understandability
- (vi) Matching
- (vii) Consistency

Which THREE of the above are NOT included in the principal qualitative characteristics listed by the Framework?

- (A) (i), (iii) and (vii)
- (B) (i), (ii) and (v)
- (C) (iii), (vi) and (vii)
- (D) (iii), (iv) and (vi)

(2 marks)

? Question 4

Relevance and reliability are two of the four main qualitative characteristics of financial information, as set out in the Framework.

Requirements

- (a) Briefly discuss what is meant by these terms. **(5 marks)**
- (b) Give an example of when these two attributes could come into conflict and what the outcome is likely to be. **(5 marks)**

(Total marks = 10)

? Question 5

The *Framework* includes the following definition:

'an asset is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity.'

Requirement

Explain this definition, using the example of a trade receivable. **(5 marks)**

? Question 6

In 1989, the IASC issued the Framework for the Preparation and Presentation of Financial Statements. It is intended to establish a broad set of accounting principles on which standards and accounting rules will be based.

Requirement

Evaluate the relationship between the Framework and the standard-setting process. **(10 marks)**

Solutions to Revision Questions

8

Solution 1

The correct answer is (A).

Items (ii) and (iii) are included in the *Framework* as characteristics of relevance, see Section 8.3.3.

Solution 2

A conceptual Framework provides guidance on the broad principles of financial reporting. It highlights how items should be recorded, on how they should be measured and presented. The setting of broad principles could assist in the development of accounting standards, ensuring that the principles are followed consistently as standards and rules are developed.

A conceptual Framework can provide guidance on how similar items are treated. By providing definitions and criteria that can be used in deciding the recognition and measurement of items, conceptual Frameworks can act as a point of reference for those setting standards, those preparing and those using financial information.

The existence of a conceptual Framework can remove the need to address the underlying issues over and over again. Where underlying principles have been established and the accounting standards are based on these principles, there is no need to deal with them fully in each of the standards. This will save the standard-setters time in developing standards and will again ensure consistent treatment of items.

Where a technical issue is raised but is not specifically addressed in an accounting standard, a conceptual Framework can help provide guidance on how such items should be treated. Where a short-term technical solution is provided by the standard-setters, the existence of a conceptual Framework will ensure that the treatment is consistent with the broad set of agreed principles.

Solution 3

The correct answer is (C), see Section 8.3.3.

Solution 4

- (a) Information is *relevant* when it influences the economic decisions of users by helping them to evaluate past, present or future economic events or confirming, or correcting, their past evaluations.

Although financial statements do not normally contain information about future activities, any information that helps users assess the future performance and financial position of an entity is likely to be relevant. An item is likely to be relevant by virtue of its nature and materiality. Information is material if its omission or misstatement could influence the decision making of users.

Information can also be relevant because of its unusual nature, irrespective of materiality. The directors would have to judge, in this case, if the nature of the information was such that its omission could influence the economic decision-making of users. Information should be released on a timely basis to be relevant to users.

Information is *reliable* when it is free from material error and bias and can be considered by users to be a faithful representation of the underlying transactions and events. To show a faithful representation, the transactions must be accounted for and presented on the basis of their commercial reality rather than their legal form.

In addition, the information must be neutral (free from bias) and complete. An omission can cause information to be false or misleading, as can the overstating of accounting estimates like provisions and valuations.

- (b) An example of where relevance and reliability could come into conflict could be the existence of a contingent liability.

If the directors of an entity believe with reasonable certainty that a future liability has been identified they must first consider whether details on it should be included. If they consider that knowledge of it could affect the decision making of users then it should be included. However, given it is based on a future event, it cannot be measured with certainty and they may not have sufficient information to make a financial estimate with reasonable certainty. It may be questionable then if the information they could provide would be reliable.

In this case relevance and reliability must be traded off. It is likely that if omission of information on the potential liability would affect users' decision making then details should be included even if the financial amount cannot be stated with reasonable certainty. Relevance would override reliability in this case.



Solution 5

In the case of a trade receivable, the past event is the making of a credit sale. The goods are transferred and the amount receivable is included in the financial records of the entity making the sale. That entity now has a receivable that is expected to turn into cash on receipt of the payment. The entity can be reasonably certain of payment where the transaction is complete, there is no dispute with the debtor and the debtor is not considered to be a credit risk. In this case, the entity can be reasonably certain that the future economic benefit (cash) will flow to them at the end of the granted credit period and can recognise the receivable as an asset within the financial statements.



Solution 6

The Framework for the Preparation and Presentation of Financial Statements provides guidance on the broad principles that the IASB has agreed should form the basis of accounting rules and standards. It gives guidance on how items should be recognised, measured and presented.

With a Framework of agreed principles established, all accounting standards that are developed are done so within this Framework. This ensures that the accounting rules and treatment of items being developed are consistent. The Framework acts as a point of reference for the standard-setters; when dealing with a technical point they can consider the Framework and ensure that the outcome is consistent with the principles it contains.

The Framework has also helped where there is no specific standard covering a technical issue. Preparers of financial information can refer to the Framework and see how similar items have been treated. The International Financial Reporting Interpretations Committee often provide Draft Interpretations as an interim solution in the absence of a specific standard. The IFRIC ensures that the interpretations are consistent with the principles within the Framework and therefore are consistent with the generally accepted rules of the IASB, until the issue can be dealt with fully in a standard.

International Accounting Standards are, generally, less prescriptive, and so the Framework acts as a point of reference for preparers and users of accounts prepared in accordance with them.

The Framework removes the need for IASB to address underlying issues over and over again. For example, the Framework gives definitions of assets and liabilities. These definitions must be met for items to be included in financial statements. This is an underlying principle, and as the accounting standards are based on the principles within the Framework they need not be dealt with fully in each of the standards.

The increasing complexity of the business environment has resulted in a great number of specific accounting standards being developed. The IASB has to date issued more than 40 IFRSs and IASs. It is vital that each standard is developed within the broad Framework of principles. The existence of the Framework assists the IASB in the development of specific accounting standards, by ensuring that they follow a consistent approach to recognition and measurement.

Many of the IFRSs provide a choice of allowable treatments for items. The IASB designates one the 'benchmark' treatment and the other(s) as an allowable alternative treatment. The development of the Framework is now expected to result in these alternatives gradually being removed, and the preferred treatment will be that which is consistent with the Framework.

The Role of the External Auditor

9

LEARNING OUTCOME

After completing this chapter you should be able to:

- ▶ explain in general terms, the role of the external auditor, the elements of the audit report and types of qualification of that report.

The syllabus topics covered in this chapter are as follows:

- The powers and duties of the external auditors, the audit report and its qualification for accounting statements not in accordance with best practice.

9.1 External audit

Countries differ widely in their audit requirement. Small entities (variously defined) are often exempt. When an audit is required, the auditor's duty is to express an opinion on the truth and fairness of the entity's published financial statements. Exemptions are usually available for dormant entities (which – by definition – have not traded during the year and so have no transactions to report).

You may work for an entity which requires an external audit and may have encountered members of the audit team. It is, however, impossible to get any real idea of the scale of an audit unless you have actually participated in one. Most of the cost of an audit is staff time charged to the audit. Auditing is a very time-consuming and costly activity. It is, therefore, worth spending some time thinking about the reasons why an audit might be carried out.

9.1.1 The purpose of an audit

Managers often feel under pressure to portray their entities in a favourable light when they report to any interested parties. This is one reason why we have a detailed set of accounting standards to regulate the presentation of contentious items in the financial statements. There is, however, an even more fundamental issue that must be addressed in the financial reporting process. It is not enough merely to *publish* rules and regulations governing the financial statements; there has to be some mechanism to *enforce* their implementation. Without

enforcement, managers might distort the impression created by the statements in any number of ways. The nature of this distortion could vary from outright fabrication of the figures all the way through to the deliberate exploitation of a loophole in the system of rules.

Auditing is largely about providing the readers of the financial statements with confidence in the figures. This is highlighted by the accountancy profession's definition of an audit.



Audit of financial statements: an exercise whose objective is to enable auditors to express an opinion as to whether the financial statements give a true and fair view . . . of the affairs of the entity at the period end and of its profit or loss . . . for the period then ended and have been properly prepared in accordance with the applicable reporting framework (e.g. relevant legislation and applicable accounting standards). *International Standard on Auditing (ISA) 2000 Objective and General Principles Governing an Audit of Financial Statements.*

The logic behind this definition is that the auditor's opinion will add some credibility to the financial statements. The auditor is an independent expert on financial reporting and will have conducted exhaustive checks before signing the audit report.

9.1.2 The auditor's duties

In most countries the auditor has a statutory duty to make a report to the entity's members on the truth and fairness of the entity's annual accounts. As we have seen in the foregoing section, this report must state the auditor's opinion on whether the statements have been prepared in accordance with the relevant legislation and whether they give a true and fair view of the profit or loss for the year and state of affairs at the year end. The duty to report on the truth and fairness of the financial statements is the primary duty associated with the external audit.

The auditor has a duty to form an opinion on certain other matters and to report any reservations. The auditor must consider whether:

1. the entity has kept proper accounting records;
2. the entity's balance sheet and income statement agree with the underlying accounting records;
3. all the information and explanations that the auditor considers necessary for the purposes of the audit have been obtained and whether adequate returns for their audit have been received from branches not visited during the audit;
4. the entity has complied with the relevant legislation's requirements in respect of the necessary disclosures. If the entity has not made all the disclosures required the audit report should, if possible, contain a statement of the required particulars.

We do not need to elaborate on the above, although it is worth noting that (3) above effectively gives the auditor the right of access to any information or material that seems relevant to checking the financial statements. The entity cannot refuse this request.

The auditor has a limited duty to review the other information issued alongside the audited financial statements. For example, the auditor must consider whether the information in any reports published with the financial statements are consistent with the information in the income statement and balance sheet. Any inconsistency should be disclosed in the audit report.

The auditor must gather information and evidence in order to support an opinion on the truth and fairness of the financial statements. There is, however, no need to *guarantee* that the statements give a true and fair view. This is partly because the auditor is only required to form an opinion in order to discharge each of the duties described above. It is also

because there will always be a limit to the amount of evidence that can be collected. The auditor is required to apply ‘reasonable skill and care’ in conducting the audit.

Contrary to popular opinion, the auditor does not have a specific duty to search for fraud. The auditor will, however, have to consider the possibility that the truth and fairness of the statements might have been distorted by any irregularity including the concealment of a fraud. In general, auditors rely on control systems within entities to ensure that there has not been any material distortion because of fraud. The auditor would, however, follow up on anything suspicious which came to light in the course of the audit.

Local legal requirements may impose additional duties on auditors.

9.1.3 The powers of auditors

Rights that are designed to ensure that the auditor is able to fulfil their statutory duties are usually given to them under local legislation relating to entities, for example in the UK the Companies Act 1985. To be able to carry out their duties auditors must be independent of the entity that they are auditing. Independence is fundamental to the credibility of the audit process.

The powers granted to the auditor by legislation varies from country to country but typical powers found in many countries are:

- the right of access at all times to the books, records, documents and accounts of the entity;
- the right to be notified of, attend and speak at meetings of equity holders;
- the right to require officers of the entity to provide them with whatever information and explanations they think necessary for the performance of their duties;
- the right to present a counter-argument to any meeting of equity holders that is considering the removal of the auditors.

9.1.4 The audit process

The manner in which an audit is conducted is beyond the scope of the syllabus. You should, however, be aware of the broad outline of the manner in which an audit is conducted.

Figure 9.1 illustrates the main steps of an audit. The auditor is usually appointed by the shareholders during the entity’s annual general meeting. This appointment is normally effective until the next annual general meeting. It is very common for the same firm to be

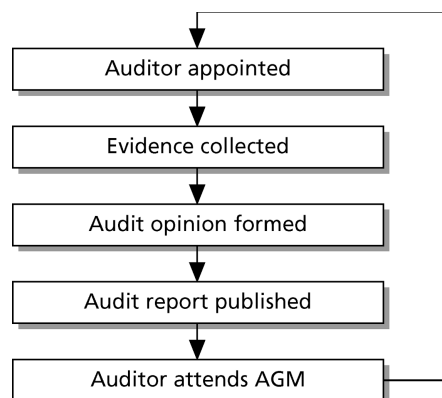


Figure 9.1 Steps in the audit cycle

reappointed annually for many years and so there is normally far more continuity than this annual cycle suggests.

The auditor sets about gathering evidence to support an opinion about the financial statements. There are two aspects to the preparation of the accounts and this means that there are two phases of the audit:

- *Bookkeeping phase.* The auditor must ensure that the transactions and balances recorded in the entity's books and ledgers are sufficiently complete and accurate to form the basis for an acceptable set of financial statements. This aspect of the audit work may be completed in stages, with most of the work undertaken during the year.
- *Accounting phase.* The auditor must review the accounting policies adopted by management in order to ensure that these are acceptable and that the statements give a true and fair view.

The gathering of audit evidence is not part of our syllabus and so we will not discuss it further. The issues associated with the reporting stage of the audit are examinable. Basically, the auditor is responsible for forming an opinion on the truth and fairness of the financial statements and for reporting this opinion to the shareholders. We will discuss this duty in more detail below. Auditing is governed by a comprehensive set of international standards on auditing (ISAs) issued by the International Auditing and Assurance Standards Board (IAASB). The IAASB is a committee of the International Federation of Accountants (IFAC). Membership of IFAC is open to accountancy bodies worldwide.

9.2 The audit report

The provision of a clear expression of opinion on the financial statements lies at the very heart of the external audit. The form and content of the audit report is governed by ISA 700 (Revised) *The Auditor's Report on Financial Statements*. ISA 700 was revised in December 2004, the new form of audit report is effective for auditor's reports dated on or after December 31, 2006. A typical audit report illustrated in ISA 700 is shown below.

Independent auditor's report

Appropriate addressee

We have audited the accompanying financial statements of ABC company, which comprise the balance sheet as at December 31, 20X1, and the income statement, statement of changes in equity and cash flow statement for the year then ended, and a summary of significant accounting policies and other explanatory notes.

Management's responsibility for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards. This responsibility includes: designing, implementing and maintaining internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements give a true and fair view of (*or present fairly, in all material respects,*) the financial position of ABC Company as of December 31, 20X1, and of its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards.

[Auditor's signature]

[Date of the auditor's report]

[Auditor's address]

You should look at this report carefully and then think about the following questions. They will help you to appreciate the extent of the auditor's duties.

- To what extent does this report state that the entity is well run?
- To what extent does it assure us that the board has been discharging its duties honestly?
- To what extent does it assure us that there has been no staff fraud?

The answer to each of the foregoing questions is 'not at all'. The audit report will never make any direct reference to the manner in which the entity is run. The financial statements could easily give a true and fair view even though the entity is not doing well. In that case, it would be up to the shareholders to infer that the entity had problems because it was making a loss or had a very poor return on capital employed. Similarly, the auditors do not provide any direct assurances about the stewardship of management or about the honesty of staff. We will return to this issue later, but the auditor's duties for the detection and reporting of fraud and other irregularities are quite severely restricted.

Thus, the only direct benefit to be had from the audit report is that it provides the shareholders with some assurance that the accounts give a true and fair view – in other words, it provides them with some assurance that the accounts provide a credible basis for making decisions.

9.2.1 A closer look at the report

A typical report is analysed in the following sections, to show what the various elements of it mean and why they are required:

Title

The auditor's report should have an appropriate title. It may be appropriate to use the term 'independent auditor' in the title to distinguish the auditor's report from reports that might be issued by others, such as by officers of the entity, the board of directors, or from the reports of other auditors who may not have to abide by the same ethical requirements as the independent auditor.

Addressee

The auditor's report should be appropriately addressed as required by the circumstances of the engagement and local regulations. The report is ordinarily addressed either to the shareholders or the board of directors of the entity whose financial statements are being audited.

Opening or introductory paragraph

The auditor's report should identify the entity whose financial statements have been audited and state that the financial statements have been audited. It should identify the title of each of the financial statements that comprise the complete set of financial statements. It should specify, the date of and period covered by the financial statements.

Management's responsibility for the financial statements

The auditor's report should state that management is responsible for the preparation and the fair presentation of the financial statements in accordance with the applicable financial reporting framework and that this responsibility includes:

- (a) Designing, implementing and maintaining internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error;
- (b) Selecting and applying appropriate accounting policies; and
- (c) Making accounting estimates that are reasonable in the circumstances.

Financial statements are the representations of management. The preparation of such statements requires management to make significant accounting estimates and judgements, as well as to determine the appropriate accounting principles and methods used in preparation of the financial statements. In contrast, the auditor's responsibility is to audit these financial statements in order to express an opinion thereon.

Auditor's responsibility

The auditor's report should state that the responsibility of the auditor is to express an opinion on the financial statements based on the audit.

The auditor's report should state that the audit was conducted in accordance with International Standards on Auditing. The auditor's report should also explain that those standards require that the auditor comply with ethical requirements and that the auditor plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

The auditor's report should describe an audit by stating that:

- (a) An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements;
- (b) The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. In circumstances when the auditor also has a responsibility to express an opinion on the effectiveness of internal control in conjunction with the audit of the financial statements, the auditor should omit the phrase that the auditor's consideration of internal control is not for the purpose of expressing an opinion on the effectiveness of internal control; and
- (c) An audit also includes evaluating the appropriateness of the accounting policies used, the reasonableness of accounting estimates made by management, as well as the overall presentation of the financial statements.

The auditor's report should state that the auditor believes that the audit evidence the auditor has obtained is sufficient and appropriate to provide a basis for the auditor's opinion.

Auditor's opinion

An unqualified opinion should be expressed when the auditor concludes that the financial statements give a true and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting framework. When expressing an unqualified opinion, the opinion paragraph of the auditor's report should state the auditor's opinion that the financial statements give a true and fair view or present fairly, in all material respects, in accordance with the applicable financial reporting framework (unless the auditor is required by law or regulation to use different wording for the opinion, in which case the prescribed wording should be used).

The terms used to express the auditor's opinion are 'give a true and fair view' or 'present fairly, in all material respects,' and are equivalent. Both terms indicate, among other things, that the auditor considers only those matters that are material to the financial statements.

Date of report

The auditor should date the report as of the completion date of the audit. This informs the reader that the auditor has considered the effect on the financial statements and on the report of events and transactions of which the auditor became aware and that occurred up to that date.

Since the auditor's responsibility is to report on the financial statements as prepared and presented by management, the auditor should not date the report earlier than the date on which the financial statements are signed or approved by management.

Auditor's address

The report should name a specific location, which is ordinarily the city where the auditor maintains the office that has responsibility for the audit.

Auditor's signature

The report should be signed in the name of the audit firm, the personal name of the auditor, or both, as appropriate. The auditor's report is ordinarily signed in the name of the firm because the firm assumes responsibility for the audit.

An example of an audit report is given below.

Extract from the consolidated accounts of the Nestlé Group for the year ended 31 December 2004

Report of the group auditors

To: The General Meeting of Nestlé SA

As Group auditors we have audited the consolidated accounts (balance sheet, income statement, cash flow statement, statement of changes in equity and annex) of the Nestlé Group for the year ended 31st December 2003.

These consolidated accounts are the responsibility of the Board of Directors. Our responsibility is to express an opinion on these consolidated accounts based on our audit. We confirm that we meet the legal requirements concerning professional qualification and independence.

Our audit was conducted in accordance with auditing standards promulgated by the Swiss profession, and with International Standards on Auditing (ISA), which require that an audit be planned and performed to obtain reasonable assurance about whether the consolidated accounts are free from material misstatement. We have examined on a test basis evidence supporting the amounts and disclosures in the consolidated accounts. We have also assessed the accounting principles used, significant estimates made and the overall consolidated accounts presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the consolidated accounts give a true and fair view of the financial position, the net profit and cash flows in accordance with International Financial Reporting Standards (IFRS) and comply with Swiss law.

We recommend that the consolidated accounts submitted to you be approved.

KPMG Klynwed Peat Marwick Goerdeler SA

S. R. Cormack Stéphane Gard

Auditor in charge

London and Zurich

23 February 2005

9.3 Qualified reports

The auditor will almost always be able to conclude that the statements give a true and fair view, although it might be more difficult to do so in some cases. If an audit involves a particularly difficult problem then the auditor might have to collect additional evidence before concluding that it has been accounted for correctly. Alternatively, the auditor might decide that the accounting policies chosen by management are unacceptable, in which case it will be necessary to negotiate a change of policy.

Occasionally, the auditor will be unable to conclude that the accounts give a true and fair view and is unable to persuade the directors to change their policy. In those cases the auditor will have to express some reservation about the statements by giving a 'qualified' opinion. This means that the opinion paragraph of the report is modified to warn the readers that the auditor has some material reservation about the truth and fairness of the statements.

Qualified reports are required where there has been a limitation on the scope of the auditor's examination or the auditor disagrees with the treatment or disclosure of a matter in the financial statements. Limitations of scope arise when the auditor is prevented from gathering all the evidence that is necessary in order to complete the audit.

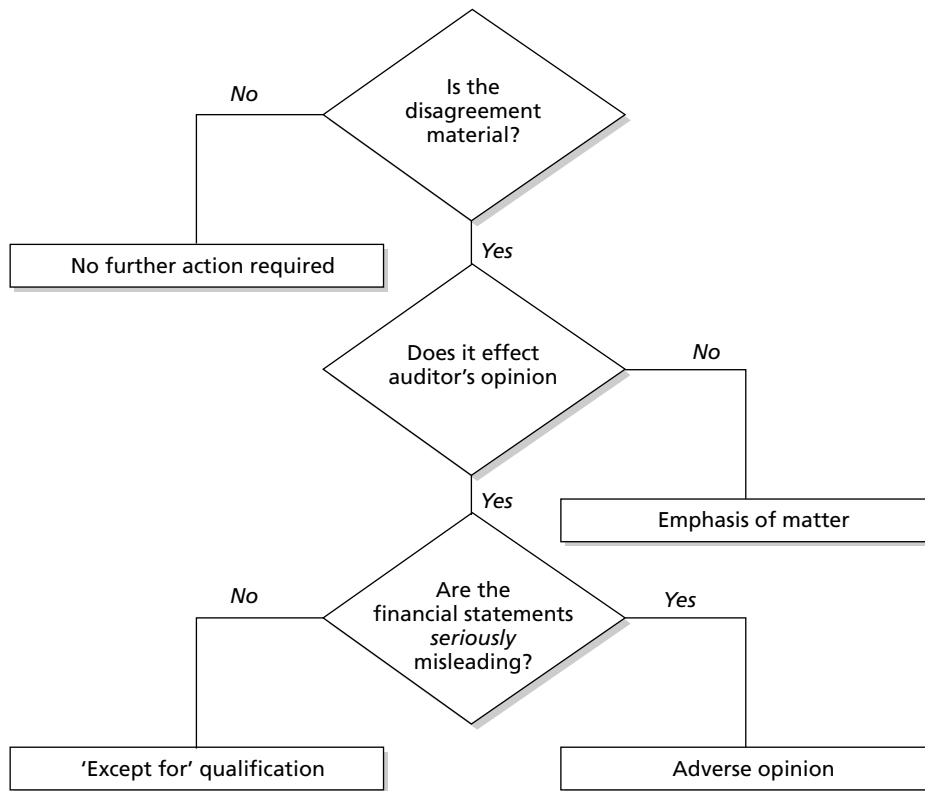


Figure 9.2 Classifying disagreements on the financial statements

While a limitation of scope is a serious problem for the auditor, it is specifically excluded from our syllabus and so we will not discuss it further. Qualifications arising from disagreement are, however, examinable.

The nature of accountancy means that there is always scope for disagreement over the facts, the application of an accounting standard or the amount of disclosure in the financial statements. The auditor would not necessarily treat a difference of opinion about the best possible treatment of a matter as disagreement. The matter would only become a problem if the auditor felt that the treatment adopted by management was unacceptable. Once such disagreement has been identified, the auditor must classify it as shown in Figure 9.2.

9.3.1 Materiality

By definition, a matter is material 'if its omission or misstatement could influence the economic decisions of users taken on the basis of the financial statements' (IASB *Framework*). This means that there is no real need to report on matters which are not material because they will not affect the behaviour of the readers. In other words, if something is immaterial then – by definition – it does not matter. Indeed, reporting on immaterial matters would be misleading because it would give them unnecessary prominence.

Materiality cannot be measured in terms of any objective criteria. Some audit firms use rules of thumb and treat anything which exceeds, say, 5 or 10 per cent of profit or 1.2 or 1 per cent of turnover as material. These benchmarks are not sufficient in themselves because some matters are material by their very nature.

There should be very little doubt about the materiality or otherwise of an item in the exam. If materiality is to be determined by the amounts involved then these will either be

very clearly material or immaterial, for example, well in excess of 10 per cent of profit or far less than 5 per cent.

Items which are to be judged in terms of their nature are rather more difficult. It is impossible to be categorical about whether such an item is material or not, but the issues ought either to be reasonably clear-cut or the marks awarded for the quality of arguments – either for or against the matter being material – rather than being for a correct distinction.

Figure 9.2 suggests that there is a second level of material disagreement, one which is so serious that the statements are rendered seriously misleading. The distinction between ‘material’ and more serious ‘fundamental’ qualifications is not at all clear-cut. A disagreement would have to be so serious as to guide readers in the wrong direction altogether before it would be regarded as more than merely material. Thus, this more extreme form of qualification might be reserved for circumstances in which, say, the entity was reporting massive profits when the auditor was of the opinion that the entity was making massive losses.

9.3.2 The wording of a qualified report

International Standard on Auditing 701(revised) *Modifications to the independent Auditors Report* deals with qualified audit reports. ISA 701 classifies qualified audit reports into the following categories:

Matters that do not affect the auditor’s opinion

- (a) *Emphasis of matter* – In certain circumstances, an auditor’s report may be modified by adding an emphasis of matter paragraph to highlight a matter affecting the financial statements which is included in a detailed note to the financial statements. The addition of such an emphasis of matter paragraph does not affect the auditor’s opinion. The paragraph would usually be included after the paragraph containing the auditor’s opinion and states that the auditor’s opinion is not qualified in this respect.

An illustration of an emphasis of matter paragraph for a significant uncertainty in an auditor’s report: *Without qualifying our opinion we draw attention to Note . . . to the financial statements. The entity [brief explanation of circumstances explained in detail in the note].*

Matters that do affect the auditor’s opinion

- (a) *A qualified opinion* should be expressed when the auditor concludes that an unqualified opinion cannot be expressed but that the effect of any disagreement with management, or limitation on scope is not so material and pervasive as to require an adverse opinion or a disclaimer of opinion. A qualified opinion should be expressed as being ‘except for’ the effects of the matter to which the qualification relates.
- (b) *A disclaimer of opinion* should be expressed when the possible effect of a limitation on scope is so material and pervasive that the auditor has not been able to obtain sufficient appropriate audit evidence and accordingly is unable to express an opinion on the financial statements.
- (c) *An adverse opinion* should be expressed when the effect of a disagreement is so material and pervasive to the financial statements that the auditor concludes that a qualification

of the report is not adequate to disclose the misleading or incomplete nature of the financial statements.

Whenever the auditor expresses an opinion that is other than unqualified, a clear description of all the substantive reasons should be included in the report and, unless impracticable, a quantification of the possible effect(s) on the financial statements.

9.3.3 Independent auditor's report showing qualified opinion

The most common form of qualified report is as follows. Read this report and compare it with the unqualified report shown above in 9.2.

Independent auditor's report

Appropriate addressee

Disagreement on Accounting Policies—Inappropriate Accounting Method—Qualified Opinion

We have audited the accompanying financial statements of ABC Company, which comprise the balance sheet as at December 31, 20X1, and the income statement, statement of changes in equity and cash flow statement for the year then ended, and a summary of significant accounting policies and other explanatory notes.

Management's responsibility for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards. This responsibility includes: designing, implementing and maintaining internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

As discussed in Note X to the financial statements, no depreciation has been provided in the financial statements which practice, in our opinion, is not in accordance with International Financial Reporting Standards. The provision for the year ended December 31, 20X1, should be xxx based on the straight-line method of depreciation using annual rates of 5% for the building and 20% for the equipment. Accordingly, the fixed assets should be reduced by accumulated depreciation of xxx and the loss for the year and accumulated deficit should be increased by xxx and xxx, respectively.

In our opinion, *except for the effect on the financial statements of the matter referred to in the preceding paragraph*, the financial statements give a true and fair view of (*or present fairly, in all material respects,*) the financial position of ABC Company as of December 31, 20X1, and of its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards.

[Auditor's signature]

[Date of the auditor's report]

[Auditor's address]

Much of the audit report is unchanged. The two main differences are that there is an additional paragraph which describes the specific area of disagreement between the auditor and the board and that the opinion paragraph has been reworded.

The explanatory paragraph spells out the facts very clearly and quantifies the matter. The readers of the report can now decide whether they agree with the auditor or the directors. If they support the auditor's opinion then it is a simple matter to reduce both profit and current assets by the amount in question.

The opinion paragraph is also very clear. The readers are left in no doubt that the auditor's only material reservation is in respect of the depreciation charge. This has been disclosed and the accounts otherwise give a true and fair view.

An extract from the more extreme form of qualification is shown below. Again, please read this and compare it with the examples shown above. *Note:* The wording of the first few paragraphs is not affected by the qualification, except that the report would be headed as shown.

9.3.4 Independent auditor's report, adverse opinion

Appropriate addressee

Disagreement on accounting policies – adverse opinion [. . .]

As more fully explained in note 7 no provision has been made for losses expected to arise on certain long-term contracts currently in progress, as the directors consider that such losses should be offset against amounts recoverable on other long-term contracts. In our opinion, provision should be made for foreseeable losses on individual contracts as required by IAS 11 *Construction Contracts*. If losses had been so recognised the effect would have been to reduce the profit before and after tax for the year and the contract work in progress at 31 December 20X0 by \$2.3 million.

In our opinion, in view of the effect of the failure to provide for the losses referred to above, the financial statements do not give a true and fair view of the financial position of ABC as at 31 December 20X0 and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards and relevant statutes.

Auditor

Date

Address

The report is headed 'adverse opinion'. Again it contains a clear description of a difference of opinion between the directors and the auditor. This time, however, the auditor has concluded that the accounts do not give a true and fair view. Issuing such an opinion is a very extreme step to take. Effectively, it suggests that the shareholders should not use the financial statements for decision-making purposes.



You might be worried about distinguishing between the two types of qualified report. In general, you should decide whether the matter is material. If it is, then the 'except for' form will almost always be appropriate. You do have to be aware of the adverse opinion, but it is very unlikely that you will ever use it in answering an examination question. You will not be asked to write out a full audit report in the examination. A question might ask you to decide which type of report is appropriate or to explain what the different types of audit report are, but you do not have to memorise the wording of the reports.

9.4 Summary

The auditor is responsible for forming an opinion on the truth and fairness of the financial statements and for expressing this in a report addressed to the shareholders. This is necessary so that the readers of the financial statements can have some confidence that the directors have not manipulated the information in the accounts.

Having completed this chapter we can now explain the purpose of an audit and the role and duties of the external auditor. We can describe the audit process and explain the contents of an audit report.

We can discuss the circumstances that could result in a qualified opinion being given and how that opinion would be reflected in the audit report.

Readings

9

The reading in this section is intended to give you some understanding of the practical issues affecting entity auditors. The first and second articles report the findings of a UK research study into the audit expectations gap, published in 2001.

The third article discusses the Enron affair and its implications for a range of things including auditor independence, auditor monitoring and financial reporting stands.

The fourth article discusses the changing nature of audits.

Although the last two articles discuss UK auditing the general principles are applicable in other countries.

Accounting Issues – Bridging the expectations gap

Ian Dewing and Peter Russell, *Accountancy Magazine*, July 2001

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Independence, responsibility, quality and liability are all to be found in the audit expectation gap Ian Dewing and Peter Russell. This is the first of two articles in which we consider the findings of our research study, *Stakeholder Perceptions on an Independent Regulatory Body for Listed Company Audit in the UK*. Sponsored by the ICAEW's Centre for Business Performance, it considered various stakeholder groups' perceptions of the need, function and structure of a UK independent regulatory body for the audit of listed companies. It was undertaken independently of the profession's own review of its regulation (notably the Regulation Review Working Party chaired by Chris Swinson), which culminated in the creation of the Accountancy Foundation.

We shall look at stakeholders' perceptions of the elements comprising the audit expectations gap, and, in our next article, at stakeholders' perceptions of the desirability of establishing an independent body so that listed company audit can address these issues.

The expectations gap has several dimensions: auditor independence, auditors' responsibilities, audit quality and auditors' liability. Views about it were explored by a questionnaire survey of, and face-to-face interviews with, officers of trade and professional associations, individual fund managers, bankers, credit analysts, and others who had experience of both the public and private sectors. All were informed, and often expert, users of accounts. In

addition, many had experience from more than one perspective, e.g., former auditors now working in the fund management or banking industry.

The objectivity link

Auditor independence is linked to audit objectivity. A question that may be posed is: 'Are auditors sufficiently independent of management to conduct audits objectively?' The survey revealed that those holding an accounting qualification were more likely to believe that the answer is 'yes'. The provision of non-audit services was a key issue. Interviewees from the fund management industry expressed concern about auditors providing non-audit services, and especially about the dangers of 'low-balling'. It was argued that audit quality could be jeopardised, and auditor independence compromised, if audit appointments were cost-drive. However, fund managers and others recognised that concern for demonstrable auditor independence needed to be balanced by the 'practical advantages' of auditors providing non-audit services. Bankers were aware of threats to independence, but some viewed the provision of non-audit services by the larger accountancy practices as positive: 'They have greater scope to give professional advice where you've got growing businesses and multi-nationals – that's where you need it.' A particular issue in the expectations gap is whether auditors' current responsibilities for detecting and reporting fraud, for the going concern opinion, and for reporting to shareholders, should be widened. The survey revealed that those with an accounting qualification believed these responsibilities should not be widened. Those without one were in favour of widening auditors' responsibilities for fraud and for going concern, but not for reporting to a wider group of stakeholders. Of the interviewees, fund managers felt that more could be done in expressing an opinion on a company's internal control environment. As regards going concern, bankers recognised the 'chicken and egg' problem for auditors and themselves. Fund managers were not in favour of widening auditors' duty to report to other stakeholders. Bankers were content that the auditors' duty to report to other stakeholders. Bankers were content that the auditors' primary duty should be to shareholders. An interesting observation was made by interviewees from the public sector, who mentioned the possibility of introducing a general power to issue a report in the public interest, noting that auditors increasingly have a duty to report to regulators.

Independent arrangements for monitoring quality of audit work and disciplining auditors over audit failure were regarded as important. Those with an accounting qualification were less convinced than others of the need for an independent body to monitor audit quality; both groups agreed that discipline should be the responsibility of an independent body.

Views varied considerably. At one extreme was the position that any profession worthy of the name should be capable of regulating its own members; at the other was the view that the profession should be regulated by a strong, independent, public body. These issues will be explored in our next article.

The liability threat

The issue of joint and several liability is controversial. It can be argued that this threat is enough to ensure audit quality. Interestingly though, those surveyed agreed that it was not, in itself, enough. However, moves to restrict auditors' liability were welcomed by those with an accounting qualification; others were strongly against reform. Fund managers and bankers were generally supportive of the moves to restrict auditors' liability, although some argued that they should be 'kept on the hook'. The practical implications were not entirely

clear. As one banker commented: 'I'm not so sure that the question of unlimited liability means a great deal to me as a banker, because I'm not really sure what recourse I would have to those auditors even if I wanted to go after them.'

Accounting Issues – The expectations gap – Part 2

Ian Dewing and Peter Russell, *Accountancy Magazine*, August 2001

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However an agency to regulate listed company audit might be structured, the essence would be effective delivery of what was promised Ian Dewing and Peter Russell.

This is our second article reporting the findings of a research study that the ICAEW's Centre for Business Performance sponsored. The first one (July, p. 98) discussed stakeholders' perceptions of elements comprising the audit expectations gap; this month we report stakeholders' views on the desirability of establishing an independent body for listed company audit to address these issues.

The research study revealed that the aspects of the expectations gap that caused most concern were auditor independence and quality of audit. The solution a number of authors have recommended would involve creating an independent agency to oversee audit regulation. To investigate stakeholder perceptions of the structure and function of such an agency, three models were developed: an Auditing Council; a Commission for Audit; and a UK Securities and Exchange Commission (SEC). An Auditing Council would be a private body analogous to the Financial Reporting Council. A Commission for Audit would be a public sector body analogous to the Audit Commission for local and health authorities in England and Wales. A UK SEC, modelled on the US SEC, would be a public sector body with overall responsibility for City regulation, including that of listed company audit.

More bureaucracy

An Auditing Council received the most support, a Commission for Audit the least, with a UK SEC provoking the strongest reactions both for and against. Arguments in favour of increased regulation were generally framed in terms of increased openness that would 'materially enhance the credibility of audits'; arguments against expressed fears that it would be 'cumbersome' and add a 'further tier of bureaucracy'. Overall, there was a significant degree of support to make the case for establishing an independent regulatory body. This is consistent with previous studies' findings and recommendations.

If such an independent body were to be created, the authors suggest it should be structured to match the expectations gap's main components as revealed by the study: independence, monitoring and discipline. Such a body might be called a Listed Companies Audit Board, structured into three panels of responsibility: an auditor independence panel; an audit quality panel; and a disciplinary panel. Whether the LCAB might be a private body, a private body with statutory recognition or a public body is open to debate.

An auditor independence panel's role would be to set up and monitor independence standards and guidelines, for example by restricting non-audit services in whole or in part, or by setting up procedures formally to authorise provision of non-audit services. It can be argued that providing audit services should be remunerative in itself and not conditional, or perceived as conditional, on the auditor providing non-audit services.

The role of an audit quality panel would be to set up and maintain a register of auditors whom the panel recognised as capable of undertaking listed company work, and to monitor the quality of audit work done. A possible consequence of such a licensing procedure is that it might lead to increased competition for listed company audits. These are increasingly dominated by the Big Five firms, partly because of the reputation effect. External validation procedures might allow other firms to join the register and compete against the Big Five, especially for the audit of middle or lower-ranking listed companies, where the importance of global reach is less significant.

Failure to observe standards of auditor independence and quality, and ignoring guidelines, would result in referral to a disciplinary panel. Sanctions against a firm, a firm's office or a partner might include 'naming and shaming', fines, or removal from the register of listed company auditors.

The new regulatory framework for the profession as a whole, based around the Accountancy Foundation (see *Accountancy*, July, p. 22), tackles the main components of the expectations gap as identified in the study. Auditor independence is dealt with via the new Ethics Standards Board, monitoring of audit quality via the existing Joint Monitoring Unit, and discipline by the new Investigation and Disciplinary Board.

Effective delivery

There may still be doubts about whether the Accountancy Foundation, a private body without statutory backing, will be sufficiently authoritative and independent to take on powerful interests, such as the Big Five firms, and whether, although at arm's length from the profession, it will be perceived to be independent of it. However, it can be argued that what matters is not so much the precise function and structure of such a body – whether public or private – but effective delivery, and perceived effective delivery, of what is promised. This is the challenge the Accountancy Foundation faces. The expectations gap has been there for some time, the whatever changes are made, some problems will inevitably remain.

Our research study's analysis and recommendations will be a source of alternative possibilities for regulation of listed company audit if the new framework is later judged unsuccessful.

Enron: The next steps – Accounting and business April 2002

First published in *Accounting & Business*, the professional journal of ACCA

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Rarely, if ever, have the newspapers carried so much coverage – both in reports and commentary – on accounting issues, both technical and political, than in the immediate aftermath of the Enron case.

Despite the emphasis that has been given to the role of Andersen in the Enron affair, the problems exposed by the largest bankruptcy in US history go much deeper than a possible breakdown in auditor performance. Enron has triggered an enormously wide-ranging debate and has raised questions about many aspects of the operation of capital markets as well as concerns about financial reporting and auditing standards, regulatory arrangements and the quality of the corporate governance in major corporations. This article sets out ACCA's views on each of these issues.

Capital market regulation

The collapse of Enron occurred in the capital market which is not only the largest in the world but which considers itself to be the best regulated. As a result, all capital markets are in future likely to have to devote more resources to maintaining the integrity of their investor-orientated information. ACCA considers that there should be a mechanism which requires both major corporations and institutional investors to provide the resources needed to ensure that the markets function properly – perhaps via an externally administered levy which confers no influence at the regulatory level.

And it is clear that new solutions must be found to global market problems. These will have to be introduced and controlled at individual national level. ACCA argues, however, that local solutions should be based on principles which are agreed at the global level. National regulators and others will need to be prepared to give up a measure of control over their domestic activities in return for influence over global developments.

Financial reporting

Although the full facts of the Enron collapse will not emerge for a long time, it is already evident that investors were not properly informed about the significance of off-balance sheet finance arrangements. US accounting rules may well have contributed to this in that they are concerned with the strict legal ownership of investment vehicles rather than with their control. By contrast, International Accounting Standards follow the principle of ‘substance over form’ and their use would have resulted in the details of the special purpose entities being reported in a transparent way.

By specifying precisely where the line is to be drawn, legalistic, rules-based standards encourage those who wish to operate as close to the line as possible, or even to test the limits. They enable the exploitation of loopholes and devalue professional judgement.

Standards and rules which are based on principles are greatly preferable. ACCA strongly supports European Union moves to adopt International Financial Reporting and Auditing Standards in the next few years and believes that accounting standard setters and capital markets worldwide which are not yet committed to these should now address the issue urgently. This will, for example, require the US capital markets to commit to the adoption of international standards in preference to established US GAAP and GAAS.

Where a rules-based approach is used, however, standard setters must act firmly and quickly on controversial subjects. The Enron collapse has called into question the speed of response of the US financial reporting standard setting body. Lobbying, either direct or through government, by those with vested interests in avoiding change is a danger to all national standard setters. There are some indications that, in the Enron case, active lobbying may have contributed to delays in issuing standards to govern the treatment of the special purpose entities used in off-balance sheet financing transactions.

It is also clear that the inappropriate recognition of revenue remains a major challenge for accounting standard setters. Many of the most celebrated corporate collapses of the last 30 years – from railroads to dot.coms – have their origins in the mis-statement of reported revenues. Standard setters and auditors alike need to focus on the principles of revenue recognition not just when bull markets turn sour but at all times.

Auditor independence

Enron, and all the other cases which have attracted attention, have demonstrated the need for greater transparency and trust. The global financial community should address this as a

matter of urgency. No single measure is likely to deal with the questions which have been raised and a range of ideas must be considered. These could include:

- making the appointment of the external auditors less dependent on the executive directors and involving the non-executive directors, audit committee and institutional shareholders; in turn, this would have far-reaching implications for the corporate governance mechanism
- limitations of the ability of audit firms to offer consulting services to listed company audit client (although not necessarily a ban on the provision of such services to non-audit clients)
- fuller disclosure of audit and consulting fees in the annual report and accounts
- a mandatory review by a company's audit committee of the independent status of the external auditors and the publication of a statement that it is satisfied with the results
- a prohibition on audit firms providing audit services in instances where audit staff have moved to senior executive roles in client companies – this could take the form of a moratorium prohibiting auditors from moving to audit clients for an appropriate period after they have been personally involved with the audit.

There is also the issue of the size of the audit fee relative to the local office which is providing the service and the fee generation target(s) set for the engagement partner. While this cannot be dealt with by prescriptive regulation, audit monitoring should focus on the culture within audit practices and the pressures on individual engagement partners.

ACCA also believes that the process of audit appointment should be reviewed. Although in theory this is a matter for shareholders, in practice the appointment is controlled by management. It may be time to see if this can be changed. One possibility is that private sector or even governmental bodies might fulfil the role of appointing auditors but for multinational companies a global, not national, approach would be necessary. This approach would require the full backing of regulatory authorities worldwide. An alternative approach would be for non-executive directors and corporate audit committees to have a much higher profile role in the auditor appointment process.

Audit monitoring

Professional bodies must have independent investigation and disciplinary procedures and be seen to act in the public interest. This enables them to take firm and transparent action against members who fail in their fundamental responsibilities, whether as executive or as auditors.

The UK system of quality control avoids firm-on-firm review and instead utilises, through professional bodies, permanent monitoring staff, who are not connected with individual accounting firms. This sort of system, which can both operate on a national basis and cover transnational audit firms, is demonstrably more effective and independent than the widely used and much criticised system of 'peer review'.

Non-executives and the risk management process

ACCA believes that the ultimate responsibility for ensuring effective corporate governance – including the implementation of robust internal control and internal audit mechanism – rests with the Board as a whole. In line with the recommendations of the Turnbull Report, Board of listed companies should ensure that appropriate mechanisms are in place for identifying and managing risk, and should report publicly on these matters. As independent agents, however, non-executive directors have a particular

responsibility to investors to ensure that corporate governance processes are appropriate and effective. We believe that there is a case for reviewing the effectiveness of non-executive directors in fulfilling this responsibility and, if necessary, for providing them with an enhanced role in the communication process.

Executive remuneration and sustainable wealth creation

The concept of payment for performance is widely accepted. When, however, it is applied to the remuneration of senior executives, it may do more than simply encourage good performance. It may also incentives short-term and self-motivated decisions which are not in the long-term interests of investors.

Investors will be better served if performance-related compensation is linked to the longer term generation of corporate wealth. There is an obvious conflict between, on the one hand, the pressures of increasingly frequent interim reporting and one year service contracts and, on the other, the need to deliver sustainable investor returns. This might be addressed by the introduction of remuneration schemes which reward sustainable year-on-year growth in profitability and shareholder value. The trend towards shorter contractual arrangements may also need to be reviewed.

Non-executive directors

The Enron audit committee has been criticised for failing to control the apparent exploitation of US accounting rules to present a better picture of performance than was the actual case. Consideration needs to be given to the time commitment and effort which is required from non-executive directors whose role is to look after the interests of the investors and other shareholders they are there to represent. They should bring to their role a balance of experience and new thinking, some real understanding of the sector in which a company is operating and the ability to make a strategic contribution. And this requires that they are available for meaningful amounts of time.

The independence of non-executives is another critical issue – much commented on by corporate governance lobby organisations. There are obvious weaknesses in a system where former executive directors can become non-executive directors and so in the position of exercising an accountability function in relation to former colleagues.

The development of mechanisms for monitoring and regulating the operation of audit committees also needs to be considered. Such mechanisms should be independent of auditors, who are not appropriate parties to examine aspects of corporate behavior which directly affect their own work. The fuller involvement of investors would add greatly to the credibility attaching to governance mechanisms and ACCA considers that it is necessary for investors, particularly institutional investors, to take an active role in monitoring the activities of audit committees.

ACCA believes that what is needed urgently is a code of corporate governance which is capable of global acceptance. Such a code should build on initiatives which have occurred in several jurisdictions. Examples of such initiatives include the OECD Principles of Corporate Governance and the World Bank-driven Global Corporate Governance Forum. We strongly urge the promoters of such initiatives to join forces with market regulators – such as IOSCO – and other global organisations – such as the International Federation of Accounts – to develop and promote compliance with a global governance code.

Wider disclosure and accountability

Despite all that has been written and done in recent years, ACCA believes that there is still considerable room for further development of corporate governance practice and reporting. Indeed, there is a need for investor information beyond the narrow confines of the financial statements. Disclosure of corporate governance performance is increasingly relevant to investors, who are right to demand plain language reporting of matters of significance. ACCA champions the extension of corporate reporting to the wider economic, social and environmental aspects of a business; investors and other stakeholders are entitled to know how a business responds to the wide range of risks facing it.

Our key suggestions

In summary, therefore, ACCA suggests that:

- global financial markets need a global set of principles-based financial reporting standards and a global code of corporate governance
- while the necessary new solutions to global market problems and issues of auditor independence will have to be introduced and controlled at individual national level, they should be based on principles which are agreed and co-ordinated at the global level
- the objectives of financial reporting practice should be expanded to recognise the growing level of concern arising from the globalisation of business
- the participants in capital markets – both major corporations and institutional investors – should provide the resources to ensure that the markets function properly through an externally administered levy which confers no influence at the regulatory level
- auditor independence issues should be revisited and the relationship between a reporting entity and its professional advisers should become more transparent
- there should be a review of the regimes for monitoring practice in auditing, financial reporting and corporate governance.

Enron should be the catalyst for improvements in a range of areas affecting company reporting and governance.

Audits: an endangered species

Emile Woolf, *Accountancy Magazine*, October 2003. www.accountancymagazine.com.

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Only the FSA or an equivalent agency should be responsible for major listed company audit appointments, argues Emile Woolf. Auditing is being eroded at both ends of the size spectrum. Small company audits are undergoing a process of statutory extinction. Raising the turnover threshold to £5m or £10m will exempt the vast majority of UK company from audit altogether. At £350,000, then £1m, exemption made sense. Raising the threshold to the full EU limit and beyond is a different matter. At these levels the audit will be missed and the economic and commercial necessities that gave rise to audits in the first place will do so again. That's how the cycle of ignorance works. At the other end of the spectrum the audit function as an affirmation of reporting integrity has become an object of derision. Enron, WorldCom, Xerox and others too numerous to mention signal the demise of the auditing imprimatur as a meaningful benchmark. The recovery of equities will materialise when company earnings are verified by cash dividends rather than audits.

This is not merely a US phenomenon. Headlines in the UK regularly publicise accounting aberrations that vastly overstate earnings. Heavily incentivised management has a powerful commitment, both corporate and personal, to showing good results. That's why we have independent audits.

The new technology

Why are they failing? Firstly, they're not independent and, secondly, as a result, the technology of auditing has been hijacked and replaced by a process whose objectives are inimical to everything that auditing connotes. In my time, audit methodology has embraced several discrete developments from 'if it moves, tick it', through substantive, system-based, then risk-based, audits, culminating in the latter day curiosity referred to as 'business risk strategic auditing' which, when the esoteric flannel is peeled away, is basically a licence to do no auditing at all. Or at least no auditing that traditionalists would recognise. This would not matter if its alchemy worked. Unfortunately, its orientation is so alien to an impartial authentication of financial statement that it cannot work.

What is it? Well, according to a 1999 KPMG statement, audit has become a 'risk-based strategic systems methodology' fit for 'the economy of the 21st century'. Its structural components have been variously cited as including 'a wider perception, away from the narrow perspective of the picture represented in the financial statements'; and 'a closer alignment with the management's view of the entity and a closer cooperation with management in the conduct of the audit and the setting of audit objectives'.

No wonder the business-risk audit approach accommodates an expression of opinion on the accounts without actually looking at the company's records. This is the independent authentication function reinvented as part of the continuum of 'audit advisory services'. Unlike its predecessors, 'business risk audit methodology' has introduced no audit procedures at all.

What happened to independence?

How does it 'work' in practice? The Enron bankruptcy examiner's report declared, incredibly, that the level of manipulation (his term) in Enron's last financial statements accounted for 96% of its total reported income; 105% of its reported cashflow; and allowed its external liabilities to be understated by \$12bn (£7.6bn). Andersen's internal notes of a client retention meeting in 2001 show that it classified key aspects of its client's business as 'intelligent gambling'. Again, the bankruptcy examiner: 'Enron carefully designed its FAS 140 technique with advice from Andersen and Enron's lawyers, with the goal that the asset transfer would qualify for sale treatment under GAAP despite the fact that the sale treatment did not reflect the economic substance of the transaction.' In 2000, Andersen's fees were \$25m for the so-called 'audit' and \$27m for non-audit services.

What's the answer?

So much for the independent audit. What's the answer. There are cries for more effective corporate governance; more power for audit committees and non-executive directors; rotation of audits/audit partners; banning of non-audit services. This is so much moonshine and misses the point completely.

Audit firms are commercial businesses and they don't want to lose clients. The need for independence, however, demands that the audit appointment should not be the gift of

management. Only the Financial Services Agency or an equivalent agency should be responsible for major listed company audit appointments, with a five-year maximum tenure to safeguard independence, coupled with a system of proportionate liability or contractual capping. The size of global corporations renders them practically unauditible. The 'capability' factor therefore needs to be addressed. Corners should not be cut merely to cope with the scale of transactions and subsidiaries should therefore be audited by different firms, if that's what it takes to do it properly. I would call that a good start.

Revision Questions

9

? Question 1

What is the objective of an audit?

- (A) To check for fraud
 - (B) To check there are no errors in the accounts
 - (C) To enable the auditor to express an opinion as to whether the financial statements give a fair presentation of the company affairs
 - (D) To enable the auditor to approve the accounts
- (2 marks)**

? Question 2

Who is responsible for the preparation of the financial statements?

- (A) The entity accountant
 - (B) The auditors
 - (C) The entity directors
 - (D) The shareholders
- (2 marks)**

? Question 3

What is the external auditor's statutory duty? (*max. 21 words*).

The auditor has a statutory duty to _____

(2 marks)

? Question 4

If an auditor disagrees with the treatment of a material item in the financial statements and the directors refuse to change their treatment, the auditor will in most situations:

- (A) Issue a qualified audit report using the 'except for' qualification
 - (B) Issue an unqualified audit report
 - (C) Issue a qualified audit report using the 'adverse opinion' qualification
 - (D) Issue a qualified audit report using the 'disagreement of treatment' qualification
- (2 marks)**



Question 5

You are the partner in charge of the audit of G, a major quoted company. You are making a final review of the financial statements before finalising the audit report. The following matters have been marked for your attention:

- (i) The draft financial statements indicate a turnover of \$500m and a profit of \$50m.
- (ii) The directors have made no provision for the costs that are likely to be incurred as a result of a damages claim for \$2.4m, which is being pursued by one of the company's customers. G's legal department and its lawyers are quite sure that this claim will have to be met in full.
- (iii) The directors have not provided for a sum of \$2.3m which ought to be written off in respect of debts that are almost certainly irrecoverable.

Requirements

- (a) Explain the implications for your audit report of the matters described in (ii) and (iii) above.

Your answer should make a clear statement of the type of report which you consider appropriate, although a full audit report is *not* required. **(5 marks)**

- (b) It has been suggested that the quality of audit reporting could be improved enormously if accounting standards were clearer and auditors had more explicit guidance on issues such as materiality.

Discuss this suggestion, making it clear how improved guidance on financial reporting might support the auditor. **(5 marks)**

(Total marks = 10)



Question 6

You are the partner in charge of the audit of K. The following matter has been brought to your attention in the audit working papers.

The entity has refused to write the closing inventory down to the lower of cost and net realisable value, despite the requirements to do so in IAS 2. The audit senior estimates that closing inventory has been overstated by \$500,000 because of this.

The draft financial statements show turnover of \$40 million and profit of \$4.5 million.

Requirements

- (a) Explain what is meant by the term 'materiality'. Explain whether the matter highlighted above is material, giving reasons. **(5 marks)**
- (b) Assuming that the directors refuse to amend the financial statements, explain what type of audit report would be appropriate to the above statements. **(5 marks)**

(Total marks = 10)

Solutions to Revision Questions

9

In the real world it is usually difficult to tell whether a problem is material or even if there is a serious disagreement. The nature of examination questions suggests that matters will always be more clear-cut.

Solution 1

The correct answer is (C).

The auditor does not check for fraud or errors specifically. The auditor does not 'approve' the accounts, see Section 9.1.1.

Solution 2

The correct answer is (C), see Section 9.1.2.

Solution 3

The auditor has a statutory duty to make a report to the company's members, expressing an opinion on the truth and fairness of the company's published financial statements.

Solution 4

The correct answer is (A), see Section 9.3.

Solution 5

(a) The first question to be resolved is whether these amounts are material. If they are not then it would not matter whether the auditor disagreed or not.

Bear in mind that either item might be immaterial when taken on its own but the combined effect could be material. Both items tend to overstate profits and so we should consider whether their total value is misleading.

One half of 1 per cent of turnover = \$2.5 million, as does 5 per cent of profit. This suggests that neither item is material in itself, but that the two taken together lead to a material overstatement of profits. If the directors refuse to alter their treatment of them then the auditor will have to qualify the audit report.

IAS 37 requires that item (ii) should be accrued. This is on the grounds that the payment is probable and the amount can be estimated with reasonable accuracy. This accrual would reduce profits by \$2.4 million and would create a current liability of the same amount.

The bad debt should be written off because of the need for prudence in the valuation of assets and recognition of losses. There is also a need to match the loss to the same period as the loss arose. This means that both profits and receivables should be decreased by \$2.3 million.

In the absence of any change by the directors, we will need to qualify the financial statements on the grounds of disagreement. The extent of our disagreement is not so serious as to warrant an adverse opinion and so we will use the 'except for' form of words.

- (b) The ambiguity of accounting standards is a major problem for the auditor. It is possible to create a slightly misleading impression without breaching any of the formal standards. It can be difficult for the auditor to justify a change to the financial statements if the directors argue that their treatment falls within the requirements of local company law and accounting standards. These same directors can, of course, seek out the loopholes and ambiguities in the standards in order to achieve the desired effect on the statements.

If accounting standards could be made clearer and less ambiguous then the auditor could find it easier to demonstrate that a particular treatment was unacceptable. On the other hand, the statements might not be any more useful because the greater clarity might be arrived at by making the requirements more rigid – thereby reducing the scope for deciding on the most realistic treatment.

The other major problem facing the auditor is over the determination of materiality. It is never clear where the precise cut-off between material and immaterial actually lies. The danger is that the directors are aware of this and could bias the figures until just before the point at which the auditor would be forced to treat the matter as a material disagreement.

Greater clarity over materiality might help, but it could also provide management with a better idea of exactly how far they could push the figures. This suggests that it might not improve the overall quality of financial reporting and auditing.



Solution 6

- (a) A matter is material if knowledge of it could influence users' decisions taken on the basis of the financial statements.

In strictly numerical terms, 0.5 per cent of turnover is \$200,000 and 5 per cent of profit is \$225,000.

The disagreement over inventory appears to be material because of its numerical significance. There is very little point in considering the nature of the matter because it would be material by virtue of its effect on profit.

- (b) This is a material disagreements and so the auditor must qualify the audit report in respect of the overstatement of stock.

The disagreement is material, but not fundamental and so the adverse opinion is not required.

The auditor would state that the accounts gave a true and fair view except for the overstatement of closing inventory and profits by \$500,000.

Published Financial Statements

10

LEARNING OUTCOME

On completion of their studies students should be able to:

- ▶ prepare financial statements in a form suitable for publication, with appropriate notes.

Learning aims

The learning aims of this part of the syllabus are that students should be able to: ‘prepare statutory accounts in appropriate form for a single company’.

With this chapter we commence the third section of the syllabus, section C. This section is a very important part of your studies and accounts for 45 per cent of your syllabus. Questions based on this section will appear in all three sections of the examination paper. The third section of the examination paper may at times comprise questions entirely from this section of the syllabus.

This text is based on IFRSs in force at January 2006. It includes all revisions made to IFRSs within the syllabus, during 2005.

The syllabus topics covered in this chapter are as follows:

- Preparation of the financial statements of a single company, including the statement of changes in equity (IAS 1).

10.1 Introduction

You will have prepared financial statements for sole traders and been introduced to the elements found in entity financial statements, either in the certificate level or in the examinations giving exemption from *Financial Accounting Fundamentals*. The work we will do at the Managerial level builds on that knowledge, so it would be advisable to refresh your knowledge of these areas before proceeding. (The accounts of limited companies are covered in the CIMA study text for *Financial Accounting Fundamentals*.)

The focus of the preparation of financial statements at this level is on entity financial statements that are prepared in a form suitable for publication. To ensure consistency and comparability of the information provided, the IASB prescribes formats for the main statements included in published financial statements.

This chapter will firstly discuss the general requirements for published financial statements and will then concentrate on the prescribed formats for the balance sheet and the income statement, identifying the items to be presented on the face of these statements and those to be included in the notes to the accounts.

The chapter focuses on the presentation aspects of the accounts, specifically addressed in IAS 1 (revised 2003) *Presentation of Financial Statements*. Accounting for and disclosing the effects of individual transactions will be covered in later chapters; however, the presentation requirements covered in this chapter will still apply.

As this chapter covers the presentation aspects of accounts, extracts from actual entity accounts have been included where appropriate to make your learning as practical as possible. You should study the requirements set out by the standards (primarily IAS 1) and then review the entity account extracts to gain a better understanding of how these requirements are adopted in practice and shape the final published accounts of entities.

10.2 General requirements

10.2.1 Purpose of financial statements

IAS 1 states that financial statements are a structured financial representation of the financial position of an entity, showing the effect of the transactions it has undertaken.

We know from Chapter 8 that the objective of financial statements is to provide information about the financial position, performance and cash flows of an entity that is useful to a wide range of users in making economic decisions.

To meet this objective, financial statements provide information about an entity's

- assets;
- liabilities;
- equity;
- income and expenses, including gains and losses;
- other changes in equity;
- cash flows.

This information, together with information contained in accompanying notes, assists users in evaluating the entity's future cash flows.

10.2.2 Responsibility for financial statements

The board of directors (and/or other governing body) of an entity is responsible for the preparation and presentation of its financial statements.

10.2.3 Components of financial statements

A complete set of financial statements normally includes:

- balance sheet;
- income statement;

- a statement of changes in equity showing either:
 - (i) all changes in equity; or
 - (ii) changes in equity other than those arising from transactions with equity holders acting in their capacity as equity holders;
- cash flow statement;
- notes comprising a summary of significant accounting policies and other explanatory notes.

Entities are encouraged (but not required) to also present a financial review by management describing and explaining the main features of the entities financial performance and financial position and the principle uncertainties it faces. This review may include:

- a description of the environment in which the entity operates;
- changes in the environment and how management has responded to them;
- resources not recognised in the balance sheet in accordance with IFRSs; and
- management policies on investment and dividends.

10.2.4 Fair presentation and compliance with IFRSs

Financial statements should present fairly the financial position, financial performance and cash flows of an entity. Fair presentation requires the faithful representation of the effects of transactions, other events and conditions in accordance with the definitions and recognition criteria for assets, liabilities, income and expenses set out in the Framework. The application of IFRSs, with additional disclosure when necessary, is presumed to result in financial statements that achieve a fair presentation. In virtually all circumstances, a fair presentation is achieved by compliance with applicable IFRSs. A fair presentation also requires an entity:

- (a) to select and apply accounting policies in accordance with IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors*. IAS 8 sets out a hierarchy of authoritative guidance that management considers in the absence of a Standard or an Interpretation that specifically applies to an item;
- (b) to present information, including accounting policies, in a manner that provides relevant, reliable, comparable and understandable information; and
- (c) to provide additional disclosures when compliance with the specific requirements in IFRSs is insufficient to enable users to understand the impact of particular transactions, other events and conditions on the entity's financial position and financial performance.

Inappropriate accounting policies are not rectified either by disclosure of the accounting policies used or by notes or explanatory material.

Compliance with IFRSs requires that all relevant standards are complied with. IFRSs refer to international standards and IFRIC/SIC interpretations adopted by the IASB. When this text refers to IFRSs it is referring to:

- IFRSs,
- IASs,
- IFRIC interpretations,
- SIC interpretations.

Entities should disclose the fact that they comply with IFRSs in the financial statements. This compliance statement is often included in the accounting policies and is usually the first stated policy.

Extract from the consolidated accounts of the Nestlé Group for the year ended 31 December 2004

Accounting policies

Accounting convention and accounting standards

The Consolidated accounts comply with International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) and with the Standing Interpretations issued by the International Financial Reporting Interpretations Committee (IFRIC) of the IASB.

The accounts have been prepared on an accruals basis and under the historical cost convention, except that the following assets and liabilities are stated at their fair value: derivative financial instruments, investments held for trading, available-for-sale investments and recognised assets and liabilities subject to fair value hedges. All significant consolidated companies have a 31st December accounting year end. All disclosures required by the 4th and 7th European Union company law directives are provided.

Extract from the consolidated financial statements of Schering AG for the year ended 31 December 2004

Notes To The Consolidated Financial Statements

(A) Basis of presentation

The consolidated financial statements of Schering Aktiengesellschaft (Schering AG) have been prepared in accordance with International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB).

Business Combinations, as of 1 January 2004, we opted for early adoption of the revisions of the existing standards under the IASB's Improvement Project as well as IFRS 2 "Share-based Payment" and IFRS 3 "Business Combinations", and hence also IAS 36 "Impairment of Assets" (revised 2004) and IAS 38 "Intangible Assets" (revised 2004). The changes in accounting policies were made in accordance with the transitional provisions in the new accounting standards.

10.2.4.1 Departure from requirements

In the unlikely event that the management decides that compliance with a particular requirement would result in misleading information, which would conflict with the objective of financial statements set out in the framework, they can *depart from that requirement in order to achieve fair presentation*. In this event the entity should disclose:

- that management has concluded that the financial statements are a fair presentation of the entity's financial position, financial performance and cash flows;
- that it has complied with all relevant IFRSs and has departed from a standard to achieve fair presentation;
- the IFRS that it has departed from and details of the required treatment, why it was misleading and the treatment that has been adopted; and
- the financial impact of the departure.

10.2.5 Other requirements affecting the preparation of financial statements

IAS 1 also outlines the following requirements for the preparation of financial statements. (Most of these you will be already familiar with, but are included for completeness.)

- *Accounting policies* should be selected so that financial statements will comply with IFRSs.
- Management should make an assessment of the entities ability to continue as a going concern. Financial statements should then be prepared on a *going concern* basis, unless there are plans to liquidate or cease trading.
- The financial statements should be prepared under the *accruals basis* of accounting, with the exception of the cash flow information.
- The financial statements should retain a *consistent approach to presentation* and classification of items year on year.
- *Material amounts* should be *presented separately* in the financial statements. Immaterial amounts should be aggregated with other like items.
- *Assets and liabilities should not be offset*, except where required or permitted by another IFRS.
- *Income and expenses* should only be offset where it is required or permitted by another IFRS or the amounts relate to the same or similar transactions and are not material.
- *Comparative information* should be disclosed for the previous period for all numerical information. Where presentation or classification of an item has changed, the comparative figures should be restated using the new treatment, if possible.
- Financial statements should be *presented at least annually* and should be issued on a timely basis (within 6 months of the balance sheet date) to be useful to users.

IAS 1 provides illustrative formats for the statements to be included in financial statements. In addition, it provides guidance on the items that should be disclosed on the face of these statements and those that can be relegated to the notes that accompany the statements.

We are now going to look at the statements in turn.

10.3 The balance sheet

10.3.1 Specimen balance sheet

A specimen balance sheet (based on that provided in IAS 1) is set out below, this shows the minimum requirements for disclosure on the face of the balance sheet.

Take a moment to study the balance sheet headings. The statement has two main sections – Assets and Equities and Liabilities. Most of the headings within the statement will be familiar to you, for example, Property, plant and equipment, inventories, issued capital, reserves, trade and other payables. Most entities will have amounts that relate to these headings that are sufficiently material that they appear on the face of the balance sheet. Some of the other headings may not be so familiar, for example, Goodwill. These amounts will only appear on the face of the balance sheet if the reporting entity has relevant amounts relating to these account categories. We will look at the adoption of the formats more closely when we study the accounts of Nestlé Group in Section 10.3.2.

IAS 1 (revised 2003) Specimen Format**Balance sheet as at 31 December 20X3**

	\$000	\$000
<i>Assets</i>		
Non-current assets		
Property, plant and equipment	X	
Goodwill	X	
Other intangible assets	X	
Available for sale investments	<u>X</u>	
		X
Current assets		
Inventories	X	
Trade receivables	X	
Other current assets	X	
Cash and cash equivalents	<u>X</u>	
		<u>X</u>
Total assets		<u><u>X</u></u>
<i>Equity and liabilities</i>		
Equity		
Share capital	X	
Other Reserves	X	
Retained earnings	<u>X</u>	
Total equity		X
Non-current liabilities		
Long-term borrowings	X	
Deferred tax	X	
Long term provisions	<u>X</u>	
Total non-current liabilities		X
Current liabilities		
Trade and other payables	X	
Short-term borrowings	X	
Current portion of long-term borrowings	X	
Current tax payable	X	
Short term provisions	<u>X</u>	
Total current liabilities		<u>X</u>
Total liabilities		<u>X</u>
Total equity and liabilities		<u>X</u>

10.3.2 Information to be presented on the face of the balance sheet

IAS 1 requires that, as a minimum, the following line items appear on the face of the balance sheet (where there are amounts to be classified within these categories):

- property, plant and equipment;
- investment property;
- intangible assets;
- financial assets (excluding amounts shown under (e), (h) and (i));
- investments accounted for using the equity method;**
- biological assets;
- inventories;
- trade and other receivables;
- cash and cash equivalents;

- (j) trade and other payables;
- (k) provisions;
- (l) financial liabilities (excluding amounts shown under (j) or (k));
- (m) liabilities and assets for current tax as defined in IAS 12, *Income Taxes*;
- (n) deferred tax liabilities and deferred tax assets, as defined in IAS 12, *Income Taxes*;
- (o) minority interest, presented within equity;**
- (p) issued capital and reserves attributable to equity holders of the parent.

** These items relate to group accounts and are beyond the scope of this syllabus.

The above list includes the items that the IASB believes are so different in nature or function that they should be separately disclosed, but *does not require them to appear in a fixed order or format*.

Additional line items, headings and subtotals should be shown on the face of the balance sheet if another IFRS requires it or where it is necessary to show a fair presentation of the financial position.

In deciding whether *additional items* should be separately presented, management should consider:

- the *nature and liquidity of assets* and their materiality (e.g. the separate disclosure of monetary and non-monetary amounts and current and non-current assets);
- their *function* within the entity (e.g. the separate disclosure of operating assets and financial assets, inventories and cash); and
- the *amounts, nature and timing of liabilities* (e.g. the separate disclosure of interest-bearing and non-interest-bearing liabilities and provisions and current and non-current liabilities).

Assets and liabilities that have a different nature or function within an entity are sometimes subject to different measurement bases, for example plant and equipment may be carried at cost or held at a revalued amount (in accordance with IAS 16). The use of these different measurement bases for different classes of items suggests separate presentation is necessary for users to fully understand the accounts.

Let us look at how these requirements are adopted in practice.

Extract from the consolidated accounts of the Nestlé Group for the year ended 31 December 2003

Consolidated balance sheet as at 31st December 2003

(Before appropriations In millions of CHF)		<i>Notes</i>	2003	2002
Assets				
Current assets				
Liquid assets				
	8			
Cash and cash equivalents		7,074	6,338	
Other liquid assets		<u>8,054</u>	<u>7,953</u>	
			15,128	14,291
Trade and other receivables	9		12,851	12,666
Inventories	10		6,995	6,794
Derivative assets	11		669	959
Prepayments and accrued income			<u>590</u>	<u>632</u>
Total current assets			<u>36,233</u>	<u>35,342</u>
Non-current assets				
Property, plant and equipment				
	12			
Gross value		41,778	40,797	
Accumulated depreciation		<u>(24,339)</u>	<u>(23,772)</u>	
			17,439	17,025
Investments in associates	13		2,707	2,561
Deferred tax assets	23		1,398	1,519
Financial assets	14		2,394	2,862
Employee benefit assets	21		1,070	1,083
Goodwill	15		26,745	25,718
Intangible assets	16		<u>1,575</u>	<u>1,242</u>
Total non-current assets			<u>53,328</u>	<u>52,010</u>
Total assets			<u>89,561</u>	<u>87,352</u>
Liabilities, minority interests and equity				
Current liabilities				
Trade and other payables	17		9,852	9,932
Financial liabilities	18		15,419	18,702
Tax payable			549	825
Derivative liabilities	19		846	384
Accruals and deferred income			<u>3,699</u>	<u>3,894</u>
Total current liabilities			<u>30,365</u>	<u>33,737</u>
Non-current liabilities				
Financial liabilities				
	20		14,064	10,548
Employee benefit liabilities	21		3,363	3,147
Deferred tax liabilities	23		576	492
Tax payable			4	15
Other payables			305	400
Provisions	24		<u>3,061</u>	<u>3,381</u>
Total non-current liabilities			<u>21,373</u>	<u>17,983</u>
Total liabilities			<u>51,738</u>	<u>51,720</u>
Minority interests			<u>943</u>	<u>813</u>
Equity				
Share capital	25		404	404
Share premium and reserves				
Share premium		5,926	5,926	
Reserve for treasury shares		2,458	2,830	
Translation reserve		(5,630)	(4,070)	
Retained earnings		<u>36,093</u>	<u>32,307</u>	
			38,847	36,993
			39,251	37,397
Less				
Treasury shares	26		<u>(2,371)</u>	<u>(2,578)</u>
Total equity			<u>36,880</u>	<u>34,819</u>
Total liabilities, minority interests and equity			<u>89,561</u>	<u>87,352</u>

Commentary on the Nestlé balance sheet

The overall format is as required. The top section of the balance sheet includes assets – non-current and current. The bottom section of the balance sheet includes all equity and liabilities.

Look at the list of required headings at 10.3.1. Now compare this list to the headings found in the Nestlé balance sheet. Remember that only the headings that have related financial amounts need be included.

You can see, for example, that amounts for property, plant and equipment, goodwill, intangible assets, and investments in associates all appear in the Nestlé balance sheet and the IAS 1 format under the heading ‘Non-current assets’. In addition Nestlé includes deferred tax assets, financial assets and employee benefits. Inventories, trade and other receivables, cash and cash equivalents all appear within the heading ‘Current assets’ on both balance sheets. Nestlé includes additional detail for derivative assets and prepayments and accrued income.

Continue through the list comparing it to the Nestlé balance sheet.

You will often find that entities will include additional detail on items that are significant to their own business and may adapt the terminology required by the standard. For example, the specimen balance sheet includes a heading for ‘Equity and liabilities’ and Nestlé has adapted the heading and included it as ‘Liabilities, minority interests and equity’. This is common and does not result in a breach of the standard, as the essence of the presentation is the same. However for the examination, you are recommended to use the IAS 1 headings.

10.3.3 Information to be presented either on the face of the balance sheet or in the notes

Further subclassifications of the line items should be presented either on the face of the balance sheet or in the notes. The *size, nature and function* of the amounts involved, or the *requirements of another IFRS* will normally determine whether the disclosure is on the face of the balance sheet or in the notes.

The disclosures will vary for each item, but IAS 1 gives the following examples:

- (a) *tangible assets* are analysed (IAS 16) by class: property, plant and equipment;
- (b) *receivables* are analysed between:
 - amounts receivable from trade customers
 - receivables from related parties
 - prepayments
 - other amounts
- (c) *inventories* are subclassified (IAS 2) into classifications like merchandise, production supplies, materials, work in progress and finished goods;
- (d) *provisions* are analysed showing provisions for employee benefits separate from any other provisions;
- (e) *equity capital and reserves* are analysed showing separately the various classes of paid-up capital, share premium and reserves.

Let us take a look at the notes to the accounts of Nestlé, in particular the disclosure notes for receivables and inventories.

Extract from the consolidated accounts of the Nestlé Group for the year ended 31 December 2003

Notes

9. Trade and other receivables

<i>In millions of CHF</i>	2003	2002
Trade receivables	10,179	9,827
Other receivables	<u>2,672</u>	<u>2,839</u>
	<u>12,851</u>	<u>12,666</u>
After deduction of allowances for doubtful receivables of	<u>513</u>	<u>476</u>

The receivables figure included in the balance sheet of CHF 12,851 m is subclassified into trade and other receivables, as required by IAS 1 (see list item (b) above). Prepayments is also included in the list as an additional disclosure, but if you turn back to the balance sheet you will see that Nestlé has chosen to promote this item to the face of the balance sheet as the entity considers it significant enough for individual disclosure.

Extract from the consolidated accounts of the Nestlé Group for the year ended 31 December 2003

Notes

10. Inventories

<i>In millions of CHF</i>	2003	2002
Raw materials, work in progress and sundry supplies	2,657	2,564
Finished goods	4,501	4,414
Provisions	<u>(163)</u>	<u>(184)</u>
	<u>6,995</u>	<u>6,794</u>

Inventories amounting to CHF 88 million (2002: CHF 148 million) are pledged as security for financial liabilities.

As required by IAS 2, inventories are subclassified in the notes to the accounts, in this case into amounts relating to raw materials and work in progress, finished goods and provisions for obsolete items.

10.3.4 Share capital and reserves disclosures

IAS 1 also requires that the following information on share capital and reserves be made *either on the face of the balance sheet or in the notes*:

(a) *for each class of share capital*:

- the *number* of shares *authorised*;
- the number of shares *issued and fully paid*, and issued but not fully paid;
- *par value* per share, or that the shares have no par value;
- a *reconciliation* of the number of shares outstanding at the beginning and at the end of the year;
- the *rights, preferences and restrictions* attaching to that class, including restrictions on the distribution of dividends and the repayment of capital;
- *shares* in the entity *held by the entity itself* or by subsidiaries or associates of the entity; and
- shares reserved for issuance under *options and sales contracts*, including the terms and amounts;

(b) a description of the *nature and purpose of each reserve* within owners' equity;

IAS 1 requires the following to be disclosed in the notes:

- the amount of *dividends* that were proposed or declared after the balance sheet date but before the financial statements were authorised for issue;
- the amount of any *cumulative preference dividends* not recognised.

An example of how this disclosure requirement may be met is given below:

Extract from the consolidated financial statements of the Bayer Group for the year ended 31 December 2004

Notes to the balance sheet

26. Stockholders' equity

The capital stock of Bayer AG amounts to €1,870 million and is divided into 730,341,920 no-par bearer shares of a single class.

Authorised capital totalling €250 million was approved by the Annual Stockholders' Meeting on 26 April, 2002. It expires on 26 April 2007. The authorised capital can be used to increase the capital stock through the issuance of new shares against cash contributions.

The Board of Management is authorised to exclude subscription rights with respect to €100 million of this authorised capital; however, in this case the issue price of the new shares must not be significantly below the market price. Exclusion of subscription rights for a further €150 million is only possible in specific cases.

Further authorised capital in the amount of €374 million was approved by the Annual Stockholders' Meeting on 27 April 2001. This authorised capital, which expires on 27 April 2006, can be used to increase the capital stock by issuing new shares against non-cash contributions. Subscription rights for existing stockholders are excluded.

Conditional capital of €83 million existed at 31 December 2004. This capital may only be utilised to the extent necessary to issue the requisite number of shares as and when conversion or subscription rights are exercised by the holders of convertible bonds or of warrants conferring subscription rights, respectively, that may be issued by Bayer AG, or group companies in which Bayer AG holds a direct or indirect interest of at least 90%, through 29 April 2009.

Capital reserves include the paid-in surplus from the issuance of shares and subscription rights by Bayer AG.

The retained earnings contain prior years' undistributed income of consolidated companies.

The changes in the various components of stockholders' equity during 2000 and 1999 are shown in the statements of changes in stockholders' equity.

This disclosure note by Bayer includes information on the number and class of shares authorised. There are also details of additional capital that can be utilised and the rights and restrictions on its use. Details of the capital and retained earnings reserves are given and finally users are directed to the statements of changes in equity (dealt with later in the chapter) for the movements in stockholders' equity from 2003 to 2004.

10.3.5 The current/non-current distinction

An entity shall present current and non-current assets and current and non-current liabilities as separate classifications on the face of the balance sheet except when a presentation based on liquidity provides information that is reliable and more relevant.

Where an entity chooses not to classify by current and non-current, assets and liabilities should be presented broadly in order of their liquidity.

Whichever method of presentation is adopted, an entity should disclose, for each asset and liability, the amount that is expected to be recovered or settled *after more than 12 months*.

Most entities will show both current and non-current liabilities on the face of the balance sheet. However, say, for example, an entity does not normally have non-current trade liabilities but as a result of one particular transaction has a payable due 20 months from the balance sheet date. The entity may, in this case, classify the entire amount as a trade payable

under current liabilities and then show separately a one-off amount that is due in 20 months' time (i.e. in more than twelve months from the balance sheet date).

In judging the most suitable presentation, management should consider the usefulness of the information they are providing. Information about the financial position of an entity is often used to predict the expected future cash flows and the timing of those cash flows. Information about the expected date of recovery and settlement of items is likely to be useful and therefore worth disclosing.

10.3.6 Current assets

An asset should be classified as a current asset when it is any of the following:

- (a) is expected to be realised in, or is intended for sale or consumption in the entities normal operating cycle;
- (b) is held primarily for trading purposes;
- (c) is expected to be realised within twelve months of the balance sheet date; or
- (d) is cash or cash equivalent.

All other assets should be classified as non-current assets.

10.3.7 Current liabilities

A liability should be classified as a current liability when it:

- (a) is expected to be settled in the entity's normal operating cycle;
- (b) is due to be settled within twelve months of the balance sheet date;
- (c) is held primarily for the purpose of being traded; or
- (d) the entity does not have an unconditional right to defer settlement of the liability for at least 12 months after the balance sheet date.

All other liabilities should be classified as non-current liabilities.

10.4 The income statement

10.4.1 Specimen income statement

A specimen income statement (based on that provided in IAS 1) is below.

Income statement for the year ended 31 December 20X3
(illustrating the classification of expenses by function)

	<i>\$000</i>
Revenue	X
Cost of sales	(X)
Gross profit	X
Other income	X
Distribution costs	(X)
Administrative expenses	(X)
Other expenses	(X)
	X
Finance costs	(X)
Profit before tax	X
Income tax expense	(X)
Profit for the period	<u>X</u>

10.4.2 Information to be presented on the face of the income statement

IAS 1 requires that certain information (as a minimum) is presented on the face of the income statement, including:

- (a) revenue;
- (b) finance costs;
- (c) share of profits and losses of associates and joint ventures accounted for using the equity method (beyond the scope of this syllabus);
- (d) pre-tax gain or loss recognised on the disposal of assets or settlement of liabilities attributable to discontinuing operations;
- (e) tax expense;
- (f) profit or loss.

Additional line items, headings and subtotals should be shown on the face of the income statement if another IFRS requires it or where it is necessary to show a fair presentation of the financial position.

Materiality, the nature and function of the item are likely to be the main considerations when deciding whether to include an additional line item on the face of the income statement.

Let us return to the accounts of Nestlé to see how these requirements have been adopted in the income statement.

Extract from the consolidated accounts of the Nestlé Group: Consolidated income statement for the year ended 31 December 2003

Consolidated income statement for the year ended 31st December 2003			
<i>In millions of CHF</i>	<i>Notes</i>	<i>2003</i>	<i>2002</i>
Sales to customers	1	87,979	89,160
Cost of goods sold		(37,583)	(38,521)
Distribution expenses		(7,104)	(7,112)
Marketing and administration expenses		(31,081)	(31,379)
Research and development costs		(1,205)	(1,208)
EBITA*	1	11,006	10,940
Net other income (expenses)	2	(534)	1,686
Amortisation and impairment of goodwill		(1,571)	(2,277)
Profit before interest and taxes		8,901	10,349
Net financing cost	3	(594)	(665)
Profit before taxes	4	8,307	9,684
Taxes	5	(2,307)	(2,295)
Net profit of consolidated companies		6,000	7,389
Share of profit attributable to minority interests		(380)	(329)
Share of results of associates	6	593	504
Net profit		6,213	7,564
As percentages of sales			
EBITA (a)		12.5%	12.3%
Net profit		7.1%	8.5%
Earnings per share (in CHF)			
Basic earnings per share	7	16.05	19.51
Fully diluted earnings per share	7	15.92	19.30

* Earnings Before Interest, Taxes and Amortisation of goodwill.

The first heading that IAS 1 requires is revenue. Nestlé has called it 'sales to customers'. The next item required is the results of operating activities. This is reflected by

Nestlé's heading 'EBITA'. However, the entity has chosen to include additional line items, intended to enhance the presentation of the statement, including headings such as research and development costs. This is a common practice in accounts preparation and the individual reporting entities will decide what information should be additionally included and what terms best describe the various categories of income and expense. Local statutory regulations may also require specific headings to be used.

Finance cost, tax expense and the profit for the period all appear in the Nestlé income statement in accordance with requirements.

10.4.3 Information to be presented either on the face of the income statement or in the notes

Certain items must be disclosed either on the face of the income statement or in the notes, if material, including:

- write-downs of inventories or property, plant & equipment and reversals of write-downs;
- restructurings of the activities and reversals of any related provisions;
- disposals of property, plant and equipment;
- disposals of investments;
- discontinuing operations;
- litigation settlements;
- other reversals of provisions.

An entity should present an *analysis of expenses* using a classification based on either the nature of expenses or their function within the entity.

This analysis can be on the face of the income statement (which is encouraged) or in the notes.

An analysis based on the *nature of expenses* would, for example, result in classifications for depreciation, purchases, wages and salaries, marketing costs, etc. The expenses would be presented in total for each type of expense. This format is normally adopted by manufacturing entities.

The analysis could look like this:

Revenue		X
Other income		X
Changes in inventories of finished goods and work in progress	X	
Raw materials and consumables used	X	
Employee benefit costs	X	
Depreciation and amortisation expense	X	
Other expenses	X	
Total expenses		(X)
Profit		<u>X</u>

The first item of expense in this format may be slightly confusing – changes in inventories of finished goods and work in progress. The change represents an adjustment to production expenses to reflect the fact that either:

- production has increased inventory levels, or
- sales exceeds production activity resulting in a reduction in inventory levels.

Note that changes in raw materials inventories are not included here. The change in raw materials inventories is in the next expense line and can be calculated as follows:

Opening inventory of raw materials	X
Plus: purchases of raw materials	<u>X</u>
	X
Less: closing inventory of raw materials	<u>(X)</u>
<i>Raw materials and consumables used</i>	<u>X</u>

An analysis based on the *function of the expense* (or cost of sales method) classifies expenses according to their function as part of cost of sales, distribution or administrative activities.

While this presentation can provide more relevant information to users, the allocation of costs to functions can often be arbitrary.

The analysis could look like this:

Revenue	X
Cost of sales	<u>(X)</u>
Gross profit	X
Other income	X
Distribution costs	(X)
Administrative expenses	(X)
Other expenses	<u>(X)</u>
Profit	<u>X</u>

Entities choosing to classify expenses by function should disclose additional information on the nature of expenses, including depreciation and amortisation expense and employee benefits expense.

The entity should choose the analysis that provides the fairest presentation of the business activities.

Most examination questions focus on the analysis by function, but occasional questions on analysis by nature of expense may occur.

Nestlé has chosen to disclose an analysis of expenses by nature. The extract is included below.

Extract from the consolidated accounts of the Nestlé Group for the year ended 31 December 2003

Notes

4. *Expenses by nature*

The following items are allocated to the appropriate headings of expenses by function in the income statement.

<i>In millions of CHF</i>	2003	2002
Depreciation of property, plant and equipment	2,408	2,542
Salaries and welfare expenses	13,580	13,976
Operating lease charges	593	528
Exchange differences	(13)	(141)

Notice that this note deals only with expenses – revenue and costs of sales already appear on the face of Nestlé's income statement. This note provides us with additional information about important headings such as depreciation, and staff costs, as these items are not separately disclosed on the face of the income statement.

An entity should disclose the amount of *dividends per share*, declared, for the period covered by the financial statements. This disclosure should be either on the face of the income statement or in the notes.

10.5 Changes in equity

Changes in an entity's equity between two balance sheet dates reflect the *increase or decrease in its net assets* or wealth during the period.

This information is useful to users as changes, excluding changes resulting from transactions with shareholders (e.g. capital injections and dividends) represents the total gains and losses generated by the entity in the period.

IAS 1 requires that certain information relating to equity be presented separately in a *statement of changes in equity*.

An entity must present, as a separate component of its financial statements, a statement showing:

- (a) the *profit or loss* for the period;
- (b) *each item* of income and expense for the period that, as required by other standards or by interpretations, is *recognised directly in equity*, and the total of these items;
- (c) total income and expense for the period (calculated as the sum of (a) and (b)), showing separately the total amounts attributable to equity holders of the parent and to minority interest; and
- (d) for each component of equity the *cumulative effect of changes in accounting policy* and the *correction of fundamental errors*.

In addition, an entity should present, either within this statement or in the notes:

- (i) capital transactions with equity holders, showing separately distributions to equity holders;
- (ii) the balance of retained earnings (*accumulated profit or loss*) at the beginning of the period and at the balance sheet date, and the movements for the period; and
- (iii) a *reconciliation* between the carrying amount of *each class of contributed equity and each reserve* at the beginning and end of the period, separately disclosing each movement.

There are various ways to present this information. Two specimen statements are given as an appendix to IAS 1. Slightly simplified versions of these are included below for illustration purposes.

10.5.1 First format for the Statement of changes in equity

Specimen entity statement of changes in equity from IAS 1 (simplified by excluding items that are outside this syllabus)

Statement of changes in equity for the year ended 31 December 20X2

	<i>Share capital</i>	<i>Other reserves*</i>	<i>Retained earnings</i>	<i>Total</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Balance at 31 December 20X2	X	X	X	X
Changes in accounting policy			X	X
Restated balance	X	X	X	X
Gain on property revaluation		X		(X)
Available for sale investments:				
Valuation gains and losses taken to equity		(X)		(X)
Transferred to profit or loss on sale		(X)		(X)
Tax on items taken directly to or transferred from equity	(X)	X		(X)
Net income recognised directly in equity	X	(X)		X
Profit for the period			X	X
Total recognized income and expense for the period		X	X	X
Dividends			(X)	(X)
Issue of share capital	X			X
Balance at 31 December 20X3	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>

* Other reserves are analysed into their components if material

The above format provides a reconciliation between the opening and closing balances of each element within shareholders' equity.

Nestlé has adopted the following format in preparing its statement of changes in equity.

Extract from the consolidated accounts of the Nestlé Group for the year ended 31 December 2003

Consolidated statement of changes in equity								
Consolidated accounts of the Nestlé Group								
<i>In millions of CHF</i>	<i>Share premium</i>	<i>Reserve for treasury shares</i>	<i>Translation reserve</i>	<i>Retained earnings</i>	<i>Total reserves</i>	<i>Share capital</i>	<i>Less: Treasury shares</i>	<i>Total equity</i>
Equity as at 31st December 2002	<u>5,926</u>	<u>2,830</u>	<u>(4,070)</u>	<u>32,307</u>	<u>36,993</u>	<u>404</u>	<u>(2,578)</u>	<u>34,819</u>
Gains and losses								
Net profit				6,213	6,213			6,213
Currency retranslation			(1,560)		(1,560)			(1,560)
Taxes on equity items				7	7			7
Fair value adjustments of available for-sale financial instruments								
– Unrealised results				15	15			15
– Recognition of realised results in the income statement				2	2			2
Fair value adjustments of cash flow hedges and of hedges of net investments in foreign entities								
– Unrealised results				(198)	(198)			(198)
– Recognition of realised results in the income statement				(74)	(74)			(74)
Recovery on disposal of goodwill charged to equity prior to 1st January 1995				19	19			19
Total gains and losses			<u>(1,560)</u>	<u>5,984</u>	<u>4,424</u>			<u>4,424</u>

Consolidated accounts of the Nestlé Group								
<i>In millions of CHF</i>	<i>Share premium</i>	<i>Reserve for treasury shares</i>	<i>Translation reserve</i>	<i>Retained earnings</i>	<i>Total reserves</i>	<i>Share capital</i>	<i>Less: Treasury shares</i>	<i>Total equity</i>
Distributions to and transactions with shareholders								
Dividend for the previous year				(2,705)	(2,705)			(2,705)
Movement of treasury shares (net)		(372)		372	–		372	372
Result on options and treasury shares held for trading purposes				135	135		(165)	(30)
Premium on warrants issued ^(a)				(0)	(0)			(0)
Total distributions to and transactions with shareholders		<u>(372)</u>		<u>(2,198)</u>	<u>(2,570)</u>		<u>207</u>	<u>(2,363)</u>
Equity as at 31st December 2003	5,926	2,458	(5,630)	36,093 ^(b)	38,847	404	(2,371)	36,880

^(a) Partial redemption of the Turbo Zero Equity-Link issue

^(b) Includes the negative Hedging Reserve of CHF 32 million

This statement will be as complex as the business activities dictate. Let us look at a heading we are familiar with, 'Retained earnings', and consider some of the items that are part of the reconciliation for the year.

Look at the bottom third of this statement. Opening retained earnings are CHF 32,307m. Net profit for the year is then added and later dividend is deducted. All other movements in retained earnings in the year are also included in order to show a full reconciliation of the opening and closing balances.

10.5.2 Second format – a statement of income and expense and a reconciliation note

The alternative format illustrated in IAS 1 is to present only items (a)–(c), listed in Section 10.5, as a separate component of the financial statements within a statement of recognised gains and losses. Items (d)–(f), from the list in 10.5 would then be shown as a reconciliation in the notes to the financial statements.

Specimen statement of recognised income and expense for the year ended 31 December 20X3

Gain/(loss) on revaluation of properties	X
Valuation gain/(losses) of investments taken to equity	X
Transferred to profit or loss on sale	<u>X</u>
Tax on items taken directly to or transferred from equity	X
Net income recognised directly in equity	X
Profit for the period	<u>X</u>
Total recognised income and expense for the period	<u>X</u>

If adopting this approach, a reconciliation of opening and closing balances of share capital, reserves and accumulated profit (as illustrated in the statement showing changes in equity given at the start of 10.5.1) would be given in the notes to the financial statements.

10.6 Notes to financial statements

Notes to the financial statements normally include narrative descriptions or more detailed analysis of items on the face of the financial statements, as well as additional information such as contingent liabilities and commitments.

IAS 1 also provides guidance on the structure of the accompanying notes to financial statements, the accounting policies and other required disclosures.

10.6.1 Structure



The structure of paper 7 means that questions on the preparation of published financial statements will be limited to 20 marks. Questions requiring full disclosure of all the notes to a set of financial statements are therefore very unlikely. Questions are more likely to require either specific notes or no notes to be included in the answer. Disclosure requirements may also be tested in the objective test question section of the paper.

The notes to the financial statements of an entity should:

- (a) present information about the *basis of preparation* of the financial statements and the specific *accounting policies* adopted for significant transactions;
- (b) disclose the *information required by other IFRSs* that is not presented elsewhere in the financial statements;
- (c) provide *additional information* which is not presented on the face of the financial statements but that is necessary for a fair presentation.

Notes to the financial statements should be presented in a systematic manner and any item on the face of the financial statements should be *cross-referenced* to any related information in the notes.

Notes are normally provided in the following order, which assists users in understanding the financial statements and comparing them with those of other entities:

- (a) statement of compliance with IFRSs;
- (b) statement of the measurement bases and accounting policies applied;
- (c) supporting information for items presented on the face of each financial statement in the order in which each line item and each financial statement is presented;
- (d) other disclosures, including:
 - contingencies, commitments and other financial disclosures;
 - non-financial disclosures.

10.6.2 Accounting policies

The accounting policies section of the notes to the financial statements should describe the following:

- (a) the measurement basis (or bases) used in preparing the financial statements; and
- (b) each specific accounting policy that is necessary for a proper understanding of the financial statements.

10.7 An illustrative question

Before completing the revision questions please work through this illustrative question.

As you work through it, refer back to the relevant section of this chapter to see how the formats and disclosure requirements are adopted.

This illustrative question is a past CIMA examination question.

Scenario

The following information relates to V, a manufacturing entity.

Trial balance at 30 September 20X1

	<i>Notes</i>	<i>\$000</i>	<i>\$000</i>
Revenue			430
Inventory at 1 October 20X0		10	
Purchases		102	
Advertising		15	
Administration salaries		14	
Manufacturing wages		57	
Interest paid		14	
Dividends received	(d)		12
Audit fee		7	
Bad debts		10	
Taxation	(d)	10	
Dividends paid	(d)	120	
Premises (cost)	(b)	450	
Plant (cost)	(c)	280	
Premises (depreciation)			40
Plant (depreciation)			160
Investments (long-term)		100	
Trade receivables		23	
Bank		157	
Payables			7
Deferred taxation	(e)		89
Loan notes			140
Share capital			100
Retained earnings at 1 October 20X0			391
		<u>1,369</u>	<u>1,369</u>

Notes

- (a) Inventory was worth \$13,000 on 30 September 20X1.
- (b) Premises consist of land costing \$250,000 and buildings costing \$200,000. The buildings have an expected useful life of 50 years.
- (c) Plant includes an item purchased during the year at a cost of \$70,000. These were the only transactions involving non-current assets during the year.
Depreciation of plant is to be charged at 10 per cent per annum on a straight line basis.
- (d) The balance on the tax account is an underprovision for tax brought forward from the year ended 30 September 20X0.
The entity paid \$48,000 on 27 November 20X0 as a final dividend for the year ended 30 September 20X0. A dividend of \$12,000 was received on 13 January 20X1. The 20X1 interim dividend was paid on 15 April 20X1.
- (e) The provision for deferred tax is to be reduced by \$17,000.
- (f) The directors have estimated that tax of \$57,000 will be due on the profits of the year.
- (g) The directors have proposed a final dividend for the year of \$50,000.

Requirement

Prepare an income statement for V for the year ended 30 September 20X1, a statement of changes in equity and a balance sheet at that date. These should be in a form suitable for presentation to the shareholders in accordance with the requirements of IFRSs and be accompanied by notes to the accounts as far as possible from the information given above.

You are *not* required to prepare the note relating to accounting policies. **(25 marks)**

Discussion

This question carries 25 marks. You would therefore have 45 minutes to do it in an examination. You will only build up to that speed with a lot of practice.

Let us go through the question and pause to think about items needing attention. It is useful to begin with the additional information below the trial balance, deciding what to do with them and marking the related items in the trial balance where necessary.

Notes (a) and (b) and (c) are routine adjustments to inventory and non-current tangible assets.

Note (d) tells us about dividends received and paid. Both are shown net in the income statement.

Note (e) gives us a straightforward movement on deferred tax.

Note (f) gives us the tax charge for the year.

Note (g) gives us the proposed final dividend.

Now for the trial balance

- Revenue, put in to the income statement
- *Inventory at 1 October 20X0*
- *Purchases*
- *Advertising*
- *Administration salaries*
- *Manufacturing wages.*

All these items go into a three-column working to arrive at the three disclosable totals – cost of sales, distribution costs and administrative expenses.

	<i>Cost of sales</i> \$000	<i>Distribution costs</i> \$000	<i>Administrative expenses</i> \$000
Inventory 1.10.X0	10		
Purchases	75		
Advertising		15	
Administrative salaries			14
Manufacturing wages, etc.	57		

For the rest of this working, see the answer below.

Returning to the trial balance, the items given here clearly direct us to the function of expense format for the income statement.

- *Interest paid.* There is no complication here. We simply include it as an expense at the correct place in the format. There is another point, not relevant for this question. Always check to confirm that the interest charge is for the full year, to find out whether an adjustment is needed. For example, if the trial balance includes 10% loan notes \$100,000 and interest paid is \$5,000, clearly an accrual of \$5,000 is required, unless the loan notes were issued halfway through the current year.
- *Audit fee.* Include in the expense working.
- *Bad debts.* Include in the expense working.
- *Taxation.* We shall need a working account for taxation (covered in detail in Chapter 6).
- *Dividend.* This is the interim dividend paid explained in note (d). The proposed dividend cannot be accrued, but must be disclosed as a note.

The remaining items are all routine balance sheet headings.

V – income statement for the year ended 30 September 20X1

<i>Ref. To</i>		<i>\$000</i>	<i>\$000</i>
<i>Notes</i>			
	Sales revenue		430
	Cost of sales		(188)
	Gross profit		<u>242</u>
	Distribution costs	(25)	
	Administrative expenses	(21)	
			(46)
			<u>196</u>
1.	Income from investments		12
	Finance cost		(14)
	Profit before tax		<u>194</u>
2.	Income tax expense		(50)
	Net profit for the period		<u>144</u>

V – Balance sheet as at 30 September 20X1

<i>Ref. To</i>	<i>Notes</i>	<i>\$000</i>	<i>\$000</i>
3.	Assets		
	<i>Non-current assets</i>		
	Tangible assets		498
	Investments		<u>100</u>
			598
	<i>Current assets</i>		
	Inventory	13	
	Trade receivables	23	
	Bank	<u>157</u>	
			<u>193</u>
			<u>791</u>
	Equity and Liabilities		
	<i>Equity</i>		
	Share capital	100	
	Retained earnings	<u>415</u>	
			515
	<i>Non-current liabilities</i>		
	Loan notes	140	
4.	Deferred tax	<u>72</u>	
			212
5.	<i>Current liabilities</i>		<u>64</u>
			<u>791</u>

V – Statement of changes in equity for the year ended 30 September 20X1

	<i>Share capital</i>	<i>Retained earnings</i>	<i>Total</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Balance at 30 September 20X0	100	391	491
Profit for the period		144	144
Dividend paid		(120)	(120)
Balance at 30 September 20X1	<u>100</u>	<u>415</u>	<u>515</u>

*Notes*1. *Profit from operations (required here as expenses are shown by function, see 10.4.3)*

Profit from operations is arrived at after charging:

	<i>\$000</i>
Depreciation	32
Staff costs	74

2. *Taxation (income statement)*

	<i>\$000</i>
Taxation estimated for this year	57
Transfer from deferred tax	<u>(17)</u>
	40
Underprovision for previous year	<u>10</u>
Charge to income statement	<u>50</u>

3. *Dividends proposed*

A final dividend of \$50,000 is proposed for the year.

4. *Tangible non-current assets*

	<i>Land and buildings</i>	<i>Plant</i>	<i>Total</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Cost 1 October 20X0	450	210	660
Additions	<u>0</u>	<u>70</u>	<u>70</u>
	450	280	730
Depreciation 1 October 20X0	<u>(40)</u>	<u>(160)</u>	<u>(200)</u>
Charge for year	<u>(4)</u>	<u>(28)</u>	<u>(32)</u>
	<u>(44)</u>	<u>(188)</u>	<u>(232)</u>
NBV 30 September 20X1	<u>406</u>	<u>92</u>	<u>498</u>
NBV 1 October 20X0	<u>410</u>	<u>50</u>	<u>460</u>

5. *Deferred taxation*

	<i>\$000</i>
Opening balance	89
Decrease in provision	<u>(17)</u>
Closing balance	<u>72</u>

6. *Current liabilities*

	<i>\$000</i>
Trade payables	7
Taxation (Note 2)	<u>57</u>
	<u>64</u>

*Workings**Analysis of expenses*

	<i>Cost of sales</i>	<i>Distribution costs</i>	<i>Administrative expenses</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Opening inventory	10		
Purchases	102		
Advertising		15	
Administration salaries			14
Manufacturing wages	57		
Audit fee			7
Bad debts		10	
Depreciation:			
building	4		
plant	28		
Closing inventory	(13)		
	<u>188</u>	<u>25</u>	<u>21</u>

10.8 Summary

Having completed this chapter, we can now explain the general requirements for the preparation of published financial statements as set out by IAS 1.

We are familiar with the recommended layouts of the main components of financial statements being balance sheet, income statement and statement of changes in equity (cash flow statement is covered in Chapter 12) and can adopt these formats in the preparation of financial statements.

Revision Questions

10

Data for Questions 1 and 2

Trade receivables as at 31 December 20X1 were \$18,000.

The bad debt provision as at 1 January 20X1 was \$900.

During the year bad debts of \$12,000 have been written off to administrative expenses.

After the year end, but before the accounts had been completed, the entity discovered that a major customer had gone into liquidation and that their outstanding balance of \$2,000 was unlikely to be paid.

Further more as a result of the recent bad debt experience the directors have decided to increase the bad debt provision at 31 December 20X1 to 10 per cent of outstanding trade receivables.

? Question 1

What is the correct balance for trade receivables, net of bad debt provision, as at 31 December 20X1?

- (A) \$3,600
- (B) \$5,400
- (C) \$14,400
- (D) \$16,200

(2 marks)

? Question 2

What is the correct charge to the income statement for bad debts and bad debt provisions for the year to 31 December 20X1?

- (A) \$14,000
- (B) \$14,400
- (C) \$14,700
- (D) \$15,600

In the exam you may have to produce financial statements in a form suitable for publication. Use these examples to build your knowledge of the formats provided by IAS 1. You need to learn them.

(2 marks)



Question 3

V imports electronic goods and resells these to large retail organisations. It specialises in luxury products such as electronic games and portable audio equipment. Almost half of the entity's sales occur during the months of October and November.

V faces intense competition and attempts to compete by anticipating consumer trends and offering products that are new to the market.

Legal fees and damages of \$270,000 were paid in settlement of a claim against V.

A wiring fault in a compact disc player had caused a fire in a customer's store. This is the first time that such an event has occurred. V has introduced safety checks on new products which will help to prevent any recurrence of this type of accident.

The following information was discovered after the first draft of the financial statements was prepared, but before the statements had been finalised and approved by the board of directors:

- (i) The entity's computer network was installed during the year ended 30 September 20X1. It was technically advanced at the time of installation and was expected to operate reliably for at least ten years. V's directors have, however, discovered that the entity's main competitors have installed newer technology which provides them with more detailed planning and marketing information. V might be forced to replace its computers within the next twelve months. It is unlikely that the existing system could be sold for much more than its scrap value.
- (ii) The loan of \$500,000 was taken out during September 20X2 to pay for the additional goods which were purchased in advance of the seasonal increase in sales. While the loan was formally repayable in the year 20X7, the loan agreement provided that the entity could repay it at any time without penalty. V actually repaid the loan in full at the end of October 20X2.

Requirements

- (a) Explain how the two matters above are likely to affect the entity's annual accounts. Describe the additional information that you would require before finalising the treatment of these matters. **(9 marks)**
- (b) Explain why the duty to present a fair presentation can be difficult to fulfil. **(7 marks)**

(Total marks = 16)

? Question 4

Atok, compiles its financial statements to 30 June annually. At 30 June 20X1, Atok's trial balance was as follows.

	<i>\$000</i>	<i>\$000</i>
Sales revenue		14,800
Purchases	8,280	
Inventory at 1 July 20X0	1,390	
Distribution costs	1,080	
Administrative expenses	1,460	
Land at valuation	10,500	
Buildings		
Cost	8,000	
accumulated depreciation at 1 July 20X0		2,130
Plant and equipment		
cost	12,800	
Accumulated depreciation at 1 July 20X0		2,480
Trade receivables and payables	4,120	2,240
Cash at bank	160	
Ordinary shares of 50 cent each:		
as at 1 July 20X0		10,000
issued during year		4,000
Share premium account:		
as at 1 July 20X0		2,000
arising on shares issued during year		2,000
Revaluation reserve as at 1 July 20X0		3,000
Retained earnings		3,140
10% loan notes (redeemable 20X9)		
(issued 1 April 20X1 with interest payable 31 March and 30 September each year)		2,000
	<u>47,790</u>	<u>47,790</u>

The following matters remain to be adjusted for in preparing the financial statements for the year ended 30 June 20X1.

- Inventory at 30 June 20X1 amounted to \$1,560,000 at cost. A review of inventory items revealed the need for some adjustments for two inventory lines.
 - Items which had cost \$80,000 and which would normally sell for \$120,000 were found to have deteriorated. Remedial work costing \$20,000 would be needed to enable the items to be sold for \$90,000.
 - Some items sent to customers on sale or return terms had been omitted from inventory and included as sales in June 20X1. The cost of these items was \$16,000 and they were included in sales at \$24,000. In July 20X1, the items were returned in good condition by the customers.
- Depreciation is to be allowed as follows.

Buildings	2 per cent per year on cost
Plant and equipment	20 per cent per year on cost.

Eighty per cent of the depreciation is to be charged in cost of sales, and 10 per cent each in distribution costs and administrative expenses.

- The land is to be revalued to \$12,000,000. No change was required to the value of the buildings.

4. Accruals and prepayments were:

	<i>Accruals</i>	<i>Prepayments</i>
	<i>\$000</i>	<i>\$000</i>
Distribution costs	190	120
Administrative costs	70	60

Requirements

- (a) Prepare Atok's income statement for the year ended 30 June 20X1 and balance sheet as at that date for publication, complying as far as possible with the provisions of international accounting standards. **(20 marks)**
- (b) Prepare a statement detailing changes in equity during the year. **(4 marks)**
- (Total marks = 24)**

? Question 5

The following information has been extracted from the accounting reports of P:

P – trial balance at 31 March 20X1

	<i>\$000</i>	<i>\$000</i>
Sales revenue		5,300
Cost of sales	1,350	
Dividends received		210
Administrative expenses	490	
Distribution costs	370	
Interest payable	190	
Income tax	25	
Dividends paid	390	
Property, plant and equipment	4,250	
Short-term investments	2,700	
Inventory	114	
Trade receivables	418	
Bank	12	
Trade payables		136
Long-term loans (repayable 20X9)		1,200
Share capital		1,500
Share premium		800
Accumulated profits		1,163
	<u>10,309</u>	<u>10,309</u>

- (a) During the year, P paid a final dividend of \$240,000 in respect of the year ended 31 March 20X0. This was in addition to the interim dividend paid on 1 September 20X0 in respect of the year ended 31 March 20X1.
- (b) The balance on the taxation account comprises the balance remaining from the settlement of the estimated tax charge for the year ended 31 March 20X0. The tax charge for this year has been estimated at \$470,000.
- (c) The directors have proposed a final dividend of \$270,000.

Requirements

Prepare an income statement and a statement of changes in equity for the year ended 31 March 20X1, and a balance sheet at that date. These should be in a form suitable for publication.

Your answer should include any notes intended for publication and these should be distinguished from workings.

You are *not* required to provide a note on accounting policies. **(25 marks)**

? Question 6

H, a wholesaling entity, employs just over 100 people and purchases food in bulk for sale to small shops and hotels. H buys from a large number of suppliers of various sizes, spread across the country. H's trial balance at 31 March 20X1 is as follows:

	\$000	\$000
Administration costs	90	
Bank	11	
Income tax		20
Distribution costs	60	
Dividend received		600
Non-current asset investment	6,575	
Dividends paid	1,200	
Loan (repayable 20X4)		200
Loan interest	24	
Plant and machinery – cost	900	
Plant and machinery – depreciation		440
Premises – cost	2,400	
Premises – depreciation		720
Accumulated profits		921
Purchases	2,027	
Revenue		5,000
Share capital		7,000
Inventory at 1 April 20X0	165	
Trade payables		168
Trade receivables	417	
Wages – administration	800	
Wages – distribution	400	
	<u>15,069</u>	<u>15,069</u>

- (i) Inventory was physically counted at close of business on 31 March 20X1 and was valued at \$167,000.
- (ii) The premises were revalued at \$2.5 million on 1 April 20X0. The directors have decided to incorporate this valuation into the balance sheet. There have been no other transactions or adjustments in respect of non-current assets.
- (iii) Premises are to be depreciated by 2 per cent of cost or valuation, and plant and machinery by 20 per cent, on the reducing balance method. All depreciation is to be treated as a distribution cost.
- (iv) The tax charge for the year has been estimated at \$270,000.
- (v) The balance on the tax account represents the amount remaining after the settlement of the liability for the year ended 31 March 20X0.

(vi) *Dividends paid during the year were:*

	\$
Final for year ended 31 March 20X0	700,000
Interim for year ended 31 March 20X1	500,000
Directors' proposed final dividend	900,000

Requirement

Prepare H's income statement and a statement of changes in equity for the year ended 31 March 20X1, and its balance sheet at that date. These should be in a form suitable for

publication, and accompanied by notes as far as you are able to prepare these from the information provided.

You are *not* required to prepare a statement of accounting policies or to calculate earnings per share. **(28 marks)**

? Question 7

Z, imports electronic goods and resells these to large retail organisations. It specialises in luxury products such as electronic games and portable audio equipment. Almost half of Z's sales occur during the months of October and November.

Z faces intense competition and attempts to compete by anticipating consumer trends and offering products which are new to the market.

Z's trial balance at 30 September 20X2 is as follows:

	\$000	\$000
Sales revenue		9,800
Purchases	1,300	
Inventory at 30 September 20X1	480	
Warehouse and delivery wages	350	
Sales commissions	180	
Sundry distribution costs	310	
Sundry administrative expenses	85	
Administrative staff salaries	220	
Legal fees and damages	270	
Tax	45	
Dividends paid	1,775	
Warehouse premises – cost	8,500	
Warehouse premises – depreciation		800
Computer network – cost	900	
Computer network – depreciation		200
Delivery vehicles – cost	700	
Delivery vehicles – depreciation		280
Trade receivables	535	
Trade payables		470
Bank	90	
Loan – repayable 20X7		500
Loan interest	25	
Share capital		1,000
Accumulated profits		2,715
	<u>15,765</u>	<u>15,765</u>

Notes:

- (i) The closing inventory was counted on 30 September 20X2 and was valued at \$520,000.
- (ii) The legal fees and damages were paid in settlement of a claim against Z for a faulty product that had caused injury to a customer. Z has introduced safety checks on new products which will help to prevent any recurrence of this type of accident.
- (iii) Depreciation has still to be charged for the year on the following bases:

Warehouse premises	2% of cost
Computer network	25% of book value
Vehicles	25% of book value

- (iv) The tax expense for the year has been estimated at \$1,900,000.
- (v) Z paid a final dividend of \$800,000 for the year ended 30 September 20X1 and an interim dividend of \$975,000 during the year. The directors propose a final dividend of \$1m.

Requirement

Prepare an income statement and a statement of changes in equity for the year ended 30 September 20X2, and a balance sheet at that date, together with notes to the financial statements for Z. These should be in a form suitable for publication in so far as is possible given the information provided. You are not required to provide a statement of accounting policies. **(25 marks)**

Solutions to Revision Questions

10

✓ Solution 1

The correct answer is (C). The bad debts already written off have already been deducted from the receivables balance. As the \$2,000 is unlikely to be paid, it should be provided for as a bad debt. Deduct this specific bad debt provision first then calculate the 10% provision.

	\$
Trade receivables	18,000
Less bad debt	<u>2,000</u>
	16,000
Less 10% provision	<u>1,600</u>
	<u>14,400</u>

✓ Solution 2

The correct answer is (C).

The total charge to income statement will include the amount already written off plus the new bad debt provision plus the increase in the general bad debt provision.

	\$	\$
Bad debts already written off		12,000
Bad debt at year end		<u>2,000</u>
		14,000
Increase in provision		
Bad debt provision b/f	900	
Bad debt provision c/f	<u>1,600</u>	
Increase		<u>700</u>
Total		<u>14,700</u>

✓ Solution 3

- (a) (i) The depreciation calculation for the computer system is based on the assumption that it will have a long life – probably the full ten years for which it is expected to operate reliably. However, the depreciation rate should reflect not just reliability, but the anticipated useful life to the entity. This is particularly important when dealing with high-technology items such as computer systems. In order to decide how this item should be treated in the final accounts of V, we would require to know whether or not the entity intends to replace the system within the next 12 months. If it is to be replaced

because it has become obsolete, the correct accounting treatment would be to increase the depreciation charge to reflect the asset's shorter useful life. This would have the effect of writing off the remaining book value of the asset immediately.

- (ii) This would appear to be governed by the provisions of IAS 1 relating to classification of liabilities as current or non-current. As the loan was repaid at the end of October 20X2, this is probably before the financial statements for the year ended 30 September 20X2 were approved, and the loan should be classified as a current liability.

Further information required: confirmation of the date on which the financial statements were approved.

- (b) IAS 1 requires that published accounts provide a fair presentation of an entity's financial position, performance and cash flows. 'Fair presentation' however is not defined by IAS 1. This can make the duty of directors to present a fair presentation in the financial statements difficult to discharge.

IAS 1 suggests that compliance with international accounting standards will virtually always result in financial statements that achieve a fair presentation. However, there can be transactions that are not specifically covered by a standard. IAS 1 contains an 'override', allowing entities to depart from the requirements of a standard if this is necessary to achieve fair presentation. If this is done the financial statements must disclose:

- that management has concluded that the financial statements fairly present the entity's financial position, financial performance and cash flows;
- that all IASs have been complied with except for the departure to achieve a fair presentation;
- the standard from which the entity has departed, the nature of the departure, an explanation of the treatment the standard would require, and the reason why that treatment would be misleading; and
- the financial impact of the departure.

The problems for directors are further compounded by the fact that the users of accounts may well have differing views as to what constitutes a fair presentation. What is of relevance to one group of users is not necessarily of prime importance to another set of account users. And so the directors may well have to address the problem of to whom the accounts should present a fair presentation.



Solution 4

Successful and time efficient answering of this type of question requires a logical approach. I would recommend that you deal firstly with the additional information. Create the list of adjustments that should be made to the trial balance figures. You could also mark the TB items that will change as a result of these adjustments so you remember to incorporate them. If there are items that are affected by a number of entries then it is often worthwhile to include working notes as you will see in the solution below. Draft the formats for the income statement and balance sheet and tick off the TB items and the adjustments as you slot the figures in – this will ensure nothing is missed – it also provides an audit trail, making it easier for you to retrace your steps should you find your balance sheet doesn't square!

Everyone has their own way of dealing with accounts preparation questions – if you have already developed a successful formula – stick with it.

(a) Atok – income statement for the year ended 30 June 20X1

	<i>Journal/Notes</i>	<i>\$000</i>
Revenue	(W1)	14,776
Cost of sales	(W2)	<u>10,280</u>
Gross profit		4,496
Distribution costs	(W3)	(1,422)
Administrative expenses	(W4)	<u>(1,742)</u>
Profit		1,332
Finance costs	(JE8)	<u>(50)</u>
Profit for the period		<u><u>1,282</u></u>

Atok – balance sheet as at 30 June 20X1

		<i>\$000</i>	<i>\$000</i>
Assets			
Non-current assets			
Land and buildings	(W5)		17,710
Plant and equipment	(W5)		<u>7,760</u>
			25,470
Current assets			
Inventories	(W6)	1,566	
Trade receivables	(W7)	4,276	
Cash at bank		<u>160</u>	
			<u>6,002</u>
Total assets			<u><u>31,472</u></u>
Equity and Liabilities			
Equity			
Issued capital		14,000	
Share premium account		4,000	
Revaluation reserve	(W8)	4,500	
Retained earnings		<u>4,422</u>	
			26,922
Non-current liabilities			
Loan notes 20X9			2,000
Current liabilities			
Trade payables		2,240	
Accruals	(W9)	<u>310</u>	
			<u>2,550</u>
Total equity and liabilities			<u><u>31,472</u></u>

(b) Atok – statement of changes in equity: year ended 30 June 20X1

	<i>Share capital</i>	<i>Share premium</i>	<i>Revaluation</i>	<i>Retained</i>	<i>Total</i>
	<i>account</i>	<i>reserve</i>	<i>earnings</i>		
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
As at 1 July 20X0	10,000	2,000	3,000	3,140	18,140
Issue of shares	4,000	2,000			6,000
Net profit for the year				1,282	1,282
Surplus on revaluation			<u>1,500</u>		<u>1,500</u>
As at 30 June 20X1	<u>14,000</u>	<u>4,000</u>	<u>4,500</u>	<u>4,422</u>	<u>26,922</u>



The following are detailed explanations and journal entries for all the adjustments. In an examination these would not be required. Concentrate on the adjustments needed, only give explanations for your adjustments in answers if they are required by the question.

Accounting adjustments required from the additional information**Inventory (item 1)**

IAS 2 states that inventory should be included in the financial statements at the lower of cost and net realisable value (NRV). The inventory in question is being held at its original cost of \$80,000. The NRV is the expected selling price less any further costs to complete and sell the items. In this case, to sell these items at \$90,000, a further \$20,000 must be incurred. The NRV is therefore \$70,000 (\$90,000 – \$20,000). See inventory in Chapter 15.

The lower of cost and NRV for these items is NRV of \$70,000. The inventory should therefore be written down by \$10,000 (cost \$80,000 – \$70,000). This is recorded as:

JE 1

			<i>\$000</i>	<i>\$000</i>
Dr		Cost of sales	10	
	Cr	Inventory		10
		Being the write down of inventory		

The sales returns will require two adjustments, the first is to reverse the sale and remove the receivable amount from the balance sheet, and the second part is to rebook the items back into stock and remove the cost of sales charge from the income statement. This is recorded as:

JE 2

			<i>\$000</i>	<i>\$000</i>
Dr		Sales	24	
	Cr	Receivables		24
		Being the recording of the sales returns		

JE 3

			<i>\$000</i>	<i>\$000</i>
Dr		Inventory	16	
	Cr	Cost of sales		16
		Being the rebooking of items into inventory		

Depreciation (item 2)

$$\text{Building depreciation} = 2\% \times 8,000,000 = 160,000$$

$$\text{Plant and equipment} = 20\% \times 12,800,000 = 2,560,000$$

See chapter 13 for depreciation calculations.

80% is to be allocated to cost of sales and 10% to each of administration and distribution expenses. This will be recorded as:

JE 4

			<i>\$000</i>	<i>\$000</i>
Dr		Cost of sales	2,176	
Dr		Distribution costs	272	
Dr		Administration costs	272	
	Cr	Accumulated depreciation – buildings		160
	Cr	Accumulated depreciation – plant and equipment		2,560
		Being the depreciation charge for the year		

Revaluation (item 3)

The land is to be revalued to \$12m. It is currently held in the trial balance at \$10.5m. The revaluation will be recorded as:

JE 5

			<i>\$000</i>	<i>\$000</i>
Dr		Land	1,500	
	Cr	Revaluation reserve		1,500
		Being the revaluation of land		

Accruals and prepayments (item 4)

The accruals and prepayments will be recorded as:

JE 6

			<i>\$000</i>	<i>\$000</i>
Dr		Distribution costs	190	
Dr		Administration costs	70	
	Cr	Accruals		260
		Being the year end accruals		

JE 7

			<i>\$000</i>	<i>\$000</i>
Dr		Prepayments	180	
	Cr	Distribution costs		120
	Cr	Administration costs		60
		Being the year end prepayments		

10% Loan notes (within TB)

Whenever you see preferred shares or any long-term debt always check that preferred dividends and interest due up to the balance sheet date have been accounted for.

Loan notes were issued on 1 April 20X1 and the first instalment of interest is not to be paid until September. We must therefore accrue interest relating to the period 1 April to 30 June, that is 3 months. Interest is $10\% \times \$2\text{m per annum} \times 3/12 \text{ months} = \$50,000$. Recorded as:

JE 8

			<i>\$000</i>	<i>\$000</i>
Dr		Finance costs	50	
	Cr	Accruals		50
		Being the interest accruing on the loan notes		

Workings – These are required in examination answers

1. *Revenue*

	<i>\$000</i>
Per trial balance	14,800
Less: goods on sale or return (JE 2)	(24)
Income statement revenue	<u>14,776</u>

2. *Cost of sales*

		<i>\$000</i>
Opening inventory		1,390
Purchases		<u>8,280</u>
		9,670
Less: closing inventory		
Original amount	1,560	
inventory write down (JE 1)	(10)	
inventory rebooked (JE 3)	16	
		<u>1,566</u>
		8,104
Depreciation (JE 4)		<u>2,176</u>
Income statement charge		<u>10,280</u>

3. *Distribution costs*

	<i>\$000</i>
Per trial balance	1,080
Accruals (JE 6)	190
Prepayments (JE 7)	(120)
Depreciation (JE 4)	<u>272</u>
Income statement charge	<u>1,422</u>

4. *Administrative expenses*

	<i>\$000</i>
Per trial balance	1,460
Accruals (JE 6)	70
Prepayments (JE 7)	(60)
Depreciation (JE 4)	<u>272</u>
Income statement charge	<u>1,742</u>

5. *Non-current assets*

	<i>Land</i>	<i>Buildings</i>	<i>Plant and Equipment</i>	<i>Total</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Per trial balance	10,500	8,000	12,800	31,300
Revaluation (JE 5)	<u>1,500</u>	<u>—</u>	<u>—</u>	<u>1,500</u>
	12,000	8,000	12,800	32,800
Less: depreciation				
as at 1 July 20X0		(2,130)	(2,480)	(4,610)
charges for year (JE 4)		<u>(160)</u>	<u>(2,560)</u>	<u>(2,720)</u>
	<u>12,000</u>	<u>5,710</u>	<u>7,760</u>	<u>25,470</u>

6. *Inventories*

	<i>\$000</i>
Per stock count	1,560
Stock write down (JE 1)	(10)
Stock returned (JE 3)	16
Balance sheet entry	<u>1,566</u>

7. *Receivables*

	<i>\$000</i>
Per trial balance	4,120
Goods on sale or return (JE 2)	(24)
Prepayments (JE 7)	180
Balance sheet entry	<u>4,276</u>

8. *Revaluation reserve*

	<i>\$000</i>
As at 1 July 20X0	3,000
Revaluation in year (JE 5)	<u>1,500</u>
As at 30 June 20X1	<u>4,500</u>

9. *Accruals*

	<i>\$000</i>
Accrued expenses (JE 6)	260
Accrued interest (JE 8)	<u>50</u>
As per accounts	<u>310</u>

**Solution 5****P – income statement for the year ended 31 March 20X1**

	<i>Notes</i>	<i>\$000</i>
Sales revenue		5,300
Cost of sales		<u>(1,350)</u>
Gross profit		3,950
Distribution costs		(370)
Administrative expenses		<u>(490)</u>
Profit		3,090
Income from fixed asset investments		<u>210</u>
		3,300
Finance cost		<u>(190)</u>
Profit before tax		3,110
Tax expense	1	<u>(495)</u>
Profit for the year		<u>2,615</u>

P – balance sheet at 31 March 20X1

	<i>Notes</i>	<i>\$000</i>	<i>\$000</i>
<i>Assets</i>			
<i>Non-current assets</i>			
Property, plant and equipment			4,250
<i>Current assets</i>			
Inventory		114	
Trade receivables		418	
Investments		2,700	
Cash at bank		<u>12</u>	
			3,244
Total assets			<u>7,494</u>
<i>Equity and Liabilities</i>			
<i>Capital and reserves</i>			
Issued capital		1,500	
Share premium		800	
Retained earnings		<u>3,388</u>	
			5,688
<i>Non-current liabilities</i>			
Long-term loans			1,200
<i>Current liabilities</i>			
Trade payables		136	
Taxation		<u>470</u>	
			606
Total equity and liabilities			<u>7,494</u>

P – statement of changes in equity for the year ended 31 March 20X1

	<i>Share capital</i>	<i>Share premium</i>	<i>Retained earnings</i>	<i>Total</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Balance at 31 March 20X0	1,500	800	1,163	3,463
Profit for the period			2,615	2,615
Dividends paid			(390)	(390)
Balance at 31 March 20X1	<u>1,500</u>	<u>800</u>	<u>3,388</u>	<u>5,688</u>

Notes to the accounts

1. *Taxation*

	<i>\$000</i>
Tax for the year	470
20X0 underprovision	<u>25</u>
	<u>495</u>

2. *Dividends*

	<i>\$000</i>
Dividends paid:	
Final, year ended 31 March 20X0	240
Interim, year ended 31 March 20X1	<u>150</u>
	<u>390</u>

The directors propose a final dividend of \$270,000 for the year ended 31 March 20X1.

**Solution 6****H – income statement for the year ended 31 March 20X1**

	<i>Note</i>	<i>\$000</i>
Sales revenue		5,000
Cost of sales		(2,025)
Gross profit		<u>2,975</u>
Distribution costs		(602)
Administrative expenses		(890)
Profit	1	<u>1,483</u>
Income from fixed asset investments		600
Finance cost		(24)
Profit before tax		<u>2,059</u>
Tax expense	2	(250)
Profit after tax		<u>1,809</u>

H – balance sheet at 31 March 20X1

	<i>Note</i>	<i>\$000</i>	<i>\$000</i>
<i>Assets</i>			
<i>Non-current assets</i>			
Property, plant and equipment	3		2,818
Investments			<u>6,575</u>
			9,393
<i>Current assets</i>			
Inventory		167	
Receivables		417	
Bank		<u>11</u>	<u>695</u>
Total assets			<u>9,988</u>
<i>Equity and Liabilities</i>			
<i>Capital and reserves</i>			
Issued capital		7,000	
Revaluation reserve		820	
Retained earnings		<u>1,530</u>	
			9,350
<i>Non-current liabilities</i>			
Long-term loans			200
Current liabilities	4		<u>438</u>
Total equity and liabilities			<u>9,988</u>

H – statement of changes in equity, year ended 31 March 20X1

	<i>Share capital</i>	<i>Revaluation reserve</i>	<i>Retained earnings</i>	<i>Total</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Balance at 31 March 20X0	7,000		921	7,921
Surplus on revaluation of land		820		820
Net profit for the period			1,809	1,809
Dividends paid (Note 5)			<u>(1,200)</u>	<u>(1,200)</u>
	<u>7,000</u>	<u>820</u>	<u>1,530</u>	<u>9,350</u>

H – notes to the financial statements**1. Profit from operations**

Profit from operations is stated after charging:

	<i>\$000</i>
Depreciation	142
Staff costs	1,200

2. Taxation

	<i>\$000</i>
Tax charge for the year	270
Overprovision from previous year	<u>(20)</u>
	<u>250</u>

3. *Tangible non-current assets*

	<i>Buildings</i>	<i>Plant and machinery</i>	<i>Total</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Cost or valuation at 1 April 20X0	2,400	900	3,300
Surplus on revaluation	100	–	100
Cost or valuation at 31 March 20X1	<u>2,500</u>	<u>900</u>	<u>3,400</u>
Depreciation at 1 April 20X0	720	440	1,160
Adjustment on revaluation	(720)	–	(720)
Provided during the year	50	92	142
Depreciation at 31 March 20X1	<u>50</u>	<u>532</u>	<u>582</u>
Net book value at 31 March 20X1	<u>2,450</u>	<u>368</u>	<u>2,818</u>
Net book value at 1 April 20X0	<u>1,680</u>	<u>460</u>	<u>2,140</u>

The buildings were revalued at \$2.5 m on 1 April 20X0.

4. *Current liabilities*

	<i>\$000</i>
Trade payables	168
Taxation	<u>270</u>
	<u>438</u>

5. *Dividends*

Dividends paid during the year were:

	<i>\$000</i>
Final for year ended 31 March 20X0	700
Interim for year ended 31 March 20X1	<u>500</u>
	<u>1,200</u>

The directors propose a final dividend for the year ended 31 March 20X1 of \$900,000.

Workings

	<i>\$000</i>
Cost of sales	
Opening inventory (per TB)	165
Add: Purchases	2,027
Less: Closing inventory	<u>(167)</u>
	<u>2,025</u>
Depreciation	
Premises 2% × \$2.5m	50
Plant 20% × RB of (900 – 440)	<u>92</u>
	<u>142</u>
Distribution costs	
Per trial balance	60
Depreciation charge (50 + 92)	142
Wages	<u>400</u>
	<u>602</u>
Administrative expenses	
Per trial balance	90
Wages	<u>800</u>
	<u>890</u>



Solution 7

Z – income statement for the year ended 30 September 20X2

	<i>Note</i>	<i>\$000</i>
Turnover		9,800
Cost of sales		<u>(1,430)</u>
Gross profit		8,370
Distribution costs		(945)
Administrative expenses		<u>(750)</u>
Profit	1	6,675
Finance costs		<u>(25)</u>
Profit before tax		6,650
Tax expense	2	<u>(1,945)</u>
Profit for the period		<u>4,705</u>

Z – balance sheet at 30 September 20X2

	<i>Note</i>	<i>\$000</i>	<i>\$000</i>
<i>Assets</i>			
<i>Non-current assets</i>			
Property, plant and equipment	4		8,370
<i>Current assets</i>			
Inventory		520	
Receivables		535	
Bank		<u>90</u>	
			<u>1,145</u>
			<u>9,515</u>
<i>Equity and Liabilities</i>			
<i>Capital and reserves</i>			
Issued capital		1,000	
Retained earnings		<u>5,645</u>	
			6,645
<i>Non-current liabilities</i>			
Long-term loan	5		500
<i>Current liabilities</i>			
Trade payables	6	470	
Tax		<u>1,900</u>	
			<u>2,370</u>
			<u>9,515</u>

Z – statement of changes in equity, year ended 30 September 20X2

	<i>Share capital</i>	<i>Retained earnings</i>	<i>Total</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Balance at 30 September 20X1	1,000	2,715	3,715
Profit for the period		4,705	4,705
Dividends paid:			
Final, year ended 30 September 20X1		(800)	(800)
Interim, year ended 30 September 20X2		<u>(975)</u>	<u>(975)</u>
Balance at 30 September 20X2	<u>1,000</u>	<u>5,645</u>	<u>6,645</u>

Z – notes to the financial statements

1. *Operating profit*

Operating profit is stated after charging:

	<i>\$000</i>
Depreciation	450
Exceptional item – non-recurring legal fees and damages (see Chapter 11 for treatment)	270

2. *Taxation*

	<i>\$000</i>
Tax charge for the year	1,900
Underprovision from previous years	<u>45</u>
	<u>1,945</u>

3. *Dividends*

The directors propose a final dividend of \$1,000,000 for the year.

4. *Tangible non-current assets*

	<i>Premises</i>	<i>Computer</i>	<i>Delivery vehicles</i>	<i>Total</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Cost at 30 September 20X1 and 20X2	<u>8,500</u>	<u>900</u>	<u>700</u>	<u>10,100</u>
Depreciation at 30 September 20X1	800	200	280	1,280
Charge for the year	<u>170</u>	<u>175</u>	<u>105</u>	<u>450</u>
Depreciation at 30 September 20X2	<u>970</u>	<u>375</u>	<u>385</u>	<u>1,730</u>
Net book value at 30 September 20X2	<u>7,530</u>	<u>525</u>	<u>315</u>	<u>8,370</u>
Net book value at 30 September 20X1	<u>7,700</u>	<u>700</u>	<u>420</u>	<u>8,820</u>

5. *Long-term loan*

This loan is due to be repaid in 5 years.

6. *Current liabilities*

	<i>\$000</i>
Trade payables	470
Tax	<u>1,900</u>
	<u>2,370</u>

Workings

	<i>\$000</i>
Cost of sales	
Opening inventory	480
Purchases	1,300
Closing inventory	<u>(520)</u>
	<u>1,260</u>
Depreciation on premises (2% × 8,500)	<u>170</u>
	<u>1,430</u>
Distribution costs	
Warehouse and delivery wages	350
Sales commissions	180
Sundry distribution costs	310
Depreciation on vehicles (25% × 700 – 280)	<u>105</u>
	<u>945</u>
Administrative expenses	
Sundry administrative expenses	85
Administrative staff salaries	220
Legal fees and damages	270
Depreciation on computer (25% × 900 – 200)	<u>175</u>
	<u>750</u>

Reporting Financial Performance

11

LEARNING OUTCOME

After completing this chapter you should be able to:

- ▶ explain and apply the accounting rules contained in IAS's dealing with reporting performance.

The syllabus topics covered in this chapter are as follows:

- Reporting performance: recognition of revenue, measurement of profit or loss, extraordinary items, prior period items, discontinuing operations and segment reporting (IAS 1, 8, 14, 18 & 35).

11.1 Introduction

In the previous chapter we studied the requirements (primarily of IAS 1 *Presentation of Financial Statements*) for the presentation of financial statements. This chapter builds on the knowledge gained in Chapter 10, but focuses on the income statement.

In this chapter we are going to consider the recognition of revenue, the measurement of profit, presentation issues regarding unusual items in the income statement and presentation and disclosure requirements regarding segmental information.

The five accounting standards covered in this chapter are all concerned with specific items, transactions and adjustments that appear either on the face of the income statement or in the accompanying notes.

Some of the standards give illustrative formats and where these are helpful in understanding the presentation aspects of these items, they will be included in the chapter.

Remember, that although we are now looking in more detail at items within the income statement, the recommended format outlined in Chapter 10, will still apply, if the accounts are to be in a form suitable for publication.

11.2 IAS 18 Revenue recognition

11.2.1 Introduction

IAS 18 defines when revenue may be recognised on the sale of goods, the rendering of services and the receipt of interest, royalties and dividends.

11.2.2 Sale of goods

Revenue from the sale of goods should be recognised when the following five conditions have been met:

- (a) the significant risks and rewards of ownership of the goods have been transferred to the buyer;
- (b) the entity selling does not retain any continuing influence or control over the goods;
- (c) revenue can be measured reliably;
- (d) it is reasonably certain that the buyer will pay for the goods;
- (e) the costs to the selling entity can be measured reliably.

11.2.3 Rendering of services

The conditions to be met for services are similar to those for the supply of goods.

Revenue from services should be recognised when:

- (a) the amount of revenue can be measured reliably;
- (b) it is reasonably certain that the client will pay for the services;
- (c) the stage of completion of the transaction can be measured reliably;
- (d) the costs to the entity supplying the service can be measured reliably.

Revenue is recognised according to the degree of completion.

11.2.4 Interest, royalties and dividends

The prime conditions for interest, royalties and dividends are that the amount of revenue can be measured reliably and their receipt is reasonably certain.

Once those conditions are met, interest and royalties should be recognised on an accruals basis and dividends recognised when the right to receive them is established.

11.2.5 Disclosure requirements

- (a) The accounting policies adopted for the recognition of revenue;
- (b) the amount of each significant category of revenue recognised (i.e. figures for sale of goods, rendering of services, interest, royalties and dividends, if material).

The following extracts give an illustration of how this requirement may be adopted in practice.

Extract from the consolidated accounts of the Nestlé Group for the year ended 31 December 2004

Accounting policies

Sales to customers

Sales to customers represent the sales of products and services rendered to third parties, net of general price reductions and sales taxes. Sales are recognised in the income statement at the moment the significant risks and rewards of ownership of the goods have been transferred to the buyer.

Extract from the consolidated financial statements of the Bayer Group for the year ended 31 December 2004

Notes to the Income Statement

Net sales and other operating income

Sales are recognised upon transfer of risk or rendering of services to third parties and are reported net of sales taxes and rebates. Revenues from contracts that contain customer acceptance provisions are deferred until customer acceptance occurs. Where sales of products or services involve the provision of multiple elements, they are assessed to determine whether separate delivery of the individual elements of such arrangements comprises more than one unit of accounting. The delivered elements are separated if (i) they have value to the customer on a stand-alone basis, (ii) there is objective and reliable evidence of the fair value of the undelivered element(s) and (iii) the arrangement includes a general right of return relative to the delivered element(s). Delivery or performance of the undelivered element(s) is considered probable and substantially in the control of the company. If all three criteria are fulfilled, the appropriate revenue recognition convention is then applied to each separate accounting unit. Allocations to provisions for rebates to customers are recognised in the period in which the related sales are recorded based on the contract terms. These amounts are deducted from net sales.

11.3 Profit or loss for the period

The objective of *IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors* (2003) is to prescribe the criteria for selecting and changing accounting policies, together with the accounting treatment and disclosure changes in accounting policies, changes in accounting estimates and corrections of errors. The standard is intended to enhance the relevance and reliability of an entities financial statements, and the comparability of those statements over time and with the financial statements of other entities. The financial information provided by the income statement about the financial performance of an entity is historical, however, users often use this statement as a basis to evaluate the entity's future performance and any information that can assist in this process is relevant.

11.3.1 Extraordinary items

IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors* replaces IAS 8 *Net profit or Loss for the period, Fundamental Errors and Changes in Accounting Policies* (revised in 1993). The 1993 version of IAS 8 required that profit or loss for the period, shown on the face of the income statement, be separated into two components:

- profit or loss from ordinary activities;
- extraordinary items.

The original standard defined *extraordinary items* and included extensive disclosure requirements if extraordinary items were present in the income statement. The new IAS 8 eliminates extraordinary items and as a result you will not be examined on them even although they are referred to in the syllabus. There is no reference in IAS 8 now, it was transferred to IAS 1 *Presentation of Financial Statements*. The revised IAS 1 says that an entity should not present any items of income and expense as extraordinary items, either on the face of the income statement or in the notes.

11.3.2 Profit or loss from ordinary activities

The term 'from ordinary activities' is now redundant as IAS 1 has removed extraordinary items there is now only one category of profit, which is referred to simply as profit or loss.

There may be items of income or expense that occur within the normal course of business but, because of their size or unusual nature, should be separately disclosed.

Providing information about *large or unusual items* reported within profit will again help users to evaluate the profit or loss that the entity is likely to generate in future periods (from trading activities).

The standard gives some examples of circumstances that may result in the separate disclosure of items. They include:

- (a) the write-down of inventories to net realisable value;
- (b) the write-down of property, plant and equipment to recoverable amount and reversals of previous write-downs;
- (c) restructuring of the activities of an entity and the reversal of any provisions made for the costs of restructuring;
- (d) disposals of items of property, plant and equipment;
- (e) disposals of long-term investments;
- (f) discontinuing operations;
- (g) litigation settlements;
- (h) other reversals of provisions.

The following extract from Nestlé's accounts provides a practical illustration of how these disclosures could be presented.

Extract from the consolidated accounts of the Nestlé Group for the year ended 31 December 2003

Notes

2. Net other income (expenses)

<i>In millions of CHF</i>	2003	2002
Other expenses		
Loss on disposal of property, plant and equipment	(6)	(9)
Loss on disposal of activities	(71)	(145)
Restructuring costs	(603)	(1,130)
Impairment of property, plant and equipment	(148)	(1,316)
Other	(343)	(694)
	<u>(1,171)</u>	<u>(3,294)</u>
Other income		
Profit on disposal of property, plant and equipment	54	44
Profit on disposal of activities	277	4,690
Other	306	246
	<u>637</u>	<u>4,980</u>
Net other income (expenses)	<u>(534)</u>	<u>1,686</u>

Other expenses

Restructuring costs and impairments result mainly from the Group's industrial reorganisation.

Restructuring costs in 2003 arise mainly from the optimisation of industrial manufacturing capacities relating to milk products and water businesses in Europe.

Other income

2002 included the gain on the partial IPO of Alcon, Inc. and the profit on the disposal of FIS.

11.4 Definitions – Accounting policies, accounting estimates and errors

- Accounting policies are the specific principles, bases, conventions and practices applied by an entity in preparing their financial statements.
- A change in accounting estimates is an adjustment of the carrying amount of an asset or liability or the periodic charge to the income statement arising from the use of an asset that results from a change to the expected future benefits or future obligations associated with the asset or liability. Changes in accounting estimates arise from new information or developments and are not corrections of errors.
- Errors are material omissions or misstatements in the financial statements. Ideally errors should be found and corrected within the same accounting period but if they are not discovered until a later period they are treated as prior period adjustments.

11.5 Changes in accounting policies

The need for comparability means that, where possible, an entity will adopt the same accounting policies year after year. However, changes are sometimes needed. Possible reasons being:

- a new statutory requirement;
- a new accounting standard;
- the change will result in a more appropriate presentation of events or transactions in the financial statements.

According to IAS 8, when an accounting standard is applied to conditions that differ in substance from the previous situation it is not to be treated as a change in accounting policy. If an accounting policy is applied to transactions or events that had not previously occurred or was previously immaterial then it is not a change in accounting policies as there would not be an existing policy to change.

The following extract from actual accounts is from the accounting policies for the year ended 31 December 2004 and provides information of the new accounting standards that were adopted in that period.

Extract from the consolidated financial statements of the Nestlé Group for the year ended 31 December 2004

Notes to the consolidated financial statements

Changes in accounting policies

In conformity with the transitional provisions of IFRS 3 on business combinations, the revised IAS 36 on impairment of assets and the revised IAS 38 on intangible assets, goodwill and indefinite life intangible assets arising on acquisitions for which the agreement date is on or after 31 March 2004 are no longer amortised but tested for impairment annually.

11.5.1 Treatment and disclosure

The required treatment in IAS 8 for changes in accounting policy is for the change to be applied retrospectively. This means that the effect of the change should be reported as an adjustment to the opening balance of retained earnings, with comparative information being restated unless impracticable.

When a change in accounting policy has a material effect on the current period or any prior period presented, or may have a material effect in subsequent periods, an entity should disclose the following:

- the reason for the change;
- the nature of the change;
- a description of transitional provisions, including those that might have an effect on future periods;
- the amount of the adjustment for the current period and for comparative figures for each financial statement line affected; and
- the amount of the adjustment relating to periods prior to those included in the comparative information;
- the fact that comparative information has been restated or that it is impracticable to do so.

Where entities choose to change an accounting policy, as opposed to a change caused by a new standard or interpretation, they should also disclose the reasons why applying the new accounting policy provides reliable and more relevant information.

The following example is amended from the example given in the appendix of IAS 8.

Example 11.A

During 20X2, Gamma changes its accounting policy with respect to the treatment of borrowing costs that are directly attributable to the acquisition of a hydroelectric power station, which is in course of construction (borrowing costs are specifically covered in Chapter 13). In previous periods Gamma had capitalised such costs (the allowed alternative treatment in IAS 23). Gamma has now decided to treat these costs as an expense, rather than capitalise them (the benchmark treatment).

Gamma capitalised borrowing costs incurred of \$2,600 during 20X1 and \$5,200 in periods prior to 20X1. All borrowing costs incurred in previous years were capitalised.

In 20X1, Gamma reported:

Profit before interest and income taxes	\$18,000
Interest expense	–
Profit before income taxes	\$18,000
Income taxes	(\$5,400)
Profit	<u>\$12,600</u>

20X1 opening retained earnings was \$20,000 and closing retained earnings totalled \$32,600 (\$20,000 plus profit of \$12,600). Gamma's tax rate was 30% for 20X2 and 20X1.

The extract from the income statement for 20X2 for Gamma, prepared under the benchmark treatment, will be as follows:

	20X2	20X1
	\$	\$
Profit before interest and income taxes	30,000	18,000
Interest expense	(3,000)	(2,600)
Profit before income taxes	27,000	15,400
Income taxes	(8,100)	(4,620)
Profit	<u>18,900</u>	<u>10,780</u>

The Statement of changes in equity for Gamma, prepared under the benchmark treatment, will be as follows:

	20X2	20X1
	\$	\$
Opening retained earnings as previously reported	32,600	20,000
Change in accounting policy with respect to the capitalisation of interest (net of income taxes of \$2,340 for 20X2 and \$1,560 for 20X1) (Note 1)	<u>(5,460)</u>	<u>(3,640)</u>
Opening retained earnings as restated	27,140	16,360
Profit	<u>18,900</u>	<u>10,780</u>
Closing retained earnings	<u>46,040</u>	<u>27,140</u>

Extract from notes to the financial statements

Note 1

During 20X2, Gamma changed its accounting policy with respect to the treatment of borrowing costs that are directly attributable to the acquisition of a hydroelectric power station which is in course of construction. In order to conform with the benchmark treatment in IAS 23, *Borrowing Costs*, the entity now expense rather than capitalise such costs. This change in accounting policy has been accounted for retrospectively. The comparative statements for 20X1 have been restated to conform to the changed policy.

The effect of the change is an increase in interest expense of \$3,000 (20X2) and \$2,600 (20X1).

Opening retained earnings for 20X1 have been reduced by \$3,640, (\$5,200 less tax \$1,560) which is the amount of the adjustment relating to periods prior to 20X1.

Opening retained earnings for 20X2 are adjusted for \$5,460 (\$3,640 plus (\$2,600 less tax of \$780)).

11.6 Changes in accounting estimates

The process of accounting requires estimation in many areas, for example allowances for doubtful debts, inventory obsolescence or the estimated useful lives of non-current assets. The estimation process involves judgements based on the latest information available, and by their nature accounting estimates can rarely be measured with precision.

Where circumstances change or new information becomes available the accounting estimate may need to be revised. The effect of the change of an accounting estimate should be reported as part of the profit or loss for the period in which the change occurs.

It can be difficult to distinguish between a change in accounting policy and a change in an accounting estimate. Where this is the case, the change is treated as a change in an accounting estimate.



Remember a change in accounting policy will usually need a prior period adjustment but a change in accounting estimate must be adjusted in the income statement for the period and is not allowed to be treated as a prior period adjustment.

11.7 Errors

The 1993 version of IAS 8 referred to fundamental errors. The revised version of IAS 8 refers to material omissions and misstatements and prior period material omissions and misstatements, there is no mention of fundamental errors.

An omission or misstatement is material if individually or collectively they influence economic decisions of users taken on the basis of the financial statements. Materiality depends on the size and nature of the omission or misstatement judged according to its

circumstances. An item could therefore be material because of its relative size or because of the nature of the error.

A prior period error is one where the material omissions and misstatements occurred in a previous period as a result of the failure to use or the misuse of reliable information that was available at the time and could reasonably be expected to have been obtained and taken into account when preparing the financial statements.

Such errors could be the result of:

- mathematical mistakes;
- mistakes in applying accounting policies;
- misinterpretation of facts;
- fraud;
- oversights.

Financial statements do not comply with IFRSs if they contain either material errors or immaterial errors made intentionally to achieve a particular presentation of the entities financial position, financial performance or cash flows.

11.7.1 Treatment and disclosure

The treatment for the correction of prior period errors is that the opening balance of retained earnings, in the first set of financial statements after the error is discovered, be adjusted by restating the comparative information, unless this is impracticable.

This means that the financial statements for the current period are presented as if the error had been corrected in the period in which the error was made. The financial statements for the current period must, however, disclose:

- the nature of the prior period error;
- the amount of the correction for the current period and for comparative figures presented for each line item affected;
- the amount of the correction relating to periods prior to those included in the comparative information;
- the fact that comparative information has been restated or that it is impracticable to do so.

The following example is amended from the example given in the appendix of IAS 8.

Example 11.B

During 20X2, Beta Co. discovered that certain products that had been sold during 20X1 were incorrectly included in inventory at 31 December 19X1 at \$6,500.

Beta's accounting records for 20X2 show sales of \$104,000, cost of goods sold of \$86,500 (including \$6,500 for error in opening inventory), and income taxes of \$5,250.

In 20X1, Beta reported:

Sales	73,500
Cost of goods sold	<u>(53,500)</u>
Profit before income taxes	20,000
Income taxes	<u>(6,000)</u>
Profit	<u>14,000</u>

20X1 opening retained earnings was \$20,000 and closing retained earnings totalled \$34,000 (\$20,000 plus profit for 20X1 of \$14,000). Beta's income tax rate was 30 per cent for 20X2 and 20X1.

The extract from the income statement for 20X2 for Beta, will be as follows:

	20X2	20X1
	\$	\$
		<i>(restated)</i>
Sales	104,000	73,500
Cost of goods sold	<u>(80,000)</u>	<u>(60,000)</u>
Profit before income taxes	24,000	13,500
Income taxes	<u>(7,200)</u>	<u>(4,050)</u>
Profit	<u>16,800</u>	<u>9,450</u>

Note: 20X1 closing stock is overstated and therefore 20X1 cost of goods sold is understated by \$6,500. Correction of this increases cost of goods sold from \$53,500 to \$60,000. Income taxes are calculated at 30% of \$13,500, which is the revised profit.

20X2 cost of goods sold is correctly recorded at \$80,000 (\$86,500 less the \$6,500 overstatement of opening stock charged to cost sales).

The statement of retained earnings for Beta (part of the Statement of changes in equity) will be as follows:

	20X2	20X1
	\$	\$
		<i>(restated)</i>
Opening retained earnings as previously reported	34,000	20,000
Correction of prior year error (net of taxes of \$1,950) (Note 1)	<u>(4,550)</u>	
Opening retained earnings as restated	29,450	20,000
Profit	16,800	9,450
Closing retained earnings	<u>46,250</u>	<u>29,450</u>

Extract from notes to the financial statements

Note 1

Certain products that had been sold in 20X1 were incorrectly included in inventory at 31 December 20X1 at \$6,500. The financial statements of 20X1 have been restated to correct this error. The effect of the restatement on those financial statements is summarised below. There is no effect in 20X2.

		Effect on 20X1
		\$
Income statement	(Increase) in cost of goods sold	(6,500)
	Decrease in income tax expense	1,950
	(Decrease) in profit	<u>(4,550)</u>
Balance sheet	(Decrease) in inventory	(6,500)
	Decrease in income tax payable	1,950
	(Decrease) in equity	<u>(4,550)</u>

11.8 Discontinuing operations

International Financial Reporting Standard 5 *Non-current Assets Held for Sale and Discontinued Operations* (IFRS 5) sets out requirements for the classification, measurement and presentation of non-current assets held for sale and the presentation and disclosure of discontinued operations. IFRS 5 replaces IAS 35 *Discontinuing Operations*. IFRS 5 applies to accounting periods commencing on or after 1 January 2005.

11.8.1 Objective

The objective of IFRS 5 is to specify the accounting for assets held for sale, and the presentation and disclosure of discontinued operations.

IFRS 5 sets principles for reporting information about discontinued operations, to enable users of financial statements to more easily evaluate an entity's future performance and cash flows.

Separate disclosure of results relating to discontinued operations will allow them to more accurately evaluate the likely performance of the operations that will be generating income in future periods.

11.8.2 Definition of a discontinued operation

IFRS 5 defines a discontinued operation as a component of an entity that has been disposed of, or is classified as held for sale and:

- (a) is part of a single plan to dispose of a separate major line of business or geographical area of operations or
- (b) that represents a separate major line of business or geographical area of operations or
- (c) is a subsidiary acquired exclusively with a view to resale.

A component of an entity is defined as operations and cash flows that can be clearly distinguished, operationally and for financial reporting purposes, from the rest of the entity.

IFRS 5 introduces the concept of a disposal group, being a group of assets and liabilities directly associated with those assets, to be disposed of, by sale or otherwise, together as a group in a single transaction.

A disposal group may be a group of *cash-generating units*, a single cash-generating unit, or part of a cash-generating unit. The group may include any assets and any liabilities of the entity, including current assets and current liabilities. If a non-current asset within the scope of the measurement requirements of this IFRS is part of a disposal group, the measurement requirements of this IFRS apply to the group as a whole, so that the group is measured at the lower of its carrying amount and fair value less costs to sell.

Classification of non-current assets (or disposal groups) as held for sale

Non-current asset (or disposal group) already held by the entity:

1. Classified as held for sale if its carrying amount will be recovered principally through a sale transaction rather than through continuing use. This occurs where:
 - a. The asset (or disposal group) is available for immediate sale in its present condition subject only to terms that are usual and customary for sales of such assets (or disposal groups) and its sale must be highly probable.
 - b. To be highly probable, the appropriate level of management must be committed to a plan to sell the asset (or disposal group), and an active programme to locate a buyer and complete the plan must have been initiated. The asset (or disposal group) must be actively marketed for sale at a price that is reasonable in relation to its current fair value and the sale should be expected to qualify for recognition as a completed sale within one year from the date of classification.

Non-current asset (or disposal group) acquired exclusively with a view to its subsequent disposal:

1. Classified as held for sale at the acquisition date only if the one-year requirement is met.

If either categories criteria are met after the balance sheet date, an entity shall not classify a non-current asset (or disposal group) as held for sale in those financial statements when issued. If the criteria are met after the balance sheet date but before the

authorisation of the financial statements for issue, the entity shall disclose the information in the notes.

Assets classified as non-current in accordance with IAS 1 Presentation of Financial Statements (as revised in 2003) can not be reclassified as current assets until they meet the IFRS 5 criteria to be classified as held for sale.

Assets of a class that an entity would normally regard as non-current that are acquired exclusively with a view to resale can not be classified as current unless they meet the IFRS 5 criteria to be classified as held for sale.

For example, if a retail entity, Markies, which provides food, clothing and homewear decides to withdraw from the food sector then the related costs of that withdrawal would be recorded within discontinued operations, as long as it was discontinued before the balance sheet date. The direct costs of abandoning the food division such as redundancy of staff and gain or loss on the sale of assets would be classified under discontinued operations. The costs of restructuring the remaining divisions, even if that restructuring is required as a result of the decision to close the food division, would however be classified as restructuring costs within continuing activities, as the costs relate to clothing and homewear and these are continuing trading activities.

A decision to withdraw from supplying dairy products would not constitute a discontinued operation as the entity is still operating in the food sector. It is not a withdrawal of a separate major line of business and so the related costs would be shown within continuing operations, probably as restructuring costs.

For the results of the discontinued operation to be separately disclosed, it follows that the related profits, losses, gains, assets and liabilities must be separately identifiable to be included in the financial statements.

11.8.3 Measurement of a non-current asset (or disposal group)

Non-current assets (or disposal group) classified as held for sale are valued at the lower of:

- The assets carrying amount as measured in accordance with applicable IFRSs.
- Fair value less costs to sell.

11.8.3.1 Recognition of impairment losses and reversals

When the non-current assets (or disposal group) are measured at fair value on initial recognition as held for sale, an impairment is recognised (in accordance with IAS 36) if the fair value less costs to sell are less than the assets carrying amount.

An entity can recognise a gain for any subsequent increase in fair value less costs to sell of an asset, but not in excess of the cumulative impairment loss that has been recognised either in accordance with this IFRS or previously in accordance with IAS 36 Impairment of Assets.

11.8.3.2 Depreciation

A non-current asset that is classified as held for sale or is part of a disposal group classified as held for sale *must not* be depreciated or amortised.

Interest and other expenses attributable to the liabilities of a disposal group classified as held for sale shall continue to be recognised.

11.8.4 Presentation and disclosure

An entity shall present and disclose information that enables users of the financial statements to evaluate the financial effects of discontinued operations and disposals of non-current assets (or disposal groups).

11.8.4.1 Presenting discontinued operations

- (a) An entity shall disclose on the face of the income statement:
- a single amount comprising the total of:
 - (i) the post-tax profit or loss of discontinued operations and
 - (ii) the post-tax gain or loss recognised on the measurement to fair value less costs to sell
 - (iii) the post-tax gain or loss on disposal of the assets or disposal group(s).
- (b) An entity shall disclose in the notes or on the face of the income statement:
- an analysis of the single amount in (a) above into:
 - (i) the revenue, expenses and pre-tax profit or loss of discontinued operations;
 - (ii) the related income tax expense (as required by IAS 12);
 - (iii) the gain or loss recognised on the measurement to fair value less costs to sell and the related income tax expense;
 - (iv) the gain or loss on the disposal of the assets or disposal group(s) and the related income tax expense.
 - If presented on the face of the income statement it must be presented in a section identified as relating to discontinued operations, and be kept separate from continuing operations.

An entity shall disclose on the cash flow statement or in the notes, net cash flows attributable to the operating, investing and financing activities of discontinued operations.

Comparative information for prior periods should be restated based on the classifications established in the current reporting period. For example, if the retail division is classified as a discontinued operation in 20X2 and its results are disclosed as such separately in the financial statements, then the comparative information for 20X1 should be restated (from continuing operations where it was included last year) and included as a direct comparison within discontinued operations.

Example 11.C

Let us consider the retail entity mentioned above. The results of Markies were as follows:

	20X2	20X1
	\$m	\$m
Revenue	140	140
Operating expenses	(120)	(92)
Impairment loss	(10)	(20)
	<u>10</u>	<u>28</u>
Interest expense	(25)	(15)
Profit (loss) before tax	<u>(15)</u>	<u>13</u>
Income tax expense	4	(6)
Profit (loss) after tax	<u>(11)</u>	<u>7</u>

Note the impairment losses both in 20X1 and 20X2 relate to the food division.

The decision was taken to withdraw from the food sector and a formal plan to abandon food related activities was formulated and implemented during the 20X2 financial year. The food division generated the following revenues and costs during 20X1 and 20X2.

	20X2	20X1
	\$m	\$m
Revenue	40	50
Operating expenses	(60)	(27)
Impairment loss	(10)	(20)
	<u>(30)</u>	<u>3</u>
Interest expense	(5)	(5)
Profit (loss) before tax	<u>(35)</u>	<u>(2)</u>
Income tax expense	10	1
Profit (loss) after tax	<u>(25)</u>	<u>(1)</u>

The 20X2 operating expenses for the food division includes a \$30m provision for employee terminations as a result of the closure.

When the final accounts are prepared the 20X2 revenues and costs of the food division are shown separately within discontinued operations.

It was noted above that IFRS 5 requires comparative information for prior periods be restated based on the classifications of this reporting period. This means that the revenues and costs generated by the food division in 20X1 must be removed from the continuing operations total in 20X1 and restated as a direct comparison for the discontinued operations. In effect we can now see what revenues and costs were generated by the food division in 20X2 and what that same division generated the previous year.

IFRS 5 Format illustrating the discontinued information shown in the notes:

	20X2	20X1
	\$m	\$m
Continuing operations		
Revenue	100	90
Operating expenses	(60)	(65)
	<u>40</u>	<u>25</u>
Finance costs	(20)	(10)
Profit before tax	20	15
Income tax expense	(6)	(7)
Profit for the period from continuing operations	<u>14</u>	<u>8</u>
Discontinued operations		
Loss for the period from discontinued operations*	(25)	(1)
Profit for the period	<u>11</u>	<u>7</u>

* The required analysis would be given in the notes

Notes:

Discontinued operations

	20X2	20X1
	\$m	\$m
Revenue	40	50
Operating expenses	(30)	(27)
Impairment loss	(10)	(20)
Provision for employee termination	(30)	-
	<u>(30)</u>	<u>3</u>
Interest expense	(5)	(5)
Loss before tax	<u>(35)</u>	<u>(2)</u>
Income tax expense	10	1
Loss after tax	<u>(25)</u>	<u>(1)</u>

From the income statement above we can now see clearly the figures generated by the food division in the last 2 years. The amounts generated by continuing operations are now separately disclosed and can be used to evaluate future income streams. (This is one of the aims of IFRS 5 – that relevant information about the components of profit be disclosed in order that users can evaluate future profits, which helps them make investment decisions based on this historic information.)

Note, the provision for employee redundancies of \$30m is likely to be reversed in the following period and offset against the actual expense incurred – remember this is the accruals concept being applied – you provide for an expense and you recognise it in the period when it was incurred – when the operation is discontinued a provision is made for items that are still outstanding at the balance sheet date. For example the actual cost of redundancies within the food division may amount to \$36m in 20X3 less the amount previously provided (in 20X2) of \$30m, results in an additional charge in 20X3 of \$6m, this will be disclosed separately under discontinued operations in 20X3.

11.8.4.2 Presentation of a non-current asset or disposal group classified as held for sale

Non-current assets classified as held for sale and the assets of a disposal group classified as held for sale are shown separately from other assets in the balance sheet, under current assets.

The liabilities of a disposal group classified as held for sale shall be presented separately from other liabilities in the balance sheet, under current liabilities. Assets and liabilities shall not be offset and presented as a single amount.

The major classes of assets and liabilities classified as held for sale must be separately disclosed either on the face of the balance sheet or in the notes.

Any cumulative income or expense recognised directly in equity relating to a non-current asset (or disposal group) classified as held for sale must be shown separately under equity.

Prior year balances for non-current assets are not adjusted to take account of the reclassification in the balance sheet for the latest period.

Example 11.D

At the end of 20X5, an entity decides to dispose of part of its assets (and directly associated liabilities). The disposal, which meets the criteria in IFRS 5 to be classified as held for sale, takes the form of two disposal groups, as follows:

	Carrying amount after classification as held for sale	
	Disposal group I: \$000	Disposal group II: \$000
Property, plant and equipment	4,900	1,700
Financial asset	1,400*	–
Liabilities	(2,400)	(900)
Net carrying amount of disposal group	<u>3,900</u>	<u>800</u>

* An amount of \$400,000 relating to these assets has been recognised directly in equity.

The presentation in the entity's balance sheet of the disposal groups classified as held for sale can be shown as follows:

Balance Sheet	20X5	20X4
ASSETS		
<i>Non-current assets</i>		
Tangible	X	X
Intangible	X	X
	<u>X</u>	<u>X</u>
<i>Current assets</i>		
Inventory	X	X
Receivables	X	X
Cash	X	X
	<u>X</u>	<u>X</u>
Non-current assets classified as held for sale	8,000	–
	<u>X</u>	<u>X</u>
Total assets	<u>X</u>	<u>X</u>
	20–5	20–4

EQUITY AND LIABILITIES		
Equity		
Equity shares	X	X
Reserves	X	X
Amounts recognised directly in equity relating to non-current assets held for sale	<u>400</u>	–
	X	X
Total equity	X	X
Non-current liabilities		
Loans	X	X
Current liabilities		
Payables	X	X
Liabilities directly associated with non-current assets classified as held for sale	<u>3,300</u>	–
	X	X
Total liabilities	<u>X</u>	<u>X</u>
Total equity and liabilities	<u>X</u>	<u>X</u>

The presentation requirements for assets (or disposal groups) classified as held for sale at the end of the reporting period do not apply retrospectively. The comparative balance sheets for any previous periods are therefore not re-presented.

11.8.4.3 Additional disclosures

An entity must disclose the following information in the notes in the period in which a non-current asset (or disposal group) has been either classified as held for sale or sold:

- a description of the non-current asset or disposal group;
- a description of the facts and circumstances of the sale;
- in respect of held for sale items the facts and circumstances leading to the expected disposal, and the expected timing of that disposal.

11.9 Segment reporting

The objective of IAS 14 *Segment Reporting* is to establish principles for reporting financial information by segment. Information about the different types of products and services an entity produces and the different geographical areas in which it operates will help users:

- better understand the entity's past performance;
- better assess the entity's risks and returns;
- make more informed judgements about the entity as a whole.

IAS 14 requires segment information from publicly quoted entities. Other entities are, however, encouraged to adopt its provisions.

11.9.1 Business and geographical segments

A *business segment* is a separately identifiable part of an entity that provides an individual product or service that is subject to different risks and returns from the other business segments.

Factors taken into account when identifying a business segment include:

- the nature of the products or services;
- the nature of the production process;
- the type of customer for the products or services;

- the methods used to distribute the products or services;
- the nature of the regulatory environment (banking, insurance, etc.).

A *geographical segment* is a separately identifiable part of an entity that provides products or services within a particular economic environment and that is subject to risks and rewards that are different from those operating in other economic environments.

Factors taken into account when identifying a geographical segment include:

- similarity of economic and political conditions;
- relationships between operations in different geographical areas;
- proximity of operations;
- exchange control regulations; and
- the underlying currency risks.

11.9.2 Segment results

The revenues, expenses, assets and liabilities reported for segments should be those amounts that are directly attributable to the segments and/or those amounts that can be allocated on a reasonable basis to the segment.

As would be expected, items such as interest, income taxes and head office expenses are excluded from the segment reporting. These items affect the entity as a whole and are decisions that are normally associated with the entity's global policies. They appear in the income statement in total.

11.9.3 Reporting formats

The entity must establish primary and secondary segment reporting formats. The formats should be selected based on how the business is affected by changes associated with either its products or its environment:

- Business dominated by differences in the products:
 - select business segments as the primary format for reporting,
 - select geographical segments as the secondary format for reporting.
- Business dominated by the country or environment in which it operates:
 - select geographical segments as the primary format for reporting,
 - select business segments as the secondary format for reporting.
- Business dominated by both products and environment:
 - select business segments as the primary format for reporting,
 - select geographical segments as the secondary format for reporting.

11.9.4 Reportable segments

A business or geographical segment is a reportable segment if the operation contributes at least 10 per cent of:

- total sales revenue, including sales to other segments; or
- total profits of all profit-making segments; or
- total losses of all loss-making segments; or
- total assets.

Internally reported segments that are substantially similar may be combined as a single reportable segment if:

- they have similar long-term financial performance; and
- they are similar in all the factors that define a segment (given above at Section 11.9.1).

An internal segment that falls below all of the 10 per cent thresholds listed above may still be shown as a reportable segment despite its size, should the management believe that it is necessary for users to fully understand the financial statements.

If it is not included as a separately identified reportable segment, it should be included as an unallocated reconciling item.

If the total external revenue attributable to reportable segments amounts to less than 75 per cent of the total revenue, additional segments should be identified as reportable segments, even if they do not meet the 10 per cent thresholds, until at least 75 per cent of the revenue is allocated to reportable segments.

11.9.5 Segment accounting policies

An entity should adopt the same accounting policies for preparing segment information as it adopts for preparing the financial statements of the entity as a whole.

Assets that are jointly used by two or more segments should be allocated to segments, provided that their related revenues and expenses are also allocated to those segments.

11.9.6 Disclosure

The entity should present a detailed analysis of selected income statement and balance sheet headings according to the primary format, plus less detailed information according to the secondary format.

The headings required for segmental disclosures are:

Income statement

1. External revenue
2. Revenue from other segments (the basis for inter-segment pricing should be disclosed)
3. Segment profit or loss, including:
 - segment depreciation
 - segment exceptional items (disclosure encouraged but not required).

Balance sheet

4. Total operating assets
5. Cost of acquisition of non-current assets during the period
6. Total operating liabilities.

An entity must present all of this information in its chosen primary format – business or geographical.

If the primary format is business, a geographical analysis of items 1, 4 and 5 must be provided as the secondary analysis.

If the primary format is geographical, an analysis by business segments of items 1, 4 and 5 must be provided as the secondary analysis.

Extracts from IAS 14 Appendix are given below as illustrations of the likely formats of segmental information

Schedule A – Information about business segments (Note 4) (all amounts million)												
	<i>Paper products</i>		<i>Office products</i>		<i>Publishing</i>		<i>Other operations</i>		<i>Eliminations</i>		<i>Consolidated</i>	
	20X2	20X1	20X2	20X1	20X2	20X1	20X2	20X1	20X2	20X1	20X2	20X1
Revenue												
External sales	55	50	20	17	19	16	7	7				
Inter-segment sales	15	10	10	14	2	4	2	2	29	30		
Total revenue	<u>70</u>	<u>60</u>	<u>30</u>	<u>31</u>	<u>21</u>	<u>20</u>	<u>9</u>	<u>9</u>	<u>29</u>	<u>30</u>	<u>101</u>	<u>90</u>
<i>Result</i>												
Segment result	<u>20</u>	<u>17</u>	<u>9</u>	<u>7</u>	<u>2</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>1</u>	30	24
Unallocated corporate expenses											<u>7</u>	<u>9</u>
Operating profit											23	(15)
Interest expense											(4)	(4)
Interest income											2	3
Share of net profit of associates	6	5					2	2			8	7
Income taxes											(7)	(4)
Net profit											<u>22</u>	<u>17</u>
<i>Other information</i>												
Segment assets	54	50	34	30	10	10	10	9			108	99
Investment in equity method associates	20	16					12	10			32	26
Unallocated corporate assets											<u>35</u>	<u>30</u>
Consolidated total assets											<u>175</u>	<u>155</u>
Segment liabilities	25	15	8	11	8	8	1	1			42	35
Unallocated corporate liabilities											<u>40</u>	<u>55</u>
Consolidated total liabilities											<u>82</u>	<u>90</u>
Capital expenditure	12	10	3	5	5		4	3				
Depreciation	9	7	9	7	5	3	3	4				
Non-cash expenses other than depreciation	<u>8</u>	<u>2</u>	<u>7</u>	<u>3</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>1</u>				

Sales revenue by geographical market

	20X2	20X1
United Kingdom	19	22
Other European Union countries	30	31
Canada and the United States	28	21
Mexico and South America	6	2
South-east Asia (principally Japan and Taiwan)	<u>18</u>	<u>14</u>
	<u>101</u>	<u>90</u>

	<i>Carrying amount of segment assets</i>		<i>Additions to property, plant, equipment and intangible assets</i>	
	20X2	20X1	20X2	20X1
United Kingdom	72	78	8	5
Other European Union countries	47	37	5	4
Canada and the United States	34	20	4	3
Indonesia	<u>22</u>	<u>20</u>	<u>7</u>	<u>6</u>
	<u>175</u>	<u>155</u>	<u>24</u>	<u>18</u>

Commentary

The above information shows the primary format chosen is business segments. We can see the various business segments across the top of the table – paper products, office products,

publishing etc. The revenues, including inter sales revenues, and segment results are provided. This meets the disclosure requirements for the income statement detailed above (items 1–3). The total revenue for 20X2 is 101m. This corresponds to the total revenue provided by the geographical split given below. Note that the geographical split is the secondary format and therefore only revenues need be disclosed.

Similarly with the balance sheet disclosures – the primary format shows items 4, 5 and 6 allocated to each product segment. The secondary format, the geographical segments, only requires a split of items 4 (total operating assets) and 5 (additions to non-current assets). See that additions to property etc totals 24 m in 20X2 according to the geographical split. This is allocated in detail above in the primary format by showing the additions that each product segment made (under capital expenditure) $12\text{ m} + 3\text{ m} + 5\text{ m} + 4\text{ m} = 24\text{ m}$.

11.10 Summary

Having completed this chapter, we can now explain the recognition criteria for revenue and can apply the correct accounting treatment for large or unusual items in arriving at profit for the period. We can also apply the appropriate treatment for changes in accounting policies, accounting estimates, and prior period errors.

We can define non-current assets held for sale and a discontinued operation and explain the disclosures required for non-current assets held for sale and discontinued operations. We can identify reportable segments and describe the disclosures required in respect of segment reporting.

Revision Questions

11

? Question 1

IAS 14 *Segment Reporting*:

- (i) Revenue
- (ii) Cost of sales
- (iii) Expenses
- (iv) Segment profit/loss
- (v) Segment profit after tax
- (vi) Total operating assets
- (vii) Total operating liabilities
- (viii) Capital employed.

Which of the following are required by IAS 14 *Segment Reporting* to be analysed by segment and disclosed in an entity's financial statements:

- (A) (i), (ii), (v) and (viii)
- (B) (i), (iv), (vi) and (vii)
- (C) (i), (ii), (iii), (v), (vi) and (vii)
- (D) (i), (iii), (iv), (vi), (vii) and (viii).

(2 marks)

? Question 2

Revenue from the sale of goods should be recognised when certain conditions are met.

- (i) the entity selling does not retain any continuing influence or control over the goods
- (ii) when the goods are dispatched to the buyer
- (iii) revenue can be measured reliably
- (iv) the supplier is paid for the goods
- (v) it is reasonably certain that the buyer will pay for the goods
- (vi) the buyer has paid for the goods.

Which of the above are included in IAS 18 *Revenue recognition's* conditions for recognition:

- (A) (i), (ii) and (v)
- (B) (ii), (iii) and (iv)
- (C) (i), (iii) and (v)
- (D) (i), (iv) and (vi).

(2 marks)



Question 3

In no more than 15 words define the IAS 8 meaning of an ‘error’.

(2 marks)



Question 4

While Presario was preparing its financial statements for the year to 30 June 20X2, they discovered that goods with a cost of \$70,000, which had been sold during 20X1, had been incorrectly included in inventory at 30 June 20X1.

The draft figures for 20X2 and the actual reported figures for 20X1 are given below:

	<i>20X2 (draft)</i>	<i>20X1</i>
	<i>\$000</i>	<i>\$000</i>
Sales	460	400
Cost of sales	<u>(250)</u>	<u>(220)</u>
Gross profit	210	180
Administrative expenses	(50)	(40)
Distribution costs	<u>(40)</u>	<u>(30)</u>
Profit before tax	120	110
Income tax (at 30%)	<u>(36)</u>	<u>(33)</u>
Profit	<u>84</u>	<u>77</u>

The opening retained earnings at 1 July 20X0 was \$120,000 and closing retained earnings at 30 June 20X1 totalled \$197,000.

The directors have decided that this amounts to a material misstatement in the reported financial statements and wish this to be corrected immediately.

Requirements

- Redraft the 20X2 income statement and restate the 20X1 figures where necessary to take account of this prior period error. **(6 marks)**
- Prepare the statement of retained earnings for inclusion in the published financial statements of Presario for the year ended 30 June 20X2. **(4 marks)**



Question 5

D is a diversified entity that has operated in four main areas for many years. Each of these activities has usually contributed approximately one-quarter of the entity’s annual operating profit. During the year ended 31 December 20X3, the entity disposed of its glass-making division.

The entity’s chief accountant has prepared the following summary of revenues and expenses:

	D – analysis of costs and revenues, year ended 31 December 20X3	
	<i>Glass-making</i>	<i>Other divisions</i>
	<i>\$000</i>	<i>\$000</i>
Sales revenue	150	820
Operating expenses	(98)	(470)
Losses on disposal of non-current assets	(205)	(61)

The entity also incurred interest charges of \$37,000 during the year, all of which relates to continuing activities. The income tax charge for the year has been estimated at \$24,000,

made up of a \$50,000 charge on the continuing activities and a \$26,000 refund for discontinued activities. A dividend of \$30,000 was paid during the year.

The entity made an issue of 100,000 \$1 shares at a premium of 80¢ per share during the year. Shareholders' funds at the beginning of the year were made up as follows:

	<i>\$000</i>
Share capital	250
Share premium account	150
Revaluation reserve	160
Retained earnings	<u>670</u>
	<u>1,230</u>

The balance on the revaluation reserve arose when the entity valued the land occupied by the properties used in its retail division. In view of recent developments, it has been decided that this reserve should be reduced to \$90,000 to reflect the reduced value of the properties.

Requirements

- (a) Explain how the analysis required by IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations* assists in assessing a business's future results and cash flows. **(6 marks)**
 - (b) Prepare an outline income statement (showing the detail in notes to the income statement) for the year ended 31 December 20X3 for D in a form suitable for publication, complying with the requirements of IFRS 5. **(8 marks)**
 - (c) Prepare a statement of changes in equity for D in accordance with the requirements of IAS 1. **(5 marks)**
- (Total marks = 19)**

? Question 6

Topaz, makes up its accounts regularly to 31 December each year. The entity has operated for some years with four divisions, A, B, C and D, but on 30 July 20X2 Division B was sold for \$8 million, realising a profit of \$2.5 million.

The trial balance of the entity at 31 December 20X2 included the following balances.

	<i>Division B</i>		<i>Divisions A, C and D combined</i>	
	<i>Dr</i>	<i>Cr</i>	<i>Dr</i>	<i>Cr</i>
	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>
Sales revenue		13		68
Costs of sales	8		41	
Distribution costs (including a bad debt of \$1.9 m – Division D)	1		6	
Administrative expenses	2		4	
Profit on sale of Division B		2.5		
Cost of fundamental reorganisation			1.8	
Interest on \$10 m 10% loan notes issued 20X2			1	
Income tax			4.8	
Interim dividend paid			6	
Revaluation reserve				10
Retained earnings 31 December 20X1				50

The balance on the revaluation reserve relates to the entity's property and arose as follows.

	<i>\$m</i>
Balance at 1 January 20X2	6
Revaluation during 20X2	<u>4</u>
Balance at 31 December 20X2 per trial balance	<u>10</u>

The share capital of \$100m has remained unchanged throughout the year.

The whole of the interest paid relates to continuing operations. The income tax should be divided as \$3.6m for continuing operations and \$1.2m for discontinued operations.

The costs of fundamental reorganisation of \$1.8m relate to the restructuring of Divisions A, C & D following the sale of division B.

Requirements

- (a) (i) Prepare the income statement of Topaz for the year ended 31 December 20X2, complying as far as possible with the provisions of IAS 1 and IFRS 5, (IFRS 5 requirements should be shown on the face of the income statement).
 (ii) Prepare the statement of changes in equity for the year as required by IAS 1. **(16 marks)**
- (b) Explain why the changes to the income statement introduced by IFRS 5 improve the quality of information available to users of the financial statements. **(4 marks)**
(Total marks = 20)

Solutions to Revision Questions

11

✓ Solution 1

The correct answer is (B), see Section 11.9.6.

✓ Solution 2

The correct answer is (C), see Section 11.2.2.

✓ Solution 3

Errors are defined by IAS 8 as ‘material omissions or misstatements in the financial statements’, see Section 11.4.

✓ Solution 4

(a) Extract from the income statement for Presario for the year ended 30 June 20X2.

	20X2	20X1 <i>(restated)</i>
	<i>\$000</i>	<i>\$000</i>
Sales	460	400
Cost of sales	<u>(180)</u>	<u>(290)</u>
Gross profit	280	110
Administrative expenses	(50)	(40)
Distribution costs	<u>(40)</u>	<u>(30)</u>
Profit before tax	190	40
Income tax (at 30%)	<u>(57)</u>	<u>(12)</u>
Profit	<u>133</u>	<u>28</u>

Workings

20X1 closing inventory was overstated by \$70,000. This resulted in cost of sales being overstated and 20X1 profit and retained earnings being understated. Following the correction, 20X1 cost of sales is restated at \$290,000 (\$220,000 + \$70,000). Profit before tax is now restated at \$40,000 and income tax (at 30%) recalculated at \$12,000.

The 20X2 cost of sales is correctly recorded at \$180,000 (\$250,000 less \$70,000 overstatement of opening inventory charged to cost of sales in the draft accounts).

- (b) The statement of retained earnings for Presario for the year ended 30 June 20X2

	20X2	20X1 <i>(restated)</i>
	<i>\$000</i>	<i>\$000</i>
Opening retained earnings as previously reported	197	120
Correction of error (net of taxes of \$70K × 30% = \$21K)	(49)	—
Opening retained earnings as restated	148	120
Profit	133	28
Closing retained earnings	<u>281</u>	<u>148</u>

Note X

Products with a cost of \$70,000, which were sold during 20X1, were incorrectly included in inventory as at 30 June 20X1. The financial statements of 20X1 have been restated to correct this error.

**Solution 5**

- (a) The information provided in financial statements, while historic, is often used by readers of accounts to evaluate future performance. Any additional information about what makes up profits and cash flows can help in the assessment of what is likely to be generated in future periods.

IFRS 5 requires that the financial information be analysed between results from continuing operations and those from discontinued operations. Discontinued operations can be an entire part of the business operations being sold or terminated. It follows then that a discontinued operation will not generate results in future periods and so should not be included in the users' assessment of future performance. The results of continuing operations are likely to recur in future periods and users can then focus on these results when evaluating what the entity is likely to generate in the future.

The analysis of continuing operations and discontinued operations is required for financial performance, assets and liabilities and cash flows.

- (b) D – income statement for the year ended 31 December 20X3

<i>Continuing operations</i>	<i>\$000</i>
Sales revenue	820
Operating expenses	(470)
Operating profit	350
Loss on disposal of fixed assets	(61)
Profit before interest	289
Finance costs	(37)
Profit before tax	252
Income tax expense	(50)
Profit for the period	<u>202</u>
from continuing operations	
Loss for the period from discontinued operations (Note 1)	(127)
Profit for the period	<u>75</u>

Note 1

<i>Discontinued operations</i>	<i>\$000</i>
Sales revenue	150
Operating expenses	<u>(98)</u>
Operating profit	52
Loss on disposal of fixed assets	<u>(205)</u>
Profit before interest	<u>(153)</u>
Finance costs	—
Profit before tax	<u>(153)</u>
Income tax expense	<u>26</u>
Loss for the period from discontinued operations	<u><u>(127)</u></u>

(c) Statement of changes in equity, year ended 31 December 20X3

	<i>Share capital</i>	<i>Share premium</i>	<i>Revaluation reserve</i>	<i>Retained earnings</i>	<i>Total</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Balance at 31 December 20X2	250	150	160	670	1,230
Net loss not recognised in the income statement: reduction in value of property			(i) (70)		(70)
Profit for the period				75	75
Dividends paid				(30)	(30)
Issue of share capital	(ii) <u>100</u>	(ii) <u>80</u>			<u>180</u>
Balance at 31 December 20X3	<u><u>350</u></u>	<u><u>230</u></u>	<u><u>90</u></u>	<u><u>715</u></u>	<u><u>1,385</u></u>

Workings

- (i) revaluation reserve to be reduced from \$160,000 to \$90,000.
(ii) share issue, 100,000 shares @ 80¢ premium; par value 100,000 × \$1 included in share capital and the (100,000 × 80¢) \$80,000 premium included in share premium.



Solution 6

(a) (i) Topaz – income statement for the year ended 31 December 20X2

	<i>Continuing operations</i>
	<i>\$m</i>
Sales revenue	68.0
Cost of sales	<u>(41.0)</u>
Gross profit	27.0
Distribution costs (Note 1)	<u>(6.0)</u>
Administrative expenses	<u>(4.0)</u>
Profit from operations	17.0
Profit on sale of discontinued operations (Note 2)	
Costs of fundamental reorganisation (Note 3)	<u>(1.8)</u>
Profit before interest	15.2
Finance cost	<u>(1.0)</u>
Profit before tax	14.2
Income tax expense	<u>(3.6)</u>
Profit for the period from continuing operations	10.6
Profit for the period from discontinued operations (Note 1)	<u>3.3</u>
Profit for the period	<u><u>13.9</u></u>

Note

1.

<i>Discontinued operations</i>	<i>\$m</i>
Sales revenue	13.0
Cost of sales	<u>(8.0)</u>
Gross profit	5.0
Distribution costs (Note 1)	(1.0)
Administrative expenses	<u>(2.0)</u>
Profit from operations	2.0
Profit on sale of discontinued operation (Note 2)	<u>2.5</u>
Profit before tax	4.5
Income tax expense	<u>(1.2)</u>
Profit after tax	<u>3.3</u>

2. *Distribution costs.* Distribution costs include a bad debt of \$1.9 million which arose on the continuing operations.
3. *Discontinued operations.* Division B was sold on 30 July 20X2 for \$8 million, realising a profit on sale of \$2.5 million. The results of Division B for the period to 31 December 20X2 are classified as discontinued operations.
4. *Fundamental reorganisation.* Following the sale of Division B in July 20X2 the entity undertook the restructuring of the remaining divisions at a cost of \$1.8 million. (Note, this amount is required to be disclosed separately on the face of the income statement because it is material. The restructuring is as a result of the discontinued operation but the costs are incurred reorganising the remaining divisions and so the amount is included in continuing operations.)

(ii) Topaz – statement of changes in equity, year ended 31 December 20X2

	<i>Share capital</i>	<i>Revaluation reserve</i>	<i>Retained earnings</i>	<i>Total</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Balance at 31 December 20X1	100	6	50	156
Net gain not recognised in income statement: revaluation of property		4		4
Net profit for the period			13.9	13.9
Dividends paid			<u>(6)</u>	<u>(6)</u>
Balance at 31 December 20X2	<u>100</u>	<u>10</u>	<u>57.9</u>	<u>167.9</u>

- (b) The information provided in financial statements, while historic, is often used by readers of accounts to evaluate future performance. Any additional information about what makes up profits can help in the assessment of what is likely to be generated in future periods.

IFRS 5 requires that revenue, expenses and pre-tax profit be analysed between results from continuing operations and those from discontinued operations. Discontinued operations can be an entire part of the business operations being sold or terminated. It follows then that a discontinued operation will not generate results in future periods and so should not be included in the users' assessment of future performance. The results of continuing operations are likely to recur in future periods and users can then focus on these results when evaluating what the entity is likely to generate in the future.

IFRS 5 also requires that any gain or loss on the disposal of the discontinued operation be disclosed in the financial statements. This enables users to identify one-off profits or losses outwith the trading activities.

The additional information required by IFRS 5 is relevant and useful to users when making their investment decisions and therefore improves the quality of the information provided.

Cash Flow Statements

12

LEARNING OUTCOME

After completing this chapter you should be able to:

- ▶ prepare a cash flow statement in a form suitable for publication.

The syllabus topic covered in this chapter is as follows:

- Preparation of cash flow statements (IAS 7).

12.1 Introduction



The cash flow statement is an important primary statement. The preparation of cash flow statements is not difficult, provided that you keep a clear head and adopt a systematic approach to the presentation of the statement itself and also the preparation of workings. 'T'-accounts are often the most efficient means of drawing conclusions from the information provided in examination questions. It is not sufficient to be able to prepare a cash flow statement; it is also necessary to be able to interpret it. Essentially, this involves thinking about the extent to which the business in question actually needs cash.

The fundamental purpose of being in business is to generate profit. Ultimately, it is profit that increases the owners' wealth. Profitability is, however, a long-term objective. In the short term, the business' viability is determined by its ability to generate cash. Even profitable entities will collapse if they do not have access to sufficient cash resources when it becomes necessary to settle a bill. Very few businesses could survive a prolonged outflow of cash.

The profit figure for the year is unlikely to bear any resemblance to the increase or decrease in the entity's bank balance over that period. Several of the entries in the income statement, such as depreciation, do not involve receipts or payments of cash. There are also many types of receipt or payment, such as the proceeds of a share issue or a loan repayment, which have no immediate impact on profit. This means that it would be possible for an entity to be trading at a profit and still run into liquidity problems.

The bank balance can, of course, be obtained from the balance sheet. Comparing balance sheets at the beginning and end of the year will even show whether cash has increased

or decreased. It is, however, difficult to identify the major causes of changes in the balance from doing so. Shareholders and other readers require a more structured presentation of the cash flows.

The cash flow statement, therefore, is intended to answer questions such as:

- Why has the bank overdraft increased, despite the entity having had a profitable year?
- Is the entity capable of generating funds, as opposed to profit, from its trading activities?
- What was done with the loan that was taken out during the year?

12.2 Objective of IAS 7 Cash flow statements

The objective of IAS 7 *Cash flow Statements* is to ensure that entities provide information about the historical changes in cash and cash equivalents by means of a cash flow statement.

Information about the cash flows of an entity is useful in providing users of financial statements with a basis to assess the ability of the entity to generate and utilise cash and cash equivalents.

IAS 7 defines cash and cash equivalents as follows:

- cash comprises cash on hand and demand deposits.
- cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

12.3 Cash flow statement format

The cash flow statement should report cash flows during the period classified by operating, investing and financing activities. The detailed format used by an entity should be the one that is most appropriate to its business. IAS 7 contains a standard format that should always be used in answering examination questions. The format is as follows (note, headings that relate to items excluded from the syllabus have been left out):

Indirect Method Cash Flow Statement

	\$	\$
Cash flows from operating activities		
Profit before taxation	X	
Adjustments for:		
Depreciation	X	
Investment income	X	
Interest expense	<u>X</u>	
	X	
Increase/Decrease in trade and other receivables	X	
Increase/Decrease in inventories	X	
Increase/Decrease in trade payables	<u>X</u>	
Cash generated from operations	<u>X</u>	
Interest paid	X	
Income taxes paid	<u>X</u>	
Net cash from operating activities		X
Cash flows from investing activities		
Purchase of property, plant and equipment	X	
Proceeds from sale of equipment	X	
Interest received	X	
Dividends received	<u>X</u>	

Net cash used in investing activities		X
Cash flows from financing activities		
Proceeds from issue of share capital	X	
Proceeds from long-term borrowings	X	
Payment of finance lease liabilities	X	
Dividends paid*	<u>X</u>	
Net cash used in financing activities		<u>X</u>
Net increase in cash and cash equivalents		<u>X</u>
Cash and cash equivalents at beginning of period		<u>X</u>
Cash and cash equivalents at end of period		<u><u>X</u></u>

* This could also be shown as an operating cash flow.

Each of the main headings shown above is discussed in detail below.

12.3.1 Cash flows from operating activities

Cash flows from operating activities are normally those arising from transactions relating to trading activities. It is intended to give an indication of the cash generated from operations.

Cash flows from operating activities can be calculated in two ways, using the direct method or the indirect method.

The direct method

The direct method shows operating cash receipts and payments, for example, cash paid to suppliers and employees and cash received from customers. This is useful to users as it shows the actual sources and uses of cash. However, many entities will not generate this information as a matter of course and so it may prove expensive to produce.

The indirect method

The indirect method instead starts with profit before taxation, adding back items shown elsewhere on the cash flow statement (e.g. finance cost) and adjusting for non-cash items included in arriving at the operating profit figure. Non-cash items would include the following:

- *Depreciation*: this is a book adjustment to reflect the wearing out of an asset; the cash impact of non-current assets is the buying of the asset.
- *Profits/losses on disposal of non-current assets*: Profit is not cash – the cash impact of the disposal is the disposal proceeds.
- *Changes in inventories*: because operating profit is calculated after charging cost of sales, which has been adjusted for opening and closing inventory; we need the figure for total cash spent on materials in the year, not the cost of the goods used in the year.
- *Changes in receivables*: the figure included in the income statement is the sales revenue – we need the cash received from customers and so we must take account of opening and closing receivables for the year.
- *Changes in payables*: for the same reason as above – we need to get to the figure for actual cash paid to suppliers.

Entities are required to disclose the calculation using the indirect method as it provides the reconciliation of operating profit to cash flows from operating activities, which is an integral part of the cash flow statement (it is therefore more likely to be the indirect method that is requested in examinations, but the direct method will occasionally be examined).

For illustration purposes we now look at the calculations using both of these methods in arriving at cash flow from operations.

Example 12.A

The following financial information relates to VWeir for the year ended 30 September 20X1.

Income statement for the year ended 30 September 20X1

	\$000
Revenue	222
Operating expenses	<u>(156)</u>
Operating profit	66
Finance costs	<u>(9)</u>
Profit before tax	57
Income tax expense	<u>(21)</u>
Profit	<u>36</u>

The following operating expenses were incurred in the year:

	\$000
Wages	(36)
Auditor's remuneration	(6)
Depreciation	(42)
Cost of materials used	(111)
Gain on sale of non-current assets	30
Rental income	<u>9</u>
	<u>(156)</u>

The following information is also available:

	30.9.X1	30.9.X0
	\$000	\$000
Inventories	21	12
Trade receivables	24	21
Trade payables	(15)	(9)

Solution

(i) Direct method

	<i>Workings</i>	\$000
Receipts from customers	1	219
Rental income		9
Payments to suppliers	2	(114)
Wages		(36)
Auditor's remuneration		<u>(6)</u>
Net cash inflow from operations		<u>72</u>

Workings

1. Receipts from customers

	\$000
Sales revenue for the year	222
Plus opening receivables (would have paid in the year)	21
Less closing receivables (cash is outstanding at the year end)	<u>(24)</u>
Cash received from customers in the year	<u>219</u>

2. *Payments to suppliers*

	\$000
Cost of materials used	111
Plus closing inventories	21
Less opening inventories	<u>(12)</u>
Materials purchased in the year	120
Plus opening payables	9
Less closing payables	<u>(15)</u>
Payments made to suppliers in the year	<u>114</u>

(ii) Indirect method

	Note	\$000
Profit before tax		57
Add back finance cost		9
Depreciation	1	42
Gain on disposal of non-current assets	2	(30)
Increase in receivables	3	(3)
Increase in inventories	4	(9)
Increase in payables	5	6
Net cash inflow from operations		<u>72</u>

Notes

1. Depreciation has been deducted in arriving at operating profit. However, it is not a cash item and so must be added back in calculating cash inflow from operating activities.
2. Similarly the gain on disposal has been included in operating profit but does not represent the cash flow associated with the disposal and so must be removed. (The cash flow for the disposal is the disposal proceeds total which will be included in 'cash flows from investing activities' further down the cash flow statement.)
3. An increase in the balance of year-end receivables means that more cash is outstanding; less has been received than is represented in revenue. This is a net cash outflow and is therefore deducted.
4. Increase in inventories is a utilisation of cash resources and so is also deducted.
5. Increase in payables means that cash has been held back rather than paid to suppliers. This is a cash inflow and is therefore added.

Remember that the change in receivables is included to show the cash impact of generating sales revenues. Similarly, cost of materials used in the income statement is adjusted for opening and closing inventories and payables to get to the net cash outflow relating to the goods actually purchased and paid for in the year. See workings 1 and 2 in the direct method above to refresh your memory of this reasoning.

12.3.2 Cash flows from investing activities

Cash payments to purchase property, plant and equipment and receipts from the sale of these items, along with cash payments to acquire equity of other entities, will be included under this heading.

12.3.3 Cash flows from financing activities

Proceeds of issuance of shares or loan notes, or cash paid for their redemption, appear here, along with dividends paid. (Dividends paid may also be shown as operating cash flows.)

12.3.4 Increase (or decrease) in cash and cash equivalents during period

This is a net movement from all the cash flows in the period. The opening and closing balances of cash and cash equivalents complete the statement.

12.4 A worked example

The following example is intended to demonstrate some of the techniques that might be used in preparing a cash flow statement. The intention is that you work through it line by line and think about the method. Do not expect every cash flow question to follow exactly the same pattern – you might have to adapt your approach in the exam.

12.4.1 Worked example

Requirements

Prepare Charlie's cash flow statement for the year ended 31 March 20X1 from the following:

Charlie – income statement for the year ended 31 March 20X1

	<i>\$000</i>
Sales revenue	1,700
Cost of sales	<u>(900)</u>
Gross profit	800
Distribution costs	(50)
Administrative expenses	<u>(120)</u>
Operating profit	630
Interest received	80
Interest paid	<u>(65)</u>
Profit before tax	645
Income tax expense	<u>(28)</u>
Profit for the financial year	<u>617</u>

Charlie – balance sheets as at 31 March

	20X1		20X0	
	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>
Non-current assets				
Tangible assets		1,580		1,000
Current assets				
Inventory		250		130
Receivables		450		360
Prepaid distribution costs		4		2
Cash at bank and in hand		<u>220</u>		<u>144</u>
		<u>2,504</u>		<u>1,636</u>
Capital and reserves				
Issued share capital		120		100
Share premium account		88		49
Revaluation reserve		203		130
Accumulated profits		<u>877</u>		<u>315</u>
		1,288		594
Non-current liabilities				
Loans	800		700	
Deferred tax	<u>10</u>		<u>7</u>	
		810		707
Current liabilities				
Trade payables	374		310	
Accrued	6		3	
administrative expenses				
Income tax	26		22	
		<u>406</u>		<u>335</u>
		<u>2,504</u>		<u>1,636</u>

Additional information

- (a) The entity sold some tangible non-current assets, which had a net book value of \$200 million. The cost of sales figure includes a loss of \$10 million on this disposal.
- (b) Cost of sales is arrived at after charging depreciation on the tangible non-current assets of \$42 million.
- (c) Dividends paid during the year were \$55,000.



A word about balancing figures. The trick to answering this type of question is to make the greatest possible use of the information that has been provided in order to determine the figures that have not been provided directly. For example, the question does not tell us how much has been paid for new tangible non-current assets. The secret is to use working schedules or open a ‘T’-account and to insert all of the relevant information related to the book value of these assets. We can infer the cost of new assets purchased during the year by calculating a balancing figure in this account.

For example we could use a working schedule as follows:

<i>Non-current assets</i>	<i>\$m</i>
Balance at 1 April 20X0	1,000
Add revaluation	73
Less disposals	(200)
Less depreciation	<u>(42)</u>
	831
Balance at 31 March 20X1	<u>1,580</u>
Purchases	749

Or we could open a ‘T’ account as follows:

Non-current assets					
		<i>\$m</i>			<i>\$m</i>
1 Apr. X0	Balance b/d	1,000		Disposals	200
	Revaluation	73		Depreciation	42
Bal. figure	Additions	<u>749</u>	31 Mar. X1	Balance c/d	<u>1,580</u>
		<u>1,822</u>			<u>1,822</u>
1 Apr. X1	Balance b/d	1,580			

The question does not actually tell us that the entity spent \$749m on new non-current assets, but, we can derive this figure simply by using a consistent method of workings/account to draw together the various pieces of information that we do have.



In the exam there is no guarantee that the information in respect of non-current assets will follow this particular pattern. You might, for example, find yourself drawing up a disposal account in order to derive the proceeds of the sale. Try the working schedule method and the ‘T’ account method, decide which one you prefer and then always use that method.

12.4.2 Cash flow from operations

For the sake of illustration, we will calculate this figure using both the direct and indirect methods. There is, however, no need to provide the information in both formats when the reconciliation using the indirect method is stated.

12.4.2.1 Direct method

The question does not state the cash received from customers. We can derive this very easily though by preparing our workings. First we will consider drawing up a 'T' account:

Receivables					
		<i>\$m</i>			<i>\$m</i>
1 Apr. X0	Balance b/d	360	<i>Bal. figure</i>	Cash received	1,610
	Sales	1,700	31 Mar. X1	Balance c/d	450
		<u>2,060</u>			<u>2,060</u>
1 Apr. X1	Balance b/d	450			

We would include all information given in the question in this account, including any details of bad debts written off.

It would not matter if the entity made some sales for cash. Provided that we include the cash sales in the debit to receivables, the balancing figure in respect of cash received will include all receipts, whether from cash sales or credit customers.

Payments to suppliers are slightly more complicated. Cost of sales has two non-cash stages: the goods are purchased on credit and they also spend some time sitting in inventory. This means that we have to determine the figure for purchases and then derive the figure for cash paid to suppliers:

Cost of sales					
		<i>\$m</i>			<i>\$m</i>
1 Apr. X0	Opening inventory	130	31 Mar. X1	Income statement (see note)	848
<i>Bal. figure</i>	Purchases	968	31 Mar. X1	Balance c/d	250
		<u>1,098</u>			<u>1,098</u>

Payables					
		<i>\$m</i>			<i>\$m</i>
<i>Bal. figure</i>	Cash paid	904	1 Apr. X0	Balance b/d	310
31 Mar. X1	Balance c/d	374		Purchases	968
		<u>1,278</u>			<u>1,278</u>

Distribution costs					
		<i>\$m</i>			<i>\$m</i>
1 Apr. X0	Prepayments b/d	2	31 Mar. X1	Income statement	50
<i>Bal. figure</i>	Cash paid	52	31 Mar. X1	Prepayments c/d	4
		<u>54</u>			<u>54</u>

Administrative expenses					
		<i>\$m</i>			<i>\$m</i>
<i>Bal. figure</i>	Cash paid	117	1 Apr. X0	Accruals b/d	3
31 Mar. X1	Accruals c/d	6	31 Mar. X1	Income statement	120
		<u>123</u>			<u>123</u>

Note: The figure inserted in the cost of sales account excludes the non-cash items of loss on disposal and depreciation (i.e. $900 - 10 - 42 = 848$).

Now we have sufficient information to determine the cash inflow from operating activities:

Charlie: cash inflow from operating activities (direct method)

	<i>\$m</i>
Cash received from customers	1,610
Cash paid to suppliers	(904)
Other operating expenses (52 + 117)	<u>(169)</u>
Cash generated from operations	537
Interest paid (see Note 1)	(65)
Income taxes paid (see Note 2)	<u>(21)</u>
Net cash from operating activities	<u>451</u>

Note 1

Interest had been removed in arriving at cash generated from operations. To arrive at ‘net cash from operating activities’, which is the heading required for the cash flow statement, we must now deduct interest paid, which is likely to have been incurred as a result of funding general trading activity and so remains within this first heading.

Note that interest received is likely to have been earned as a result of a deliberate investing activity and so is reclassified within ‘cash flows from investing activities’.

Note 2

The calculation for tax paid must adjust the income statement charge for opening and closing balances on the tax accounts held in the balance sheet.

	<i>\$m</i>
Income tax expense as per income statement	28
Opening creditor (paid during the year)	22
Closing creditor (outstanding at the year end)	<u>(26)</u>
	24
Increase in deferred tax provision (a non-cash item that has been included in the income tax expense in the income statement)	<u>(3)</u>
Tax paid in the year	<u>(21)</u>

Alternatively you could set up a ‘T’-account to arrive at the balance paid in the year, as shown below:

Taxation					
		<i>\$m</i>			<i>\$m</i>
<i>Bal. fig.</i>	Cash paid	21	1 Apr. X0	Balance b/d	22
31 Mar. X1	Balance c/d	26	1 Apr. X0	Balance b/d	7
31 Mar. X1	Balance c/d	<u>10</u>	31 Mar. X1	Income statement	<u>28</u>
		<u>57</u>			<u>57</u>

Now we will use working schedules to prepare the same figures:

<i>Receivables</i>	
Balance 1 April 20X0	360
Add sales	<u>1,700</u>
	2,060
Less balance at 31 March 20X1	<u>450</u>
Cash received	<u>1,610</u>

<i>Cost of sales</i>		
Opening inventory 1 April 20X0		130
Closing inventory 31 March 20X1		<u>250</u>
Increase in inventory		120
Charged to Income statement		<u>848</u>
Purchases		<u>968</u>
<i>Payables</i>		
Balance 1 April 20X0		310
Add purchases		<u>968</u>
		1,278
Less balance at 31 March 20X1		<u>374</u>
Cash paid		<u>904</u>
<i>Distribution costs</i>		
Balance 1 April 20X0 – prepayment		2
Balance at 31 March 20X1 – prepayment		<u>4</u>
Increase in prepayments		2
Charged to Income statement		50
Cash paid		<u>52</u>
<i>Administrative expenses</i>		
Balance 1 April 20X0 – accruals		3
Balance at 31 March 20X1 – accruals		<u>6</u>
Increase in accruals		(3)
Income statement		<u>120</u>
Cash paid		<u>117</u>

12.4.2.2 Indirect method

The indirect method is required to be disclosed as it provides the reconciliation of operating profit (from the income statement) to the net cash flow from operating activities that appears in the cash flow statement. This calculation should, of course, give the same result as the direct method.

The indirect method reconciliation starts with ‘profit before tax’.

Charlie: cash inflow from operating activities (indirect method)

	Note	\$000
<i>Profit before taxation</i>		645
Depreciation	1	42
Loss on disposal of non-current assets	2	10
Interest received	3	(80)
Interest paid	3	<u>65</u>
<i>Operating profit before working capital changes</i>		682
Increase in inventories	4	(120)
Increase in receivables	4	(90)
Increase in payables	4	64
Increase in prepaid expenses	5	(2)
Increase in accrued expenses	5	<u>3</u>
<i>Cash generated from operations</i>		537
Interest paid	6	(65)
Income taxes paid	7	<u>(21)</u>
Net cash inflow from operating activities		<u>451</u>
(agrees to the total calculated using the direct method)		

Notes

1. Depreciation has been deducted in arriving at operating profit. However, it is not a cash item and so must be added back in calculating cash inflow from operating activities.

2. Similarly the gain on disposal has been included in operating profit but does not represent the cash flow associated with the disposal and so must be removed. (The cash flow for the disposal is the disposal proceeds total which will be included in 'cash flows from investing activities' further down the cash flow statement.)
3. Interest received and paid have been included in arriving at profit before tax in the income statement. They are removed to arrive at cash generated from operating activities.
4. The changes in working capital elements are discussed in detail in Section 12.3.1.
5. The adjustments made for prepayments and accruals are made for similar reasons to the changes in working capital – some expenses included in the income statement are those that relate to the year but are not necessarily paid in the year. Adjusting for prepayments and accruals will ensure that the actual cash flows associated with the expenses are included.



The simplest way to proceed through any question involving the preparation of an accounting statement is to have a sheet of paper for the statement itself and another for the workings. This makes it easier to work through the statement in a methodical manner, with plenty of space set aside for the workings.

12.4.3 Cash flows from investing activities

12.4.3.1 Purchase of tangible assets

This figure will be calculated as a balancing figure (discussed in Section 12.4.1). We will use all of the information we are given about tangible assets and conclude that the difference is the additions in the year.

Tangible non-current assets					
		<i>\$m</i>			
1 Apr. X0	Balance b/d	1,000		Disposals	200
	Revaluation	73		Depreciation	42
<i>Bal. fig.</i>	Additions	<u>749</u>	31 Mar. X1	Balance c/d	<u>1,580</u>
		<u>1,822</u>			<u>1,822</u>
1 Apr. X1	Balance b/d	1,580			

The opening balance of \$1,000 m and the closing balance (balance carried down at 31 March 20X1) are taken from the balance sheet information.

The net book value of disposals and the depreciation charge for the year are given in the additional information.

There is a movement on the revaluation reserve of \$73m, this is also included as we attempt to reconcile the opening and closing balances for the net book value of tangible assets with the balancing figure being taken as additions in the year.

12.4.3.2 Proceeds of sale of plant

We are told in the additional information that cost of sales includes a loss of \$10m in respect of a disposal of tangible non-current assets (we removed this figure in arriving at

cash flow from operating activities in Section 12.4.2). We are also told that the net book value of the disposed assets totalled \$200m.

We know that the gain or loss on disposal is calculated by comparing the proceeds with the net book value and so can calculate the proceeds as:

	<i>\$m</i>
Net book value	200
Loss on disposal	<u>(10)</u>
Proceeds from disposal	<u>190</u>

12.4.3.3 Interest received

As noted above, this income is likely to have been earned as a result of a specific investing activity and so is included within this category.

12.4.4 Cash flows from financing activities

12.4.4.1 Proceeds of share issue

The cash inflow resulting from the share issue is calculated by looking at the movements on the share capital and share premium accounts combined.

	<i>\$m</i>
Increase in issued share capital (120 – 100)	20
Increase in share premium (88 – 49)	<u>39</u>
Total proceeds from share issue in the year	<u>59</u>

12.4.4.2 Proceeds from long-term borrowings

The \$100m cash inflow is arrived at by simply comparing the opening and closing balances on the loans account. It moves from \$700m last year to \$800m this year, resulting in a net cash inflow from loans of \$100m.

12.4.5 The cash flow statement

Now we put together all of the above elements, using the standard IAS 7 format, the complete answer is as follows:

Charlie – cash flow statement for the year 31 March 20X1

	<i>\$m</i>	<i>\$m</i>
<i>Cash flows from operating activities</i>		
Profit before taxation	645	
Adjustments for		
Depreciation	42	
Loss on sale of plant	10	
Interest received	(80)	
Interest paid	<u>65</u>	

<i>Operating profit before working capital changes</i>	682	
Inventory – increase	(120)	
Receivables – increase	(90)	
Payables – increase	64	
Prepayments – increase	(2)	
Accruals – increase	<u>3</u>	
Cash generated from operations	537	
Interest paid	(65)	
Income taxes paid	<u>(21)</u>	
<i>Net cash from operating activities</i>		451
<i>Cash flows from investing activities</i>		
Purchase of tangible non-current assets	(749)	
Proceeds of sale of plant	190	
Interest received	<u>80</u>	
<i>Net cash used in investing activities</i>		(479)
<i>Cash flows from financing activities</i>		
Proceeds of issue of shares	59	
Proceeds from long-term borrowings	100	
Dividends paid	<u>(55)</u>	
<i>Net cash from financing activities</i>		104
<i>Net increase in cash and cash equivalents</i>		76
<i>Cash and cash equivalents at 1 April 20X0</i>		144
<i>Cash and cash equivalents at 31 March 20X1</i>		<u>220</u>

12.5 Interpreting a cash flow statement

We can see that Charlie managed to generate a net increase in cash during the period in question. Normally that would be desirable, but one can never be too categorical about such matters.

While very few entities can survive a prolonged outflow of cash, some businesses have too much tied up in liquid assets. The shareholders of such businesses would probably benefit from a deliberate disbursement of cash. For example, excess funds could be invested in non-current assets or inventories, or even returned to the shareholders by way of a dividend.

It is also worth bearing in mind that it is not difficult to distort cash balances in the short term. If the finance director delayed the payment of suppliers by a few days just before the year end then that could increase bank balances by a month's worth of payments to suppliers. Similarly, delaying the replenishment of inventories or encouraging prompt payment from receivables by means of a discount could artificially increase the bank balance.

The cash flow statement does not give enough information on its own to enable a reader to tell whether a entity's funds have been well managed. The effects of any net movement can only be measured by looking at the closing balance sheet and considering whether the relationships between the various components of working capital and long-term finance are acceptable.

Even if a net inflow was necessary, the statement cannot show whether the most appropriate type of finance has been raised or whether it has been obtained from the cheapest source.

12.6 Summary

Having completed this chapter we can now follow the provisions of IAS 7 *Cash flow Statements* in arriving at cash flows from operating activities, using both the direct and indirect methods. We can calculate cash flows from investing and financing activities and prepare a cash flow statement in a form suitable for publication.

Revision Questions

12

The preparation and interpretation of cash flow statements has been a common source of examination questions in the past. This is likely to continue to be the case.

? Question 1

How much interest was paid during the year?

	<i>\$000</i>
Interest accrued b/f	600
Interest charged to income statement	700
Interest accrued c/f	500

- (A) \$600,000
- (B) \$700,000
- (C) \$800,000
- (D) \$1,300,000

(2 marks)

Data for Questions 2-7

For each cash flow listed below identify the IAS 7 Cash Flow Statement's heading where the cash flow would be included. The headings to use are:

- (A) cash flows from investing activities;
- (B) cash flows from financing activities;
- (C) cash and cash equivalents;
- (D) cash flow from operating activities.

? Question 2

Profit on disposal of a fixed asset.

- (A) (B) (C) (D)

(2 marks)

? Question 3

Dividends paid on preferred shares.

- (A) (B) (C) (D)

(2 marks)

? Question 4

Cash paid on redemption of debenture maturing during the year.

(A) (B) (C) (D)

(2 marks)

? Question 5

Surplus cash used to purchase own shares on the stock exchange.

(A) (B) (C) (D)

(2 marks)

? Question 6

A 60 day, 5% government bond purchased one month before the year end.

(A) (B) (C) (D)

(2 marks)

? Question 7

Depreciation of property, plant and equipment.

(A) (B) (C) (D)

(2 marks)

? Question 8

Accrued income tax payable, balance at 31 March 2002 \$920,000.

Accrued income tax payable, balance at 31 March 2003 \$890,000.

Taxation charge to the income statement for the year to 31 March 2003 \$850,000.

Deferred tax balance at 31 March 2002 \$200,000.

Deferred tax balance at 31 March 2003 \$250,000.

How much should be included in the cash flow statement for income tax paid in the year?

(A) \$800,000

(B) \$830,000

(C) \$850,000

(D) \$880,000

(4 marks)

? Question 9

Y's income statement for the year ended 31 December 20X3 and balance sheets at 31 December 20X2 and 31 December 20X3 were as follows:

Y – income statement for the year ended 31 December 20X3

	<i>\$000</i>	<i>\$000</i>
Sales revenue		360
Raw materials consumed	(35)	
Staff costs	(47)	
Depreciation	(59)	
Loss on disposal	<u>(9)</u>	
		(150)
Operating profit		210
Interest payable		<u>(14)</u>
Profit before tax		196
Income tax expense		<u>(62)</u>
Profit after tax		<u>134</u>

Y – balance sheets as at 31 December				
	20X3		20X2	
	\$000	\$000	\$000	\$000
Non-current assets				
Cost		798		780
Depreciation		(159)		(112)
		<u>639</u>		<u>668</u>
Current assets				
Inventory	12		10	
Trade receivables	33		25	
Bank	<u>24</u>		<u>28</u>	
		<u>69</u>		<u>63</u>
		<u>708</u>		<u>731</u>
Capital and reserves				
Share capital	180		170	
Share premium	18		12	
Retained earnings	<u>358</u>		<u>257</u>	
		556		439
Non-current Liabilities				
Long-term loans		100		250
Current liabilities				
Trade payables	6		3	
Income tax	<u>46</u>		<u>39</u>	
		<u>52</u>		<u>42</u>
		<u>708</u>		<u>731</u>

During the year, the entity paid \$45,000 for a new piece of machinery.
A dividend of \$33,000 was paid during the year.

Requirement

Prepare a cash flow statement for Y for the year ended 31 December 20X3 in accordance with the requirements of IAS 7. **(15 marks)**

? Question 10

It has been suggested that ‘cash is king’ and that readers of an entity’s accounts should pay more attention to information concerning its cash flows and balances than to its profits and other assets. It is argued that cash is more difficult to manipulate than profit and that cash flows are more important.

Requirements

- Explain whether you agree with the suggestion that cash flows and balances are more difficult to manipulate than profit and non-cash assets. **(8 marks)**
 - Explain why it might be dangerous to concentrate on cash to the exclusion of profit when analysing a set of financial statements. **(7 marks)**
- (Total marks = 15)**



Question 11

The following information relates to Neave for the year ended 31 December 20X3.

Income statement for the year ended 31 December 20X3

	<i>\$000</i>
Sales revenue	16,200
Raw materials consumed	<u>(13,000)</u>
	3,200
Depreciation	(200)
Other operating costs	(2,880)
Investment income	<u>60</u>
Operating profit	180
Gain on sale of investment	600
Interest payable	<u>(40)</u>
Profit before tax	740
Income tax expense	<u>(320)</u>
Profit after tax	<u>420</u>

Balance sheet as at 31 December 20X3

	<i>20X3</i>	<i>20X3</i>	<i>20X2</i>	<i>20X2</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Non-current assets				
Tangible (NBV)		5,400		5,000
Investments		<u>1,200</u>		<u>1,400</u>
		6,600		6,400
Current assets				
Inventories	1,240		1,020	
Trade receivables	1,000		1,040	
Bank	<u>400</u>		<u>140</u>	
		<u>2,640</u>		<u>2,200</u>
		<u>9,240</u>		<u>8,600</u>
Capital and reserves				
Share capital		2,800		2,600
Share premium		1,600		1,400
Revaluation reserve		800		720
Retained earnings		<u>2,400</u>		<u>2,260</u>
		7,600		6,980
Non-current liabilities				
Long-term loans		400		300
Deferred tax		200		120
Current liabilities				
Trade payables	800		1,000	
Income tax	<u>240</u>		<u>200</u>	
		<u>1,040</u>		<u>1,200</u>
		<u>9,240</u>		<u>8,600</u>

Additional information

- 200,000 \$1 ordinary shares were issued during the year for \$2.00 per share for cash.
- \$150,000 was raised by a new long-term loan being arranged during the year.
Repayments under the existing loan totalled \$50,000 in the year.
- No investments were acquired in the year.

4. The taxation charge in the income statement is made up of:

	<i>\$000</i>
Income tax	240
Deferred tax	<u>80</u>
	<u>320</u>

5. No tangible non-current assets were sold in the year. However, land was revalued upwards by \$80,000.
6. Interim dividends paid in the year amounted to \$280,000.

Requirement

Prepare the cash flow statement for the year ended 31 December 20X3 for Neave.

(20 marks)

Solutions to Revision Questions

12

 **Solution 1**

The correct answer is (C), see Section 12.4.2.

 **Solution 2**

The correct answer is (A), see Section 12.4.3.
The profit is adjusted in the reconciliation.

 **Solution 3**

The correct answer is (B), see Section 12.4.4.

 **Solution 4**

The correct answer is (B), see Section 12.4.4.

 **Solution 5**

The correct answer is (B), see Section 12.4.4.

 **Solution 6**

The correct answer is (C), see Section 12.2.

 **Solution 7**

The correct answer is (D), see Section 12.4.2.



Solution 8

The correct answer is (B).

	\$
Deferred tax 31 March 02	200,000
Deferred tax 31 March 03	<u>250,000</u>
Increase	50,000
Total tax charged to Income statement	<u>(850,000)</u>
Income tax for year	<u>800,000</u>
Tax balance 31 March 2002	920,000
Income tax charge for the year	<u>800,000</u>
	1,720,000
Outstanding at 31 March 2003	<u>890,000</u>
Corporation tax paid in the year	<u><u>830,000</u></u>



Solution 9

Y – cash flow statement for the year ended 31 December 20X3

	\$000	\$000
<i>Cash flows from operating activities</i>		
Profit before taxation	196	
Adjustments for		
Depreciation	59	
Loss on sale of plant	9	
Interest payable	<u>14</u>	
<i>Operating profit before working capital changes</i>	278	
Inventory – increase	(2)	
Receivables – increase	(8)	
Payables – increase	<u>3</u>	
Cash generated from operations	271	
Interest paid	(14)	
Income taxes paid	<u>(55)</u>	
<i>Net cash from operating activities</i>		202
<i>Cash flows from investing activities</i>		
Purchase of non-current assets	(45)	
Proceeds of sale of plant	<u>6</u>	
Net cash used in investing activities		(39)
<i>Cash flows from financing activities</i>		
Proceeds of issue of shares	16	
Repayments of loans	(150)	
Dividends paid	<u>(33)</u>	
Net cash used in financing activities		<u>(167)</u>
<i>Net increase/decrease in cash and cash equivalents</i>		(4)
<i>Cash and cash equivalents at 1 January 20X3</i>		<u>28</u>
<i>Cash and cash equivalents at 31 December 20X3</i>		<u><u>24</u></u>

Working notes

Taxation

	\$000
Balance due at 31 December 20X2	39
Add: tax charge for the year to 31 December 20X3	<u>62</u>
	101
Less: tax liability at 31 December 20X3	<u>(46)</u>
Tax paid during year	<u><u>55</u></u>

Non-current assets – cost

	<i>\$000</i>
Balance at 31 December 20X2	780
Add: machinery purchased	<u>45</u>
	825
Less: balance at 31 December 20X3	<u>(798)</u>
Disposal in the year	<u>27</u>

Non-current assets – depreciation

	<i>\$000</i>
Balance at 31 December 20X2	112
Add: charge for the year	<u>59</u>
	171
Less: balance at 31 December 20X3	<u>(159)</u>
Depreciation on disposal	<u>12</u>

Receipts from sales of non-current tangible assets

	<i>\$000</i>
Cost (calculated above)	27
Depreciation (calculated above)	<u>(12)</u>
Written-down value	15
Loss on sale	<u>(9)</u>
Proceeds from sale	<u>6</u>

**Solution 10**

- (a) Cash is the most liquid of assets, and it is also the most tangible. A banknote with a face value of \$10 can be held in the hand, and there can be no dispute that maybe it is really \$11 or \$9. Profits, however, are not tangible or liquid, and it is possible to argue that profit should be restated at a higher (or lower) amount.

With simple income and expenditure accounts, the excess corresponds to an amount of cash, and is therefore difficult to manipulate. But, with accruals accounting, problems of estimation arise (e.g. how much to provide for depreciation and bad debts). In the case of modern, multinational groups of entities, the potential for manipulation of profit is much greater still.

It is possible, however, to manipulate cash flows and balances as well as profits. Cash balances can be boosted at the year end by withholding payment to suppliers; customers can be given incentives to pay any large balances; loans can be taken out (and repaid immediately after the year end); and assets can be sold for cash.

The International Accounting Standards Committee has been developing and issuing financial reporting standards which attempt to minimise the opportunities for manipulation of profits, cash flows and balances.

- (b) Positive cash flows are extremely important for entities to ensure their survival. Many very profitable entities have gone into liquidation simply because of their inability to generate sufficient cash. But in the longer term, entities that are unable to make profits will cease to generate cash, and will also fold. Of the two, the ability to generate profits is the most important for the long-term security of the entity. By focusing purely on increasing cash balances, the managers of an entity might neglect their main task, which is to make a profit for shareholders.

It is also not in the best interests of an entity to habitually hold large cash deposits (unless interest rates are running at an abnormally high rate). It makes more sense for

the directors to reinvest available funds in non-current assets, which should increase the entity's profitability. The entity's working capital management policy should ensure that enough cash is held to meet its day-to-day requirements, but no more. In the same way, as an entity gains nothing from carrying very large amounts of excess inventory, it is likely that better returns can be found for excess cash by alternative investments.



Solution 11

Neave – cash flow statement for the year ended 31 December 20X3

	Notes	\$000	\$000
<i>Cash flows from operating activities</i>			
Profit before taxation			740
Adjustments for:			
Depreciation	1	200	
Gain on sale of Investments	2	(600)	
Interest paid	3	40	
Investment income Received	4	<u>(60)</u>	
			<u>(420)</u>
Operating profit before working capital changes			320
Inventory – increase	5	(220)	
Receivables – decrease	5	40	
Payables – decrease	5	<u>(200)</u>	
			<u>(380)</u>
Cash generated from operations			<u>(60)</u>
Interest paid		(40)	
Income taxes paid	6	<u>(200)</u>	
			<u>(240)</u>
Net Cash from operating activities			<u>(300)</u>
<i>Cash flows from investing activities</i>			
Purchase of non-current assets	7	(520)	
Proceeds from sale of investments	8	800	
Investment income		<u>60</u>	
Net cash generated from investing activities			340
<i>Cash flows from financing activities</i>			
Proceeds of share issue	9	400	
Increase in long-term loans		150	
Repayments of loan		(50)	
Dividends paid		<u>(280)</u>	
Net cash from financing activities			<u>220</u>
Net increase in cash and cash equivalents			<u>260</u>
Cash and cash equivalents at 1 January 20X3	10		140
Cash and cash equivalents at 31 December 20X3	10		<u>400</u>

Notes

1. Depreciation is a non-cash item that has been deducted in arriving at profit before tax, and so is added back in the calculation for cash flow from operations.
2. The gain on sale is calculated by comparing the proceeds and the book value of investments; it is not a cash item and so is deducted. The proceeds of the sale will appear later in the cash flow within investing activities.
3. Interest paid has been deducted in arriving at profit before tax. It is added back to arrive at actual cash generated from operations and then appears later as a deduction in arriving at net cash from operating activities as it is likely to have been incurred in the financing of the business's general trading activities (for format purposes).

4. Investment income is removed in arriving at cash flow from operations as it likely to have been earned as a result of deliberate investment activities. It is included further down the cash flow statement under ‘Cash flows from investing activities’.
5. Changes in working capital must be accounted for as turnover and cost of materials used are not cash items – they do not take account of credit extended to customers and by suppliers. Increase in inventory means more inventory has been purchased and is an outflow of cash. Payables decreasing means that payments are being made, which again is an outflow of cash. Receivables decreasing means that cash is being received faster from customers, and so is a source of cash.
6. Income tax paid is then deducted in arriving at net cash from operating activities as this has been incurred by trading. The actual tax paid must be calculated, as there are two balance sheet balances and an income statement charge all relating to tax. It is calculated as follows:

	<i>\$000</i>
Opening liability – income tax	200
Opening deferred tax balance	120
Charge for the year	320
Closing liability – income tax	(240)
Closing deferred tax balance	<u>(200)</u>
Cash paid in respect of tax	<u>200</u>

7. The purchase of non-current assets appears under investing activities. We are not told the figure for purchases and so must derive it using all the information relating to the non-current assets given in the question. The additions in the year will be the balancing figure. We want to track all the movements in the year in order to reconcile the opening and closing net book value that are in the balance sheet.

	<i>\$000</i>
Opening net book value (B/S)	5,000
Depreciation charge (decreases book value)	(200)
Revaluation in the year (increases book value)	80
Balancing figure – additions in the year	<u>520</u>
Closing net book value	<u>5,400</u>

This calculation could also be performed with the use of a ‘T’-account (you should use whatever you feel most confident with):

Tangible non-current assets					
		<i>\$000</i>			<i>\$000</i>
1 Jan. X1	Balance b/d	5,000		Depreciation	200
	Revaluation	80			
<i>Bal. fig.</i>	Additions	<u>520</u>	31 Dec. X1	Balance c/d	<u>5,400</u>
		<u>5,600</u>			<u>5,600</u>
1 Jan. X2	Balance b/d	<u>5,400</u>			

8. The cash proceeds from the sale of investments is also included within investing activities although this is a source of cash. We are not told the proceeds but can easily work them out. We know the gain on disposal (from the income statement) and we know the book value of the investments (from the balance sheet). We know that

the gain is calculated as proceeds less book value and so gain plus book value must equal proceeds:

	<i>\$000</i>
Gain on sale	600
Decrease in book value of investments in the year (1,400 – 1,200)	<u>200</u>
Proceeds from disposal	<u>800</u>

9. The additional information in the question tells us that the share issue was for cash and so the proceeds of share issue are $200,000 \times \$2$ per share = \$400,000 cash inflow. This is a method of financing the business and so is included in the cash flows from financing activities.

The opening and closing bank balances are found in the balance sheet and the net cash flow in the year should reconcile the opening and closing balances for bank and cash.

Non-current Tangible Asset Standards

13

LEARNING OUTCOME

After completing this chapter you should be able to:

- ▶ explain and apply the accounting rules contained in IAS's dealing with ... tangible non-current assets.

The syllabus topics covered in this chapter are as follows:

- Property, Plant and Equipment (IAS 16): the calculation of depreciation and the effect of revaluations, changes to economic useful life, repairs, improvements and disposals.
- Related financing costs (IAS 23).

You will have studied the basic accounting for tangible non-current assets in Financial Accounting Fundamentals or the course giving you exemption from it. If required, refresh your knowledge by revisiting your previous text.

13.1 IAS 16 property, plant and equipment

13.1.1 Objective

The objective of IAS 16 is to prescribe the accounting treatment for property, plant and equipment so that users of the financial statements have information about the entity's investment in its property, plant and equipment and changes in that investment. The main issues being the recognition of the assets, determining their carrying amounts and associated depreciation charges.

13.2 Revision of some definitions in IAS 16



You should know these definitions from your earlier studies. You need to ensure that you know all of the following definitions for your examination.

13.2.1 Property, plant and equipment

Property, plant and equipment are tangible items that are held for use in the production or supply of goods or services, for rental to others, or for administrative purposes.

13.2.2 Carrying amount

The amount at which an asset is recognized, after deducting any accumulated depreciation and impairment losses. Also referred to as book value.

13.2.3 Cost

The amount paid and the fair value of other consideration given to acquire an asset at the time of its acquisition or construction. See Section 13.3.1.

13.2.4 Depreciable amount

The cost or valuation of an asset less its residual value.

13.2.5 Depreciation

The systematic allocation of the depreciable amount of an asset over its useful life.

13.2.6 Fair value

The amount for which an asset can be exchanged between knowledgeable, willing parties in an arm's length transaction.

13.2.7 Impairment loss

The amount by which the carrying amount exceeds its recoverable amount.

13.2.8 Recoverable amount

The higher of an asset's net realisable value and its value in use.

13.2.9 Residual value

The residual value of an asset is the amount that the entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, assuming that the asset was already at the point where it would be disposed of (using the age and condition that would be assumed to apply at the time of disposal).

13.2.10 Useful life

IAS 16 defines useful life as the period over which the asset is expected to be available for use by the entity or the volume of output expected from the asset.

13.3 Recognition

IAS 16 requires that an item of property, plant or equipment should be recognised as an asset when:

- it is probable that future economic benefits associated with the asset will flow to the entity;
- the cost of the item can be measured reliably.

The first point is based on the principle that the item should only be recognised as an asset and included in the financial statements when it reaches its location and condition necessary for it to be capable of operating in the manner intended by management.

The second point deals with cost. If the asset has been purchased then the asset is initially recognised at its original cost.

13.3.1 Elements of cost

The cost of an item of property, plant or equipment can include any of the following:

- Invoice price, including any import duties and non-refundable purchase taxes;
- Any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended. Directly attributable costs can include:
 - site preparation,
 - initial delivery and handling costs,
 - installation and assembly costs,
 - testing and initial set up costs,
 - professional fees.

Note administration expenses and general overhead costs cannot be included.

- The initial estimate of dismantling and removing the item and restoring the site on which it is located. This will involve creating a provision which is dealt with in chapter 18.

13.3.2 Self-constructed assets

Where the entity constructs the asset itself for its own use then the cost is determined using the same principles as for an acquired asset. Attributable costs are likely to include the cost of the materials and labour and other inputs used in the construction and will exclude any profit element.

13.4 Measurement

IAS 16 requires that an entity must choose between the cost model or the revaluation model as its accounting policy and apply that policy to an entire class of property, plant and equipment.

13.4.1 Cost model

Once recognised as an asset, the item should be carried at its cost less any accumulated depreciation and any accumulated impairment losses.

13.4.2 Revaluation model

Once recognised as an asset, an asset whose fair value can be measured reliably, can be held at a revalued amount less any subsequent accumulated depreciation and impairment losses. The revalued amount being its fair value at the date of revaluation. Revaluation should be undertaken regularly to ensure that value of the asset does not vary significantly from its fair value. The fair value of land and buildings will usually be market value determined by a professional valuer. The fair value of plant and equipment is usually current market value. If the asset is of a specialised type that is rarely sold, an entity may have to estimate fair value using depreciated replacement cost.

13.5 Subsequent expenditure

Parts of some items of property, plant and equipment may require replacement at regular intervals. For example, a furnace may require relining after a specified number of hours of use, or aircraft interiors such as seats and galleys may require replacement several times during the life of the airframe. Items of property, plant and equipment may also be acquired to make a less frequently recurring replacement, such as replacing the lifts in a high rise building, or to make a non-recurring replacement. IAS 16 requires the recognition principle in Section 13.3 to be applied to the subsequent expenditure, in other words:

- it is probable that future economic benefits associated with the asset (that is the additional expenditure) will flow to the entity;
- the cost of the item (additional expenditure) can be measured reliably.

If the recognition criteria are met an entity recognises in the carrying amount of an item of property, plant and equipment the cost of replacing part of such an item when that cost is incurred. The carrying amount of those parts that are replaced is derecognised in accordance with the derecognition provisions in Section 13.7.

A condition of continuing to operate an item of property, plant and equipment (for example, an aircraft) may be performing regular major inspections for faults regardless of whether parts of the item are replaced. When each major inspection is performed, its cost is recognised in the carrying amount of the item of property, plant and equipment as a replacement if the recognition criteria are satisfied. Any remaining carrying amount of the cost of the previous inspection (as distinct from physical parts) is derecognised. This occurs regardless of whether the cost of the previous inspection was identified in the transaction in which the item was acquired or constructed.

13.6 Accounting for depreciation

All assets with a limited useful life must be depreciated. Land has an unlimited useful life (unless it is a mine, quarry etc.) and is not depreciated. Depreciation should be allocated on a systematic basis over the asset's economic useful life and charged as an expense to the income statement, unless it is included in the carrying amount of another asset. For example depreciation of assets used in development work may be included in the carrying amount of intangible assets recognised under IAS 38 *Intangible assets* (see chapter 16 for details).

IAS 16 requires that each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item shall be depreciated separately. The

initial cost of the asset will need to be allocated to its significant parts, for example the airframe and engines of an aircraft would need to be treated separately as they have different useful lives. If the significant parts have the same useful lives they can be grouped together for depreciation purposes.

IAS 16 also requires the assets residual value and useful life to be reviewed at every year end. If changes are made to either it will count as a change in accounting estimate and be dealt with using IAS 8, as previously discussed in Chapter 11.

IAS 16 specifically states that repair and maintenance of an asset does not remove the need to provide for depreciation. The residual value of an asset may increase to an amount equal to or greater than its carrying value, if this happens depreciation will be zero.

Depreciation commences when the asset reaches the location and condition necessary for it to be capable of operating in the manner intended by management and only ceases when it is fully depreciated or when it is derecognised.

Example 13.A

A machine was purchased on 1 January 2003 for \$50,000. The asset is used from the date of acquisition and its estimated economic useful life is five years. The following entry will be recorded in respect of depreciation in the year ended 31 December 2003:

Debit	Depreciation expense	\$	\$
		10,000	
Credit	Accumulated depreciation		10,000

Being the depreciation expense for the year

The machine will be included in the balance sheet as at 31 December 2003 at \$40,000 (cost \$50,000 less accumulated depreciation of \$10,000).

13.6.1 Review of useful life

The useful life of the asset and its residual value should be reviewed periodically (at least at each financial year-end), and if there are significant changes then future depreciation charges should be adjusted. The useful life of an asset to an entity may be less than its total economic life as an entity may have a policy to replace each type of asset after a fixed period of time or after a fixed amount of usage.

Example 13.B

A machine was purchased on 1 January 2000 for \$50,000. The asset is used from the date of acquisition and its estimated economic useful life is ten years. After three years of use the asset's useful life is reviewed. The machine is expected to last only a further 5 years from the date of review.

The depreciation charge will now be calculated based on the carrying value of \$35,000 (cost less three years' depreciation) and a remaining useful life of five years. The charge for the next 5 years will be \$7,000.

The higher charge to income statement will ensure the original cost of the asset is expensed to the income statement over its total revised life of 8 years – 3 years of \$5,000 and 5 years of \$7,000.

13.6.2 Depreciation method

IAS 16 requires that the depreciation method used should reflect the actual pattern in which the assets future economic benefits are expected to be consumed by the entity. The depreciation method should also be reviewed at the end of each year and if there is a change in the pattern of usage the method should be changed to reflect the new consumption of

economic benefits. Any change in depreciation method will be treated as a change in accounting estimate under IAS 8.



A variety of depreciation methods can be used to allocate the depreciable amount of an asset over its useful life. The most common in examinations are the straight line method and the reducing balance method. You should have covered depreciation methods in your foundation studies, you may find it useful to revise the different methods of depreciation.

Example 13.C

Depreciation methods revision

A machine is purchased on 1 January 2000 for \$100,000. It has a useful economic life of 5 years and at the end of that time it is expected to have a residual value of \$10,000.

Calculate depreciation for each year using:

- (a) straight line depreciation
- (b) reducing balance depreciation at 35%

Straight line depreciation

The depreciable amount is $\$100,000 - \$10,000 = \$90,000$. This will be depreciated over 5 years, therefore each years depreciation is $\$90,000/5 = \$18,000$.

Reducing balance depreciation

When calculating reducing balance depreciation ignore the residual value and apply the depreciation rate to the carrying amount. In year 1 the carrying amount is the cost $\$100,000 \times 35\% = \$35,000$.

In year 2 deduct the first years depreciation from the cost to give the carrying amount, $\$100,000 - \$35,000 = \$65,000$. This is then multiplied by the depreciation rate to give the annual depreciation charge, $\$65,000 \times 35\% = \$22,750$.

In year 3 deduct the second years depreciation, $\$65,000 - \$22,750 = \$42,250$. The third years depreciation is then $\$42,250 \times 35\% = \$14,788$.

And so on:

Year 4 = $\$42,250 - \$14,788 = \$27,462 \times 35\% = \$9,612$

Year 5 = $\$27,462 - \$9,612 = \$17,850 \times 35\% = \$6,248$

Carrying value at end of year 5 is $\$17,850 - \$6,248 = \$11,602$, a little over the \$10,000 estimated.

13.7 Retirements and disposals

The carrying amount of an asset should be derecognised on disposal of that asset or when there is no future economic benefit expected from its continued use or disposal. Derecognition means removing the asset from the balance sheet. **Gains or losses on disposal** are calculated by comparing the net disposal proceeds and the carrying value of the asset at the date of disposal. Gains or losses should be recognised in the income statement as income or expense but IAS 16 specifies that they cannot be included as revenue.

Example 13.D

A machine was purchased on 1 January 2001 for \$50,000. The asset is used from the date of acquisition and its estimated economic useful life is five years. The asset is sold on 1 March 2004 for \$24,000. The entity policy is to charge a full year's depreciation in the year of acquisition and none in the year of disposal.

The gain on disposal is the difference between the proceeds of \$24,000 and the carrying value of the asset, \$20,000 (cost of \$50,000 less three years' depreciation).

The disposal will be recorded as:

		\$	\$
Debit	Bank	24,000	
Debit	Accumulated depreciation	30,000	
Credit	Cost of asset		50,000
Credit	Gain on disposal (income statement)		4,000

Being the disposal of the asset and recognition of the gain.

13.8 Revaluation of assets

Property is often revalued as it better reflects the fair value of the asset, due to changes in property valuations. The valuations are usually performed by professional valuers and if valuation fluctuations are frequent it may be necessary to revalue annually; if not, every three or five years is sufficient.

If an item of property, plant or equipment is revalued, that entire class of property, plant or equipment must be revalued. A class is a grouping of assets of a similar nature, for example:

- land,
- buildings,
- machinery,
- motor vehicles,
- office equipment,
- furniture and fittings.

13.8.1 Revaluation surplus

When an asset is revalued the asset's carrying value is increased and a corresponding increase to equity is recorded under the heading *revaluation reserve*.

Example 13.E

An asset was purchased on 1 January 2001 for \$500,000. The asset is used from the date of acquisition and its estimated economic useful life is 50 years. After three years of use the asset is revalued on 1 January 2004 at \$540,000. The revaluation surplus is the difference between the revalued amount and the carrying value of the asset which is \$70,000, \$540,000 less \$470,000. The revaluation is recorded as follows:

		\$	\$
Debit	Accumulated depreciation	30,000	
Debit	Cost of asset	40,000	
Credit	Revaluation reserve		70,000

Being the revaluation of the asset at 1 January 2004.

Accumulated depreciation on the asset is **eliminated** and the balance of the surplus is debited to the cost of the asset. The asset will now be **held at valuation less any subsequent accumulated depreciation**, calculated on the revalued amount over the asset's remaining useful life.

13.8.2 Revaluation deficits

If future revaluations result in a fair value that is less than the carrying value, then the revaluation surplus will be debited with the amount of the deficit. If there is an insufficient amount in the revaluation reserve in respect of the asset then the balance of the deficit will be charged to the income statement.

The effect of taxes on income resulting from revaluations must be recognized and disclosed in accordance with IAS 12, this will usually mean an increase in asset value will give rise to an increase in deferred tax.

Example 13.F

If the asset in Example 13.E was revalued again 5 years after purchase at \$500,000 the calculations would be as follows:

	\$	\$
Original cost	500,000	
Three years depreciation (3/50)	<u>(30,000)</u>	
Net book value	470,000	
Revaluation to	540,000	
Gain on revaluation		70,000
Two years depreciation (2/47 × 540,000)	<u>22,978</u>	
Net book value	517,022	
Revalued to	<u>500,000</u>	
Loss on revaluation, charged to revaluation reserve		<u>17,022</u>
Balance on revaluation reserve		<u>52,978</u>

Example 13.G

If the asset in Example 13.E was revalued to \$440,000 after 3 years a deficit of \$30,000 would arise. This would be calculated as follows:

	\$
Original cost	500,000
Three years depreciation (3/50)	<u>(30,000)</u>
Net book value	470,000
Revaluation to	440,000
Loss on revaluation	<u>30,000</u>

In this example the asset has not previously been revalued, the loss must be charged to income statement.

13.8.3 Disposal of a revalued asset

When a previously revalued asset is disposed of the gain on disposal is measured as the difference between the carrying value at the date of disposal and the proceeds received.

Example 13.H

Continue with Example 13.E, an asset was purchased on 1 January 2001 for \$500,000. The asset is used from the date of acquisition and its estimated economic useful life is 50 years. After 3 years of use the asset is revalued on 1 January 2004 at \$540,000. Depreciation is charged on a monthly basis.

The asset is then sold on 30 June 2004 for \$550,000, how much profit should be recognized in the income statement?

	\$	\$
Original cost	500,000	
Three years depreciation (3/50)	<u>(30,000)</u>	
Net book value	470,000	
Revaluation to	540,000	
Gain on revaluation		70,000
Depreciation (6/12 × 540,000/47)	<u>5,745</u>	
Net book value at date of disposal	534,255	
Proceeds	<u>550,000</u>	
Gain on disposal, recognized in the income statement		15,745

When this asset is disposed of the revaluation surplus included in equity in respect of an item of property, plant and equipment may be transferred directly to retained earnings. This may involve transferring the whole of the surplus when the asset is retired or disposed of. IAS 16 specifically says that transfers from revaluation surplus to retained earnings are not made through profit or loss. The transfer will be shown in the statement of changes in equity.

IAS 16 also allows some of the revaluation surplus to be transferred as the asset is used by an entity. In such a case, the amount of the surplus transferred would be the difference between depreciation based on the revalued carrying amount of the asset and depreciation based on the asset's original cost. This amount can be transferred to retained earnings each year.

Example 13.I

In Example 13.H the disposal takes place within the following period so the whole of the revaluation surplus can be transferred to retained earnings. The amount transferred is \$70,000.

Example 13.J

Using the data and answer to Example 13.F:

	\$	\$	\$
Original cost	500,000		
Three years depreciation (3/50)	<u>(30,000)</u>		
Net book value	470,000		
Revaluation to	540,000		
Gain on revaluation			70,000
Two years depreciation (2/47 × 540,000)	<u>22,978</u>	22,978	
Two years depreciation based on cost is		<u>20,000</u>	
Transfer to retained earnings from revaluation reserve (1,489 each year)			(2,978)
Net book value	517,022		
Revalued to	<u>500,000</u>		
Loss on revaluation, charged to revaluation reserve			<u>(17,022)</u>
Balance on revaluation reserve			50,000
Depreciation (500,000/45)	11,111	11,111	
Depreciation based on cost		<u>10,000</u>	
Transfer to retained earnings from revaluation reserve			<u>(111)</u>
Balance on revaluation reserve			<u>48,889</u>

13.9 Disclosure requirements

IAS 16 has extensive disclosure requirements:

- measurement bases used (e.g. cost or valuation);
- depreciation methods used;
- useful lives or depreciation rates used;

- (d) gross carrying amount and accumulated depreciation at the beginning and end of the period;
- (e) reconciliation of opening and closing figures with details of additions, disposals, revaluations, impairments and depreciation;
- (f) details of any pledging of items of property, plant and equipment as security for liabilities;
- (g) commitments for future capital expenditure;
- (h) if the asset has been revalued:
 - (i) basis of valuation;
 - (ii) date of valuation;
 - (iii) whether an independent valuer was used;
 - (iv) the carrying value of the asset if no revaluation had taken place;
 - (v) the revaluation surplus.

13.10 IAS 23 borrowing costs

13.10.1 Introduction

IAS 23 deals with the accounting treatment of interest, etc., including the extent to which it may be capitalised as part of the cost of a non-current asset.

13.10.2 The benchmark treatment

The benchmark treatment in IAS 23 requires that borrowing costs should be recognised as an expense as they are incurred.

Debit	Expense
Credit	Bank

13.10.3 The allowed alternative treatment

Borrowing costs may be capitalised if they are directly attributable to the acquisition, construction or production of a qualifying asset (one that takes a long time to get ready for use or sale).

Debit	Asset
Credit	Bank

13.10.4 Interest rate

For specific borrowings, the actual interest cost will be used. For general borrowings, the weighted average cost will be used.

13.10.5 Period of capitalisation

Capitalisation will commence when expenditure on the asset and borrowing costs are being incurred, and must cease when substantially all the activities necessary to prepare the asset for sale or use are complete.

13.10.6 SIC2-Consistency-Capitalisation of borrowing costs

SIC2 requires the policy towards borrowing costs to be applied to all qualifying assets.

13.10.7 Disclosure

The financial statements must disclose:

- (a) the accounting policy adopted for borrowing costs;
- (b) borrowing costs capitalised in the period;
- (c) the capitalisation rate used.

13.11 Available for sale financial assets

You do not need to know the detail of IAS 32 – *Financial Instruments: Disclosure and Presentation* or IAS 39 – *Financial Instruments: Recognition and Measurement* as the only part of these standards in the syllabus relates to share capital which is dealt with in Chapter 17. However the asset headings defined in IAS 32 and IAS 39 have to be used in the balance sheet, so you need to understand what the headings mean.

IAS 32 defines financial assets, the definition includes equity instruments in other entities.

IAS 39 categorises financial assets into four categories, the only category effecting this syllabus is 'available for sale investments'. These are investments in equity and other types of shares in other entities. They appear on the balance sheet under the non-current asset heading. They are measured at fair value and revalued to fair value on each balance sheet date.

Note that being classified as available for sale does not mean that there is any intention to sell them.

13.12 Summary

Having completed this chapter we can now account for and disclose the amounts relating to property, plant and equipment, including depreciation, changes in useful life, disposal and the effects of revaluation.

Finally, we can explain how to treat and disclose amounts relating to borrowing costs.

Revision Questions

13

? Question 1

A building contractor decides to build an office building, to be occupied by his own staff. Tangible non-current assets are initially measured at cost. Which of the following expenses incurred by the building contractor cannot be included as part of the cost of the office building?

- (A) Interest incurred on a specific loan taken out to pay for the construction of the new offices;
- (B) Direct building labour costs;
- (C) A proportion of the contractor's general administration costs;
- (D) Hire of plant and machinery for use on the office building site. **(2 marks)**

? Question 2

The purpose of depreciation is to:

- (A) Allocate the cost less residual value on a systematic basis over the asset's useful economic life;
- (B) Write the asset down to its market value each period;
- (C) Charge profits for the use of the asset;
- (D) Recognise that assets lose value over time. **(2 marks)**

? Question 3

Which of the following tangible non-current assets are *not* usually depreciated:

- (A) Machinery purchased through a finance lease;
- (B) Land;
- (C) Buildings with a life in excess of 30 years;
- (D) Vehicles. **(2 marks)**



Question 4

AB purchased a specialized machine for \$20,000 on 1 April 2000. The machine had an expected useful life of ten years and was depreciated using the straight line method. Residual value was assumed to be zero.

Due to a worldwide shortage of specialized parts for manufacturing new machines of this type, the price of new machines of a similar type more than doubled by 31 March 2003. AB decided to revalue their machine on 31 March 2003 to market value. The market value of a two year old machine was \$35,000.

AB ceased production of a product line and no longer required the machine. They sold the machine for \$32,000 on 31 March 2004.

On disposal of the machine AB should:

- (i) Transfer \$21,000 from revaluation reserve to retained earnings
- (ii) Credit a gain on disposal of \$2,000 to the income statement
- (iii) Debit loss on disposal of \$1,000 to income statement
- (iv) Transfer \$15,000 from revaluation reserve to retained earnings
- (v) Credit gain on disposal of \$23,000 to income statement.

Which of the following are the correct entries to record the gain/loss on disposal?

- (A) (i) and (iv)
- (B) (iii) and (iv)
- (C) (v) only
- (D) (i) and (ii)

(4 marks)



Question 5

Plant and machinery, costing \$50,000, was purchased on 1 April 20X0. This was depreciated for two years at 20 per cent using the reducing balance method. On 1 April 20X2 the machinery (original cost \$25,000) was sold for \$12,000. Replacement machines were acquired on the same date for \$34,000. What was the net book value of plant and machinery at 1 April 20X3?

- (A) \$39,800
- (B) \$43,200
- (C) \$40,800
- (D) \$40,000

(4 marks)



Question 6

Roming purchased property costing \$440,000 on 1 January 2000. The property is being depreciated over 50 years on a straight-line basis.

The property was revalued on 1 January 2004 at \$520,000. The useful life was also reviewed at that date and is estimated to be a further 40 years.

Requirement

Prepare the accounting entries to record the revaluation and calculate the depreciation charge that will apply from 1 January 2004. (5 marks)

? Question 7

The financial statements are being prepared for Diska and the accountant has asked you how the borrowing costs of \$30m should be treated in the accounts. Of the \$30m, \$7m relates specifically to the construction of the entity's new manufacturing plant (at a total cost of \$60m).

Requirement

Discuss the appropriate accounting treatment for the above costs, explaining what options are available and the disclosures that would be required. **(4 marks)**

? Question 8

A property was purchased on 1 January 1998 for \$800,000. The asset is used from the date of acquisition and its estimated economic useful life is 50 years. After five years of use the asset is revalued on 1 January 2003 at \$830,000.

A subsequent valuation was completed one year later, as the property valuations in that area were experiencing significant fluctuations, and the property valuation was \$750,000.

Requirements

- Explain the treatment and prepare the accounting entries to record the revaluation on 1 January 2003. **(4 marks)**
- Explain the treatment and prepare the accounting entries to record the revaluation on 1 January 2004. **(6 marks)**

(Total marks = 10)

? Question 9

AD owns three hotels. The entity has employed C and J, a firm of chartered surveyors, to revalue its properties during the past year. The directors have decided that the valuations should be incorporated into the entity's financial statements.

This is the first time that such a revaluation has taken place and the clerk responsible for the preparation of the non-current asset note in the balance sheet is unsure of the correct treatment of the amounts involved. The entity's year end is 30 September 20X3.

The clerk has extracted the following table from the report prepared by C and J:

	<i>Original cost</i>	<i>Depreciation to 30.9.X2</i>	<i>Market value at 1.1.X3</i>	<i>Estimated useful life from 1.1.X3</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>Years</i>
Hotel G	400	96	650	50
Hotel H	350	56	420	30
Hotel K	250	35	160	40

Depreciation for the first three months of the year is to be based on the entity's original depreciation policy of writing off 2 per cent of cost per annum. Depreciation for the remainder of the year is to be based on the estimated asset lives stated in the surveyors' report.

Requirements

- (a) Prepare the non-current asset note, which would appear as part of A's published accounts, assuming that A owns no non-current assets apart from the three hotels listed above.
(You are *not* required to prepare the description of accounting policies which would appear in respect of non-current assets.) **(8 marks)**
- (b) Answer the following queries posed by the accounts clerk:
- (i) The book value of Hotel K has fallen as a result of the revaluation. How should this decrease be reflected in the financial statements? **(4 marks)**
- (ii) Does all of the depreciation based on the revalued amounts for Hotels G and H have to be charged to the income statement or can a proportion be offset against the revaluation reserve instead **(2 marks)**
- (Total marks = 14)**

Solutions to Revision Questions

13

✓ Solution 1

The correct answer is (C), see Section 13.3.1.

Only specific costs incurred directly on the asset can be included. Finance costs can be included. Direct labour costs are also specific, as are the hire costs.

✓ Solution 2

The correct answer is (A), see Section 13.5.

✓ Solution 3

The correct answer is (B), see Section 13.5.

All tangible fixed assets, with finite useful lives are usually depreciated.

✓ Solution 4

The correct answer is (D), see Sections 13.6 and 13.7.

	\$
Original cost	20,000
Three years depreciation	<u>(6,000)</u>
	14,000
Revaluation, transfer to reserve	<u>21,000</u>
	35,000
Depreciation (1/7)	<u>(5,000)</u>
	30,000
Less cash on disposal	<u>32,000</u>
Gain on disposal	<u>2,000</u>
Reversal of revaluation gain to retained earnings	<u>21,000</u>

**Solution 5**

The answer is (D), see Section 13.5.

	\$	\$
Cost		50,000
20% depreciation		<u>(10,000)</u>
		40,000
20% depreciation		<u>(8,000)</u>
		32,000
Less disposal, net book value		
Cost	25,000	
Depreciation, 2 years	<u>9,000</u>	
		<u>(16,000)</u>
		16,000
Add acquisition		<u>34,000</u>
NBV 1 April 20X2		50,000
Less 20% depreciation		<u>10,000</u>
NBV 1 April 20X3		<u>40,000</u>

**Solution 6**

The annual charge for depreciation was $\$440,000/50 \text{ years} = \$8,800$.

The asset had been used and depreciated for four years (2000 to 2003).

The carrying value of the asset at the date of valuation was therefore \$404,800 (cost of \$440,000 – accumulated depreciation of \$35,200).

The revaluation surplus is calculated as the valuation amount of \$520,000 less the carrying value of the asset of \$404,800. The surplus is therefore \$115,200.

The revaluation at 1 January 2004 will be recorded as:

		\$	\$
Debit	Accumulated depreciation	35,200	
Debit	Cost of asset	80,000	
Credit	Revaluation surplus		115,200

Being the revaluation of the asset at 1 January 2004.

The depreciation charge for 2004 and beyond will be based on the asset's valuation over the remaining useful life of the property. The useful life has also been revised to 40 years, so the depreciation will now be \$13,000, being value of \$520,000 over 40 years.

**Solution 7**

The benchmark treatment under IAS 23 *Borrowing Costs* requires that borrowing costs be recognised as an expense as they are incurred.

The allowed alternative treatment, however, allows borrowing costs to be capitalised if they are directly attributable to the acquisition, construction or production of a qualifying asset.

If Diska adopted the allowed alternative treatment then \$23m would be charged to the income statement and \$7m would be capitalised and included in the cost of constructing the plant.

The financial statements would disclose:

- the accounting policy adopted;
- the amount of borrowing costs capitalised in the period.

 **Solution 8**

At 1 January 2003

The annual charge for depreciation was $\$800,000/50 \text{ years} = \$16,000$.

The asset had been used and depreciated for five years (1998–2002).

The carrying value of the asset at the date of valuation was therefore $\$720,000$ (cost of $\$800,000$ – accumulated depreciation of $\$80,000$).

The revaluation surplus is calculated as the valuation amount of $\$830,000$ less the carrying value of the asset of $\$720,000$. The surplus is therefore $\$110,000$.

The revaluation at 1 January 2003 will be recorded as:

		\$	\$
Debit	Accumulated depreciation	80,000	
Debit	Cost of asset	30,000	
Credit	Revaluation surplus		110,000

Being the revaluation of the asset at 1 January 2003.

At 1 January 2004

The annual charge for depreciation is now $\$830,000/45 \text{ years}$ (the remaining useful life of the asset) = $\$18,444$.

The asset had been used and depreciated one further year: 2003.

The carrying value of the asset at the date of the second valuation was therefore $\$811,556$ (valuation of $\$830,000$ – accumulated depreciation of $\$18,444$).

The revaluation effect is calculated as the new valuation amount of $\$750,000$ less the carrying value of the asset of $\$811,556$. This results in a deficit on revaluation of $\$61,556$.

The deficit will firstly be charged against any surplus relating to this asset's previous revaluations, with any balance of the deficit being charged in the income statement.

There are sufficient amounts in the revaluation reserve, in this case to absorb the deficit at 1 January 2004, and so the revaluation at 1 January 2004 will be recorded as:

		\$	\$
Debit	Revaluation surplus	61,556	
Credit	Carrying value of the asset		61,556

Being the revaluation of the asset at 1 January 2004, resulting in an impairment deficit.

 **Solution 9**

(a) Tangible non-current assets

	<i>\$000</i>
<i>Land and buildings at cost or valuation</i>	
At 1 October 20X2 (400 + 350 + 250)	1,000
Revaluation gain (To Balance)	<u>230</u>
At 30 September 20X3 (650 + 420 + 160)	<u>1,230</u>
Depreciation	
At 1 October 20X2 (96 + 56 + 35)	187
Revaluation adjustment (187 + 5)	(192)
Charge for year (workings)	<u>28</u>
At 30 September 20X3 (for 9 months)	<u>23</u>
Net book value	
At 1 October 20X2	<u>813</u>
At 30 September 20X3	<u>1,207</u>

Land and buildings (hotels) were revalued at 1 January 20X3 on an open-market basis.

<i>Depreciation</i>	<i>\$000</i>
Charge for first three months $(400 + 350 + 250) \times 2\% \times 3/12$	5
Charge for the last nine months $((650/50) + (420/30) + (160/40)) \times 9/12$	<u>23</u>
	<u>28</u>

- (b) IAS 16 requires that any revaluation loss which is caused by a clear consumption of economic benefit should be recognised as an expense in the income statement. It is unlikely that this would apply to a hotel, where increased occupancy is unlikely to have any real effect on wear and tear on the fabric of the building.

If the building has previously been revalued then the loss would be shown in the statement of changes in equity as a decrease in revaluation surplus to the extent that any credit balance existing in the revaluation reserve for that asset. When all the previous revaluation gain has been eliminated the balance will be written off to the income statement.

Accounting for Leases

14

LEARNING OUTCOME

After completing this chapter you should be able to:

- ▶ explain the principles of the accounting rules contained in IAS's dealing with ... leases (lessee only).

The syllabus topics covered in this chapter are as follows:

- Leases (IAS 17) – Operating and finance leases in the books of the lessee.

14.1 Introduction

The IASB defines an asset as ‘... a resource controlled by the entity as a result of past events and from which economic benefits are expected to flow to the entity’.

In general terms we normally consider assets to be items that we own. The definition above, however, is based on an entity having ‘control’ over an asset and determining how that asset will be used in order to generate revenues. The accounting treatment for leasing transactions is based on the essence of this definition.

The recognition of assets and liabilities should reflect the commercial reality of business transactions, and this standard deliberately tackles the existence of off-balance sheet finance.

Most entities want to have a strong balance sheet and, historically, many abused the accounting rules in order to enhance their financial position. One of the most common ways was to sell the assets that were necessary to the business and then lease them back. The assets, and more importantly, any associated liability for the financing of the assets, were removed and replaced with a simple annual leasing charge.

The commercial reality was, of course, that the entity still determined how the assets were to be used; in substance they retained control over the assets. The fact that legal title had transferred was irrelevant in accounting terms. The accounting treatment for leases now ensures that the entity controlling the assets, irrespective of ownership, recognises the assets and associated liability in order to show a true and fair view of their financial position.

Note the paper 7 syllabus only requires a knowledge of the treatment of leases in the lessee's financial statements. Accounting by the lessor is outside the syllabus.

14.2 Key definitions

The following definitions are given in the standard and help to explain terms used later in this chapter.



A *lease* is an agreement whereby the lessor conveys to the lessee in return for a payment or series of payments the right to use an asset for an agreed period of time. (This definition includes hire purchase agreements.)

A *finance lease* is a lease that transfers substantially all the risks and rewards incidental to ownership of an asset. Title may or may not be eventually transferred.

An *operating lease* is a lease other than a finance lease.

The *lease term* is the non-cancellable period for which the lessee has contracted to lease the asset. Where the lessee has the option to continue to lease the asset for further terms, with or without further payment, and it is reasonably certain at the inception of the lease that this right will be exercised, then the lease term can be taken to include this further period.

14.3 Characteristics of leases

14.3.1 Finance leases

The classification of leases is based on the definitions of operating and finance leases given above; however, in practice, deciding on the classification can be extremely complex. IAS 17 does not provide a quantifiable test for deciding the classification; instead, we should consider all the features within the lease agreement, focusing on which party has the significant rights and rewards normally associated with ownership.



For the purposes of this syllabus you will be expected to be able to identify and discuss the main characteristics of leases and arrive at a decision as to how the lease should be classified and then accounted for. When asked to decide on or evaluate the classification of a lease refer to the list given below.

A lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to ownership from the lessor to lessee. The classification is based on the substance of the transaction rather than the legal form, so greater weight should be given to those features that have a commercial effect in practice. The standard gives some situations that could indicate that transfer of ownership has taken place:

- legal title is transferred to the lessee at the end of the lease;
- the lease term is for the majority of the asset's economic useful life, irrespective of title transfer;
- at the inception of the lease the present value of the minimum lease payment amounts to at least substantially all of the fair value of the leased asset;
- the lessee has the option to purchase the asset for a price sufficiently below the fair value of the asset at the date this option can be exercised;
- the leased assets are of a specialised nature and as such can only be used by the lessee unless modifications are made;
- where the lessee can cancel the lease but has to bear any losses associated with the cancellation;

- the lessee has the ability to continue the lease for a secondary period at a rate substantially below the market rent;
- gains or losses from the fluctuation in the fair value of the residual value of the asset fall to the lessee.

In answering a question, these *badges of ownership* should always form the basis of your justification for the classification of a lease.

Example 14.A

On 1 January 2003 Dixon Doors leased a new machine from EK Finance. The capital cost of the machine is \$25,000. Six half-yearly payments of \$5,000 are payable in advance, the first instalment being due on 1 January 2003. A secondary term of three years is being offered by EK Finance for \$100 per annum. Dixon Doors have not yet decided if they will use the secondary term.

The estimated economic useful life of the asset is five years with a nil residual value. After three years (primary lease term) the asset is expected to have a residual value of \$5,000. Under the lease agreement Dixon Doors is entitled to 95 per cent of the proceeds should the asset be sold.

Explain, with justifications, how this lease should be classified.

Solution

From the information given we can calculate that the minimum lease payments (six payments of \$5,000 × \$30,000) are greater than the fair value of the asset (capital cost \$25,000). The difference is the finance cost associated with the lease.

The primary lease term is in this case three years (Dixon Doors not yet decided on taking a secondary term), which is for the majority of the asset's economic useful life.

The lessee has the option to lease the asset for a secondary term at a substantially reduced rate (\$100 p.a. for an asset worth \$5,000 at the inception of the secondary term).

And finally the fact that Dixon Doors are entitled to 95 per cent of the proceeds should the asset be sold at the end of the primary lease term.

These are all badges of ownership which indicate that the risks and rewards normally associated with owning an asset are transferred to the lessee, Dixon Doors. This lease would therefore be classified as a finance lease.

14.3.2 Operating leases

If the information given does not point to the lease being a finance lease, that is, there are no clear indicators that ownership has transferred to the lessee, then the lease should be classified as an operating lease.

14.3.3 Leases of land and buildings

The land and buildings elements of a lease of property should be considered separately, unless the land element is immaterial. To achieve this the minimum lease payments need to be allocated between the land and buildings element in proportion to the relative fair values of the leasehold interests in the land element and the buildings element. The land is normally classified as an operating lease, unless title is expected to pass to the lessee at the end of the lease term, then it will be a finance lease. The buildings element will need to be classified as either an operating lease or a finance lease based on the criteria in 14.3.1. If it is not possible to allocate the minimum lease payments reliably between the land element and the building element the entire lease should be classified as a finance lease, unless it is clear that both elements are operating leases.

Where the amount of land to be separately recognised is immaterial, the lease of land and buildings can be treated as a single unit in determining the classification of the lease.

14.4 Accounting for operating leases

Operating lease rentals are viewed as an annual expense of the business and should be charged to the income statement on a systematic basis (normally straight-line basis) over the term of the lease.

The accounting policies will normally state this.

Rentals payable under operating leases are charged to the income statement as incurred.

Example 14.B

Buyer Products has a non-cancellable five-year operating lease costing \$2,000 per annum for five years. The machine has an estimated useful life of 20 years. The annual charge in respect of this operating lease will be recorded as follows:

		\$	\$
Debit	Operating lease charges	2,000	
Credit	Bank		2,000
	<i>Being the payment of the operating lease charge.</i>		

Property leases often give incentives to lessees to encourage uptake of leases, such as rent-free periods and reverse premiums. Although no specific reference is made to these in the standard the principle to be applied is straightforward, and that is to charge the income statement on a straight-line basis over the term of the lease. This ensures that the expense is charged and matched against the income that the asset generates while leased. Consider the two basic examples below.

14.4.1 Rent-free period

Example 14.C

Buyer Products enters into a second non-cancellable 5-year operating lease. Under the terms of the lease \$5,000 is payable for four years commencing in year 2. The machine has an estimated useful life of 20 years.

Buyer Products will use the asset to help generate income for the next five years and so should charge the income statement with an expense in respect of leasing this asset. The annual charge should be \$4,000 (\$5,000 × 4 years = \$20,000. \$20,000 over 5 years = \$4,000 per annum.)

The charge in respect of this operating lease in year 1 will be recorded as follows:

		\$	\$
Debit	Operating lease charges	4,000	
Credit	Accrued lease charges		4,000
	<i>Being the recording of the operating lease charge in year 1.</i>		

The charge in respect of this operating lease in years 2–5 will be recorded as follows:

		\$	\$
Debit	Operating lease charges	4,000	
Debit	Accrued lease charges	1,000	
Credit	Bank		5,000
	<i>Being the recording of the operating lease charge in years 2–5.</i>		

14.4.2 Cashback incentives

The recording of the operating lease charge where a cashback incentive has been granted, again relies on the matching principle and requires that the total payable under the operating lease be allocated over the full term of the lease.

Example 14.D

Buyer Products enters into a third non-cancellable five-year operating lease. Under the terms of the lease \$4,000 is payable for five years, however there is a cashback incentive of \$2,500 paid at the start of the lease. The machine has an estimated useful life of 20 years.

Buyer Products will use the asset to help generate income for the next five years and so should charge the income statement with an expense in respect of leasing this asset. The annual charge should be \$3,500 ($\$4,000 \times 5 \text{ years} = \$20,000$. $\$20,000 - \$2,500 = \$17,500$ over 5 years = \$3,500 per annum).

The recording of the cashback in year 1 will be recorded as follows:

		\$	\$
Debit	Bank	2,500	
Credit	Deferred income		2,500
	<i>Being the recording of the cashback in year 1.</i>		

The charge in respect of this operating lease in years 1–5 will be recorded as follows:

		\$	\$
Debit	Operating lease charges	3,500	
Debit	Deferred income ($\$2,500/5 \text{ years}$)	500	
Credit	Bank		4,000
	<i>Being the recording of the operating lease charge in years 2–5.</i>		

Note, the cashback of \$2,500 is released to the income statement over the lease term at \$500 per annum.

14.5 Disclosures for operating leases

A note to the financial statements should show:

- Lease payments recognised as an expense in the period
- A general description of the entity's significant lease arrangements
- The total of future minimum lease payments under non-cancellable operating leases for each of the following periods:
 - not later than one year;
 - later than one year and not later than five years;
 - later than five years.

An example will help us understand this disclosure requirement.

Example 14.E

Snowyday Boots have three non-cancellable operating leases as at 31 December 2002. The details for the leases are as follows:

Lease 1	\$10,000 per annum	Expires 31 December 2003
Lease 2	\$20,000 per annum	Expires 31 December 2005
Lease 3	\$30,000 per annum	Expires 31 December 2009

This disclosure is intended to show the cash commitment that the business has under operating leases in future periods. Remember that operating leases are an expense item, there is no asset or liability on the balance sheet of the lessee. The leases are, however, non-cancellable and so the business must disclose this commitment somewhere in the financial statements to provide a true and fair view. The note will be as follows:

Snowyday Boots – extract from the notes to the accounts

Lease commitments	
Operating leases	
The following charges arise from non-cancellable operating leases:	
Minimum lease payments	\$
Not later than 1 year	60,000
Later than 1 year and not later than 5 years	160,000
Later than 5 years	<u>60,000</u>
	<u>280,000</u>

Workings

The total of the minimum lease payments is \$280,000 calculated from the annual lease payment multiplied by the remaining lease term as at 31 December 2002:

	Years remaining	Due less than 1 year	Due in 2–5 years	Due in more than 5 years
		\$	\$	\$
Lease 1	1	10,000	0	0
Lease 2	3	20,000	40,000	0
			(20K × 2 yrs)	
Lease 3	7	30,000	120,000	60,000
			(30K × 4 yrs)	(30K × 2 yrs)
Total		<u>60,000</u>	<u>160,000</u>	<u>60,000</u>

14.6 Accounting for finance leases

Before we consider the treatment of finance leases, let us remind ourselves of the business reasons for entering into such an arrangement.

There are a number of ways that a business can acquire an asset:

- it can purchase the asset outright

Debit	Fixed asset
Credit	Bank
<i>Being the purchase of a fixed asset for cash.</i>	

- it can take a loan and then purchase the asset

Debit	Bank
Credit	Bank loan
<i>Being the receipt of the loan</i>	
Debit	Fixed asset
Credit	Bank
<i>Being the purchase of a fixed asset using the loaned cash.</i>	

- it can lease the asset

Debit	Fixed asset
Credit	Finance lease creditor
<i>Being the leasing of the asset and the recognition of the associated liability.</i>	

A finance lease allows the lessee the use of the asset as if it were his/her own and creates a liability to the lessor for the capital amount to be repaid. This is effectively like a loan from the lessor – it just cuts out the bank as a middle man.

Similarly to the bank, the lessor will charge the lessee finance costs or interest for financing the acquisition of the fixed asset, and just as we do with a bank loan we have to allocate the repayments between those amounts that relate to interest and those that reduce the liability. (The difference with an asset acquired using a finance lease is that legal title is not transferred.)

The accounting for these transactions is straightforward:

Debit	Fixed asset
Credit	Finance lease creditor
<i>Being the acquisition of the asset and the recognition of the associated liability.</i>	
Debit	Finance lease creditor
Debit	Interest expense
Credit	Bank
<i>Being the repayments made to the lessor allocated between interest and capital.</i>	
Debit	Depreciation expense
Credit	Accumulated depreciation
<i>Being the depreciation of the leased asset by the lessee.</i>	

These entries result in the asset being held at book value in the accounts of the lessee and the asset is depreciated by the lessee, ensuring that the expense associated with the asset, depreciation, is matched against the income that the asset is helping to generate.

This treatment ensures that the business reality of the transaction and not its legal form prevails. The leased asset is included in the total assets of the business and the liability associated with funding the acquisition of the leased asset is disclosed on the balance sheet. Business ratios, for example gearing and return on capital employed, are more meaningful with the leased assets included.

Do not lose sight of the basic accounting entries. The recording of finance lease transactions is straightforward and must not be overshadowed by the calculation of implied interest, which is what we are about to look at.

With many loan agreements the bank will simply calculate the interest due based on the interest rate to be applied and the outstanding liability at that date. Under finance lease agreements it is generally the total rentals payable that is stated. We then must compare this with the fair value (usually the cost) of the fixed asset to establish the total amount of interest that is to be paid over the term of the lease. The main calculation then is how best to allocate the interest expense to the income statement.

14.7 Calculating the implied interest on finance leases

The standard requires that finance lease interest allocated to periods should be calculated so as to produce a constant periodic rate of interest on the outstanding balance of the liability for each period. This is then charged as a finance expense.

There are three methods of allocating the finance charges in a finance lease:

- the straight-line method;
- the sum-of-digits method;
- the actuarial method.

The method which gives the constant periodic rate of interest on the outstanding liability is the actuarial rate. This rate can be computer generated. The standard, however permits the use of some approximation to the rate in order to simplify the calculation.

The sum of digits (also known as the 'rule of 78') gives a suitable approximation to the actuarial method. The straight-line method is the easiest to calculate but does not provide us with a constant rate of interest.

You will be expected to be able to apply all three methods within this syllabus. Remember that this calculation is just for calculating the interest. Once this calculation is completed we can then record the lease repayments, allocating the payment between interest and reduction of capital.

Let us work through an example of a finance lease in the books of a lessee. We will use one set of information and calculate the interest allocation using all three methods. We will then select one of these methods and record the accounting entries and draft the relevant extracts and disclosures.

Example 14.F Shanks and Ward – lease information

- The accounting year end is 31 December.
- The cost of the leased asset is \$280,000.
- The estimated economic useful life is eight years.
- The asset has a nil residual value.
- The lease commences 1 January 2003.
- The primary lease term is seven years.
- The lease repayments are \$50,000 per annum in advance.
- Residual value at the end of the primary lease term is \$35,000.
- Lessee is entitled to 95 per cent of the residual value at the end of the primary term.

Step 1. Confirm that the lease is to be treated as a finance lease. This lease is a finance lease. The total rentals exceed the fair value of the asset at the inception of the lease. The lease term is for the majority of the asset's economic useful life. The lessee is entitled to the majority of the proceeds should the asset be sold at the end of the primary lease term. These are clear indicators that the benefits of ownership of the asset has transferred to the lessee.

Step 2. Calculate the total finance charge. The total finance charge is calculated by comparing the total rentals payable and the fair value (cost) of the asset. In this case the total finance charge is \$70,000, being total rentals of \$350,000 (\$50,000 for 7 years) less the cost of the asset \$280,000.

Step 3. Establish the basis for allocating the total finance charge. Decide (or follow requirement in any exam question) on the method of allocation from one of the three methods. Establish the total number of periods being financed.

It is vitally important for your calculations that you correctly identify the number of periods over which you want to charge interest. The clue is in the repayment details.

If the repayments are to be made in advance then your first payment will reduce your capital immediately before you start receiving funding, and when you make the final instalment your final period of use of the asset will be with no outstanding liability. To calculate the finance periods for repayments in advance take the total number of repayments and deduct 1.

If the repayments are in arrears then you will not have extinguished the lease liability until the end of the primary lease term. The finance periods will equal the number of repayments.

Let us look at a very quick illustration of this calculation before we continue.

The date of the inception of the lease is 1 January 2001. If the lease term is three years and the repayments are half-yearly in arrears, then the total finance periods over which you will allocate any interest is six (twice a year for 3 years).

The first instalment is made on 30 June 2001 and the last instalment you make under this lease will be on 31 December 2003. A lease liability exists until the end of the lease term and is not extinguished until 31 December 2003

when the final instalment is made. It follows then that if the lessor was providing you with funding for the full six periods then you will allocate interest over the six periods.

However, if the repayments are in advance then the first instalment will be made on 1 January 2001, at the inception of the lease. The final instalment will be made on 1 July 2003. For the period 1 July 2003 to 31 December 2003 you will use the asset; however, you have extinguished the lease liability at the start of the period.

You are not receiving funding for the final six months and therefore should not be allocating interest for this final period. The total finance periods are then five (half-yearly for three years less one) which results in us allocating interest from 1 January 2001 until 30 June 2003.

Step 4. Calculate the interest to be charged to each period. Use one of the three methods mentioned above. We will use all three in this example for illustration purposes.

Step 5. Record the relevant accounting entries for the year. Capitalise and depreciate the leased assets, create the lease creditor and record the repayments allocating the payments between interest and capital based on the calculations in step 4.

Let us now calculate the interest using the three methods based on the lease information for Shanks and Ward.

The first three steps are the same for each of the three methods.

- Step 1. Confirm the lease is a finance lease – justification is given above in Section 14.7.1 Step 1.
- Step 2. Calculate the total interest to be allocated – completed above – \$70,000.
- Step 3. Establish the basis for allocation – the number of finance periods. The repayments are annual in advance and the lease term is seven years. Total finance periods = (7 – 1) = 6.
- Step 4. Calculate the interest to be allocated to each period.

Straight-line method

$$\frac{\text{Total finance cost to be allocated}}{\text{Number of finance periods}} = \frac{\$70,000}{6} = 11,667 \text{ per period}$$

This is the most straightforward method to use as it simply allocates the same amount of interest to each finance period. It may not reflect the commercial reality of the transaction as the liability is reducing each period and therefore the interest incurred is also reducing.

Step 5. Record the relevant accounting entries for the year.

		\$	\$
Debit	Fixed asset	280,000	
Credit	Finance lease creditor		280,000
<i>Being the capitalisation of the leased asset on 1 January 2003.</i>			
Debit	Finance lease creditor	38,333	
Debit	Finance lease interest	11,667	
Credit	Bank		50,000
<i>Being the repayment made on 1 January 2003.</i>			

(The total repaid is \$50,000. We calculated implied interest of \$11,667 using the straight-line method. The difference is the amount of the repayment that reduces the liability.)

		\$	\$
Debit	Depreciation charge for the year	35,250	
Credit	Accumulated depreciation		35,250
<i>Being the depreciation of the leased asset for the year to 31 December 2003.</i>			

(Total cost of asset \$280,000, less the residual value that Shanks and Ward is entitled to at the end of the primary lease term: 95% × \$35,000 = \$33,250.)

$$\frac{\$280,000 - \$33,250}{7 \text{ years}} = 35,250 \text{ per annum}$$

Remember, the amount you want to depreciate is the net cost of the asset to the lessee. There is no indication that a secondary lease term will be used and so we depreciate over the primary lease term of seven years.

Let us look at how the liability would be extinguished over the period of the lease using this method.

<i>Period</i>	<i>Liability at start of period</i>	<i>Rental paid</i>	<i>Liability during period</i>	<i>Allocated interest</i>	<i>Liability at end of period</i>
	\$	\$	\$	\$	\$
1 Jan. 2003	280,000	(50,000)	230,000	11,667	241,667
1 Jan. 2004	241,667	(50,000)	191,667	11,667	203,334
1 Jan. 2005	203,334	(50,000)	153,334	11,667	165,001
1 Jan. 2006	165,001	(50,000)	115,001	11,667	126,668
1 Jan. 2007	126,668	(50,000)	76,668	11,666	88,334
1 Jan. 2008	88,334	(50,000)	38,334	11,666	50,000
1 Jan. 2009	50,000	(50,000)	-	-	-
Totals		<u>(350,000)</u>		<u>70,000</u>	

Let us have a look at the information this table provides:

- compare the opening and closing liabilities each year – it reduces by the amount of the repayment which represents capital \$38,333 (\$50,000 – \$11,667);
- the total rentals paid is \$350,000;
- the total interest allocated is \$70,000 – which is what we calculated above;
- the interest has been allocated over six finance periods;
- the final instalments made on 1 January 2009 extinguishes the lease liability – remember, the repayments were in advance.

Let us now complete steps 4 and 5 using the sum-of-digits method of allocating interest.

Sum-of-digits method

The sum of digits can be calculated using a simple formula:

$$\frac{n(n + 1)}{2}$$

where *n* is the number of finance periods.

In this example, the sum of digits is 21, being (6 × 7)/2. We calculated the number of finance periods in step 3 above.

The total interest of \$70,000 (calculated in step 2 above) is allocated by multiplying it by the 'relevant digit' divided by the sum of digits. The relevant digit will be the number of finance periods remaining at the date the repayment is made. In this example, the first instalment made on 1 January 2003 will be digit 6, as there are six finance periods remaining when this repayment is made. The relevant digit then reduces by one each period as the number of funding periods remaining decreases.

Let us recreate our table to see the whole repayment plan using the sum-of-digits method.

<i>Period</i>	<i>Liability at start of period</i>	<i>Rental paid</i>	<i>Liability during the period</i>	<i>Interest calculation</i>	<i>Allocated interest</i>	<i>Liability at end of period</i>
	\$	\$	\$		\$	\$
1 Jan. 2003	280,000	(50,000)	230,000	6/21 × \$70,000	20,000	250,000
1 Jan. 2004	250,000	(50,000)	200,000	5/21 × \$70,000	16,667	216,667
1 Jan. 2005	216,667	(50,000)	166,667	4/21 × \$70,000	13,333	180,000
1 Jan. 2006	180,000	(50,000)	130,000	3/21 × \$70,000	10,000	140,000
1 Jan. 2007	140,000	(50,000)	90,000	2/21 × \$70,000	6,667	96,667
1 Jan. 2008	96,667	(50,000)	46,667	1/21 × \$70,000	3,333	50,000
1 Jan. 2009	50,000	(50,000)	-		-	-
Totals		<u>(350,000)</u>			<u>70,000</u>	

Let us have a look at the information this table provides:

- compare the opening and closing liabilities each year – it reduces by the amount of the repayment which represents capital:
 - \$30,000 (\$50,000 – \$20,000) in year 1
 - \$33,333 (\$50,000 – 16,667) in year 2 and so on;
- the total rentals paid is \$350,000;

- the total interest allocated is still \$70,000 – it is just allocated on a different basis;
- the interest has again been allocated over six finance periods;
- the final instalment made on 1 January 2009 extinguishes the lease liability - remember, the repayments were in advance.

Step 5. Record the entries for the year end 31 December 2003

		\$	\$
Debit	Fixed asset	280,000	
Credit	Finance lease creditor		280,000
<i>Being the capitalisation of the leased asset at 1 January 2003.</i>			

Debit	Finance lease creditor	30,000
Debit	Finance lease interest	20,000
Credit	Bank	50,000
<i>Being the repayment made on 1 January 2003.</i>		

(The total repaid is \$50,000. We calculated implied interest of \$20,000 using the sum-of-digits method. The difference is the amount paid towards reducing the liability.)

		\$	\$
Debit	Depreciation charge for the year	35,250	
Credit	Accumulated depreciation		35,250
<i>Being the depreciation of the leased asset for the year to 31 December 2003 (as calculated earlier during the straight-line method)</i>			

Note that the accounting entries are the same as those for the straight-line method – the only difference is the amount of the repayment that has been allocated to interest and capital respectively.

Actuarial method

The constant rate of interest can only be computer-generated or by a very long process of trial and error.



If you are asked to use this method in an examination an interest rate will be provided. If an interest rate is provided, then the examiner wants you to use the actuarial method of allocation. If an interest rate is not given, use the sum-of-digits method.

For the Shanks and Ward example, the approximate rate of interest (rounded to two decimal places) is 8.16 per cent. This rate is applied to the outstanding liability at the start of the period to give the interest expense to be charged for the period.

We will recreate our table to see the full effect:

Period	Liability at start of period	Rental paid	Liability during period	Interest at 8.16% applied to liability during period	Liability at end of period
	\$	\$	\$		\$
1 Jan. 2003	280,000	(50,000)	230,000	18,768	248,768
1 Jan. 2004	248,768	(50,000)	198,768	16,219	214,987
1 Jan. 2005	214,987	(50,000)	164,987	13,463	178,450
1 Jan. 2006	178,450	(50,000)	128,450	10,482	138,932
1 Jan. 2007	138,932	(50,000)	88,932	7,257	96,189
1 Jan. 2008	96,189	(50,000)	46,189	3,811*	50,000
1 Jan. 2009	50,000	(50,000)	–	–	–
Totals		<u>(350,000)</u>		<u>70,000</u>	

* This amount includes \$42 rounding as the rate used is the closest approximation rounded to two decimal places.

Let us have a look at the information this table provides:

- compare the opening and closing liabilities each year – it reduces by the amount of the repayment which represents capital:
 - \$31,232 (\$50,000 – \$18,768) in year 1
 - \$33,781 (\$50,000 – \$16,219) in year 2 and so on;
- the total rental paid is \$350,000;
- the total interest allocated is still \$70,000 – it is just allocated on a different basis;
- the interest has again been allocated over six finance periods;
- the final instalment made on 1 January 2006 extinguishes the lease liability – remember, the repayments were in advance.

Step 5. Record the entries for the year to 31 December 2000.

The accounting entries for step 5 are once again those for the other methods, the only difference being the amount of the repayment allocated to interest and capital.

We have now calculated the allocated interest using the three permitted methods. The results can be summarised as follows:

<i>Year ended 31 December</i>	<i>Interest calculated using straight line \$</i>	<i>Interest calculated using sum of digits \$</i>	<i>Interest calculated using actuarial \$</i>
2003	11,667	20,000	18,768
2004	11,667	16,667	16,219
2005	11,667	13,333	13,463
2006	11,667	10,000	10,482
2007	11,666	6,667	7,257
2008	11,666	3,333	3,811
2009	–	–	–
Totals	<u>70,000</u>	<u>70,000</u>	<u>70,000</u>

The sum-of-digits method gives a close approximation to the actuarial method. The straight-line method, while being the simplest to calculate, provides a somewhat arbitrary allocation.

14.7.1 In advance/in arrears

The tables and calculations we have performed in this example are based on a lease agreement with repayments in advance. Note that if the repayments were to be in arrears then the total finance periods would be seven and not six. The lease liability would not be extinguished until the final instalment was made on 31 December 2009 and as a result there would be interest charged in this period. For completeness, let us consider the same lease as above but with repayments in arrears, the interest being apportioned using the sum-of-digits basis.

Example 14.G

We will use the example in 14.F above.

The sum of digits is calculated as:

$$\frac{n(n+1)}{2}$$

where n is the number of finance periods.

In this example, the sum of digits is 28, being $(7 \times 8)/2$. The finance periods now total seven as the repayments are in arrears and the lessee is receiving funding until the end of the lease term.

The total interest of \$70,000 (calculated in step 2 above) is allocated by multiplying it by the 'relevant digit' divided by the sum of digits. The relevant digit will be the number of finance periods remaining at the date the repayment is made.

In this example, the first instalment made on 31 December 2003 will be digit 7, as there are seven finance periods remaining when this repayment is made. The relevant digit then reduces by one each period as the number of funding periods remaining decreases.

Let us recreate our table to see the whole repayment plan, using sum of digits for *repayments in arrears*.

<i>Period</i>	<i>Liability at start of period</i> \$	<i>Interest calculation</i>	<i>Allocated interest</i> \$	<i>Rental paid</i> \$	<i>Liability at end of period</i> \$
1 Jan. 2003	280,000	$7/28 \times \$70,000$	17,500	(50,000)	247,500
1 Jan. 2004	247,500	$6/28 \times \$70,000$	15,000	(50,000)	212,500
1 Jan. 2005	212,500	$5/28 \times \$70,000$	12,500	(50,000)	175,000
1 Jan. 2006	175,000	$4/28 \times \$70,000$	10,000	(50,000)	135,000
1 Jan. 2007	135,000	$3/28 \times \$70,000$	7,500	(50,000)	92,500
1 Jan. 2008	92,500	$2/28 \times \$70,000$	5,000	(50,000)	47,500
1 Jan. 2009	47,500	$1/28 \times \$70,000$	2,500	(50,000)	–
Totals			<u>70,000</u>	<u>350,000</u>	

Let us have a look at the information this table provides:

- compare the opening and closing liabilities each year – it reduces by the amount of the repayment which represents capital (\$50,000 – \$17,500 = \$32,500 in year 1);
- there is no column for 'capital during the period' as the repayment is made at the end of the period and therefore the entire amount is outstanding for the period;
- the total rentals paid is \$350,000;
- the total interest allocated is still \$70,000 – it is just allocated on a different basis;
- the interest has been allocated over seven finance periods;
- the final instalment made on 31 December 2009 extinguishes the lease liability – remember, the repayments were in arrears.

14.8 Disclosures for finance leases

From the accounting entries we processed in the above examples we can draft any relevant extracts from the financial statements, using the sum-of-digits figures from Example 14.F above:

Shanks and Ward – extracts from the financial statements for the year ended 31 December 2003.

Income statement

	\$
<i>Operating expenses</i>	
Depreciation charge for the year	35,250
Finance lease interest (sum of digits)	20,000

Balance sheet

<i>Non-current assets</i>	
Property, plant and equipment (cost \$280,000 less \$35,250)	244,750
<i>Current liabilities</i>	
Finance lease creditor	33,333
<i>Non-current liabilities</i>	
Finance lease creditor	216,667

To understand how the creditor figures are calculated, refer back to Example 14.F. The creditor within current liabilities will represent the amount of next year's repayment that will be allocated to capital, that is \$50,000 less interest of \$16,667.

The creditor due in more than one year is the outstanding balance at the end of the following year or it can be calculated by taking the closing liability at the balance sheet date (\$250,000) and deducting the amount that is due within one year (just calculated above) of \$33,333.

It is not necessary to complete the full schedule of repayments, unless it is asked for. In order to calculate the creditor due within one year and greater than one year, however, you will have to calculate the interest to be allocated for the following period – remember that

next year’s repayment less interest allocated to next year leaves the amount which is due to be repaid to capital next year.

Lessees are required to make the following disclosures in respect of finance leases:

- for each class of asset, the net carrying amount at the balance sheet date;
- a reconciliation between the total of future minimum lease payments at the balance sheet date and their present value analysed between:
 - not later than 1 year;
 - later than one year and not later than 5 years;
 - later than 5 years.

The disclosure note for the Shanks and Ward example would be as follows:

Obligations under finance leases as at 31 December 2003

The minimum lease payments payable under finance leases are as follows:

	\$
Not later than 1 year	50,000
Later than one year and not later than 5 years	250,000
Later than five years	<u> </u>
	300,000
Less finance charges allocated to future periods (70,000 – 20,000, see Example 14.F)	<u>(50,000)</u>
Present value of lease payments	<u>250,000</u>

You can check this present value calculation – it should equal the total of the creditors due within and greater than one year that is recorded in the balance sheet (see extracts above). \$33,333 + \$216,667 which equals \$250,000.

14.9 Summary

Having completed this chapter we can now correctly classify operating and finance leases, using the badges of ownership to justify our treatment. We can prepare the accounting entries to record an operating lease and draft the relevant extracts and additional disclosures for incorporation into the financial statements.

In accounting for finance leases, we can use the three acceptable methods of calculating the implied rate of interest on the lease, namely straight line, sum of digits, and actuarial. Once the finance costs are calculated we can prepare the accounting entries that correctly allocate revenue and capital elements of lease repayments. The relevant extracts and notes to the accounts can also be drafted.

Revision Questions

14

? Question 1

A finance lease runs for five years, with annual payments in arrears of \$25,000. The fair value of the asset was \$90,000. Using the sum of the digits method, what would the outstanding lease creditor be at the end of year 2.

- (A) \$47,000
- (B) \$61,000
- (C) \$64,500
- (D) \$40,000

(2 marks)

? Question 2

An operating lease is:

- (A) a lease that is not a finance lease;
- (B) a lease that transfers substantially all risks and rewards to the lessor;
- (C) a lease that is for virtually all the estimated useful life of the asset;
- (D) a lease where the lessee is responsible for repairs, insurance and other running costs.

(2 marks)

? Question 3

L leases a delivery vehicle to D on an operating lease. The terms of the lease are:

- term 3 years,
- special introductory discount in year one, rental reduced to \$2,000,
- annual rentals of \$5,000 per year for years two and three.

How much should D recognize as an expense in its income statement for the first year of the lease?

- (A) \$2,000
- (B) \$4,000
- (C) \$5,000
- (D) \$12,000

(2 marks)

**Question 4**

Logan's Locks are preparing financial statements for the year ended 31 December 2003. During the year Logan's entered into two operating lease agreements which are detailed below.

- (a) On 1 August 2003 the entity entered into an operating lease for plant and machinery. The lease term is three years and quarterly rentals of \$9,000 are payable in arrears.
- (b) The entity entered into a second agreement on 1 October 2003 for the lease of motor vehicles. This agreement was again for three years. Under the terms of the contract Logan has paid an initial rental of \$75,000, this will be followed by quarterly rentals of \$4,000. The rentals are payable in advance and commence on 1 April 2004.

Requirement

Prepare the accounting entries to account for the operating leases above in the financial statements for Logan's Locks for the year ended 31 December 2003 and draft the relevant extracts and disclosure notes. **(5 marks)**

**Question 5**

On 1 January 2003 Caps leased a new machine from ITC Finance. The cost of the machine is \$100,000. The asset has an estimated useful life of five years and has a nil residual value.

Under the terms of the 3-year lease, six half-yearly payments of \$20,000 each are payable in advance, commencing 1 January 2003. There is a secondary two-year term available to Caps for \$200 per annum. Caps have not yet decided whether or not they will take advantage of this offer.

At the end of the primary term of the lease, the asset has an estimated residual value of \$20,000. Caps are entitled to 95 per cent of this should the asset be sold.

Requirements

- (a) Explain, with reasons, why the above lease should be classified as an operating or finance lease. **(4 marks)**
- (b) Using the sum-of-digits method of calculating implied finance charges on the lease, prepare all the relevant accounting entries to record this transaction in the financial statements of Caps Incorporated for the year ended 31 December 2003. **(10 marks)**
- (c) Draft extracts from the accounts for the following account categories:
 - non-current assets,
 - current liabilities,
 - non-current liabilities.**(6 marks)**

(Total marks = 20)

**Question 6**

On 1 January 2003 Sharpmate took delivery of a new machine from F4 Finance under a finance lease agreement. Under the 4-year lease agreement, \$10,000 is payable annually in arrears, the first payment being on 31 December 2003.

The cost of the machine was \$31,500 and it has an estimated useful life of four years. There is a nil residual value.

Requirements

- (a) Assuming that a rate of 10 per cent gives a constant periodic rate of interest on the outstanding liability for each period, draft the accounting entries to incorporate this transaction in the accounts of Sharpmate for the year ended 31 December 2003. **(10 marks)**
- (b) Draft a disclosure note for inclusion in the financial statements for the same year, showing a reconciliation between the total of minimum lease payments and the present value of the lease payments at the balance sheet date. **(6 marks)**

(Total marks = 16)



Question 7

Campbells Framing leased a new machine from Greenan Finance on 1 October 2002. The capital cost of the machine is \$180,000. Under the terms of the finance lease agreement, six annual payments of \$40,000 are payable in arrears with the first payment due on 30 September 2003.

There is an indefinite secondary term to the lease for a nominal fee and Campbells are anticipating taking advantage of this term. The asset has an estimated useful life of ten years with an estimated residual value at the end of its life of nil. The residual value at the end of six years is \$40,000 and Campbells have a 90 per cent interest in this value.

Requirements

- (a) Using the sum-of-digits method of allocating interest, calculate the finance charge to be included in the income statement for the year ended 30 September 2003 and draft all relevant accounting entries for this period for incorporation into the accounts. **(10 marks)**
- (b) Draft the relevant extracts from the income statement and the balance sheet for the year ended 30 September 2003. **(6 marks)**

(Total marks = 16)

Solutions to Revision Questions

14

✓ Solution 1

The correct answer is (B) see Example 14.F
\$61,000 calculated as follows:

	\$
Payments (5 × \$25,000) =	125,000
Fair value	<u>90,000</u>
Finance charge	<u>35,000</u>
no. of finance periods =	5
$N(n + 1)/2 = (5 \times 6)/2 =$	15
Interest charges	
Year 1 – $5/15 \times 35K =$	11,667
Year 2 – $4/15 \times 35K =$	9,333
Lease creditor	
Initial balance	90,000
Interest	11,667
Payment 1	(25,000)
Interest	9,333
Payment 2	<u>(25,000)</u>
Balance	<u>61,000</u>

✓ Solution 2

The correct answer is (A), see Section 14.2.

✓ Solution 3

The correct answer is (B), see Section 14.4.

IAS 17 requires interest expense to be recognized evenly over the life of the lease.

Total expense \$2,000 + \$5,000 + \$5,000 = \$12,000 divided by three years is \$4,000 a year.

✓ Solution 4

- (a) The lease agreement commences 1 August 2003 and the reporting year end is 31 December 2003. The lease payments are made quarterly in arrears and so the first payment made is on 31 October 2003, recorded as:

Debit	Operating lease charges	\$	\$
		9,000	
Credit	Bank		9,000
<i>Being the payment and recording of the lease repayment on 31 October.</i>			

We must also account for the operating lease charges for November and December, although the payment will not be made until January. It will therefore be accrued by recording:

Debit	Operating lease charges	\$	\$
		6,000	
Credit	Accrued charges		6,000
<i>Being the accrued operating lease charges for November and December.</i>			

- (b) The total amount payable under this lease should be allocated to match against the period of use irrespective of the cash flow.

The total payable can be calculated as follows:

	\$
Initial payment	75,000
Ten payments of \$4,000	<u>40,000</u>
Total payable over 3 years	<u>115,000</u>

$$\left(\frac{\$115,000}{36 \text{ months}} \right) \times 3 \text{ months} = \$9,583$$

The accounting entries for the year end 31 December 2003 will be:

Debit	Deferred lease charges	\$	\$
		75,000	
Credit	Bank		75,000
<i>Being the initial payment of \$75,000 paid on 1 October 2003.</i>			
Debit	Operating lease charges	9,583	
Credit	Deferred lease charges		9,583
<i>Being the lease charges recognised for the 3 months to 31 December 2003.</i>			

Logan’s Locks – financial statement extracts for the year ended 31 December 2003.

Income statement

	\$
<i>Operating expenses</i>	
Operating lease charges (\$9,000+\$6,000+\$9,583)	24,583

Notes to the accounts

Commitments under non-cancellable operating leases

At 31 December 2003 the entity were committed to making the following payments in respect of non-cancellable operating leases:

	\$
Not later than one year	48,000
Later than one and not later than five years	91,000
Later than five years	–

Workings for the note

	<i>Contract (a)</i>	<i>Contract (b)</i>	<i>Total</i>
Payable in 2004	4 × \$9,000 = \$36,000 (first payment: 1 April)	3 × \$4,000 = \$12,000	\$48,000
Payable beyond 2004	12 payments in total, one made in 2003 and four in 2004. The remainder will be paid beyond 2004: \$9,000 × 7 = \$63,000.	10 repayments of \$4,000 will be made, three in 2004 and the remainder in the periods beyond 2004. 7 × \$4,000 = \$28,000.	\$91,000



Solution 5

- (a) This lease should be classified as a finance lease. There are clear indicators that the rights normally associated with ownership have been transferred from the lessor to the lessee:
- The minimum lease payments (\$20,000 × 6) totalling \$120,000 exceed the capital cost of the asset (\$100,000).
 - The lease term is three years and the useful life is estimated at 5 years, so the lease agreement is for the majority of the asset’s useful life.
 - Should the asset be sold, 95 per cent of the proceeds would accrue to the lessee.
 - A secondary term has been offered at a nominal rate below the market rate for leasing the asset.

Remind yourself of the steps we used when dealing with a finance lease question. Refer back to the chapter text if necessary.

- (b) *Step 1:* Confirm classification as a finance lease – done in part (a).
Step 2: Calculate the total finance charge:

	\$
Total repayments (6 × \$20,000)	120,000
Capital cost of the asset	100,000
Total interest to be allocated	<u>20,000</u>

Step 3: Establish the number of finance periods over which to allocate interest. There are six repayments but they are payable in advance so the last finance period has no outstanding liability as the final instalment payable on 1 July 2005 extinguishes the creditor balance. The lease term then continues to 31 December 2005. The finance periods total 6 – 1 = 5.

Step 4: Calculate the interest to be charged to the periods. The question requires the use of the sum-of-digits method of allocating interest.

Sum of digits = $n(n + 1)/2$, where n is the number of finance periods

Sum of digits = $(5 × 6)/2 = 15$

<i>Period</i>	<i>Capital at start</i>	<i>Payment</i>	<i>Outstanding during period</i>	<i>Interest to be allocated</i>	<i>Capital at end</i>
	\$	\$	\$	\$	\$
1/1/03	100,000	(20,000)	80,000	20,000 × 5/15 = 6,667	86,667
1/7/03	86,667	(20,000)	66,667	20,000 × 4/15 = 5,333	72,000
1/1/04	72,000	(20,000)	52,000	20,000 × 3/15 = 4,000	56,000
1/7/04	56,000	(20,000)	36,000	20,000 × 2/15 = 2,667	38,667
1/1/05	38,667	(20,000)	18,667	20,000 × 1/15 = 1,333	20,000
1/7/05	20,000	(20,000)	–	–	–
		<u>(120,000)</u>		<u>(20,000)</u>	

Note: The full allocation is given above for illustration purposes only. In order to answer this question the calculation need only go as far as 1/7/04 – that is, to calculate the entries for 2003 and the creditor due within one year (i.e. payable in 2004) for part (c).

The accounting entries for the year to 31 December 2003 are as follows:

		\$	\$
Debit	Asset	100,000	
Credit	Lease creditor		100,000
<i>Being the acquisition of the asset under finance lease on 1 January.</i>			
Debit	Finance lease creditor	28,000	
Debit	Finance lease interest	12,000	
Credit	Bank		40,000
<i>Being the lease repayments on 1 January and 1 July allocated between interest and capital.</i>			
Debit	Depreciation	27,000	
Credit	Accumulated depreciation		27,000
<i>Being the depreciation charge for the asset for the year (\$100,000 – residual value \$19,000 (\$20,000 × 95%) = \$81,000; \$81,000/3 years = \$27,000.)</i>			

(c) Extracts from accounts: Caps Balance Sheet at 31 December 2003

	\$	
Non-current assets		
Plant and machinery (\$100,000 – \$27,000)	73,000	
Current liabilities		
Finance lease creditor (\$40,000 – \$6,667)	33,333	
Non-current liabilities		
Finance lease creditor (\$72,000 – \$33,333)	38,667	



Solution 6

- (a) *Step 1:* Confirm classification as a finance lease – given in question
Step 2: Calculate the total finance charge:

	\$	
Total repayments (4 × \$10,000)	40,000	
Capital cost of the asset	<u>31,500</u>	
Total interest to be allocated	<u>8,500</u>	

Step 3: Establish the number of finance periods over which to allocate interest. There are four repayments and they are payable in arrears. The final payment is due on 31 December 2006 which is the end of the lease term. The lessee is therefore getting funding for the entire lease term and so the interest should be allocated over all four periods. Finance periods total four.

Step 4: Calculate the interest to be charged to the periods. The question requires the use of the actuarial method of allocating interest and requires the use of the approximate rate of 10 per cent.

<i>Period</i>	<i>Capital at start</i>	<i>Interest at 10%</i>	<i>Payment</i>	<i>Capital at end</i>
	\$	\$	\$	\$
31/12/03	31,500	3,150	(10,000)	24,650
31/12/04	24,650	2,465	(10,000)	17,115
31/12/05	17,115	1,712	(10,000)	8,827
31/12/06	8,827	<u>1,173*</u>	<u>(10,000)</u>	
		<u>8,500</u>	<u>(40,000)</u>	

* Rounding.

Note: The full allocation is given above for illustration purposes only. In order to answer this question the calculation need only go as far as 31/12/03 – that is, to calculate the entries for 2003. The creditor due within one year is not asked for in this question.

The accounting entries for the year to 31 December 2003 are as follows:

		\$	\$
Debit	Asset	31,500	
Credit	Lease creditor		31,500
<i>Being the acquisition of the asset under finance lease on 1 January.</i>			
Debit	Finance lease creditor	6,850	
Debit	Finance lease interest	3,150	
Credit	Bank		10,000
<i>Being the lease repayment on 31 December 2003 allocated between interest and capital.</i>			
Debit	Depreciation	7,875	
Credit	Accumulated depreciation		7,875
<i>Being the depreciation charge for the asset for the year (\$31,500/4 years).</i>			

(b) Sharpmate – financial statements for the year ended 31 December 2003.

Obligations under finance leases

The minimum lease payments payable under finance leases are as follows:

	\$
Not later than 1 year	10,000
Later than 1 year and not later than 5 years	20,000
Later than 5 years	—
Total minimum lease payments	<u>30,000</u>
Less interest allocated to future periods	5,350
Present value of the lease payments	<u>24,650</u>

Note: The present value of \$24,650 is the net obligation outstanding at 31 December 2003. You can check this is correct by looking at the interest calculation table above – the capital at the end of year 2003 is \$24,650.



Solution 7

(a) *Step 1:* Confirm classification as a finance lease – given in question.

Step 2: Calculate the total finance charge:

	\$
Total repayments 6 × \$40,000	240,000
Capital cost of the asset	<u>180,000</u>
Total interest to be allocated	<u>60,000</u>

Step 3: Establish the number of finance periods over which to allocate interest.

There are six repayments and they are payable in arrears. The final payment is due on 30 September 2008, which is the end of the lease term. The lessee is therefore getting funding for the entire lease term and so the interest should be allocated over all six periods. Finance periods total six.

Step 4: Calculate the interest to be charged to the periods.

The question requires the use of the sum-of-digits method of allocating interest.

sum of digits = $n(n + 1)/2 = (6 \times 7)/2 = 21$

<i>Period</i>	<i>Capital at start</i> \$	<i>Interest to be allocated</i> \$	<i>Payment</i> \$	<i>Capital at end</i> \$
30/09/03	180,000	$\$60,000 \times 6/21 = 17,143$	(40,000)	157,143
30/09/04	157,143	$\$60,000 \times 5/21 = 14,286$	(40,000)	131,429
30/09/05	131,429	$\$60,000 \times 4/21 = 11,429$	(40,000)	102,858
30/09/06	102,858	$\$60,000 \times 3/21 = 8,571$	(40,000)	71,429
30/09/07	1,429	$\$60,000 \times 2/21 = 5,714$	(40,000)	37,143
30/09/08	37,143	$\$60,000 \times 1/21 = 2,857$	(40,000)	–
		<u>60,000</u>	<u>240,000</u>	

Note: The full allocation is given above for illustration purposes only. In order to answer this question the calculation need only go as far as 30/09/04; that is, to calculate the entries for the year ended 30 September 2003 and the creditor due within one year which can only be calculated by calculating the interest allocated to 2004.

The accounting entries for the year to 30 September 2003 are as follows:

Debit	Asset	\$ 180,000	
Credit	Lease creditor		\$ 180,000
<i>Being the acquisition of the asset under finance lease on 1 October 2002.</i>			
Debit	Finance lease creditor	22,857	
Debit	Finance lease interest	17,143	
Credit	Bank		40,000
<i>Being the lease repayment on 30 September 2003 allocated between interest and capital.</i>			
Debit	Depreciation	18,000	
Credit	Accumulated depreciation		18,000
<i>Being the depreciation charge for the asset for the year (\$180,000/10 years – Campbells expect to use the asset for its entire useful life by exercising the secondary lease term.)</i>			

(b) Campbells: financial statements for the year ended 30 September 2003 (extracts)

Income statement

<i>Operating expenses</i>	\$
Depreciation charge	18,000
Finance lease interest	17,143

Balance sheet

<i>Non-current assets</i>	
Plant and machinery (\$180,000 – \$18,000)	162,000
<i>Current liabilities</i>	
Finance lease creditor (\$40,000 – \$14,286)	25,714
<i>Non-current liabilities</i>	
Finance lease creditor (\$157,143 – \$25,714)	131,429

Inventories and Construction Contracts

15

LEARNING OUTCOME

After completing this chapter you should be able to:

- ▶ explain and apply the accounting rules contained in IAS's dealing with ... inventories.

The syllabus topics covered in this chapter are as follows:

- Inventories (IAS 2);
- Construction contracts and related financing costs (IAS 11 & 23): determination of cost, net realisable value, the inclusion of overheads and the measurement of profit on uncompleted contracts.

15.1 Introduction

This chapter will cover two specific areas: inventories and construction costs. They are dealt with in separate accounting standards.

We will look first at IAS 2 *Inventories*, which prescribes the accounting treatment for inventories. The standard provides guidance on the amount of cost to be recognised as an asset and carried forward until the related revenues are generated. The standard also gives guidance on what constitutes cost and how to write down the asset to net realisable value. Chapter 22 discusses inventory management.

IAS 11 *Construction Contracts* prescribes the accounting treatment of revenue and costs associated with construction contracts. The standard gives guidance on how to recognise contract revenues and associated costs and how these amounts should be recorded and disclosed.

15.2 IAS 2 inventories

15.2.1 Definition of inventories

The standard defines inventories as assets:

- held *for sale* in the ordinary course of business (like items of clothing in a retail clothing business);

- in the *process of production* for such sale (like cloth in a clothing manufacturing business); or
- in the form of materials or *supplies to be consumed* in the production process or in the rendering of services (like thread and buttons in a clothing manufacturing business).

15.2.2 Measurement

The underlying principle of IAS 2 is that inventories should be measured at the lower of cost and net realisable value.

- *Net realisable value* is the estimated selling price (in the normal course of business) less the estimated costs of completion and the estimated costs of making the sale.

Inventories are usually written down to net realisable value, item by item or groups of similar items where it is not practical to evaluate separate items.

- *Cost* should comprise all costs of purchase, costs of conversion (if manufacturing) and other costs incurred in bringing the inventories to their present location and condition.

15.2.3 Determining cost

- *Costs of purchase* include the purchase price, import duties and other taxes (to the extent that they are not recoverable from the tax authority), handling costs and other costs directly attributable to the acquisition.
- *Costs of conversion* include costs directly related to the units being produced, for example, direct labour costs. The costs also include an allocation of fixed and variable overhead that are incurred, in converting materials into finished goods.
- *Variable production overheads* are those indirect costs of production that vary directly with the volume being produced, for example indirect materials and indirect labour.
- *Fixed production overheads* are those indirect costs of production that remain constant irrespective of the numbers of units produced, for example depreciation of factory buildings and equipment and the cost of factory management and administration.
- *Financing costs*, if the requirements of IAS 23 are satisfied financing costs can be included (see Section 13.10).

15.2.4 Costs not included in cost of inventory

Examples of costs excluded from the cost of inventories and recognised as expenses in the period in which they are incurred are:

- abnormal amounts of wasted materials, labour or other production costs;
- storage costs, unless those costs are necessary in the production process before a further production stage;
- administrative overheads that do not contribute to bringing inventories to their present location and condition;
- selling and distribution costs.

15.2.5 Allocation of overheads

The allocation of fixed production overheads to the cost of production is based on the normal capacity of the business. Any abnormal production problems that occur during the period should be charged to that period's income statement.

Example 15.A

The following costs have been included in the month of July:

	\$
Cost of raw materials	20,000
Cost of related consumables	10,000
Direct wages	4,000
Indirect production costs	6,000
Power	1,000
Administration – production	1,200
Administration – general	1,100
Selling and marketing costs	2,300
Depreciation	3,950

Additional information

1. All administration and 40 per cent of indirect production costs are fixed.
2. Depreciation figure above includes \$1,850, which relates to the production equipment.
3. 95 per cent of the power relates to the production of goods.
4. There was a breakdown during the month and 10 per cent of the month's production was lost.
5. During July 250,000 units were produced.

Calculate the unit cost of the goods.

Solution

The costs that can be charged to the cost of the goods are as follows:

	\$
Raw material costs	20,000
Cost of related consumables	10,000
Direct wages	4,000
Variable indirect production costs (60% – remaining 40% is a fixed cost)	3,600
Power (95%)	950
Depreciation	<u>1,850</u>
	40,400
Fixed indirect production costs (normal activity of 90% × 40% fixed element × 6,000)	2,160
Fixed production administration (90% × \$1,200)	<u>1,080</u>
Total cost	<u>43,640</u>
Cost per unit	17.5¢

Note that fixed costs are allocated based on the normal level of activity – the question tells us that 10 per cent of production is lost due to a breakdown. The costs associated with this are not included in the cost of inventory but instead charged to the income statement in the period in which the loss occurred.

Other costs can be included in the cost of inventories if they have been incurred to bring the goods to their present location or condition, for example the design costs of specific goods.

15.2.6 Calculation of costs

Inventory should be valued at either cost itself or reasonably close approximations to actual cost, the most common methods of valuation are:

- (a) Actual unit cost.
- (b) *First in first out (FIFO)*. The inventory is assumed to consist of the latest purchases made which cover the quantity in inventory and is priced accordingly.

- (c) *Average cost.* The weighted average cost at which an inventory item has been purchased during the period is taken.
- (d) *Standard cost.* This is acceptable, provided that the standard costs are reviewed frequently to ensure that they bear a reasonable relationship to actual costs during the period.
- (e) *Selling price less gross profit margin.* This method is acceptable only if it can be demonstrated that it gives a reasonable approximation of the actual cost.

The same basis must be used for all inventories that are similar in nature or use. Inventories of a different nature or use can be valued on a different basis.

15.2.7 Allowed alternative method

When IAS 2 was revised in 2003 the allowed alternative method of last in first out was removed. IAS 2 now has no allowed alternative treatment.

15.2.8 Disclosures for inventories

The financial statements should disclose:

- (a) the accounting policies adopted in measuring inventories including the cost formula used;
- (b) the total amount of inventories in classifications appropriate to the business;
- (c) the carrying amount of inventories carried at net realisable value.

15.3 IAS 11 construction contracts

15.3.1 General principle

A construction contract is a contract for the construction of a single asset or a combination of assets that are related. Contracts can often span more than one accounting period and this creates additional accounting problems:

- how much revenue should be included in the income statement?
- how much should be charged for related costs?
- how much profit should be recognised in the period in respect of this contract?

Normally revenues and profits are only recognised in the income statement once they are realised. However, the nature of construction contracts can mean that the contract is only invoiced and revenues realised on completion of the contract. The income statement must show a fair representation of the activities of the entity for the period. Here the prudence concept and the matching concept are head to head.

The matching concept wins and, for the sake of the financial statements showing a fair presentation of the activities of the entity and providing useful and relevant information to users, we include an appropriate part of revenue and profits of the contract in the period in which the activity has taken place.

Each contract must be accounted for separately and then the totals aggregated and included in the financial statements.

15.3.2 Accounting treatment

When the outcome of a contract can be assessed with reasonable certainty, IAS 11 provides that contract revenues and costs can be recognised according to the stage of completion of the contract. The stage of completion is usually assessed and then certified by a professional surveyor.

The treatment required by IAS 11 results in our accounting entries being based, to a great extent, on judgement rather than on actual transactions.

The economic reality with a construction contract is that it may span more than one accounting period and the related invoice may not be raised until the contract is completed. However, the contractor will not wish to bear the full cost of financing the project throughout its duration, so the customer will often pay for stages of work completed on the contract. These interim payments are known as *progress payments* and are usually paid once a piece of work completed has been certified by a surveyor or other professional.

As progress payments are not for the completed project they are not credited directly to sales or turnover, as would happen with a completed sale, but are recorded for each invoice raised during the course of the contract.

The recording for invoices raised for construction contracts is:

- We raise an invoice

Debit	Receivables
Credit	Progress payments

- We receive payment

Debit	Bank
Credit	Receivables

This is fine for the invoice-raising, but when is the sales revenue recorded?

Well, as we noted above, we must include an appropriate part of total revenue and profits of the contract in the accounting period where there is activity on the contract. However, since no final transaction has taken place it is the preparer who must decide how much should be included for revenue, related costs and profit.

The standard gives guidance as to how these figures should be arrived at (discussed below). However, the recording is as follows:

- We record sales revenue

Debit	Progress payments
Credit	Sales revenue

- We match related costs

Debit	Cost of sales
Credit	Contract costs

Note

- When revenue is recorded the debit entry is to progress payments – this could be considered to be like a contract account, recording all customer monies received during the contract and recording any revenues recognised. Remember that the trade receivables account is only affected by the raising of an invoice – in the entry seen above.
- Any contract costs not yet transferred to cost of sales (may have purchased all the materials for the contract at the start of the contract to secure discount) will be included within

assets in the balance sheet. As the costs are incurred, however, they are held within a contract cost account, there is one for each contract (because each contract must be accounted for separately) and then the balances are aggregated in the financial statements.

Accounting for construction costs affects a number of headings in the income statement and balance sheet:

1. Sales value of work completed is included in 'revenue' in the income statement. Related costs of the work completed are included in 'cost of sales' in the income statement.
2. If the contract is expected to be profitable overall, then an appropriate part of that profit is recognised within the income statement by the above entries.
3. If the contract is expected to make a loss overall, then all of the loss must be recognised as soon as it is anticipated, by adding the expected loss for future periods on to the cost of sales.
4. If the outcome of the contract cannot be measured with reasonable certainty (e.g. if the contract is at an early stage of completion), then revenue recognised must be made to equal contract costs in order to create no profit or loss in the period.
5. Any contract costs incurred but not yet transferred to cost of sales should be included within contract costs under the heading 'gross amounts due from customers for contract work' in the balance sheet.
6. Where sales revenue recognised exceeds the progress payments received, the balance should be included in 'gross amounts due from customers for contract work' within assets.
7. Where sales revenue recognised is less than the progress payments received, the balance should be included as a separate item within 'payables', as 'gross amounts due to customers for contract work'.

For the last two points, remember that the preparer decides the level of revenue to be included in the income statement at the end of the accounting period based on the stage of completion. However, this may not be the same as the work that has been completed and certified, so the figures for revenue and for progress payments received are unlikely to match unless a certification takes place at the balance sheet date.

We are now going to look at the detailed accounting for construction contracts using examples wherever possible to reinforce a practical understanding of the procedure.

15.3.3 Sales revenue

In order to estimate an appropriate part of contract revenue to be included in the income statement, we must first establish the stage of completion of each contract. There is no set rule on how to determine turnover, but the two main methods used in practice are:

- *By reference to the proportion of work done.* Established either by certification of work by the surveyor, or by comparing the costs incurred to date to the total contract costs anticipated to give an estimate of work completed so far.
- *By identifying specific points in the contract where the work completed has separately ascertainable sales values.* For example, a contract for residential property development could have a sales value for the building of a house, and separate values for the construction of a garage, swimming pool, stables, etc.

Sales revenue should be recognised based on the activity on the contract in the period, regardless of the profit that is likely.

Remember that items included in the income statement are recorded only once, so for a contract that spans, say, four years, we must deduct any contract revenues previously recognised. The calculations will be:

- Year 1 (Total contract revenue × % stage of completion) = sales revenue for year 1
- Year 2 (Total contract revenue × % stage of completion) – revenue recognised in year 1 = sales revenue for year 2
- Year 3 (Total contract revenue × % stage of completion) – revenue recognised in year 1 and 2 = sales revenue for year 3

Example 15.B

Moby has the following contract details for a contract that started in 20X2:

	20X2	20X3	20X4
Total contract sales value	\$10m	\$11m	\$11.5m
Estimated % completion	40%	75%	100%

Note that the total contract value has changed over the duration of the contract – this can only be included in the revenue calculations if these amendments have been agreed with the customer. This is a common occurrence as the costs associated with labour and materials during the course of the contract may change, an unforeseen obstacle may occur which is beyond the control of the contractor, or the customer specifications may change.

The revenue to be recognised is as follows:

	20X2 \$m	20X3 \$m	20X4 \$m
Revenues recognisable to date:			
20X2: 40% × \$10m	4.00		
20X3: 75% × \$11m		8.25	
20X4: 100% × \$11.5m			11.50
Less revenues recognised in prior periods		(4.00)	(8.25)
Revenue for the period	<u>4.00</u>	<u>4.25</u>	<u>3.25</u>

15.3.4 Recognisable contract profits

The recognition of contract profit is usually based on the percentage of work completed on the contract.

The amount of revenue and profit to be included are both calculated (based on work done) and the cost of sales figure is the balancing figure

Example 15.C

Plusman contract A commenced in 20X2 and has the following details for the year ended 31 December 20X3:

Total contract value	\$80m
Costs incurred to date	\$50m
Estimated costs to complete	\$7m
Completion	80%
Profit recognised in 20X2	\$11m

The first step is to calculate the total estimated profit on the contract:

	\$m	\$m
Total sales value of the contract		80
Less: contract costs incurred to date	(50)	
estimated costs to completion	<u>(7)</u>	
Total estimated contract costs		(57)
Total estimated contract profit		<u>23</u>

The second step is to establish the stage of completion of the contract and calculate the profit recognisable to date:

$$\begin{aligned} &\text{Total estimated contract profit} \times \% \text{ completion of the contract} \\ &= \text{recognisable profit to date } \$23\text{m} \times 80\% \text{ completion} = \$18.4\text{m} \end{aligned}$$

The third step is to calculate the profit reportable for this accounting period:

	<i>\$m</i>
Recognisable profit to date	18.4
Less cumulative profit recognised in prior periods	(11.0)
Profit recognisable in this period	<u>7.4</u>

In this case turnover and cost of sales will be recognised to give the \$7.4m profit in the income statement for the period.

15.3.5 Expected contract losses

Whenever an overall contract loss is expected, the loss must be recognised as soon as it is anticipated.

The first step, calculating the overall profit or loss on the contract, would still be performed. However, if the overall contract is loss-making the full amount of the loss will be recognised immediately.

Example 15.D

Plusman's contract B commenced during 20X3 and will complete in 20X4. It has the following details for the year ended 31 December 20X3:

Total contract value	\$70m
Costs incurred to date	\$40m
Estimated costs to complete	\$39m
Completion	50%

The first step is to calculate the overall outcome for this contract:

	<i>\$m</i>	<i>\$m</i>
Total sales value of the contract		70
Less: contract costs incurred to date	(40)	
estimated costs to completion	<u>(39)</u>	
Total estimated contract costs		<u>(79)</u>
Total estimated contract loss		<u>(9)</u>

Contact B is 50 per cent complete and revenue recognised must reflect this activity in the period, so the fact that the contract is loss-making does not remove the need to recognise sales revenue.

If we follow the previous example the revenues and costs will occur as follows (50 per cent of revenue and 50 per cent of costs, resulting in 50 per cent of loss in the period. This would leave the same again to be recognised next year).

Income statement (extract)

	2003	2004
	<i>\$m</i>	<i>\$m</i>
Sales revenue (50% in each of the two years)	35.0	35.0
Cost of sales	<u>(39.5)</u>	<u>(39.5)</u>
Loss on contract	<u>(4.5)</u>	<u>(4.5)</u>

IAS 11 and prudence require that we recognise the whole of the loss as soon as it is anticipated and so the \$4.5m loss expected to occur in 20X4 is pulled back and charged to 20X3's income statement through cost of sales. What it

does mean is that cost of sales must be charged with an amount that results in the full contract loss of \$9m being recognised immediately. The income statement extract now shows:

Income statement (extract)		
	2003	2004
	\$m	\$m
Sales revenue (50% in each of the two years)	35	35
Cost of sales (39.5 + 4.5)	(44)	(35)
Profit/(loss) on contract	<u>(9)</u>	<u>—</u>

We know that cost of sales must be charged with \$44m to ensure that the full contract loss of \$9m is recognised in the first year (i.e. as soon as it is anticipated).

In this case the cost of sales charge is made up of two elements:

- 50 per cent of total contract costs of \$79m = \$39.5m;
- the remaining amount of the loss that is expected to occur next year, which is \$4.5m.

15.3.6 Uncertain outcome

If the outcome of the contract cannot be estimated with reasonable certainty then no profit should be recognised. However, the income statement must still reflect the activity in the period and so an appropriate part of revenue and cost of sales must be recognised.

Example 15.E

Plusman's contract C commenced in 20X3 and has the following details for the year ended 31 December 20X3:

Total contract value	\$40m
Costs incurred to date	\$3m
Estimated costs to complete	\$30m
Completion	10%

Plusman has only just commenced work on this contract and cannot be certain of its outcome at the year-end date. The overall contract is expected to be profit-making. However, the contract has only just started (10 per cent complete) and so the outcome cannot be measured with reasonable certainty. In this case, prudence dictates that no profit should be recognised in the year ended December 20X3.

Revenue would normally include 10 per cent of revenue and cost of sales would be made to match the revenue to create a nil profit:

Income statement (extract)	
	\$m
Sales revenue (10% × \$40m)	4
Cost of sales	(4)
Profit/loss on contract	<u>—</u>

However, in this case we cannot transfer \$4m to cost of sales as we have only incurred costs of \$3m to date. Where costs to date are less than the required cost of sales charge, we instead restrict the revenue figure to the level of costs incurred to date. The income statement for 20X3 would therefore include the following for contract C:

Income statement (extract)	
	\$m
Sales revenue	3
Cost of sales	(3)
Profit/loss on contract	<u>—</u>

15.3.7 Inventories

Any contract costs incurred but not yet transferred to cost of sales should be included within contract costs under the heading 'gross amounts due from customers for contract work' in the balance sheet.

Remember that each contract is accounted for separately so some contracts may have inventories, some may not. Each contract is calculated and then the total from each contract is aggregated in the balance sheet.

Example 15.F

Let us look at Plusman's contract A again.

Plusman's contract A commenced in 20X2 and has the following details for the year ended 31 December 20X3:

Total contract value	\$80m
Costs incurred to date	\$50m
Estimated costs to complete	\$7m
Completion	80%
Profit recognised in 20X2	\$11m

Solution

Costs incurred to date total \$50m:

		\$m	\$m
Debit	Contract costs	50	
Credit	Bank/payables		50

The amount we will have charged to cost of sales to date (20X2 and 20X3) is based on the percentage completion \times the total contract costs ($80\% \times \$57m$) = \$45.6m. Over the two years of the contract we will have recorded:

Transfer to cost of sales:

		\$m	\$m
Debit	Cost of sales	45.6	
Credit	Contract costs		45.6

There is therefore a balance remaining on contract costs at 31 December 20X3 of \$4.4m ($\$50m - \$45.6m$). This amount represents contract costs incurred that relate to a future activity and is therefore recognised as an asset and will be included in 'gross amounts due from customers'.

15.3.8 Receivables

Let us stay with this example and look at the impact on receivables in the balance sheet. Where sales revenue recognised to date exceeds the progress payments received, the balance should be included in the balance sheet as an asset and referred to as 'unbilled contract revenue' within the heading 'gross amounts due from customers for contract work'.

The progress payments received to date at 31 December 20X3 for Contract A totalled \$60m:

		\$m	\$m
Debit	Bank	60	
Credit	Progress payments		60

The total sales revenue recognised to date at 31 December 20X3 is \$64m (80% × \$80m).

		<i>\$m</i>	<i>\$m</i>
Debit	Progress payments	64	
Credit	Sales revenue		64

This results in a \$4m receivable in respect of this contract. We have calculated (based on percentage completion) that sales and therefore amounts due from customers to date totals \$64m and the customer has paid \$60m to date. The remaining \$4m is therefore a receivable and is referred to as ‘unbilled contract revenue’ within ‘gross amounts due from customers for contract work’.

IAS 11 specifies that an entity should present the gross amount due from customers for contract work as an asset. Note that it does not specify where the asset should be recorded.



In an examination question gross amounts due from customers should be treated as a current asset.

15.3.9 Payables

Where sales revenue recognised to date is less than the progress payments received the balance should be included as a separate item within payables, and referred to as ‘gross amounts due to customers for contract work’.

Let us assume that for Contract A the progress payments received at 31 December 2003 totalled \$70m.

		<i>\$m</i>	<i>\$m</i>
Debit	Bank	70	
Credit	Progress payments		70

The total sales revenue recognised to date at 31 December 20X3 is \$64m (80% × \$80m).

		<i>\$m</i>	<i>\$m</i>
Debit	Progress payments	64	
Credit	Sales revenue		64

In this case we have calculated that \$64m is due on this contract and the customer has already paid \$70m. We have received customer monies that have not yet been earned and so the balance of \$6m is included within payables as ‘gross amounts due to customers for contract work’ (included as a liability until the money has been earned through next year’s activity on the contract).

IAS 11 specifies that an entity should present the gross amount due to customers for contract work as a liability. It does not state how the liability should be included.



In an examination question gross amounts due to customers should be included as a current liability.

15.3.10 Provisions for foreseeable losses

Whenever a loss is provided for it is charged to the income statement and the corresponding credit entry is made in the balance sheet. IAS 11 permits foreseeable losses to be deducted from 'gross amounts due from customers for contract work' on a contract by contract basis, in some cases this will turn an amount due from the customer into an amount due to the customer, see Section 15.3.13. Foreseeable losses charged to cost of sales are therefore recorded as:

Debit	Cost of sales
Credit	Contract costs/unbilled contract revenue

15.3.11 Disclosure requirements

An entity should disclose the following for construction contracts:

- (a) contract revenue recognised;
- (b) methods used to determine contract revenue recognised;
- (c) methods used to determine stage of completion of contracts;
- (d) for work-in-progress:
 - (i) costs incurred and profits less losses to date;
 - (ii) advances received (i.e. payments from customers before the related work is performed);
 - (iii) retentions (i.e. progress billings not paid until satisfaction of conditions in contract or until defects are rectified).

15.3.12 Illustrations from IAS 11

IAS 11 also contains illustrations showing the procedure. They are given below and you should work through them once you have fully understood the procedure described above.

15.3.12.1 Illustration 1

A contractor has a fixed-price contract for \$9,000 to build a bridge. The initial amount of revenue agreed in the contract is \$9,000. The contractor's initial estimate of contract costs is \$8,000. It will take 3 years to build the bridge.

By the end of year 1, the contractor's estimate of contract costs has increased to \$8,050.

In year 2, the customer approves a variation resulting in an increase in contract revenue of \$200 and estimated additional contract costs of \$150. At the end of year 2, costs incurred include \$100 for standard materials stored at the site to be used in year 3 to complete the project.

The contractor determines the stage of completion of the contract by comparing the proportion of contract costs incurred for work performed to date with the latest estimated total contract costs. A summary of the financial data during the construction period is as follows:

	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>
	\$	\$	\$
Initial amount of revenue agreed in contract	9,000	9,000	9,000
Variation	—	200	200
Total contract revenue	<u>9,000</u>	<u>9,200</u>	<u>9,200</u>
Contract costs incurred to date	2,093	6,168	8,200
Contract costs to complete	5,957	2,032	—
Total estimated contract costs	<u>8,050</u>	<u>8,200</u>	<u>8,200</u>
Estimated profit	<u>950</u>	<u>1,000</u>	<u>1,000</u>
Stage of completion	26%	74%	100%

The stage of completion for year 2 (74 per cent) is determined by excluding from contract costs incurred for work performed to date the \$100 of standard materials stored at the site for use in year 3.

The amounts of revenue, expenses and profit recognised in the income statement in the three years are as follows:

		<i>To date</i>	<i>Recognised in prior year</i>	<i>Recognised in current year</i>
		\$	\$	\$
Year 1	Revenue (9,000 × .26)	2,340		2,340
	Expenses (8,050 × .26)	<u>2,093</u>	—	<u>2,093</u>
	Profit	<u>247</u>	—	<u>247</u>
Year 2	Revenue (9,200 × .74)	6,808	2,340	4,468
	Expenses (8,200 × .74)	<u>6,068</u>	<u>2,093</u>	<u>3,975</u>
	Profit	<u>740</u>	<u>247</u>	<u>493</u>
Year 3	Revenue (9,200 × 1.00)	9,200	6,808	2,392
	Expenses	<u>8,200</u>	<u>6,068</u>	<u>2,132</u>
	Profit	<u>1,000</u>	<u>740</u>	<u>260</u>

15.3.12.2 Illustration 2

A contractor has reached the end of its first year of operation. All its contract costs incurred have been paid for in cash and all its progress billings and advances have been received in cash. Contract costs incurred for contracts B, C and E include the costs of materials that have been purchased for the contract but which have not been used in contract performance to date. For contracts B, C and E the customers have made advances to the contractor for work not yet performed.

The status of its five contracts in progress at the end of year 1 is as follows:

	<i>Contract</i>					<i>Total</i>
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Contract revenue recognised	145	520	380	200	55	1,300
Contract expenses recognised	110	450	350	250	55	1,215
Expected losses recognised	—	—	—	40	30	70
Recognised profits less recognised losses	<u>35</u>	<u>70</u>	<u>30</u>	<u>(90)</u>	<u>(30)</u>	<u>15</u>
Contract costs incurred in the period	110	510	450	250	100	1,420
Contract costs incurred recognised as contract expenses	<u>110</u>	<u>450</u>	<u>350</u>	<u>250</u>	<u>55</u>	<u>1,215</u>
Contract costs that relate to future activity recognised as an asset	<u>—</u>	<u>60</u>	<u>100</u>	<u>—</u>	<u>45</u>	<u>205</u>
Contract revenue (see above)	145	520	380	200	55	1,300
Progress billings	<u>100</u>	<u>520</u>	<u>380</u>	<u>180</u>	<u>55</u>	<u>1,235</u>
Unbilled contract revenue	<u>45</u>	<u>—</u>	<u>—</u>	<u>20</u>	<u>—</u>	<u>65</u>
Advances	<u>—</u>	<u>80</u>	<u>20</u>	<u>—</u>	<u>25</u>	<u>125</u>

Let us examine this information step by step.

The first section shows us the information required for the Income statement:

	<i>Contract</i>					<i>Total</i>
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Contract revenue recognised	145	520	380	200	55	1,300
Contract expenses recognised	110	450	350	250	55	1,215
Expected losses recognised	—	—	—	40	30	70
Recognised profits less recognised losses	<u>35</u>	<u>70</u>	<u>30</u>	<u>(90)</u>	<u>(30)</u>	<u>15</u>

The totals provide us with the detail we need to complete the income statement:

Income statement (extract)	<i>\$000</i>	<i>\$000</i>
Contract revenue		1,300
Contract expenses	1,215	
Expected losses	<u>70</u>	<u>1,285</u>
Profit		<u>15</u>

The middle section provides information on the contract costs incurred and those recognised as contract expenses in the period and transferred to cost of sales:

	<i>Contract</i>					<i>Total</i>
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Contract costs incurred in the period	110	510	450	250	100	1,420
Contract costs incurred recognised as contract expenses	<u>110</u>	<u>450</u>	<u>350</u>	<u>250</u>	<u>55</u>	<u>1,215</u>
Contract costs that relate to future activity recognised as an asset	<u>—</u>	<u>60</u>	<u>100</u>	<u>—</u>	<u>45</u>	<u>205</u>

The third section provides information on the revenue recognised in the period and the progress billings:

	<i>Contract</i>					<i>Total</i>
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Contract revenue (see above)	145	520	380	200	55	1,300
Progress billings	<u>100</u>	<u>520</u>	<u>380</u>	<u>180</u>	<u>55</u>	<u>1,235</u>
Unbilled contract revenue	<u>45</u>	<u>—</u>	<u>—</u>	<u>20</u>	<u>—</u>	<u>65</u>

From the above we can now calculate the 'gross amounts due from/to customers for contract work'. This is calculated as the contract costs that relate to future activities plus the unbilled contract revenue less provisions for losses.

	<i>Contract</i>					<i>Total</i>
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Contract costs that relate to future activity recognised as an asset	0	60	100	0	45	205
Unbilled contract revenue	45	0	0	20	0	65
Expected losses recognised	0	0	0	(40)	(30)	(70)
'gross amounts due from customers for contract work'	45	60	100	0	15	220
'gross amounts due to customers for contract work'	0	0	0	(20)	0	(20)

Note that contract D has unbilled contract revenue of \$20,000 but with the expected loss this is turned in to an amount due to the customer and is treated as a liability in the balance sheet.

Payments received in advance from customers are shown separately as liabilities:

	<i>Contract</i>					<i>Total</i>
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Payments in advance shown as a liability	—	<u>80</u>	<u>20</u>	—	<u>25</u>	<u>125</u>

In summary the balance sheet entries for the five contracts would be:

	<i>\$000</i>
Payments due from customers for contract work, shown as an asset	220
Payments due to customers for contract work, shown as a liability	(20)
Payments in advance, shown as a current liability	(125)

IAS 11 also requires the following amounts to be disclosed:

	<i>\$000</i>
Contract revenue recognised as revenue in the period	1,300
Contract costs incurred and recognised profits (less recognised losses) to date	1,435
Advances received, presented as a current liability	(125)
Gross amount due from customers for contract work – presented as an asset	220
Gross amount due to customers for contract work – presented as a liability	(20)

The above figures can also be arrived at as follows:

	<i>Contract</i>					<i>Total</i>
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Contract costs incurred	110	510	450	250	100	1,420
Recognised profits less recognised losses	35	70	30	(90)	(30)	15
	145	580	480	160	70	1,435
Progress billings	(100)	(520)	(380)	(180)	(55)	(1,235)
Due from customers	45	60	100		15	220
Due to customers				(20)		(20)

15.3.13 A comprehensive example

This worked example includes all of the headings discussed above.

Example 15.G

Crave has three contracts in progress during the year and the following details are available for the year ended 31 December 2003:

<i>Contract</i>	<i>Alpha</i>	<i>Beta</i>	<i>Gamma</i>
Commenced	June 20X2	Jan 20X3	Nov 20X3
Total contract value	\$90m	\$60m	\$100m
Costs incurred to date	\$70m	\$45m	\$15m
Estimated costs to complete	\$10m	\$23m	\$70m
Completion	80%	60%	10%
Progress payments received	\$65m	\$32m	\$20m

Additional information

- Contract Alpha commenced during 20X2 and at 31 December 20X2 was 50 per cent complete; accordingly, appropriate amounts for revenue and profit were included in the 20X2 income statement.
- Crave has a policy of recognising profit on contracts once the contracts have reached a minimum of 30 per cent completion, to ensure that their outcome can be assessed with reasonable certainty.

Solution

	Sales revenue		
	<i>Alpha</i>	<i>Beta</i>	<i>Gamma</i>
	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>
Revenues recognisable to date			
Alpha (80% X \$90m)	72		
Beta (60% X \$60m)		36	
Gamma (10% X \$100m)			10
Revenues previously recognised			
Alpha (50% X \$90m)	(45)		
Revenues recognisable in the period	<u>27</u>	<u>36</u>	<u>10</u>

Total sales revenue that is recognisable and will be included in the income statement for the year ended 31 December 20X3 is \$73m (27 + 36 + 10).

Contract profits and losses

	Alpha \$m	Beta \$m	Gamma \$m
Overall contract position			
Total contract value	90	60	100
Total contract costs (incurred to date plus costs to complete)	<u>(80)</u>	<u>(68)</u>	<u>(85)</u>
Contract profit/(loss)	<u>10</u>	<u>(8)</u>	<u>15</u>
Profits/losses recognisable to date			
Alpha (80% X \$10m)	8		
Beta (100% X (loss of \$8m))		(8)	
Gamma (Nil – only 10% complete)			–
Amounts previously recognised			
Alpha (50% X \$10m)	<u>(5)</u>		
Profits/(losses) in the period	<u>3</u>	<u>(8)</u>	<u>–</u>

Using the revenues and profits calculated above we can now draft the income statement extract for Crave for December 20X3:

Income statement (extract)

	Alpha \$m	Beta \$m	Gamma \$m	Total \$m
Sales revenue	27	36	10	73
Cost of sales	<u>(24)</u>	<u>(44)</u>	<u>(10)</u>	<u>78</u>
Contract profits/(losses)	<u>3</u>	<u>(8)</u>	<u>–</u>	<u>(5)</u>

Note

- Alpha – we must remember to deduct the revenues and profits previously recognised.
- Beta – the overall contract is expected to make a loss of \$8m and the entire loss must be recognised immediately. The cost of sales figure therefore, includes cost of sales for 20X3 of \$40.8m (60% × total contract costs of \$68m) plus anticipated loss for 20X4 of \$3.2m (40% X \$8m); rounded to \$41m and \$3m.
- Gamma – the contract is only 10 per cent complete and so 10 per cent of revenue can be recognised but no profit must be recognised as the contract outcome cannot be assessed with reasonable certainty. Cost of sales is therefore charged with an amount to match revenue (provided that there is sufficient in contract costs from this contract to transfer to cost of sales).

Inventories

	Alpha \$m	Beta \$m	Gamma \$m	Total \$m
Contract costs incurred to date	70	45	15	
Transferred to cost of sales to date	<u>(64)</u>	<u>(41)</u>	<u>(10)</u>	
Balance contract costs that relate to future activities	<u>6</u>	<u>4</u>	<u>5</u>	<u>15</u>

Note: Alpha is 80 per cent complete to date and has therefore transferred 80 per cent of total contract costs to cost of sales over 20X2 and 20X3.

Receivables and payables

	Alpha \$m	Beta \$m	Gamma \$m	Total \$m
Progress payments received	65	32	20	
Sales revenue recognised to date	<u>72</u>	<u>36</u>	<u>10</u>	
Receivables – unbilled contract revenue	<u>7</u>	<u>4</u>		<u>11</u>
Payables – progress payments received			<u>(10)</u>	<u>(10)</u>

Summary

	<i>Alpha</i>	<i>Beta</i>	<i>Gamma</i>	<i>Total</i>
	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>
Inventories, contract costs that relate to future activities	6	4	5	15
Receivables – unbilled contract revenue	7	4	0	11
Expected loss recognised	0	(3)	0	(3)
Payments due from customers for contract work	13	5	5	23
Payments due to customers for contract work	0	0	(10)	(10)

15.4 Summary

Having completed this chapter we can now define and account for inventories, including the determination of cost and net realisable value. We can also explain the disclosures required by IAS 2 *Inventories*.

In addition, we can explain the principle of revenue recognition with regard to construction contracts. We can correctly account for construction contracts, including the treatment of losses, and explain the required disclosures required by IAS 11 *Construction Contracts*.

Revision Questions

15

? Question 1

Item code ZYX321 had 320 items in inventory at 31 March, the entity year end. The original cost of the inventory, according to the inventory control system, was \$5,000. Alternative valuations were obtained at 31 March for this inventory item. Which value should be used in the accounts at 31 March?

- (A) Net realisable value \$4,750
- (B) Original cost \$5,000
- (C) Replacement cost \$5,500
- (D) Selling price \$6,000

(2 marks)

Data for questions 2–4

Details of contract AB1375 are:

	<i>\$000</i>	<i>\$000</i>
Certified work completed		300
Costs incurred to date:		
Attributable to work completed	345	
Further costs attributable to partly completed work	<u>50</u>	
		395
Progress payments received		320
Expected further loss on completion		40

Using the above data, identify the correct entries for contract AB1375 items in Questions 2–4.

? Question 2

The revenue and cost of sales figure should be:

	<i>Revenue</i>	<i>Cost of sales</i>
	<i>\$000</i>	<i>\$000</i>
(A)	340	395
(B)	320	395
(C)	300	385
(D)	300	435

(2 marks)



Question 3

The liability shown in the balance sheet for 'progress payments received in advance' should be:

- (A) \$5,000
- (B) \$10,000
- (C) \$20,000
- (D) \$30,000

(2 marks)



Question 4

The asset shown in the balance sheet for 'gross amounts due from customers for contract work' should be:

- (A) \$0
- (B) \$10,000
- (C) \$50,000
- (D) \$395,000

(2 marks)



Question 5

	<i>\$000</i>
Total contract value	370
Certified work completed	320
Costs to date – attributable to work completed	360
Progress payments received	300
Expected further costs to completion	50

The amounts shown in the profit and loss accounts for Revenue and Cost of Sales should be:

	<i>Revenue</i>	<i>Cost of Sales</i>
	<i>\$000</i>	<i>\$000</i>
(A)	320	360
(B)	320	400
(C)	370	360
(D)	370	410

(2 marks)



Question 6

- (a) IAS 2 *Inventories* requires inventories of raw materials and finished goods to be valued in financial statements at the lower of cost and net realisable value.

Requirements

- (i) Describe the three methods of arriving at the cost of inventory which are benchmark treatments in IAS 2.

(4 marks)

- (ii) Explain how the cost of an inventory of finished goods held by a manufacturer would normally be arrived at when obtaining the figure for the financial statements. **(3 marks)**
- (b) Sampi is a manufacturer of garden furniture. The entity has consistently used FIFO (first in first out) in valuing inventory, but it is interested to know the effect on its inventory valuation of using weighted average cost instead of FIFO.

At 28 February 20X8 the entity had a inventory of 4,000 standard plastic tables, and has computed its value on each of the two bases as:

<i>Basis</i>	<i>Unit cost</i>	<i>Total value</i>
	\$	\$
FIFO	16	64,000
Weighted average	13	52,000

During March 20X8 the movements on the inventory of tables were as follows:

<i>Received from factory</i>		
<i>Date</i>	<i>Number of units</i>	<i>Production cost per unit</i>
		\$
8 March	3,800	15
22 March	6,000	18

<i>Sales</i>	
<i>Date</i>	<i>Number of units</i>
12 March	5,000
18 March	2,000
24 March	3,000
28 March	2,000

On a FIFO basis the inventory at 31 March 20X8 was \$32,400.

Requirements

Compute what the value of the inventory at 31 March 20X8 would be using weighted average cost.

(5 marks)

In arriving at the total inventory values you should make calculations to two decimal places (where necessary) and deal with each inventory movement in date order.

(Total marks = 12)



Question 7

K designs and installs computer systems for large entities and government organisations. Most of the entity's sales involve several months of activity and some contracts can take up to two years to complete.

The entity's trial balance at 30 September 20X0 was as follows:

	<i>\$000</i>	<i>\$000</i>
Contract A – Costs incurred to date	1,200	
Contract B – Costs incurred to date	3,100	
Contract A – Invoiced to client		2,000
Contract B – Invoiced to client		3,000
Contract A – Amount due from client	200	
Contract B – Amount due from client	300	
Sales revenue		14,000
Cost of sales	7,700	
Administration expenses	2,200	
Distribution costs	1,400	
Dividends received		480
Income tax		100
Dividends	1,200	
Non-current assets – cost	7,500	
Non-current assets – depreciation		1,300
Non-current asset investments	2,500	
Inventory at 30 September 20X0	560	
Trade receivables	1,160	
Bank	40	
Trade payables		380
Share capital		5,500
Accumulated profits		2,300
	<u>29,060</u>	<u>29,060</u>

Notes

- (i) The figures for sales revenue and cost of sales relate to work done during the year ended 30 September 20X0, excluding all transactions relating to Contracts A and B.
- (ii) K recognises sales revenue and profit on long-term contracts on the basis of the proportion of total contract price invoiced to customers. All anticipated losses are recognised as soon as they are foreseen. The entity's standard contract usually permits customers to withhold 10 per cent of the invoiced value of work done until the system has been installed and agreed to be satisfactory.
- (iii) Contract A commenced during the year ended 30 September 20X0. The contract has a total value of \$5 million. K anticipates that it will spend a further \$1.5 million in order to complete this contract.
- (iv) Contract B also commenced during the year ended 30 September 20X0. The contract has an agreed total value of \$4 million. There have been some problems with this project which were not anticipated when the contract was drafted. K expects to spend a further \$1.2 million in order to complete the contract. This includes \$800,000 of additional costs which relate to the unforeseen problems. K's lawyers are currently attempting to negotiate a revised contract price of \$4.8 million, although the customer is insistent that the system be completed for the original price. K's lawyers are 'reasonably confident' that they can make the customer pay for the additional costs. There is no possibility of these negotiations being completed before the financial statements have to be finalised.

- (v) Closing inventories at 30 September 20X0 included a batch of computer workstations intended for resale. These had cost K \$250,000, but they were sold for only \$120,000 in October 20X0. A new product was brought on to the market on 1 October 20X0 which reduced the market value of the workstations.

K's finance director has made the following points to the board:

- The entity should account for Contract B on the assumption that its eventual selling price will be \$4 million and not the \$4.8 million that the entity is seeking from the customer, even though there is a strong possibility that the higher amount will be obtained.
- The loss on the inventory sold during October 20X0 should be taken into account in the calculation of profit for the year ended 30 September 20X0, even though the information available at the year end suggested that the inventory would be sold at a profit.

Requirements

- (a) It has been suggested that there can be considerable inconsistency between entities in the manner in which they recognise profits on partly completed long-term contracts. Explain why this might be, and explain why IAS 11 permits the anticipation of such profits, despite the accounting problems which this may cause. **(8 marks)**
- (b) Explain why, for accounting purposes, K should assume that Contract B will be sold for \$4 million. **(5 marks)**
- (c) Explain why the loss on the workstations should be anticipated, even though it was not realised until after the year end. **(5 marks)**

(Total marks = 18)

? Question 8

Basset, a construction entity, prepares its accounts to 31 December 2001. During the year the entity undertook five contracts all of which commenced in the period and will require more than 12 months to complete.

The position of each contract at 31 December 2001 is as follows:

<i>Contract</i>	<i>1001</i>	<i>1002</i>	<i>1003</i>	<i>1004</i>	<i>1005</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Contract value	1,800	390	260	4,800	2,000
Certified work to date	1,010	240	200	1,500	1,700
Progress payments received	1,300	200	200	1,900	1,400
Costs to be transferred to cost of sales	1,010	240	200	1,200	1,300
Costs incurred to date	1,310	240	200	1,450	1,400

In addition to the amounts transferred to cost of sales, foreseeable losses are anticipated on two contracts: contract 1001 a loss of \$50,000 and contract 1002 a loss of \$80,000.

Basset recognise turnover based on the value of work certified at the balance sheet date.

Requirement

Prepare a summary statement showing profits and losses on all five contracts and the related balance sheet totals for each. **(20 marks)**

Solutions to Revision Questions

15

✓ Solution 1

The correct answer is (A), see Section 15.2.2.

IAS 2 requires inventory to be valued at cost or net realisable value whichever is the lower.

✓ Solution 2

The correct answer is (C), see Section 15.3.5.

The cost of sales must include the full provision for expected future losses:

$$345 + 40 = 385.$$

✓ Solution 3

The correct answer is (C), see Section 15.3.9.

The excess payments received in advance from customers is $320 - 300 = 20$.

✓ Solution 4

The correct answer is (B), see Section 15.3.7.

The provision for future losses is subtracted from further costs attributable to partly completed work, $50 - 40 = 10$.

✓ Solution 5

The correct answer is (A), see Section 15.3.5.

	<i>\$000</i>
Total contract:	
Contract price	370
Costs (360 + 50)	<u>410</u>
Loss	<u>(40)</u>
To date:	
Revenue	320
Cost of sales	<u>360</u>
Loss	<u>(40)</u>

\$40,000 loss is recognised, there is no need for a provision.



Solution 6

- (a) (i) 1. *First in first out.* Under FIFO, inventory is valued at the price of the most recent purchases, whether or not it is composed of these particular items.
 2. *Unit cost.* Inventory is valued at the price paid for each inventory item held.
 3. *Average cost.* Inventory is priced at the weighted average price at which each item has been purchased during the year.
 All these methods represent actual cost (method 2) or a reasonably close approximation to actual cost (methods 1 and 3).
 (ii) The cost of an inventory of finished goods would be arrived at by taking the cost of the labour and materials used in their manufacture plus an allocation of overheads. In allocating overheads, a normal level of production must be assumed, and selling and general administrative overheads excluded.
 (b) Closing inventory is therefore:

Value of inventory using weighted average

	Units	Weighted average cost \$	Value of closing inventory \$
Opening inventory	4,000	13.00	
8 March	<u>3,800</u>	15.00	
Balance	7,800	13.97	
12 March	<u>(5,000)</u>		
	2,800	13.97	
18 March	<u>(2,000)</u>		
	800	13.97	
22 March	<u>6,000</u>	18.00	
	6,800	17.53	
24 March	<u>(3,000)</u>		
	3,800	17.53	
28 March	<u>(2,000)</u>		
	<u>1,800</u>	17.53	<u>31,554</u>

Summary

		\$
Inventory value:	FIFO	32,400
	Weighted average	31,554



Solution 7

- (a) Construction contracts are frequently entered into by businesses such as shipbuilders, construction engineers and other similar industries, where contracts normally last for a period of more than one year. Because of the length of time such contracts take to complete, to defer taking profit into account until completion would result in the income statement not reflecting a true and fair view of activities of the entity during the year. Instead, the accounts would only show the results of those contracts that happened to be completed by the year end. As a result, it is normal accounting practice that, where a contract spans more than one accounting period, a proportion of profit is taken during the life of the contract, rather than waiting and taking the whole profit on completion.

In the past, the accounting treatment of construction contracts varied enormously from entity to entity. IAS 2 attempts to reduce the amount of variation between entities

in their choice of accounting treatment, although directors are still left with a certain amount of latitude in deciding which approach to take. In particular, IAS 2 allows flexibility in the choice of how to apportion costs and revenue between the years of the contract. Various methods of determining the degree of completion of the contract are allowed by the standard. Permissible methods include:

- taking the proportion that contract costs incurred for work to date bear to estimated total contract costs;
- surveys of work performed;
- completion of a physical proportion of the contract work.

Even if all entities were to use the same method, they would still need to incorporate figures which are estimated. Because accounting forecasts and estimates are often highly subjective, this can also lead to inconsistencies between entities.

The standard attempts to counteract these problems to some extent, by requiring a fair amount of disclosure, such as explanation of the means by which sales revenue has been determined.

- (b) There are three accounting standards which relate directly to why the entity should assume that Contract B will be sold for only \$4m, even though there is a strong possibility that the entity will obtain a higher amount.
- First, IAS 1 outlines the fundamental accounting concepts, one of which is prudence. This requires that revenue and profits should not be anticipated, but should be included in the accounts only when realised.
 - This position is further underlined by IAS 37, which requires that contingent gains or revenues should not be included in accounts, because they are dependent on an uncertain future event (in this case, the resolution of the contract negotiations).
 - Finally, IAS 2 requires that profit on long-term contracts is calculated in a prudent manner. If K were to take the selling price as the higher figure of \$4.8m, this could not be considered to be prudent, and the directors would therefore not be complying with the terms or the spirit of the standard.
- (c) Inventories should be included in the financial statements at the lower of cost and net realisable value, and the fact is that the workstations had a net realisable value of only \$120,000. When entities are valuing year-end inventories, they should use all available information to arrive at an amount. That will often include information which only becomes available after the year end, such as in this case. The situation is similar to the requirement to write off a bad debt at the year end, even though the customer only went into liquidation after the year end.

IAS 10 specifically identifies evidence concerning the net realisable value of inventories as being an adjusting event after the balance sheet date. This means that the amount previously included in the financial statements should be changed to the lower amount.



Solution 8

Income statement figures for 2001

<i>Contract</i>	<i>1001</i>	<i>1002</i>	<i>1003</i>	<i>1004</i>	<i>1005</i>	<i>Total</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Certified work to date	1,010	240	200	1,500	1,700	4,650
Costs to be transferred to cost of sales	(1,010)	(240)	(200)	(1,200)	(1,300)	(3,950)
Less foreseeable losses on contracts	50	80	—	—	—	(130)
Profit/(loss) on contracts	<u>(50)</u>	<u>(80)</u>	<u>—</u>	<u>300</u>	<u>400</u>	<u>570</u>

Inventories

Inventories are calculated by comparing the costs incurred to date with amounts transferred to cost of sales. Any balance remaining is included in ‘gross amounts due from customers for contract work’.

<i>Contract</i>	<i>1001</i>	<i>1002</i>	<i>1003</i>	<i>1004</i>	<i>1005</i>	<i>Total</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Costs incurred to date	1,310	240	200	1,450	1,400	4,600
Costs to be transferred to cost of sales	<u>(1,010)</u>	<u>(240)</u>	<u>(200)</u>	<u>(1,200)</u>	<u>(1,300)</u>	<u>3,950</u>
Contract costs that relate to future activity	300	–	–	250	100	650

Receivables/payables

To establish amounts to be included in either receivables or payables we compare the sales revenue recognised to date with the progress payments received to date.

<i>Contract</i>	<i>1001</i>	<i>1002</i>	<i>1003</i>	<i>1004</i>	<i>1005</i>	<i>Total</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Certified work to date	1,010	240	200	1,500	1,700	4,650
Progress payments received	<u>(1,300)</u>	<u>(200)</u>	<u>(200)</u>	<u>(1,900)</u>	<u>(1,400)</u>	<u>5,000</u>
Receivables – unbilled contract revenue		<u>40</u>	<u>–</u>	<u>–</u>	<u>300</u>	<u>340</u>
Excess progress payments received	<u>(290)</u>			<u>(400)</u>		<u>(690)</u>

<i>Contract</i>	<i>1001</i>	<i>1002</i>	<i>1003</i>	<i>1004</i>	<i>1005</i>	<i>Total</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Contract costs that relate to future activity	300	–	–	250	100	650
Unbilled contract revenue	–	40	–	–	300	340
Foreseeable losses on contracts	<u>(50)</u>	<u>(80)</u>	<u>–</u>	<u>–</u>	<u>–</u>	<u>(130)</u>
Gross amounts due from customers for contract work	<u>250</u>		<u>0</u>	<u>250</u>	<u>400</u>	<u>860</u>
Gross amounts due to customers for contract work		<u>(40)</u>				<u>(40)</u>

Balance sheet extract	<i>\$000</i>
Gross amounts due from customers for contract work, treated as an asset	860
Gross amounts due to customers for contract work, treat as a liability	(40)
Progress payments received in advance, treated as a current liability	(690)

Non-current Intangible Assets

16

LEARNING OUTCOME

After completing this chapter you should be able to:

- ▶ explain the principles of the accounting rules contained in IAS's dealing with disclosure of . . . research and development expenditure, intangible fixed assets (other than goodwill on consolidation), impairment of assets.

The syllabus topics covered in this chapter are as follows:

- research and development costs (IAS 38): criteria for capitalisation;
- intangible assets (IAS 38) and goodwill (excluding that arising on consolidation): recognition, valuation and amortisation;
- impairment of assets (IAS 36) and its effect on the above.

16.1 Introduction

In Chapter 13, we examined non-current tangible assets. In this chapter, we will consider non-current intangible assets and goodwill and then the impairment of non-current assets (tangible and intangible). Goodwill will be discussed in relation to individual entities as groups are outside the scope of the syllabus. Non-current intangible assets are covered by IAS 38 Intangible Assets, goodwill is dealt with by IFRS 3 Business Combinations and impairment of assets is IAS 36 Impairment of Assets.

16.1.1 Objective of IAS 38 intangible assets

An intangible asset is an identifiable non-monetary asset without physical substance held for use in the business. Entities often use resources to acquire or develop intangibles such as scientific or technical knowledge, design and implementation of a new process or system, licences, trademarks and intellectual property. If it is probable that this investment in the intangible will result in future economic benefits flowing to the entity, then the cost can be recognised as an asset instead of an expense.

16.1.2 Recognition and initial measurement

The recognition of a purchased intangible asset requires an entity to demonstrate that the item meets the definition and recognition criteria set out in IAS 38: an intangible asset should be recognised if and only if:

- it is probable that the future economic benefits from the asset will flow to the entity;
- the cost of the asset can be measured reliably.

An intangible asset purchased separately from a business should be capitalised at cost.

Where an intangible asset is acquired when a business is bought, it should be capitalised separately from purchased goodwill, provided that it can be measured reliably on initial recognition. Cost being the fair value of the asset.

If the fair value of an intangible asset purchased as part of the acquisition of a business cannot be measured reliably it should not be recognised and will be included within goodwill.

The cost of an intangible asset is measured in the same way as a tangible non-current asset. The cost of an intangible asset comprises:

- (a) its purchase price, including import duties and non-refundable purchase taxes, after deducting trade discounts and rebates;
- (b) any directly attributable cost of preparing the asset for its intended use.

Examples of directly attributable costs are:

- (a) costs of employee benefits arising directly from bringing the asset to its working condition;
- (b) professional fees.

Examples of costs that are not a cost of an intangible asset are:

- (a) costs of introducing a new product or service (including costs of advertising and promotional activities);
- (b) costs of conducting business in a new location or with a new class of customer (including costs of staff training);
- (c) administration and other general overhead costs.

In Section 8.3.4, we considered the ‘Framework’ and its definition of an asset: ‘an asset is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity’. To be able to be recognised as an intangible asset expenditure must give access to future economic benefits.

The management of the entity must consider the economic conditions that exist and are likely to exist over the useful life of the asset, and then assess the probability of future economic benefits. The assessment should be management’s best estimate using all the evidence available, giving greater weight to external evidence. The asset should be measured initially at cost and amortised over its useful life.

16.1.3 Internally generated goodwill

Some expenditure may be incurred with the aim of generating future revenues but does not result in an intangible asset being recognised in the accounts. For example money spent on developing customer relationships may help generate future revenues but won’t result in an identifiable asset that could be sold separately from the business activities. This expenditure is often referred to as contributing to internally generated goodwill.

Internally generated goodwill is not recognised as an asset, as it is not an identifiable resource that can be measured reliably. Where the market value of an entity exceeds the carrying value of the net assets, this could be an indication that internally generated goodwill exists but it is not reliable enough to allow an intangible asset to be included in the accounts. This expenditure is written off in the income statement as it is incurred.

16.1.4 Internally generated intangible asset

For an internally generated intangible asset to be recognised in the financial statements the item must first meet the detailed criteria set out in IAS 38. The creation of the asset must be separated into:

- a research phase;
- a development phase.

If the entity is unable to distinguish between the research and development phases then the entire expenditure must be recorded as research phase expense.

The accounting treatment for internally generated intangibles is determined first by how research and development activities are defined:

- *Research*: Original and planned investigation undertaken with the prospect of gaining new scientific or technical knowledge and understanding.
- *Development*: The application of research findings or other knowledge to a plan or design for the production of new or substantially improved materials, devices, products, processes, systems or services prior to the commencement of commercial production or use.

16.1.4.1 Research phase

Expenditure on research should be recognised in the income statement as an expense when it is incurred. It is unlikely that entities could be certain that research expenditure would ultimately create an asset that would generate revenues, capitalisation of research expenditure is not allowed. Only when expenditure creates an asset that can directly be sold or used to make goods that will be sold will recognition be allowable.

16.1.4.2 Development phase

In the development phase of a project an entity may be able to identify an intangible asset and demonstrate that it will generate probable future economic benefits. Development activities could include:

- the design and construction of tools involving new technology;
- the design, construction and testing of a chosen alternative for new or improved materials, products, processes or services;
- the design, construction and operation of a pilot plant that is not big enough for commercial production.

An intangible asset should be recognised if, and only if, an entity can demonstrate *all* of the following:

- (a) the technical feasibility of completing the intangible asset so that it can be used or sold;
- (b) the intention to complete the asset to use it or sell it;
- (c) the ability to use or sell the asset;

- (d) that the asset will in fact generate probable future economic benefit – does a market exist for the asset if it is to be sold, or can the asset’s usefulness be proven if the asset is to be used internally;
- (e) that it has the technical, financial and other resources to complete the project to make and use or sell the asset;
- (f) that it can measure the expenditure on the development of the asset reliably in order to incorporate the amount in the financial statements.

A detailed business or project plan could be used to illustrate the availability of the entity’s resources (point (e) above).

The *cost* of an internally generated intangible asset (point (f) above) can include expenditure such as:

- materials and services used or consumed in generating the intangible asset;
- cost of employee benefits arising from the generation of the intangible asset (wages and salaries);
- other direct costs like patents and licences;
- overheads that were incurred to generate the asset like depreciation on plant, property and equipment used in the process;
- interest charges, as specified in IAS 23 Borrowing Costs (see Chapter 13).

Selling and administrative expenses and costs of staff training to use the new product or process are not to be included in establishing the cost of the intangible. Costs can include expenditure incurred from the date that the asset meets all of the above criteria, but cannot include expenditure previously included as an expense in prior years’ accounts.

Internally generated brands, mastheads, publishing titles, customer lists and items similar in nature *should not be recognised* as intangibles, as it is unlikely that expenditure on developing such items can be distinguished from expenditure on developing the business as a whole.

Entities may incur other items of expenditure designed to provide future benefits, such as start-up costs (legal costs and product launches), training activities, advertising and promotions, however no separable item is created and no asset would be recognised. The expenditure would be charged to the income statement as it was incurred.

16.1.5 Subsequent expenditure

The nature of intangible assets is such that, in many cases, there are no additions to an asset or replacements of part of an asset. Accordingly, most subsequent expenditures are likely to maintain the future economic benefits embodied in an existing intangible asset rather than meet the definition of an intangible asset and the recognition criteria set out in IAS 38. In addition, it is often difficult to attribute subsequent expenditure directly to a particular intangible asset rather than to the business as a whole. Therefore, only rarely will subsequent expenditure – expenditure incurred after the initial recognition of a purchased intangible asset or after completion of an internally generated intangible asset – be recognised in the carrying amount of an asset.

After initial recognition at cost, intangible assets should be carried at cost less any accumulated amortisation or impairment losses.

16.1.6 Subsequent measurement

IAS 38 allows intangible non-current assets to be carried at amortised cost or at revalued amount, being its fair value at the date of the revaluation less any subsequent accumulated amortisation and any subsequent accumulated impairment losses. For the purpose of revaluations under IAS 38, fair value should be determined by reference to an active market. Revaluations should be made with sufficient regularity such that the carrying amount does not differ materially from that which would be determined using fair value at the balance sheet date.

If an intangible asset is revalued, all the other assets in its class should also be revalued, unless there is no active market for those assets. If an intangible asset in a class of revalued intangible assets cannot be revalued because there is no active market for this asset, the asset should be carried at its cost less any accumulated amortisation and impairment losses.

If the fair value of a revalued intangible asset can no longer be determined by reference to an active market, the carrying amount of the asset should be its revalued amount at the date of the last revaluation by reference to the active market less any subsequent accumulated amortisation and any subsequent accumulated impairment losses.

If an intangible asset's carrying amount is increased as a result of a revaluation, the increase shall be credited directly to equity under the heading of revaluation surplus. However, the increase shall be recognised in profit or loss to the extent that it reverses a revaluation decrease of the same asset previously recognised in profit or loss.

If an intangible asset's carrying amount is decreased as a result of a revaluation, the decrease is recognised in profit or loss unless the intangible asset has previously been revalued. If an intangible non-current asset has previously been revalued upwards, any decrease in value can be debited directly to equity under the heading of revaluation surplus to the extent of any credit balance existing in the revaluation surplus in respect of that asset.

The cumulative revaluation surplus included in equity may be transferred directly to retained earnings when the surplus is realised. The whole surplus may be realised on the retirement or disposal of the asset. However, some of the surplus may be realised as the asset is used by the entity; each year, the amount of the surplus realised is the difference between amortisation based on the revalued carrying amount of the asset and amortisation that would have been recognised based on the asset's historical cost. The transfer from revaluation surplus to retained earnings is not made through the income statement.

16.1.7 Amortisation

The depreciable amount of an intangible asset should be allocated on a systematic basis over the best estimate of its useful life. Amortisation should start from the date the asset is available for use.

As with tangible assets the most difficult decision for management is determining the useful life of the asset. The useful life of an intangible asset should take account of such things as:

- the expected usage of the asset;
- possible obsolescence and expected actions by competitors;
- the stability of the industry;
- market demand for the products and services that the asset is generating.

The method of amortising the asset should reflect the pattern in which the assets economic benefits are expected to be consumed by the entity. If that proves difficult to determine, then the straight line method is acceptable. The residual value of the intangible should

be assumed to be zero unless there is a commitment from a third party to purchase the asset or the entity intends to sell the asset and a readily available active market exists. The annual amortisation amount will be charged to the income statement as an expense.

The useful life and method of amortisation should be reviewed at least at each financial year end. Changes to useful life or method of amortisation should be effective as soon as they are identified and should be accounted for as changes in accounting estimates (IAS 8), by adjusting the amortisation charge for the current and future periods.

16.1.8 Impairment losses

The treatment for impairment of assets is dealt with by IAS 36, Impairment of Assets. In addition to the requirements of IAS 36 (discussed in Section 16.3), an entity should estimate the recoverable amount of intangibles at least at every year end, including assets that are not yet available for use.

16.1.9 Retirements and disposals

An intangible asset should be removed from the balance sheet on disposal or when no future economic benefits are expected from its use or future disposal. Any gains or losses from disposal (the difference between the net proceeds and the carrying value of the asset) should be recognised as income or expense in the income statement. Amortisation does not cease when the asset is no longer used or is held for disposal unless it is already fully amortised.

16.1.10 Disclosure

The financial statements should disclose the following for each class of intangible assets, distinguishing between internally generated intangible assets and other intangible assets:

- (a) the useful lives or amortisation rates used;
- (b) the amortisation methods used;
- (c) the gross carrying amount and the accumulated amortisation (together with accumulated impairment losses) at the beginning and end of the period;
- (d) the amount of amortisation charged to the income statement;
- (e) a reconciliation of the carrying amount at the beginning and the end of the period showing:
 - additions (internally developed assets and acquisitions);
 - retirements and disposals;
 - changes to the intangible assets due to revaluations, impairment losses and other changes;
 - impairment losses recognised and reversed in the income statement;
 - amortisation recognised during the period.

In addition, an entity must disclose details of any intangible given a useful life of greater than twenty years and any individual intangible that is material to the financial statements as a whole.

If intangible assets are carried at revalued amounts, the following should be disclosed:

- (a) by class of intangible assets:
 - (i) the effective date of the revaluation;
 - (ii) the carrying amount of revalued intangible assets;

- (b) the amount of the revaluation surplus that relates to intangible assets at the beginning and end of the period, indicating the changes during the period and any restrictions on the distribution of the balance to shareholders;
- (c) the methods and significant assumptions applied in estimating the assets' fair values.

16.2 Purchased goodwill

IFRS 3 Business combinations regulates the treatment of purchased goodwill. Although business combinations and group accounting is outside of your syllabus non-group aspects of goodwill are in the syllabus. The basic issues involved with the treatment of goodwill do not involve principles of consolidation, so they can be dealt with in this syllabus.

Goodwill arises on the acquisition of an entity or an entities assets or assets and liabilities. IFRS 3 defines purchased goodwill as '*any excess of the cost of acquisition over the acquirer's interest in the fair value of the identifiable net assets and liabilities acquired as at the date of the transaction*'. The excess payment is made in anticipation of future economic benefits arising from the acquisition.

The IFRS 3 definition can give rise to 'positive goodwill' where the purchase consideration exceeds the fair value of the net assets, or negative goodwill where the fair value of the net assets exceeds the purchase consideration.

IFRS 3 requires goodwill to be recognised as an asset and recorded on the balance sheet as an asset.

16.2.1 Purchased goodwill – recognition and measurement

Positive goodwill should be recognised as an asset and carried at cost less any accumulated impairment losses. IFRS 3.

IFRS 3 requires that the entity carries out annual assessments of the recoverable amount of the goodwill to identify any impairment losses arising each year. These impairment losses are recognised instead of amortisation.

16.2.2 Negative purchased goodwill

Negative purchased goodwill is conceptually the equivalent of a discount on the purchase price. When negative goodwill arises IFRS 3 emphasises the need to check that the correct fair values of the assets and liabilities acquired have been used in the calculation of the goodwill figure.

Negative goodwill is credited to the income statement in the year of acquisition.

16.3 IAS 36 impairment of assets

16.3.1 Introduction

Your syllabus requires only knowledge of the principles of IAS 36.

The object of IAS 36 is to ensure that an entity does not carry its assets at a value above their recoverable amount. (Recoverable amount means the higher of an asset's net selling price and its value in use.)

16.3.2 Procedures to check for impairment

At each balance sheet date an entity should assess whether there are internal or external indications that the value of any asset is impaired.

In assessing whether there is any indication that an asset may be impaired, an entity shall consider, as a minimum, the following indications:

External sources of information:

- (a) during the period, an asset's market value has declined significantly more than would be expected as a result of the passage of time or normal use;
- (b) significant changes with an adverse effect on the entity have taken place during the period, or will take place in the near future, in the technological, market, economic or legal environment in which the entity operates or in the market to which an asset is dedicated;
- (c) market interest rates or other market rates of return on investments have increased during the period, and those increases are likely to affect the discount rate used in calculating an asset's value in use and decrease the asset's recoverable amount materially;
- (d) the carrying amount of the net assets of the reporting entity is more than its market capitalisation.

Internal sources of information:

- (a) evidence is available of obsolescence or physical damage of an asset;
- (b) significant changes with an adverse effect on the entity have taken place during the period, or are expected to take place in the near future, in the extent to which, or manner in which, an asset is used or is expected to be used. These changes include the asset becoming idle, plans to discontinue or restructure the operation to which an asset belongs, and plans to dispose of an asset before the previously expected date;
- (c) evidence is available from internal reporting that indicates that the economic performance of an asset is, or will be, worse than expected.

Entities will usually state the process undertaken in respect of impairment reviews. The following extract from Nestlé's accounts does just that.

Extract from the consolidated accounts of the Nestlé Group for the year ended 31 December 2004

Accounting policies

Impairment of assets

Consideration is given at each balance sheet date to determine whether there is any indication of impairment of the carrying amounts of the Group's assets. If any indication exists, an asset's recoverable amount is estimated. An impairment loss is recognised whenever the carrying amount of an asset exceeds its recoverable amount. The recoverable amount is the greater of the net selling price and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value based on the average borrowing rate of the country where the assets are located, adjusted for risks specific to the asset.

16.3.3 Recognition and measurement of an impairment loss

An impairment review follows the long-established principle that an asset's balance sheet carrying value should not exceed its recoverable amount, which is measured by

reference to the future cash flows that can be generated from its continued use or disposal. An asset is impaired when the carrying amount of the asset exceeds its recoverable amount. If any of the indications listed in Section 16.3.2 are present, an entity is required to make a formal estimate of recoverable amount. If no indication of a potential impairment loss is present, there is no requirement to make a formal estimate of recoverable amount.

If the carrying value of an asset is in fact less than the recoverable amount, the shortfall (an impairment loss) must be recognised in the income statement as an expense. The only exception to this is that an impairment loss on an asset that has previously been revalued may be debited against that revaluation surplus, up to the amount of the surplus relating to that asset, any additional impairment is then recognised in the income statement.

An asset's recoverable amount is defined in IAS 36 as the higher of an asset's net selling price and value in use. Net selling price is the asset's market price less the costs of disposal. Calculating the asset's value in use involves the following steps:

- (a) estimating the future cash inflows and outflows to be derived from continuing use of the asset and from its ultimate disposal;
- (b) applying the appropriate discount rate to these future cash flows.

It is not always necessary to determine both an asset's net selling price and its value in use. For example, if either of these amounts exceeds the asset's carrying amount, the asset is not impaired and it is not necessary to estimate the other amount. It may be possible to determine net selling price, even if an asset is not traded in an active market. However, sometimes it will not be possible to determine net selling price because there is no basis for making a reliable estimate of the amount obtainable from the sale of the asset in an arm's length transaction between knowledgeable and willing parties. In this case, the recoverable amount of the asset may be taken to be its value in use.

If there is no reason to believe that an asset's value in use materially exceeds its net selling price, the asset's recoverable amount may be taken to be its net selling price.

Recoverable amount is determined for an individual asset, unless the asset does not generate cash inflows from continuing use that are largely independent of those from other assets or groups of assets. If this is the case, recoverable amount is determined for the cash-generating unit to which the asset belongs.

The carrying amount of an cash-generating unit:

- (a) includes the carrying amount of only those assets that can be attributed directly, or allocated on a reasonable and consistent basis, to the cash-generating unit and that will generate the future cash inflows estimated in determining the cash-generating unit's value in use. It is important to include in the cash-generating unit all assets that generate the relevant stream of cash inflows from continuing use. In some cases, certain assets contribute to the estimated future cash flows of a cash-generating unit, need to be allocated to the cash-generating unit on a reasonable and consistent basis. This might be the case for goodwill or corporate assets such as head office assets;
- (b) does not include the carrying amount of any recognised liability, unless the recoverable amount of the cash-generating unit cannot be determined without consideration of this liability.

In outline the stages of an impairment review are:

- identifying separate cash-generating units;
- establishing balance sheets for each cash-generating unit, comprising the net tangible and intangible assets plus allocated purchased goodwill for each cash-generating unit;
- forecasting the future cash flows of the cash-generating unit and discounting them to present value using the rate of return the market would expect for an equally risky investment;
- comparing the present value of the cash flows with the net assets of each cash-generating unit and recognising any shortfall as an impairment loss;
- allocating any impairment loss to write down the assets of the cash-generating unit. Any impairment is allocated first, to goodwill allocated to the cash-generating unit (if any); and then, to the other assets of the unit on a pro-rata basis based on the carrying amount of each asset in the unit.

In allocating an impairment loss the carrying amount of an asset should not be reduced below the highest of:

- (a) its net selling price (if determinable);
- (b) its value in use (if determinable);
- (c) zero.

Example 16.A

An asset costing \$100,000 when purchased on 1 January 2001 has an estimated useful life of 10 years. On 1 January 2004 the asset is estimated to have a recoverable amount of \$50,000.

The asset's carrying value on 1 January 2004 is cost \$100,000 less accumulated depreciation of \$30,000 ($\$10,000 \times 3$ years).

The \$20,000 impairment in value will be charged as an expense to the income statement:

		\$	\$
Debit	Income statement – impairment loss	20,000	
Credit	Net book value of asset		20,000
	<i>Being impairment loss reducing asset value from \$70,000 to \$50,000.</i>		

Future depreciation expense will be based on the new value of \$50,000 – note, however, the estimated useful life of the asset has not changed, so the depreciation will be calculated as \$50,000 over the remaining seven years = \$7,143.

Example 16.B

Using the same asset as in Example 16A, let us assume the asset was revalued to \$110,000 on 1 January 2003. This created a revaluation surplus of \$30,000, being \$110,000 less the carrying value of the asset ($\$100,000 - \$20,000$).

If on 1 January 2004 the asset is estimated to have a recoverable amount of \$90,000 then the impairment loss of \$9,000 (recoverable amount ($\$110,000 - \$11,000 = \$99,000 - \$90,000 = \$9,000$)) will be charged against the revaluation reserve, reducing the amount in respect of this asset.

		\$	\$
Debit	Revaluation reserve	9,000	
Credit	Net book value of asset		9,000
	<i>Being the recording of the impairment loss.</i>		

If the revaluation surplus did not have sufficient amounts relating to this specific asset, then the balance of the impairment loss would be charged to the income statement.

16.4 Disclosure of impairments

For each class of assets, the financial statements should disclose:

- (a) the amount of impairment losses recognised in the income statement during the period and the line item(s) of the income statement in which those impairment losses are included;
- (b) the amount of reversals of impairment losses recognised in the income statement during the period and the line item(s) of the income statement in which those impairment losses are reversed;
- (c) the amount of impairment losses recognised directly in equity during the period;
- (d) the amount of reversals of impairment losses recognised directly in equity during the period.

16.5 Summary

Having completed this chapter we can discuss the recognition and valuation of intangible assets, including purchased goodwill, internally generated goodwill and research and development costs. We can explain the requirement to amortise goodwill and can discuss the criteria for the capitalisation of development costs. We can also explain the main disclosure requirements in respect of intangible assets.

We can explain the principle of impairment of assets and can record the effect of impairment losses on assets.

Revision Questions

16

? Question 1

When can internally developed intangible assets be capitalised? (*max. 35 words*) **(2 marks)**

? Question 2

When should a full impairment review be carried out?

- (A) When circumstances indicate that an impairment may have occurred
- (B) When the directors want to reduce the value of their assets
- (C) When the book value of assets seems too high
- (D) Every 5 years

(2 marks)

? Question 3

Purchased goodwill is defined by IAS 38 as:

- (A) The amount paid for intangible assets
- (B) The difference between the balance sheet value and the amount paid for the business
- (C) The difference between the fair value of the tangible non-current assets acquired and the amount paid
- (D) The difference between the cost of the acquisition and the fair values of the net assets acquired

(2 marks)

? Question 4

Which of the following can be capitalised and carried forward in the balance sheet as an asset:

- (A) a payment of \$10,000 to XY University for original research
- (B) \$50,000 spent on applied research to develop a new discovery into a possible new product
- (C) \$22,000 being the cost of developing a new product for final launch on the market. The product is expected to be profitable
- (D) \$17,000 the cost of developing a product that was then found to be non-viable

(2 marks)



Question 5

IAS 38 specifies criteria that must be met before development expenditure can be deferred:

1. the technical feasibility of completing the project so that the asset can be used;
2. the project has a useful economic life of more than one year;
3. the ability to use the asset;
4. total deferred expenditure is less than 10% of turnover;
5. financial resources are sufficient to complete the project and use the asset;
6. adequate resources exist to complete the project and make use of the asset.

Which of the above criteria are included in IAS 36 requirements to defer development expenditure?

- (A) 1, 2, 3 and 4
 (B) 1, 2, 4 and 5
 (C) 1, 3, 5 and 6
 (D) 2, 3, 4 and 6

(2 marks)

Scenario for Questions 6 and 7

T manufactures radar equipment for military and civil aircraft. The entity's latest trial balance as at 31 December 20X1 is as follows:

	\$000	\$000
Administrative costs	800	
Bank overdraft		700
Receivables	2,000	
Factory – cost	18,000	
Factory – depreciation		1,800
Factory running costs	1,200	
Loan interest	1,680	
Long-term loans		12,000
Machinery – cost	13,000	
Machinery – depreciation		8,000
Manufacturing wages	1,300	
Opening inventory – parts and materials	400	
Opening inventory – work in progress	900	
Retained earnings		380
Purchases – parts and materials	2,300	
Research and development	5,300	
Sales revenue		10,000
Sales salaries	600	
Share capital		15,000
Trade payables		600
Trade fair costs	1,000	
	48,480	48,480

- (i) The inventory was counted at 31 December 20X1. Closing inventories of parts and materials were valued at \$520,000 and closing inventories of work in progress were valued at \$710,000. There are no inventories of finished goods because all production

is for specific customer orders and goods are usually shipped as soon as they are completed.

- (ii) No depreciation has been charged for the year ended 31 December 20X1. The entity depreciates the factory at 2 per cent of cost per annum and all machinery at 25 per cent per annum on the reducing balance basis.
- (iii) The balance on the research and development account is made up as follows:

	\$
Opening balance (development costs brought forward)	2,100,000
Calibrating equipment purchased for laboratory	600,000
Long-range radar project	900,000
Wide-angle microwave project	<u>1,700,000</u>
	<u>5,300,000</u>

The opening balance comprises expenditure on new products which have just been introduced to the market. The entity has decided that these costs should be written off over 10 years, starting with the year ended 31 December 20X1. T has a policy of capitalising all development costs which meet the criteria laid down by IAS 38.

The new calibrating equipment is used in the entity's research laboratory. It is used to ensure that the measurement devices used during experiments are properly adjusted.

The long-range radar project is intended to adapt existing military radar technology for civilian air traffic control purposes. The entity has built a successful prototype and has had strong expressions of interest from a number of potential customers. It is almost certain that the entity will start to sell this product early in the year 20X3 and that it will make a profit.

The wide-angle microwave project is an attempt to apply some theoretical concepts to create a new radar system for use in fighter aircraft. Initial experiments have been promising, but there is little immediate prospect of a saleable product because the transmitter is far too large and heavy to install in an aeroplane.

- (iv) During the year the entity spent \$1,000,000 in order to exhibit its product range at a major trade fair. This was the first time that T had attended such an event. No orders have been received as a direct result of this fair, although the sales director has argued that contacts were made, which will generate sales over the next few years.
- (v) T has made losses for tax purposes for several years. It does not expect to pay any tax for the year ended 31 December 20X1.

The directors do not plan to pay any dividends for the year ended 31 December 20X1.

Question 6

- (a) Prepare T's income statement for the year ended 31 December 20X1 and its balance sheet at that date. These should be in a form suitable for publication.
Do *not* prepare notes to the accounts except for those required in part (b).
Do *not* prepare a statement of accounting policies or a statement of changes in equity.
- (b) Prepare the following notes to T's accounts:
 - (i) Intangible non-current assets
 - (ii) Tangible non-current assets

(20 marks)



Question 7

- (a) Explain how each of the following items should be treated in T's financial statements:
Research and development
- (i) New calibrating equipment purchased for laboratory **(3 marks)**
 - (ii) Long-range radar project **(4 marks)**
 - (iii) Wide-angle microwave project **(4 marks)**
- (b) Explain how the costs associated with the trade fair should be treated in T's financial statements. **(4 marks)**
- (c) The directors of T have read that the calculation of an entity's profit figure involves a great deal of subjective judgement and that some entities increase or decrease their profits by biasing the subjective decisions which are associated with accounting. Explain how T's chief accountant should respond if the directors ask for the financial statements to be restated in a manner which makes the entity appear to be more profitable than it actually is. **(5 marks)**
- (Total marks = 20)**



Question 8

Z acquired the business and assets of Q, a sole trader, on 31 October 2002.

The fair value of the assets acquired from Q were:

	<i>\$000</i>
Non-current intangible assets	
Brand X – brand name	220
Non-current tangible assets	
Plant and equipment	268
Inventory	<u>5</u>
	493
Cash paid to Q	523

Z spent the following amounts creating and promoting the Brand Z brand name:

Year to 31 October 2000	\$100,000
Year to 31 October 2001	\$90,000
Year to 31 October 2002	\$80,000

Z's accounting policy on recognised non-current intangible assets is that brand names are amortised over 10 years.

On 31 October 2003, Z's brand names were valued by an independent valuer as follows:

Brand X at \$250,000
Brand Z at \$300,000

The directors of Z have been very impressed with the increase in profits from Q's former business. They are certain that the goodwill has increased since they acquired Q's business. Z's directors have estimated that the goodwill is worth \$45,000 at 31 October 2003.

Requirements

Explain how Z should treat:

- (i) the brand names; **(9 marks)**
 - (ii) goodwill; **(6 marks)**
- in its financial statements for the years ended 31 October 2002 and 2003. Your explanation should include reference to relevant International Accounting Standards.

(Total marks = 15)

Solutions to Revision Questions

16

✓ Solution 1

Internally developed intangible assets can be capitalised if during the development the entity is able to identify that the development expenditure will enable the generation of probable future economic benefits.

✓ Solution 2

The correct answer is (A), see Section 16.3.2.

✓ Solution 3

The correct answer is (D), see Section 16.2.

✓ Solution 4

The correct answer is (C), see Section 16.1.4.

This specification could meet the requirements of IAS 38 to enable development expenditure to be carried forward to future periods.

✓ Solution 5

The correct answer is (C), see Section 16.1.4.

✓ Solution 6

(a)

T – income statement for the year ended 31 December 20X1

	<i>Notes</i>	<i>\$000</i>
Sales revenue		10,000
Cost of sales		<u>(8,540)</u>
Gross profit		1,460
Selling and distribution costs		<u>(1,600)</u>
Administrative expenses		<u>(800)</u>
Loss from operations	1	<u>(940)</u>
Finance cost		<u>(1,680)</u>
Retained Loss for the year		<u><u>(2,620)</u></u>

T – balance sheet at 31 December 20X1

	<i>Notes</i>	<i>\$000</i>	<i>\$000</i>
Non-current assets			
Intangible non-current assets	2		2,790
Tangible non-current assets	3		<u>20,040</u>
			22,830
Current assets			
Inventory	4	1,230	
Receivables		<u>2,000</u>	
			<u>3,230</u>
			26,060
Share Capital and reserves			
Issued capital			15,000
Retained earnings			<u>(2,240)</u>
			12,760
Non-current liabilities			
Long-term loans			12,000
Current liabilities			
Bank overdraft		700	
Trade payables		<u>600</u>	
			<u>1,300</u>
			<u>26,060</u>

(b) *T – notes to the financial statements*

Intangible non-current assets

	<i>Cost \$000</i>	<i>Amortisation \$000</i>	<i>Net book value \$000</i>
Development expenditure			
At 1 January 20X1	2,100	–	2,100
Additions	900	–	900
Amortised in the year	–	<u>(210)</u>	<u>(210)</u>
At 31 December 20X1	<u>3,000</u>	<u>(210)</u>	<u>2,790</u>

T has capitalised these development costs in order to match them with anticipated revenue. Development costs of \$2,100,000 are being written off over ten years. The balance of costs are not yet being amortised, as commercial production has not yet commenced.

Tangible non-current assets

	<i>Land and buildings \$000</i>	<i>Plant and machinery \$000</i>	<i>Total \$000</i>
Cost at 1.1.20X1	18,000	13,000	31,000
Additions	–	600	600
Cost at 31.12.20X1	<u>18,000</u>	<u>13,600</u>	<u>31,600</u>
Depreciation at 1.1.20X1	1,800	8,000	9,800
Charge for the year	360	1,400	1,760
Depreciation at 31.12.20X1	<u>2,160</u>	<u>9,400</u>	<u>11,560</u>
Net book value at 31.12.20X1	<u>15,840</u>	<u>4,200</u>	<u>20,040</u>
Net book value at 1.1.20X1	<u>16,200</u>	<u>5,000</u>	<u>21,200</u>

Workings

	<i>\$000</i>
<i>Cost of sales</i>	
Opening inventory – parts and materials	400
Opening inventory – work in progress	900
Purchases	<u>2,300</u>
	3,600
Closing inventory – parts and materials	(520)
Closing inventory – work in progress	<u>(710)</u>
	2,370
Depreciation – factory ($18,000 \times 2\%$)	360
Depreciation – machinery ($(13,000 + 600 - 8,000) \times 25\%$)	1,400
Factory running costs	1,200
Manufacturing wages	1,300
Research costs written off	1,700
Amortisation of development costs ($2,100 \times 10\%$)	<u>210</u>
	<u>8,540</u>
<i>Selling and distribution costs</i>	<i>\$000</i>
Sales salaries	600
Trade fair costs	<u>1,000</u>
	<u>1,600</u>

**Solution 7**

- (a) (i) The cost of assets acquired to provide facilities for research and development (R&D) should be capitalised and depreciated over their useful lives, and included as part of the R&D expense. Where an asset is used in development activities, the depreciation can be included as development costs and capitalised. The new calibrating equipment purchased for the laboratory is an asset which will be used on various projects, not solely R&D projects. Because the various projects on which it will be used cannot be identified, the machine should be classed as a tangible non-current asset. It should be depreciated in the same way as T's existing machinery.
- (ii) The long-range radar project satisfies the criteria stated in IAS 38, which requires R&D expenditure to be deferred to future periods. The project is clearly defined, and its related expenditure is separately identifiable. The outcome of the project has been assessed as technically feasible and commercially viable, and is expected to make a profit. The costs should therefore be included in the balance sheet as an intangible non-current asset, and amortised when commercial production commences.
- (iii) The outcome of the wide-angle microwave project is much less certain. The project may be commercially successful, but it is too early to be sure. IAS 38 does not allow expenditure of this kind to be deferred to future periods. The costs must be written off in the income statement as they are incurred. This is because certain expenditure can be regarded as part of the continuing operation required to maintain an entity's business and competitive position. It is also in accordance with the fundamental accounting concept of prudence.
- (b) Given that there are no specific accounting standards governing the accounting treatment of the trade fair, T should turn to the IASB Framework. If the costs are carried forward they need to meet the definition of an asset set out in the Framework. An asset must have future economic benefit to the entity. Since there is no indication of any increase in future

sales revenue the trade fair cost does not seem to have any future economic benefit. It should therefore be treated as an expense not an asset.

Because the cost is significant, and not a normal part of selling and distribution, it should be disclosed separately in a note to the income statement.

- (c) Financial statements must be prepared in accordance with accounting standards. It is sometimes possible for an entity to adhere to the *letter* of the law while failing to comply with the *spirit* of the law. The most important requirement is that the accounts show a true and fair view. Thus, even if the directors of T have come up with a creative accounting scheme which does not appear to break any accounting rules or legislation, the chief accountant should explain to the directors that the financial statements must be adjusted to show a true and fair view of the entity's profitability.

The accountant could perhaps ask for the support of T's external auditor, who could explain that any material distortion of the accounts would inevitably lead to a qualified audit report.



Solution 8

- (i) Brand names

Purchase of Brand X brand name

A brand name is an intangible non-current asset. Intangible non-current assets are covered by IAS 38 – Intangible assets.

IAS 38 allows purchased intangible non-current assets to be recognised in the financial statements, if it is probable that future economic benefits will flow from the assets and if their value can be measured reliably at the date of purchase. As a value has been given for the brand X, it is reasonable to assume that its value can be measured reliably. The brand name 'Brand X' should be recognised in the balance sheet at \$220,000 at 31 October 2002 and amortised over its useful economic life of 10 years. \$22,000 per year will be charged to the income statement.

The entity must carry out an impairment review at the end of the first financial year after the acquisition, and consider whether the performance of the entity, after the acquisition of the brand, has improved in line with expectations.

Internally generated brand names. Brand Z is an internally generated brand name. Some types of internally generated intangible non-current assets can be recognised in the balance sheet if they meet specific criteria, however IAS 38 specifically states that internally generated brand names should not be recognised as assets under any circumstances.

All expenditure will be charged to the income statement in the year it was incurred.

- (ii) *Goodwill*

Purchased goodwill from Q. Purchased goodwill is the price paid over and above the fair value of the assets acquired.

	<i>\$000</i>
Assets acquired (including brand)	493
Cash paid	523
Goodwill	30

Positive purchased goodwill of \$30,000 will be recognised in the balance sheet at cost at 31 October 2002. Annual impairment reviews will be carried out as required by IFRS 3 *Business Combinations* but no amortisation will be provided.

Increase in value of purchased goodwill. IFRS 3 does not allow goodwill to be revalued upwards, so no action should be taken on the directors' valuation. Purchased goodwill will gradually be replaced by self-generated goodwill, so the increase in the valuation is due to internally generated goodwill arising since the acquisition. IFRS 3 specifically forbids the capitalisation of internally generated goodwill.

Share Capital Transactions

17

LEARNING OUTCOME

After completing this chapter you should be able to:

- ▶ explain the accounting rules contained in IAS's governing share capital transactions.

The syllabus topics covered in this chapter are as follows:

- Issue and redemption of shares, including treatment of share issue and redemption costs (IAS 32 and IAS 39), the share premium account, the accounting for maintenance of capital arising from the purchase by a entity of its own shares.

17.1 Introduction

This chapter deals with the accounting entries in respect of the issue and redemption of shares. You could view this as a series of journal entries which have to be learned by rote. This would, however, make the topic much more difficult and certainly far less interesting than it can be. Try to understand the principles involved, you will then be able to work out the journals required, rather than try to memorise them.

This topic is usually governed by local legal requirements that relate to the entity together with IFRS requirements. Countries differ in their legislation governing the issue and redemption of shares. From an international standpoint it is thus possible only to consider the general principles and the requirements of international accounting standards. IAS 32 *Financial Instruments: Disclosure and Presentation* and IAS 39 *Financial Instruments: Recognition and Measurement* both deal with share and debt classification, presentation, measurement and treatment in the financial statements. These two standards are very long and complex standards that cover a wide range of possibilities relating to financial instruments. As part of your syllabus you are only required to have a knowledge of the accounting rules governing share capital transactions, the rules relating to debt are outside the syllabus.

17.2 IAS 1 requirements

17.2.1 Interests of shareholders

The notes to an entity's financial statements contain a detailed note about the entity's share capital. This is hardly surprising given that the shareholders are regarded as the primary audience for the published accounts. They are the owners of the entity and need to be able to see how their ownership interests are reflected in the balance sheet. They need to know how their interests might be affected by the issue of new shares.

A new issue will raise funds which will increase the value of their existing shares if the proceeds are invested wisely. This will, however, dilute their control. They also need to know about the interests of the other shareholders. In particular, they need to know how the existence of different classes of shares might affect their interests.

17.2.2 Disclosures

We studied the requirements of IAS 1 *Presentation of financial statements* in detail in Chapter 7. The following disclosures are required by the standard in respect of share capital.

IAS 1 requires that, issued capital and reserves attributable to equity shareholders must be shown on the face of the balance sheet. In addition IAS 1 requires that, on the face of the balance sheet or in the notes, equity capital and reserves are analysed showing separately the various classes of paid-in capital, share premium and reserves.

IAS 1 also requires that the following information on share capital and reserves be made either on the face of the balance sheet or in the notes:

- (a) for each class of share capital:
 - the number of shares authorised;
 - the number of shares issued and fully paid, and issued but not fully paid;
 - par value per share, or that the shares have no par value;
 - a reconciliation of the number of shares outstanding at the beginning and at the end of the year;
 - the rights, preferences and restrictions attaching to that class including restrictions on the distribution of dividends and the repayment of capital;
 - shares in the entity held by the entity itself; and
 - shares reserved for issuance under options and sales contracts, including the terms and amounts;
- (b) a description of the nature and purpose of each reserve within equity.

IAS 1 requires the following to be disclosed in the notes:

- (a) the amount of dividends proposed or declared after the balance sheet date but before the financial statements were authorised for issue, but not recognised as a distribution to equity shareholder during the period, and the related amount per share;
- (b) the amount of any cumulative preference dividends not recognised.

Example 17.A

Some extracts from the annual report of an imaginary entity quoted on the local stock exchange are shown below. You are required to read through the extracts and answer the following questions.

1. How many additional shares of each class can the entity's directors issue?
2. What was the selling price of the new shares issued by the entity?
3. What differences are there likely to be between the preference and ordinary shares?

Balance sheet

	Notes	20X7 \$m	20X6 \$m
Issued share capital*	23	1,353.7	1,345.2
Share premium account		320.0	310.0
Reserves		<u>2,200.0</u>	<u>2,050.0</u>
		<u>3,873.7</u>	<u>3,705.2</u>

Notes

* Issued share capital

	20X7 \$m	20X6 \$m
Authorised		
6,000,000,000 ordinary shares of 25¢ each	1,500.0	1,500.0
700,000 7.0% cumulative preference shares of \$1 each	0.7	0.7
2,000,000 4.9% cumulative preference shares of \$1 each	<u>2.0</u>	<u>2.0</u>
	<u>1,502.7</u>	<u>1,502.7</u>
Issued and fully paid		
5,400,000,000 ordinary shares of 25¢ each	1,350.0	1,342.5
700,000 7.0% cumulative preference shares of \$1 each	0.7	0.7
2,000,000 4.9% cumulative preference shares of \$1 each	<u>2.0</u>	<u>2.0</u>
	<u>1,353.7</u>	<u>1,345.2</u>

Solution

During the year the entity issued 30,000,000 ordinary shares with a nominal value of \$7,500,000. The aggregate consideration raised was \$17,500,000.

The entity has three classes of shares. The directors are authorised to issue up to 6 billion ordinary shares, 700,000 7.0 per cent preference shares and 2 million 4.9 per cent preference shares. They can, therefore, issue a further 0.6 billion ordinary shares without seeking the permission of the shareholders. They can ask the shareholders to increase this limit by changing the internal regulations. The two types of preference shares are at their authorised limits and so the internal regulations would have to be changed before any further issues could be made.

The entity raised \$17.5 million from a sale of 30 million shares. The shares must have been sold for 58.3 cents each. The shares have a nominal value of 25 cents each, although their value on the stock market is determined by the market's expectations of the entity's future profitability. In this case, the directors have been able to sell the shares at a premium of $58.3 - 25 = 33.3\text{¢}$.

17.3 Different classes of shares

There are several different dimensions that can be used to describe and classify share capital. These include:

- authorised versus issued;
- nominal value versus issue price;
- specific classes of shares, as described in the entity's internal regulations;
- equity versus non-equity.

The precise rights attached to each class of shares is a matter for the entity's internal regulations. The usual differences can be summed up as follows:

	<i>Ordinary shares</i>	<i>Preference shares</i>
Voting rights	Ordinary shareholders almost always have the right to vote at general meetings, although some entities issue both voting and non-voting ordinary shares	Preference shareholders would not normally have any voting rights
Rewards	The ordinary dividend is decided by the directors. The ordinary shareholders are entitled to all of the profits after all other claims have been met. Any profits which are not distributed as a dividend will increase the ordinary shareholders' equity	The preference dividend is usually fixed (e.g. 7.0 per cent of nominal value). The directors may, however, be able to suspend the preference dividend if the entity could not afford to pay it. In this case the directors will probably be required to suspend the ordinary dividend. If the preference shares are 'cumulative' then any unpaid preference dividend will be paid once the entity's circumstances permit, before the ordinary shareholders can receive any dividend
Risks	The ordinary shareholders are the last to be paid if the entity fails. In practice, this means that they may lose everything they have invested	The preference shareholders will not be paid until after all of the entity's debts have been repaid

Preference shares have become unpopular. From the shareholder's point of view they carry a higher risk than making a loan and they do not have the potential for unlimited dividends offered by ordinary shares. This means that they have to carry a high rate of dividend to make them attractive.

From the entity's point of view, preference dividends cannot be charged as expenses for tax purposes and so they are a very expensive source of finance. There was, however, a brief period when unusual types of preference and other shares became popular as a result of a surge of interest in 'new financial instruments'. These were a means of raising finance which could be treated as share capital in the balance sheet (thereby reducing the gearing ratio) but which gave the buyer the same rights as debt (thereby making them a cheap source of funds). Now IAS 32 and IAS 39 require these types of shares to be treated as debt in the financial statements (see below).

The disclosure requirements in respect of shares are illustrated quite fully in Exercise 17.A. Entities are required to disclose the authorised share capital and the numbers and nominal value of each class of share which has been allotted. The effects of any allotment which took place during the year should be stated. The entity also has to disclose any options which have been granted to subscribers, stating the numbers of shares involved, the period during which this right can be exercised and the price to be paid. Details also have to be given of any redeemable shares, including the terms on which redemption will take place and the dates when this may occur.

17.4 IAS 32 Financial instruments disclosure and presentation

IAS 32 was introduced to ensure that 'financial instruments' (briefly shares and loan notes) were shown in the financial statements according to their true nature. This means that there must be a clear distinction between equity (e.g. ordinary shares) and liabilities (e.g. loan notes).

The distinction must be made according to the true substance of the financial instrument. In most cases this is not too difficult. To help sort things out, IAS 32 contains several definitions:

Financial instrument: Any contract that gives rise to both a financial asset of one entity and a financial liability or equity instrument of another entity.

Equity instrument: Defined in IAS 32 as any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities.

Financial liability: Any liability that is a contractual obligation to make one or more payments in the future.

If we apply these definitions to the main elements of the long-term capital in a balance sheet, we arrive at these conclusions:

- (a) *ordinary shares* are clearly equity instruments and will always be classified as such;
- (b) *loan notes and bonds* are financial liabilities and will appear as such on the balance sheet;
- (c) *preference shares* are not so easily classified. IAS 32 requires the particular rights attaching to a preference share to be analysed to determine whether it exhibits the fundamental characteristic of a financial liability. For example, if the terms of issue provide for mandatory redemption for cash, they qualify as liabilities as there is an obligation to transfer financial assets to the holder of the share. If the preference shares are non-redeemable the appropriate classification is based on an assessment of the substance of the contractual arrangements and the definitions of a financial liability and equity instrument. For example, if the payment of a dividend is at the discretion of the issuer they are equity shares. The classification as equity is not affected by the previous history of making dividend payments or the intention of the entity to make payments in the future. If the substance of a preference share is determined to be a liability, the preference share will be treated as debt in the balance sheet and will be shown under non-current liabilities.

17.5 Issue of shares

17.5.1 Process

The bookkeeping entries in respect of the issue of shares are not complicated. The exact legal requirements may vary from one country to another and there may be additional requirements specified for entities quoted on the local stock exchange. In general the procedures required to issue a share will follow a similar sequence of events. The accounting entries will follow the chronology of the share issue itself, for example:

1. The entity announces the availability of the shares and their selling price, usually in a formal document.
2. Applicants for shares submit formal requests for part of the issue. These applications will be accompanied by a proportion of the asking price, as requested by the entity in its announcement.

3. If the issue is oversubscribed then the entity has to decide how the shares should be allocated to the applicants. Any unsuccessful applicants will have their application money returned.
4. The entity will 'allot' or formally issue the shares. The new shareholders will be asked to pay for a further proportion of the total asking price or the full balance outstanding.
5. The entity will make further 'calls' of cash until the shares have been paid for in full. The timing of these calls will be determined by the entity's needs for long-term finance.

The selling price of the shares will be set so as to make the offer attractive to potential investors, but not so attractive that the shares are significantly underpriced. If the shares are sold too cheaply then the existing shareholders will have their investment diluted. The price is, therefore, likely to be set just below the current market price. If this exceeds the nominal value of the shares then the difference is called the 'share premium'.

Entities usually take precautions to ensure that the issue is fully sold. If there is a risk that some shares will be left over then the entity can pay a financial institution to underwrite the offer. In return for a premium, the underwriter will agree to buy any unpaid shares left at the closing date of the offer.

If a shareholder does not pay the amounts due on the allotment or calls then there will usually be provisions included in the issue documents that specify that the shares will be forfeited if payment is not made when due. The entity will be entitled to sell the forfeited shares for any amount that it can get, provided the total amount paid by the original shareholder and the new owner exceeds the nominal value of the shares.

17.5.2 Accounting for the issue of shares

The simplest way to organise the bookkeeping in respect of share capital is to have one account for the nominal value of the shares which have been issued and another for the premium, if any, created when those shares were issued. The balance on these accounts increases as soon as any allotment is made or any call is requested.

The cash received on application is recorded in an 'application and allotment' account. This is like a creditors account with the balance representing the amount paid to the entity in anticipation of either the receipt of some shares or the return of the payment. Once the shares have been allotted the cash paid on application becomes the property of the entity and the shares transferred to the new shareholders discharge the entity's commitment to them. The entries on application are:

1. Debit Bank
 Credit Application and allotment account
 Being recording of monies received on applications for new shares
2. Debit Application and allotment account
 Credit Bank
 Being return of monies to unsuccessful applicants
3. Debit Application and allotment account
 Credit Share capital
 Credit Share premium
 Being transfer of application monies to share capital and share premium (if shares issued at a premium) on allotment of shares

Application and allotment

- | | |
|--|---|
| 2. Cash returns to unsuccessful applicants | 1. Cash received with applications
3. Balance transferred to share capital |
|--|---|

The allotment account is then clear and can be used to record the amount due from shareholders in respect of the entity’s request for any further payments. This is recorded by crediting share capital and share premium with the amount requested and debiting the allotment account. Cash received is debited to bank and credited to allotment. The entries on allotment are:

4. Debit Application and allotment account
 Credit Share capital
 Credit Share premium
 Being amounts due on allotment
5. Debit Bank
 Credit Application and allotment account
 Being allotment monies received
6. Debit Investment in own shares
 Credit Application and allotment account
 Being transfer of balance of allotment monies due but not received

Application and allotment

- | | |
|----------------------------------|---|
| 4. Amount requested on allotment | 5. Cash received
6. Balance transferred to Investment – own shares |
|----------------------------------|---|

If further calls are required a similar set of entries will be made. The amount requested will be debited to a call account and credited to share capital. Cash will be credited to the call account as it is received. If there is any balance left on the allotment or call accounts once the final deadline for receipt of payments has passed then the shares will be forfeited. The balance on the account will be transferred to an ‘investment in own shares’ account. These shares will normally be reissued. Any amount received in excess of the original shareholder’s default will be credited to share premium. The entries are:

10. Debit Bank
 Credit Investment in own shares
 Being amounts received on reissue of forfeited shares
11. Debit Investment in own shares
 Credit Share premium
 Being transfer of balance to share premium

Investment own shares

- | | |
|---|--|
| 6. Balance transferred from application and allotment | 10. Cash received from new shareholder |
| 9. Balance transferred from call | 11. Balance transferred to share premium |

Example 17.B

Randall had a balance on its share capital account of \$2m and a balance on share premium of \$600,000. The directors decided to issue a further 500,000 \$1 shares for \$1.40 each.

The issue was announced and all applicants were asked to send a cheque for 10¢ for every share applied for. A total of 1,100,000 shares were applied for on the due date.

The directors decided to reject the smaller applications and returned application monies for a total of 100,000 shares. The remaining applicants were allotted one share for every two applied for, and were deemed to have paid 20¢ per share.

Applicants were asked to pay a further 90¢ per share, this being deemed to include the share premium associated with the issue. All allotment monies were received by the due date.

A final call of 30¢ per share was made. Payments were received in respect of 495,000 shares. The holder of 5,000 shares defaulted on this call and his shares were forfeited.

The forfeited shares were reissued for 50¢ each.

You are required to prepare the following accounts and enter the transactions described above.

- share capital;
- share premium;
- application and allotment;
- call;
- investment in own shares.

Solution

The entries required to record this series of transactions are as follows:

		\$	\$
1.	Debit Bank	110,000	
	Credit Application and allotment account	110,000	
	Being application monies received		
2.	Debit Application and allotment account	10,000	
	Credit Bank	10,000	
	Being return of application monies		
3.	Debit Application and allotment account	100,000	
	Credit Share capital		100,000
	Being allocation of shares (500,000 shares × 20¢ per share)		
4.	Debit Bank	450,000	
	Credit Application and allotment		450,000
	Being further monies received (500,000 shares × 90¢ per share)		
5.	Debit Application and allotment	450,000	
	Credit Share capital		250,000
	Credit Share premium		200,000
	Being allocation of shares including premium of 40¢ per share		
6.	Debit Call account	150,000	
	Credit Share capital	150,000	
	Being amounts due on call (500,000 shares × 30¢)		
7.	Debit Bank	148,500	
	Credit Call account		148,500
	Being amounts received on call (495,000 shares × 30¢)		
8.	Debit Investment in own shares	1,500	
	Credit Call account		1,500
	Being transfer of call monies due but not received		

9.	Debit	Bank	2,500	
	Credit	Investment in own shares		2,500
		Being amounts received on reissue of shares (5,000 shares × 50¢ per share)		
10.	Debit	Investment in own shares	1,000	
	Credit	Share premium		1,000
		Being transfer of balance to share premium account (5,000 shares reissued at further premium of 20¢, i.e. 50¢ – 30¢)		

Share capital			
	\$		\$
		3.	Balance b/d
			2,000,000
		5.	Application and allotment
			100,000
		5.	Application and allotment
			250,000
		6.	Call
			150,000
Balance c/d	<u>2,500,000</u>		<u>2,500,000</u>
	<u>2,500,000</u>		Balance b/d
			2,500,000

Share premium			
	\$		\$
		5.	Balance b/d
			600,000
		10.	Application and allotment
			200,000
Balance c/d	<u>801,000</u>	10.	Investment – own share
	<u>801,000</u>		1,000
			<u>801,000</u>
			Balance b/d
			801,000

Application and allotment					
	\$		\$		
2.	Bank	10,000	1.	Bank	110,000
3.	Share capital	100,000			<u>110,000</u>
		<u>110,000</u>			
5.	Share capital	250,000	4.	Bank	450,000
5.	Share premium	200,000			<u>450,000</u>
		<u>450,000</u>			

Call					
	\$		\$		
6.	Share capital	150,000	7.	Bank	148,500
		<u>150,000</u>	8.	Investment – own share	1,500
					<u>150,000</u>

Investment in own shares						
		\$			\$	
8.	Call	1,500		9.	Bank	2,500
10.	Share premium	<u>1,000</u>				<u>2,500</u>
		<u>2,500</u>				<u>2,500</u>
Bank						
		\$			\$	
1.	Application and allotment	110,000		2.	Application and allotment	10,000
4.	Application and allotment	450,000				
7.	Call account	148,500				
8.	Investment in own shares	<u>2,500</u>				
		<u>711,000</u>			Balance c/d	<u>701,000</u>
						<u>711,000</u>

Randall has raised a net total of \$701,000 from the issue of shares (495,000 issued at \$1.40 and 5,000 issued at \$1.60).

17.5.3 Share issue costs, redemption costs and dividends

IAS 32 requires:

- (i) interest, dividends, gains and losses relating to a financial liability to be recognised as an expense in the income statement.

This means that:

- dividends on preference shares classified as debt will be treated as an expense in the income statement and included under finance cost.
- any gains/losses on redemption of a preference share classified as debt will be taken to the income statement and

- (ii) transaction costs of any equity transaction must be taken directly to equity.

This means that cost of issuing equity shares must be deducted from a reserve and not recognised in the income statement. Issue costs are usually deducted from share premium, if one exists, or any other reserve. Equity dividends are also deducted directly from equity.

IAS requires that equity dividends must be declared before the balance sheet date if they are to be recognised in the financial statements.

17.5.4 Redeemable shares

Any shares that are redeemable for cash are defined as a financial liability. Financial liabilities finance costs are charged to the income statement on an annual basis. IAS 32 and IAS 39 require that the total finance cost of a financial liability (from issue to redemption) be charged to the income statement over the life of the shares in such a way as to give a constant annual rate of interest on the outstanding balance of the liability.

The total cost will include:

- (i) Any issue costs less any premiums payable on issue.
- (ii) Annual dividends.
- (iii) Any redemption costs plus any premium payable on redemption.

The initial amount used to calculate the constant rate of interest is the amount of cash raised, that is the issue price less any costs. Each year the amount of dividend paid is debited to the reserve and the finance charge (debited to income statement) is credited.

See Section 17.9 for a discussion on the treatment of a redemption of shares.

Example 17.C

An entity issued 1,000,000 \$1 redeemable 4% preference shares at par on 1 April 2002, which was redeemable on 31 March 2006 at a 10% premium. The issue costs were \$100,000.

The constant annual rate of interest is approximately 9.283%. Ignore all tax implications.

Calculate the total finance cost, and the annual finance charge to the income statement.

Solution

The total finance cost is:

Issue costs	\$100,000
Redemption costs (\$1,000,000 x 10%)	\$100,000
Annual dividends at 4% (\$40,000 x 4 years)	<u>\$1,600,000</u>
	<u>\$1,800,000</u>

Year	Opening balance	Interest at 9.283%	Dividend at 4%	Closing balance
2002/3	900,000	83,547	40,000	943,547
2003/4	943,547	87,589	40,000	991,136
2004/5	991,136	92,007	40,000	1,043,144
2005/6	1,043,144	96,856	40,000	1,100,000

The annual finance cost is that shown under the column headed 'interest at 9.283%'

17.5.5 Convertible debt

A convertible debt must be examined to establish if it is a debt instrument, an equity instrument or both (a compound instrument).

Compound instruments must be split into its two elements, debt and equity. Each element is then accounted for separately. The value of the debt is calculated as the fair value of a similar debt instrument without the equity element. The value of the equity element is the difference between the fair value of the total instrument and the fair value of the debt element. For example the debt element of a 10% bond convertible into equity shares on a two for one basis after five years would be valued by calculating the value of a similar 10% bond without the conversion. This would be deducted from the value of the bond to give the value of the equity element.

17.6 Bonus issues

17.6.1 Process

An entity can convert part of its reserves into shares. These shares can then be given to the existing shareholders in proportion to their holdings at the time of the issue. These 'free shares' are often called bonus shares but may be given other names in some countries.

For example, X might give its shareholders one fully paid \$1 ordinary share for every two that they had previously held. If the entity had 1,000,000 ordinary shares outstanding before the issue then share capital would increase to 1,500,000 shares of \$1, or \$1,500,000. This credit to share capital would have a corresponding debit of \$500,000 to reserves.

Example 17.D

How would a bonus issue affect:

- the market price of shares? (up or down);
- distributable profits? (up or down).

Common sense suggests that the share price would fall in proportion to the size of the issue. Thus a market price of \$2.40 before a two-for-one issue would fall to \$1.60 immediately after. Two shares before the issue would have been worth \$4.80, the same as three shares held afterwards. It is, however, *possible* that the stock market will react positively to the announcement of the bonus because there is a tendency for entities to increase dividend payments after making these issues. Of course, this price change would be because of the expected increase in dividends rather than the increase in the number of shares.

If the reserve account which was debited with the value of the bonus is part of distributable profits then this will reduce the maximum dividend. This might, therefore, provide lenders with a measure of protection because a greater proportion of the entity's equity is being 'locked in'. The buffer effect referred to earlier will, therefore, be enhanced. Of course, it is highly unlikely that the entity would make a bonus issue if doing so would severely limit its ability to pay dividends. Thus, the size of a bonus issue is likely to be small in relation to total reserves.

17.6.2 Accounting for a bonus issue

Example 17.E

The directors of A have decided to make a bonus issue of one share for every three previously held. The entity's balance sheet just before the issue was as follows:

A – balance sheet as at 31 December 20X2

	\$m
Non-current assets	14
Current assets	4
	<u>18</u>
Share capital	9
Retained earnings	4
	<u>13</u>
Liabilities	5
	<u>18</u>

You are required to redraft A's balance sheet to take the bonus issue into account. Show the journal entry required to bring about your change.

Solution

The share capital will increase by one-third. This means that share capital will increase and the retained earnings decrease by \$3m. This can be shown as a journal entry:

		\$m	\$m
Debit	Retained earnings	3	
Credit	Share capital		3

The balance sheet would, therefore, become:

A – balance sheet as at 31 December 20X2

	\$m
Non-current assets	14
Working capital	<u>4</u>
	<u>18</u>
Share capital	12
Accumulated profits	<u>1</u>
	<u>13</u>
Liabilities	<u>5</u>
	<u>18</u>

17.7 Accounting for a rights issue

If an entity issues new shares for cash, it is often required to first offer them to its existing ordinary shareholders in proportion to their shareholdings. This is called a rights issue.

Example 17.F

Using the information provided above in Example 17.E and assuming that the share capital consists of 9 million \$1 shares, let us assume the directors of A decide to make a rights issue instead of a bonus issue. The terms of the rights issue are one for every three shares held at \$1.20.

Assuming that all the shareholders take up the rights, the transaction would be recorded as follows:

		\$m	\$m
Debit	Cash	3.6	
Credit	Share capital		3.0
Credit	Share premium		0.6

The rights issue would generate new funds. At a one-for-three rights issue 3 million new shares would be issued and the balance raised would be credited to share premium.

The new balance sheet would be:

A – balance sheet as at 31 December 20X2

	\$m
Non-current assets	14.0
Working capital	<u>7.6</u>
	<u>21.6</u>
Share capital	12.0
Share premium	0.6
Accumulated profits	<u>4.0</u>
	<u>16.6</u>
Liabilities	<u>5.0</u>
	<u>21.6</u>

17.8 Accounting for treasury shares

Where an entity acquires its own equity shares, and at the balance sheet date has not cancelled them, they are referred to as treasury shares.

IAS 32 states that any change in equity resulting from the purchase, sale, issue and cancellation of shares should not result in any gain or loss being recognised in the income statement. Where an entity reacquires its own shares, it should be recorded as a change in equity and the reacquired shares should be reclassified as treasury shares and shown as a deduction from equity. This should be shown on the face of the balance sheet or in the notes to

the financial statements. The transaction would then be included within the statement of changes in equity.

Example 17.G

Murray has 1 million \$1 ordinary shares in issue at 31 December 20X1. The equity and reserves included the following:

<i>Equity and reserves</i>	<i>\$000</i>
Share capital, \$1 shares, fully paid	1,000
Share premium	600
Retained earnings	500
	<u>2,100</u>

In the year to 31 December 20X2 the entity reacquired 300,000 of its shares for \$1.30 each. Retained profit for 20X2 was \$60,000.

IAS 32 requires that no gain or loss be recorded on the reacquisition of an entity's own shares. Instead the full amount of issued capital will remain on the balance sheet and the shares reacquired and held by the entity (and reclassified as treasury shares) will be shown as a deduction from equity. The presentation of this is reasonably flexible. The simplest presentation is to show the total cost of redemption as a deduction from total equity. This could be presented as follows:

<i>Equity and reserves</i>	<i>\$000</i>
Share capital, \$1 shares, fully paid	1,000
Share premium	600
	<u>1,600</u>
Treasury shares	(390)
	<u>1,210</u>
Retained earnings	560
Total equity and reserves	<u>1,770</u>

Alternative presentations include showing the deduction for the nominal value of treasury shares against share capital and the premium paid on redemption against share premium.

17.9 The purchase and redemption of shares

One of the basic principles followed in most countries is that the equity capital invested by the shareholders cannot normally be repaid or distributed to the shareholders unless the entity is wound up.

Dividends payments are normally restricted to being paid out of 'distributable' reserves which are, at least essentially, equivalent to retained earnings. This protects the lenders and creditors from the possibility that the entity could use an excessive dividend to reduce the equity base and leave the liabilities uncovered by assets.

While these regulations have a very clear purpose, they may prove unduly restrictive. If an entity is not quoted on a stock market then it would be difficult for shareholders to sell their investments. It might be preferable for a small entity to be able to buy out individual shareholders rather than have them sell their shares to an outsider. There is, therefore, often some scope in the local legal regulations for the reduction of share capital, subject to some very stringent safeguards.

The basic principle almost universally applied is that the equity capital has a 'permanent' component which can never be repaid unless the entity is wound up. Entities can either purchase or redeem their shares, but must normally do so in such a way that this 'permanent' capital is preserved. There are few exceptions to this general rule.

17.9.1 Purchases out of distributable profits

In the simplest possible case an entity can buy back its shares. It is usually required to ensure that equity capital is maintained. This can be achieved by making a transfer from distributable reserves to a reserve that is usually legally classified as non-distributable. This reserve could be called a 'capital redemption reserve' or a capital reserve. This is best illustrated by an example:

Example 17.H

Peters: balance sheet as at 30 September 20X5

	\$000
Net assets	4,000
Share capital – \$1 shares, fully paid	2,000
Share premium	500
Permanent capital	2,500
Distributable profit	1,500
	<u>4,000</u>

The entity is owned by the Peters family, one of whose members wants to sell her shares and retire. The other shareholders are keen to keep all of the entity's shares in the family but none can afford to buy the retiring shareholder's equity. It has, therefore, been decided that the entity will purchase 100,000 shares for \$180,000. This requires two journal entries:

	\$	\$
Debit Share capital	100,000	
Premium on purchase	80,000	
Credit Bank		180,000
Debit Distributable profits	180,000	
Credit Premium on purchase		80,000
Capital redemption reserve		100,000

The first journal reduces both bank and share capital by the appropriate amounts. The premium on purchase account is used to maintain double entry. The balance on this account will be cancelled by the next step.

The second journal is required to make a transfer from distributable profits which is equal to the amount paid for the purchase of the shares. The corresponding credits go to premium on purchase and capital redemption reserve.

These transactions and adjustments would have the following effect on Peters's balance sheet.

Peters: balance sheet as at 30 September 20X5

	\$000
Net assets	3,820
Share capital \$1 shares, fully paid	1,900
Share premium	500
Capital redemption reserve	100
Permanent capital	2,500
Distributable profit	1,320
	<u>3,820</u>



Exercise

Look back at the above example. How has the transfer to the capital redemption reserve protected Peters's creditors?

**Solution**

Clearly, both the entity's capital and net assets have been reduced by \$180,000. The transfer to capital redemption reserve has, however, used part of the entity's distributable profits to replace the permanent capital which was used to make the repurchase. The lenders' security will have been affected by the outflow of cash and the reduction of equity. This could, however, have happened anyway if the directors had decided to pay a dividend of \$180,000.

It is never going to be in the lenders' interests for the entity to return equity to the shareholders, whether this is accomplished by either dividend or the repurchase of shares. There is, however, some protection from the fact that distributable profits place an upper limit on such payments. Entities can also purchase their own shares from the proceeds of a new share issue. This could be done to repay redeemable shares when they are due for repayment; to 'tidy' up the balance sheet, that is, redeem separate classes of shares and issue one new class; or to reduce the amount of committed dividends that are required to be paid by redeeming high dividend preference shares and replacing them with lower dividend preference shares or equity. For example:

Example 17.1**ABC: balance sheet as at 30 September 20X5**

	\$000
Net assets	4,000
Share capital \$1 equity shares, fully paid	1,500
10% Preference shares (redeemable)	1,000
Permanent capital	2,500
Retained earnings	1,500
	<u>4,000</u>

ABC need to redeem their redeemable preference shares. The preference shares are redeemable for \$1.50 per share. ABC are raising the cash required for the purchase by an issue of 750 \$1 equity shares at \$2.00 per share. Prepare ABC balance sheet after the redemption of the preference shares.

Solution

Cost of redemption is 1,000 shares at \$1.50 equals \$1,500. \$1,000 is debited to preference share capital and the balance, \$500, will be debited to retained earnings.

The issue will raise 750 times \$2, \$1,500 in cash. This will be allocated to Equity: share capital \$750 and share premium \$750.

The cash raised will be used to redeem the preference shares: debit bank \$1,500 and credit bank \$1,500.

The balance sheet after the transactions have taken place will be:

ABC: balance sheet as at 30 September 20X5

	\$000
Net assets	4,000
Share capital – \$1 equity shares, fully paid (1,500 + 750)	2,250
10% Preference shares (redeemable)	0
Share premium	750
Permanent capital	3,000
Retained earnings (1,500 – 500)	1,000
	<u>4,000</u>

Note that in this case the permanent capital is maintained and there is no requirement to make a transfer from retained earnings to a capital reserve. There are often quite complex regulations regarding share redemptions and how much must be transferred to a capital reserve. There are also variations in the treatment of cash raised by a new issue. In some cases the full amount of the issue proceeds are counted and in others only the equity element is counted.



If you are not told otherwise in the question, in exam questions you should assume that the nominal amount of the share capital will be maintained and if it is not covered by a new issue it must be appropriated from retained earnings.

17.10 Summary

Having completed this chapter we can now explain the disclosure requirements of both IAS 1 and IAS 32 and we can discuss the main characteristics of equity and non-equity share capital.

We can account for the issue of shares, including a bonus issue and a rights issue, and can account for the purchase and redemption of shares.

Revision Questions

17

? Question 1

ZZ redeemed their redeemable preference shares with a cash payment, paying a premium of 20 per cent.

Nominal value of shares redeemed	\$70,000
Cash paid on redemption	\$84,000

How much should be transferred to the capital redemption reserve (CRR) and how much should be charged to distributable reserves?

	CRR	Distributable reserves
(A)	\$70,000	\$14,000
(B)	\$84,000	\$84,000
(C)	\$70,000	\$84,000
(D)	\$84,000	\$70,000

(2 marks)

? Question 2

Ordinary shares are usually classified as:

- (A) Equity shares
- (B) Non-equity shares
- (C) Loans
- (D) Deferred shares

(2 marks)

? Question 3

Which type of financial instrument has the following characteristics?

- they do not normally have any voting rights;
- they usually have a fixed rate of return;
- they are ranked after unsecured creditors;
- the return can be suspended by directors, but will have to be paid in later years.

- (A) Convertible stock
- (B) Ordinary shares
- (C) Preference shares
- (D) Cumulative preference shares

(2 marks)

**Question 4**

The directors of Alpha have decided to make a bonus issue of one for every five shares held by existing shareholders. The balance sheet of Alpha immediately before the issue was as follows:

Alpha: balance sheet as at 31 December 20X9

	<i>\$000</i>
Non-current assets	10,500
Working capital	4,800
	<u>15,300</u>
Share capital	10,000
Retained earnings	2,300
	<u>12,300</u>
Liabilities	3,000
	<u>15,300</u>

Share capital consists of 20 million 50¢ ordinary shares.

Requirement

Prepare the accounting entry that records the bonus issue and redraft the balance sheet immediately after the bonus issue takes place. **(5 marks)**

**Question 5**

The directors of Beta have decided to make a rights issue of two for every five shares held by existing shareholders at \$1.15. All the existing shareholders have chosen to take up this offer. The balance sheet of Beta immediately before the issue was as follows:

Beta: Balance sheet as at 31 December 20X9

	<i>\$000</i>
Non-current assets	15,500
Current assets	8,800
	<u>24,300</u>
Share capital	15,000
Retained earnings	4,300
	<u>19,300</u>
Liabilities	5,000
	<u>24,300</u>

Share capital consists of 15 million \$1 ordinary shares.

Requirement

Prepare the accounting entry that records the rights issue and redraft the balance sheet immediately after the rights issue takes place. **(5 marks)**

**Question 6**

Optima issued 500,000 \$1 ordinary shares for \$1.30 on 1 August 20X2. At the balance sheet date, 31 December 20X2 all the shares issued were fully paid. Costs related to this issue totalled \$60,000 and the financial accountant has charged this amount to finance costs in

the income statement. The retained profit for the year as per the draft accounts is \$210,000. The equity and reserves of Optima at 31 December 20X1 was as follows:

	<i>\$000</i>
<i>Equity and reserves</i>	
Share capital, \$1 shares, fully paid	3,500
Share premium	600
Revaluation reserves	400
Retained earnings	940
	<u>5,440</u>

Requirement

Prepare the accounting adjustments required to ensure that the costs of this share issue are recorded correctly and draft the equity and reserves section of the balance sheet for inclusion in the financial statements for the year ended 31 December 20X2. **(10 marks)**

Solutions to Revision Questions

17

✓ Solution 1

The correct answer is (C), see Section 17.9.

Nominal share capital has reduced by \$70,000, therefore CRR is credited with \$70,000. The cash paid, including the premium, is \$84,000, and this needs to be charged to distributable reserves.

✓ Solution 2

The correct answer is (A), see Section 17.3.

✓ Solution 3

The correct answer is (D), see Section 17.3.

✓ Solution 4

Share capital will increase by one-fifth. Share capital will increase by \$2m and accumulated profits will reduce by \$2m. The transaction would be recorded as follows:

		<i>\$m</i>	<i>\$m</i>
Debit	Accumulated profits	2m	
Credit	Share capital		2m

The new balance sheet would be as follows:

Alpha balance sheet as at 31 December 20X9

	<i>\$000</i>
Non-current assets	10,500
Working capital	<u>4,800</u>
	15,300
Share capital	<u>12,000</u>
Accumulated profits	<u>300</u>
	12,300
Liabilities	<u>3,000</u>
	<u>15,300</u>



Solution 5

Assuming that all the shareholders take up the rights, then 6 million new shares are created. The transaction would be recorded as follows:

		<i>\$m</i>	<i>\$m</i>
Debit	Cash	6.9	
Credit	Share capital		6.0
Credit	Share premium		0.9

The rights issue would generate new funds. At a two-for-five rights issue, 6m new shares would be issued and the balance raised would be credited to share premium.

The new balance sheet would be as follows:

Beta – balance sheet as at 31 December 20X9

	<i>\$000</i>
Non-current assets	15,500
Working capital	<u>15,700</u>
	<u>31,200</u>
Share capital	21,000
Share premium	900
Retained earnings	<u>4,300</u>
	<u>26,200</u>
Liabilities	<u>5,000</u>
	<u><u>31,200</u></u>



Solution 6

The financial accountant has recorded the issue costs as:

Dr	Finance costs	\$60,000
Cr	Bank	\$60,000

Being the recording of the share issue costs.

The standard requires that costs relating to a new issue of equity should be offset against share premium rather than being charged to the income statement. The entry that should have been recorded by the accountant was:

Dr	Share premium	\$60,000
Cr	Bank	\$60,000

Being the recording of the share issue costs.

The bank entry that has been posted is correct. The charge to finance costs, however should be reversed and the costs debited against share premium in accordance with the standard.

The correcting entry is:

Dr	Share premium	\$60,000
Cr	Finance costs	\$60,000

Being the correcting entry to record the share issue costs.

Extract from the balance sheet of Optima as at 31 December 20X2

<i>Equity and reserves</i>		<i>\$000</i>
Share capital, \$1 shares, fully paid		4,000
Share premium (see workings)		690
Revaluation reserves		400
Retained earnings (see workings)		<u>1,210</u>
		<u>6,300</u>
<i>Workings</i>		
<i>Share premium</i>		<i>\$000</i>
As at 31/12/X1		600
Premium on issue in 20X1 (500K shares × 30 cents)		150
Less issue costs		<u>(60)</u>
As at 31/12/X2		<u>690</u>
<i>Retained earnings</i>		
As at 31/12/X1		940
Profit per draft accounts		210
Plus the add back of the issue costs incorrectly charged within finance costs in arriving at profit		60
As at 31/12/X2		<u>1,210</u>

Recognition and Disclosure of Other Significant Accounting Transactions

18

LEARNING OUTCOME

After completing this chapter you should be able to:

- ▶ explain the principles of the accounting rules contained in IAS's dealing with disclosure of related parties to a business, ... post-balance sheet events and contingencies.

The syllabus topics covered in this chapter are as follows:

- post-balance sheet events (IAS 10),
- provisions and contingencies (IAS 37),
- the disclosure of related parties to a business (IAS 24).

18.1 Introduction

In this chapter we cover three IASs which deal with various aspects of recognition and disclosure of other significant transactions. They are:

- IAS 10 Events After the Balance Sheet Date,
- IAS 37 Provisions, Contingent Liabilities and Contingent Assets,
- IAS 24 Related party disclosures.

18.2 IAS 10 Events after the balance sheet date

18.2.1 Introduction

It is a fundamental principle of accounting that regard must be had to all available information when preparing financial statements. This must include relevant events occurring after

the balance sheet date, up to the date on which the financial statements are authorised for issue. The objective of IAS 10 is to:

- define the extent to which different types of post balance sheet events are to be reflected in financial statements;
- define when an entity should adjust its financial statements for events after the balance sheet date;
- set out the disclosures that the entity should provide about the date the balance sheet was authorised;
- specify disclosures required about events arising after the balance sheet date.

18.2.2 Definitions

IAS 10 defines an event after the balance sheet date as ‘events after the balance sheet date are those events, favourable and unfavourable, that occur between the balance sheet date and the date when the financial statements are authorised for issue.’

IAS 10 identifies two main types of post-balance sheet event: adjusting events and non-adjusting events.

18.2.3 Adjusting events

These are ‘events which provide evidence of conditions that existed at the balance sheet date’. They require changes in amounts to be included in financial statements, because financial statements should reflect all available evidence as to conditions existing at the balance sheet date.

Examples of *adjusting events* are:

1. *Non-current assets.* The subsequent determination of the purchase price or of the proceeds of sale of assets purchased or sold before the year end.
2. *Property.* A valuation which provides evidence of a permanent diminution in value.
3. *Investments.* The receipt of a copy of the financial statements or other information in respect of an unlisted entity which provides evidence of a permanent diminution in the value of a long-term investment.
4. *Inventories and work in progress.*
 - The receipt of proceeds of sales after the balance sheet date or other evidence concerning the net realisable value of inventories.
 - The receipt of evidence that the previous estimate of accrued profit on a long-term construction contract was materially inaccurate.
5. *Receivables.* The renegotiation of amounts owing by customers, or the insolvency of a customer.
6. *Taxation.* The receipt of information regarding rates of taxation.
7. *Claims.* Amounts received or receivable in respect of insurance claims, which were in the course of negotiation at the balance sheet date.
8. *Obligations.* The settlement after the balance sheet date of a court case that confirms that the entity had a present obligation at the balance sheet date.
9. *Discoveries.* The discovery of errors or frauds which show that the financial statements were incorrect.

18.2.4 Non-adjusting events

Non-adjusting events are events that are indicative of conditions that arose after the balance sheet date. Consequently, they do not result in changes in amounts in financial statements.

Although non-adjusting events do not lead to changes in amounts in financial statements, they should still be disclosed by note, if material.

Examples of *non-adjusting events* are:

1. issues of shares and loan notes;
2. purchases and sales of non-current assets and investments;
3. losses of fixed assets or inventories as a result of a catastrophe, such as fire or flood;
4. opening new trading activities or extending existing trading activities;
5. closing a significant part of the trading activities if this was not anticipated at the year end;
6. decline in the value of property and investments held as non-current assets, if it can be demonstrated that the decline occurred after the year end;
7. government action, such as nationalisation;
8. strikes and other labour disputes.

18.3 Proposed dividends

IAS 10 was revised in 1999 and 2003, an important change made in 1999 and reinforced in 2003 was to prevent proposed equity dividends being recognised as liabilities unless they are declared before the balance sheet date. Declared means that the dividend is appropriately authorised, and is no longer at the discretion of the entity.



IAS 1 requires the disclosure of proposed dividends, this may be done in the statement of changes in equity or by note to the financial statements. It is, of course, very unusual for entities to propose or declare a final dividend before the balance sheet date. However, you may find that your examiner does take advantage of this loophole in questions so that the proposed dividend will appear as a liability and in the statement of changes in equity.

18.4 Going concern

If management determines after the balance sheet date that it is necessary to liquidate the entity or cease trading, or that it has no realistic alternative but to do so, the financial statements should not be prepared on a going-concern basis.

18.5 Disclosure requirements of IAS 10

- (a) *Events after the balance sheet date requiring changes to the financial statements:* A material adjusting event after the balance sheet date requires changes to the financial statements.
- (b) *Events after the balance sheet date requiring disclosure by note:* A material post balance sheet event should be disclosed [by note] where it is a non-adjusting event of such importance that its non-disclosure would affect the ability of users of financial statements to reach a proper understanding of the financial position.

The note should disclose the nature of the event and an estimate of the financial effect, or a statement that it is not practicable to make such an estimate. The estimate should be made before taking account of taxation, with an explanation of the taxation implications where necessary for a proper understanding of the financial position.

- (c) *Date directors approve financial statements:* The date on which the financial statements are authorised for issue should be disclosed.

18.6 IAS 37 Provisions, Contingent Liabilities and Contingent Assets

18.6.1 Introduction

IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* regulates the recognition and disclosure of provisions and contingencies. For your examination you need to understand the principles relating to provisions, contingent liabilities and contingent assets.

18.6.2 Provisions

The term ‘provision’ is defined in IAS 37 as ‘a liability of uncertain timing or amount’. The main objectives of IAS 37 in this area are to ensure that entities make provisions for all such liabilities and do not make excessive provisions.

A provision should be recognised when, and only when:

- (a) an entity has a present obligation (legal or constructive) as a result of a past event;
 - (b) it is probable (i.e. more likely than not) that an outflow of resources embodying economic benefits will be required to settle the obligation; and
 - (c) a reliable estimate can be made of the amount of the obligation.
- (a) *An entity has a present obligation (legal or constructive) arising from a past event:*
- There is a present obligation if it is more likely than not that an obligation exists at the balance sheet date.
 - A legal obligation could arise from a contract, legislation or other legal requirement.
 - A constructive obligation derives from the entity’s actions:
 - by an established pattern of past practice, published policies or a sufficiently specific current statement, the entity has indicated to current parties that it will accept certain responsibilities; and
 - as a result the entity has created a valid expectation on the part of those other parties that it will discharge those responsibilities.
- (b) *It is probable (i.e. more likely than not) that an outflow of resources embodying economic benefits will be required to settle the obligation:*
- A transfer of economic benefits is regarded as probable if it is more likely than not to occur.
 - Where there are a number of similar obligations the probability that a transfer will be required is determined by considering the class of obligations as a whole, for example warranties.
- (c) *A reliable estimate can be made of the amount:*
- If it is not possible to make a reliable estimate a provision cannot be made. The item must be disclosed as a contingent liability. IAS 37 notes that it is only in extremely rare cases that a reliable estimate will not be possible.

A reimbursement from a third party, to pay for part or all of the expenditure provided as a provision should only be recognised if it is reasonably certain that it will be received. If it is recognised it should be treated as a separate asset, rather than set off against the provision.

18.6.3 Provision for warranties

If an entity sells goods and provides a warranty against faults occurring after sale a provision needs to be created for the future warranty claims. The process is known as *expected values* and uses estimates of the likely cost and the probability of it occurring.

Example 18.1

An entity provides a one-year warranty on its goods. The entity estimates that at the year-end if all goods needed minor repairs the cost would be \$4 million and if all goods needed major repairs the cost would be \$15 million. The probability of goods needing no repair 90% minor repair 8% and major repair 2%.

Calculate the provision for warranty claims.

Solution

The amount, using expected values is $(\$4\text{m} \times 0.08) + (\$15\text{m} \times 0.02) = \$620,000$

For each class of provision, the financial statements should disclose, if material:

- (a) the opening and closing balance;
- (b) additional provisions made in the period;
- (c) amounts used (i.e. incurred and charged against the provision);
- (d) details of the nature of the obligation provided for, including expected timing and any uncertainties relating to the obligation.

18.7 Contingent liabilities and contingent assets

A contingent liability is:

- (i) a possible obligation that arises from past events and whose existence will be confirmed only by the occurrence of one or more uncertain future events not wholly within the control of the entity; or
- (ii) a present obligation that arises from past events but is not recognised because it is not probable that a transfer of economic benefits will be required to settle the obligation; or the amount of the obligation cannot be measured with sufficient reliability.

A contingent asset is:

a possible asset that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity.

The accounting treatment of contingent liabilities and contingent assets depends upon the degree of probability. The following table shows the requirements.

<i>Likelihood of occurrence</i>	<i>Material contingent asset</i>	<i>Material contingent liability</i>
Remote	No disclosure allowed*	No disclosure
Possible	No disclosure allowed*	Disclose by note
Probable	Disclose by note	In these two categories the contingent liability requires a provision
Virtually certain	Accrual	

* Note that disclosure is not allowed for 'remote' or 'possible' contingent gains. The prudence concept dictates that contingent gains are treated with more caution than contingent losses.

When a contingency is disclosed by note, the following information should be given:

- (i) the nature of the contingency;
- (ii) an estimate of the financial effect.

The following extract illustrates these disclosure requirements, as it describes the nature of the contingency and the financial effect of it.

Extract from the consolidated accounts of the Nestlé Group for the year ended 31 December 2003

Notes to the accounts

34. Contingent assets and liabilities

The Group is exposed to contingent liabilities amounting to about CHF 470 million (2002: CHF 440 million) representing various potential litigation. Contingent assets for litigation claims in favour of the Group amount to about CHF 170 million (2002: CHF 160 million).

18.8 Problems with IAS 37 as regards contingencies

- (a) *Determining level of probability.* It must be a matter of judgement in many cases to determine the appropriate level of probability of an event, and hence the appropriate accounting treatment of it. Opinion is bound to differ both as to the percentage probability of an event and as to the category a given percentage should be placed into. *UK GAAP*, an authoritative work on accounting standards and practice in the UK, suggests an answer to the second of these uncertainties by proposing the following:

<i>Likelihood of outcome</i>	<i>Level of probability</i>
Remote	0–5%
Possible	5–50%
Probable	50–95%
Virtually certain	95–100%

- (b) *Disclosure of information* about a claim which may prejudice the settlement of that claim. Entities will typically attempt to limit damage to their cause by including in the disclosure note a statement declaring that the claims will be strenuously resisted.
- (c) *Counterclaims.* An entity may have a contingent liability for a claim against it which is matched by a counterclaim or a claim by the entity against a third party. The likelihood of success, and the probable amounts of the claim and the counterclaim, should be separately assessed and disclosed where appropriate. For example, an entity might have

an action brought against it which it could in turn bring against a subcontractor. If the subcontractor had no material assets, the claim would, if successful, fall upon the entity, with no practical recourse to the subcontractor.

18.9 Related party disclosures

IAS 24 *Related Party Disclosures* was issued in March 1984, reformatted in 1994 and updated in 2003. The objective of the standard is to ensure that financial statements disclose to shareholders the effect of the existence of related parties, any material transactions with them and any outstanding balances.

In the absence of information to the contrary, we assume that an organisation has independent discretionary power over its transactions and resources, and pursues its activities independently of the interests of its owners, managers and others. We presume that transactions have been undertaken 'at arm's length'.

These assumptions may not be justified when related party relationships exist, because the requisite conditions for competitive, free-market dealings may not be present. The parties themselves may endeavour to trade at arm's length, but the very nature of the relationship may preclude this. Even when trading does take place at arm's length, it is still useful to report on the nature of the relationship.

18.10 Definitions

IAS 24 includes the following definitions:

Related party: A party is related to an entity if:

- (a) directly, or indirectly through one or more intermediaries, the party:
 - (i) controls, is controlled by, or is under common control with, the entity (this includes parents, subsidiaries and fellow subsidiaries);
 - (ii) has an interest in the entity that gives it significant influence over the entity; or
 - (iii) has joint control over the entity;
- (b) the party is an associate (as defined in IAS 28 *Investments in Associates*) of the entity;
- (c) the party is a joint venture in which the entity is a venturer (see IAS 31 *Interests in Joint Ventures*);
- (d) the party is a member of the key management personnel of the entity or its parent;
- (e) the party is a close member of the family of any individual referred to in (a) or (d);
- (f) the party is an entity that is controlled, jointly controlled or significantly influenced by, or for which significant voting power in such entity resides with, directly or indirectly, any individual referred to in (d) or (e); or
- (g) the party is a post-employment benefit plan for the benefit of employees of the entity, or of any entity that is a related party of the entity.

Note: Parents, subsidiaries, associates, joint ventures and post-retirement benefits are all outside the scope of your syllabus.

Related party transaction: A transfer of resources or obligations between related parties, regardless of whether a price is charged.

You can see from the above definition that 'Related parties' include entities in the same group as the reporting entity, associated entities, directors and their close families, and pension

funds for the benefit of employees of the reporting entity. In addition, key managers and those controlling 20 per cent or more of the voting rights are presumed to be related parties unless it can be demonstrated that neither party has influenced the financial and operating policies of the other in such a way as to inhibit the pursuit of separate interests.

18.10.1 Exclusions

In the context of this Standard, the following are not necessarily related parties:

- (a) two entities simply because they have a director or other member of key management personnel in common, notwithstanding (d) and (f) in the definition of 'related party'.
- (b) two venturers simply because they share joint control over a joint venture.
- (c)
 - (i) providers of finance;
 - (ii) trade unions;
 - (iii) public utilities; and
 - (iv) government departments and agencies.

Simply by virtue of their normal dealings with an entity (even though they may affect the freedom of action of an entity or participate in its decision-making process); and

- (d) a customer, supplier, franchisor, distributor or general agent with whom an entity transacts a significant volume of business, merely by virtue of the resulting economic dependence.

18.11 Disclosure

The standard concerns the disclosure of related party transactions in order to make readers of financial statements aware of the position and to ensure that the financial statements show a true and fair view.

18.11.1 Disclosure of control

Related party relationships where control exists should be disclosed irrespective of whether any transactions took place.

18.11.2 Disclosure of transactions and balances

If there have been transactions between related parties, an entity shall disclose the nature of the related party relationship as well as information about the transactions and outstanding balances necessary for an understanding of the potential effect of the relationship on the financial statements.

Disclosures that related party transactions were made on terms equivalent to those that prevail in arm's length transactions are made only if such terms can be substantiated.

At a minimum, disclosures shall include:

- (a) the amount of the transactions;
- (b) the amount of outstanding balances:
 - (i) their terms and conditions, including whether they are secured, and the nature of the consideration to be provided in settlement;
 - (ii) details of any guarantees given or received;

- (c) provisions for doubtful debts related to the amount of outstanding balances;
- (d) the expense recognised during the period in respect of bad or doubtful debts due from related parties.

In addition IAS 24 requires an entity to disclose key management personnel compensation in total and for each of the following categories:

- (a) short-term employee benefits;
- (b) post-employment benefits;
- (c) other long-term benefits;
- (d) termination benefits;
- (e) equity compensation benefits.

18.11.3 Examples of related party transactions

- purchases or sales of goods;
- purchases or sales of property and other assets;
- rendering or receipt of services;
- agency arrangements;
- leasing arrangements;
- management contracts;
- any of these or similar transactions would require to be disclosed if material;
- transfers of research and development;
- transfers under licence agreements;
- transfers under finance arrangements (including loans and equity contributions in cash or in kind);
- provision of guarantees or collateral;
- settlement of liabilities on behalf of the entity or by the entity on behalf of another party.

18.12 Summary

Having completed this chapter we can now account for adjusting and non-adjusting events occurring after the balance sheet date and can discuss the principles of recognising provisions and can define and account for contingencies.

We can define related parties and related party transactions and can explain the disclosures required by IAS 24 *Related Party Disclosures*.

Revision Questions

18

? Question 1

Which of the following could be classified as a post-balance sheet adjusting event:

- (A) A serious fire, occurring one month after the year end, that damaged the sole production facility, causing production to cease for three months.
- (B) One month after the year end a notification was received advising that the large balance on a receivable would not be paid as the customer was being wound up. No payments are expected from the customer.
- (C) A large quantity of parts for a discontinued production line was discovered at the back of the warehouse during the year-end inventory count. The parts have no value except a nominal scrap value and need to be written off.
- (D) The entity took delivery of a new machine from the USA in the last week of the financial year. It was discovered almost immediately afterwards that the entity supplying the machine had filed for bankruptcy and would not be able to honour the warranties and repair contract on the new machine. Because the machine was so advanced it was unlikely that any local entity could provide maintenance cover. **(2 marks)**

? Question 2

X is currently defending two legal actions:

- (i) An employee, who suffered severe acid burns as a result of an accident in X's factory, is suing for \$20,000, claiming that the directors failed to provide adequate safety equipment. X's lawyers are contesting the claim, but have advised the directors that they will probably lose.
- (ii) A customer is suing for \$50,000, claiming that X's hair-care products damaged her hair. X's lawyers are contesting this claim, and have advised that the claim is very unlikely to succeed.

How much should X provide for these legal claims in its financial statements?

- (A) \$0
- (B) \$20,000
- (C) \$50,000
- (D) \$70,000 **(2 marks)**



Question 3

Which of the following could be regarded as a related party of X:

- (A) P is X's main customer, taking 50 per cent of their turnover.
- (B) S is X's main supplier, supplying approximately 40 per cent of X's purchases.
- (C) A is the managing director of X and is the largest single shareholder, holding 35 per cent of the equity.
- (D) B is X's banker and has provided X with an overdraft facility and a short-term loan.

(2 marks)



Question 4

Timber Products is a timber supplies wholesale entity. The balance sheet date is 31 December. On turnover of \$83.5m, the entity has pre-tax earnings of \$31.6m (last year \$40.3m on sales revenue of \$91.2m).

Timber Products has a small number of customers of which one, Homestead, represents 75 per cent of the sales revenue of Timber Products. Homestead has direct online access to Timber Products' order book and inventory records. Whenever Homestead requires a delivery, it accesses Timber Products' inventory records and order book.

Requirements

Explain whether Homestead is a related party:

- (a) if, when there is insufficient quantity of the item it requires in inventory or on order, Homestead asks Timber Products to place an order with its supplier; **(4 marks)**
- (b) if, when there is insufficient quantity of the item it requires in inventory or on order, Homestead generates an order from Timber Products to its suppliers. **(4 marks)**

(Total marks = 8)



Question 5

Holiday Refreshments runs a brewing business. In February 2004 the accounts for the year ended 31 December 2003 are being finalised. The following issues remain outstanding:

1. A customer bought a glass of Holiday Best Beer in his local bar during October 2003 and became ill. He is suing the bar and Holiday Refreshments. The case has not yet come to court and although the entity's solicitors believe they will win the case, the directors offered an out-of-court settlement of \$10,000 as a goodwill gesture. Under the terms of the offer each side would meet their own costs which in the case of Holiday Refreshments are \$1,500 up to December 2003. All of this amount had been paid by the year-end. The customer has not yet formally accepted the offer.
2. A consignment of hops costing \$95,000 was delivered to the brewery on 20 December 2003. The supplier has not yet issued an invoice.
3. Bottles for the entity's beers are supplied by Bottlebank. Five years ago, in order to secure supplies, Holiday gave a guarantee over a \$3,000,000 10-year bank loan taken out by Bottlebank. The guarantee is still in force. Bottlebank's latest accounts indicate net assets of \$6.8m and it has not breached any of the terms and conditions of the loan.

4. Due to a faulty valve, a batch of beer was inadvertently discharged into a river instead of into the bottling plant in March 2003. The entity paid a fine of \$20,000 in July 2003 for an illegal discharge. It is also responsible for rectifying any environmental damage. To 31 December 2003 \$200,000 had been paid. The extent of further expenditure is uncertain although it is estimated to be between \$100,000 and \$140,000.

Requirement

Explain how each of the above items should be treated in the accounts of Holiday Refreshments for the year to 31 December 2003. **(10 marks)**

Solutions to Revision Questions

18

Solution 1

The correct answer is (B), see Section 18.2.3.

Further information is now available that throws more light on the prevailing position at the year end.

- (A) is a post balance sheet non-adjusting event.
- (C) is an adjusting event but was discovered at the year-end inventory count. It is therefore an adjusting event but is not post balance sheet.
- (D) if the lack of maintenance cover is material it could be treated as a post balance sheet non-adjusting event.

Solution 2

The correct answer is (B), see Section 18.6.2.

The directors need to create a provision for \$20,000 as the employee's claim is probably going to succeed but the customer's claim is not. Provisions have to be created when it is probable that the organisation will have to transfer economic benefit. Probable is usually taken as more than 50 per cent likely.

Solution 3

The correct answer is (C), see Sections 18.10 and 18.10.1.

IAS 24 presumes directors and shareholders who can exercise significant influence to be related parties. The largest single shareholder is certain to have significant influence.

- (A) and (B) are incorrect because IAS 24 does not require parties with whom the reporting entity transacts a significant volume of business to be treated as a related party.
- (D) is incorrect because IAS 24 does not require providers of finance in the ordinary course of business to be treated as a related party.

Solution 4

- (a) It could be argued that a related party relationship exists because, as a result of Homestead representing 75 per cent of the sales of Timber Products, Homestead has influence over the financial and operating policies of Timber Products to an extent that Timber Products might be inhibited from pursuing at all times its own separate

interests. However, paragraph 6(c) of IAS 24 states that no disclosure is required of a relationship that exists simply as a result of a party being a customer of the reporting entity with whom it transacts a significant volume of business.

- (b) A related party relationship exists because Homestead has effectively, as a result of its having direct control over the purchase ordering system of Timber Products, influence over the financial and operating policies of Timber Products to an extent that Timber Products might be inhibited from pursuing at all times its own separate interests.



Solution 5

1. *Court case.* An offer has been made but not yet accepted. It is uncertain whether it must be accepted or whether the customer will pursue his case. The offer arose out of a past event (supply of beer in October) and there is a present obligation as an offer has been made. A provision of \$10,000 should be made and brief details disclosed.
2. *Hops.* This is a straightforward accrual. An obligation arises from a past event and there is no significant uncertainty.
3. *Guarantee.* No present obligation exists as Bottlebank has net assets and has met the terms of the loan. There is a possibility that the guarantee will be called in during the next 5 years and therefore the granting of the guarantee (a past event) may give rise to a possible obligation. This is a contingent liability which should be disclosed in the notes to the accounts but not provided for in the accounts.
4. *Environmental discharge.* The damage occurred as a result of a past event – the discharge of beer. The fine and \$200,000 rectification costs will already be included in the accounts. There is an obligation to make good further environmental damage. There is uncertainty concerning the amount. A provision should be made of, say, \$120,000, with an explanation of the range of possible payments.

Working Capital Ratios

19

LEARNING OUTCOME

After completing this chapter you should be able to:

- ▶ calculate and interpret working capital ratios for business sectors.

Learning aims

The learning aims of this part of the syllabus are that students should be able to:

- assess and control the short term financial requirements of a business entity.

The syllabus topics covered in this chapter are as follows:

- Working capital ratios (e.g. receivable days, inventory days, payable days, current ratio, quick ratio) and the working capital cycle.
- Working capital characteristics of different businesses (e.g. supermarkets being heavily funded by payables) and the importance of industry comparisons.

19.1 Introduction

This final part of the syllabus will examine various aspects of working capital management. This chapter discusses working capital policy and working capital ratios. Chapter 20 discusses various alternatives for short-term investing, various sources of short-term funding and funding for international trade. The following three chapters discuss the elements of working capital in more detail; Chapter 21 covering receivables and payables; Chapter 22 dealing with inventory management; Chapter 23 discusses cash management and cash flow forecasts.

19.2 Working capital management

In CIMA's *Management Accounting: Official Terminology*, working capital is defined as follows:



The capital available for conducting the day-to-day operations of an organisation; normally the excess of current assets over current liabilities.

In accounting terms, this is a static balance sheet concept, referring to the excess at a particular moment in time of permanent capital plus non-current liabilities over the non-current assets of the business. As such, it depends on accounting rules, such as what is capital and what is revenue, what constitutes retained earnings, the cut-off between long term and short term (twelve months from the balance sheet date for published accounts) and when revenue should be recognised.

If working capital, thus defined, exceeds net current operating assets (inventory plus receivables less payables), the entity has a cash surplus (usually represented by bank deposits and investments); otherwise it has a deficit (usually represented by a bank loan and/or overdraft). On this basis the control of working capital can be subdivided into areas dealing with inventory, receivables, payables, and cash.

A business must be able to generate sufficient cash to be able to meet its immediate obligations and therefore continue trading. Unprofitable businesses can survive for quite some time if they have access to sufficient liquid resources, but even the most profitable business will quickly go under if it does not have adequate liquid resources. Working capital is therefore essential to the entity's long-term success and development and the greater the degree to which the current assets cover the current liabilities, the more solvent the entity.

The efficient management of working capital is important from the point of view of both liquidity and profitability. Poor management of working capital means that funds are unnecessarily tied up in idle assets, hence reducing liquidity and also reducing the ability to invest in productive assets such as plant and machinery, so affecting profitability.

An entity's working capital policy is a function of two decisions:

- First, the appropriate level of investment in, and mix of current assets to be decided upon, for a set level of activity. This is the investment decision.
- Second, the methods of financing this investment the financing decision.

19.2.1 The investment decision

All businesses, to one degree or another, require working capital. The actual amount required will depend on many factors such as the age of the entity, the type of business activity, credit policy, and even the time of year. There is no standard fixed requirement. It is essential that an appropriate amount of working capital is budgeted for to meet anticipated future needs. Failure to budget correctly could result in the business being unable to meet its liabilities as they fall due. If a business finds itself in such a situation, it is said to be *technically insolvent*. In conditions of uncertainty, firms must hold some minimal level of cash and inventories based on expected sales plus additional safety inventory. With an *aggressive working capital policy*, a firm would hold minimal safety inventory. Such a policy would minimise costs, but it could lower sales because the firm may not be able to respond rapidly to increases in demand.

Conversely, a *conservative working capital policy* would call for large safety inventory levels. Generally, the expected return is lower under a conservative than under an aggressive policy, but the risks are greater under the aggressive policy. A *moderate policy* falls somewhere between the two extremes in terms of risk and returns.

19.2.2 The financing decision

Working capital financing decisions involve the determination of the mix of long- versus short-term debt.

There is a basic difference between cash and inventories on the one hand and receivables on the other. In the case of cash and inventories, higher levels mean safety inventory, hence a more conservative position. There is no such thing as a ‘safety level of receivables’ and a higher level of receivables in relation to sales would generally mean that the firm was extending credit on more liberal terms. If we characterise aggressive as being risky, then lowering inventories and cash would be aggressive but raising receivables would also be aggressive.

The financing of working capital depends upon how current and fixed asset funding is divided between long-term and short-term sources of funding. Three possible policies exist.

- (i) *Conservative.* A conservative policy is where all of the permanent assets both non-current assets and the permanent part of the current assets (i.e. the core level of investment in inventory and receivables, etc.) are financed by long-term funding, as well as part of the fluctuating current assets. Short-term financing is only used for part of the fluctuating current assets (Figure 19.1). The conservative policy is the least risky but also results in the lowest expected return.
- (ii) *Aggressive.* An aggressive policy for financing working capital uses short-term financing to fund all the fluctuating current assets as well as some of the permanent part of the current assets. This policy carries the greatest risk of illiquidity, as well as the greatest return (because short-term debt costs are typically less than long-term costs) (Figure 19.2).
- (iii) *Moderate.* A moderate (or maturity matching) policy matches the short-term finance to the fluctuating current assets, and the long-term finance to the permanent part of current assets plus non-current assets (Figure 19.3). This policy falls between the two extremes.

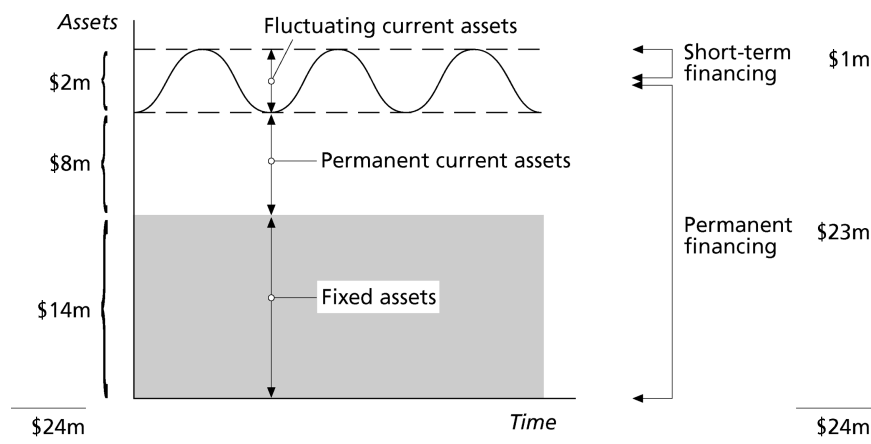


Figure 19.1

WORKING CAPITAL RATIOS

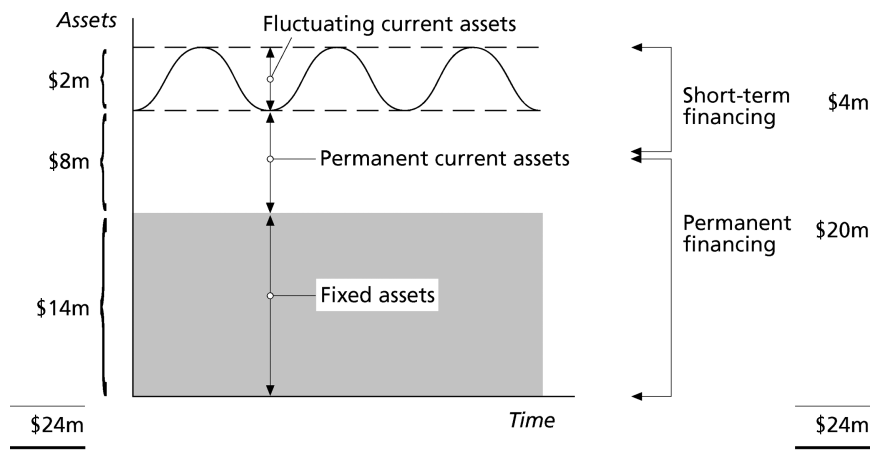


Figure 19.2

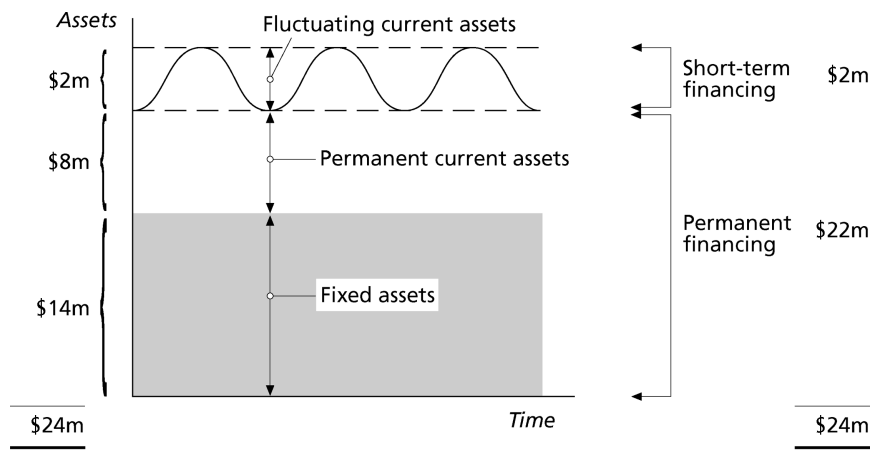


Figure 19.3

19.3 Working capital ratios

Working capital management may be analysed using ratio analysis. We shall consider two groups of ratios: liquidity ratios and those concerned with the calculation of the working capital cycle.

19.3.1 Illustration

The financial statements of Alpha are shown below:

Alpha income statement for the year ended 31 December 20X9

	\$	\$
Sales revenue		500,000
Opening inventory	25,000	
Purchases	305,000	
Closing inventory	<u>(30,000)</u>	
Cost of goods sold		<u>300,000</u>
Gross profit		200,000
Other operating expenses	60,000	
Finance cost	<u>24,000</u>	
Profit		<u>84,000</u> <u>116,000</u>

Alpha balance sheet as at 31 December 20X9

	\$	\$
Non-current assets		540,000
Current assets		
Inventory	30,000	
Receivables	62,500	
Bank	<u>7,000</u>	
		<u>99,500</u>
		<u>639,500</u>
Capital and reserves		
Share capital		125,625
Accumulated profit		<u>256,000</u>
		381,625
Non-current liabilities		
Loan notes		200,000
Current liabilities		
Payables		<u>57,875</u>
		<u>639,500</u>

Ignore taxation.

We will use this set of financial statements to illustrate the calculation of the working capital ratios.

19.3.2 Liquidity ratios

Liquidity refers to the amount of cash in hand or readily obtainable to meet payment obligations. Liquidity ratios indicate the ability to meet liabilities from available assets and are calculated from balance sheet information. The most commonly used are the current ratio and the quick ratio.

19.3.3 The current ratio

The current ratio is the ratio of current assets divided by current liabilities:

$$\text{Current ratio} = \frac{\text{current assets}}{\text{current liabilities}}$$

Alpha's current ratio is:

$$\frac{99,500}{57,875} = 1.7:1$$

Notice that this figure is usually expressed as a ratio rather than as a percentage.

The current ratio provides a broad measure of liquidity. A high current ratio would suggest that the business would have little difficulty meeting current liabilities from available assets. However, if a large proportion of current assets is represented by inventory, this may not be the case as inventory are less liquid than other current assets.

19.3.4 The quick ratio

The quick ratio, or *acid test*, indicates the ability to pay payables in the short term. The quick ratio recognises that inventory may take some time to convert into cash and so focuses on those current assets that are relatively liquid.

$$\text{Quick ratio} = \frac{\text{current assets} - \text{inventory}}{\text{current liabilities}}$$

Alpha's quick asset ratio is:

$$\frac{99,500 - 30,000}{57,875} = 1.2:1$$

By ignoring inventory, the ratio concentrates on those current assets which are immediately available to meet payables as and when they fall due.

There are no general norms for these ratios and 'ideal' levels vary depending on the type of business being examined. Manufacturers will normally require much higher liquidity ratios than retailers. If a norm is required, the best guide will usually be the industry average if one is available. The industry average should indicate whether the current and quick ratios required in the industry are generally quite high or relatively low. This will be determined by the trading conditions in the sector. For example a retailer such as a supermarket will be able to purchase on credit and sell for cash. There will therefore be virtually no receivables, other than credit card entities and very little inventory. The current and quick ratios will be quite low as a result. Whereas a manufacturing organisation will need to hold inventory in various stages of completion, from raw materials to finished products and the majority if not all of the sales will be on credit. As a result both liquidity ratios will be higher.

When analysing liquidity ratios, the absolute figure calculated for a particular year is less important than the trend from one year to the next. It is important to assess whether the organisation's liquidity is improving or declining over time.

19.4 Efficiency ratios

The efficiency ratios are related to the liquidity ratios. They give an insight into the effectiveness of the entity's management of the components of working capital.

19.4.1 Inventory turnover

It is possible to calculate the average number of days taken by the business to sell an item of inventory, if there are several types of inventory each type must be calculated separately:

$$\frac{\text{Inventory}}{\text{Cost of sales}} \times 365$$

This is equivalent to taking the amount of inventory held by the business, dividing by the rate at which inventory is consumed in a year and multiplying by the number of days in a year. Alpha's inventory turnover is:

$$\frac{30,000}{300,000} \times 365 = 37 \text{ days}$$

This means that, on average, any given item of inventory will spend 37 days 'on the shelf' before it is sold.

Obviously, it is desirable for this period to be as short as possible. The shorter the inventory turnover period, the more quickly inventory can be converted into cash. The inventory turnover ratio can, however, be too short. It is easy to reduce the figure produced by this ratio: the entity can simply allow its inventory to run down. This could, however, be counterproductive if this led to stoppages in production because there were inadequate inventories of materials or components. Similarly, holding inadequate inventories of

finished goods could cost the entity both trade and goodwill if it is unable to meet customer demand.

It is difficult to tell whether 37 days is ‘good’ or ‘bad’. It would be helpful if Alpha could be compared to a similar entity or if previous years’ figures were available.

Sometimes this ratio is calculated using constants of 52 or 12 to express the turnover in terms of weeks or months. It is also possible to invert the formula and leave out the constant to show how often inventory has ‘turned over’ during the year:

$$\frac{\text{Cost of sales}}{\text{Closing inventory}} = \frac{300,000}{30,000} = 10 \text{ times}$$

19.4.2 Receivables turnover

This is a measure of the average length of time taken for customers to settle their balance:

$$\frac{\text{Receivables}}{\text{Sales}} \times 365$$

Alpha’s ratio is:

$$\frac{62,500}{500,000} \times 365 = 46 \text{ days}$$

Again, it is desirable for this ratio to be as short as possible. It will be better for the entity’s cash flow if customers pay as quickly as possible. It can, however, be difficult to press for speedier payment. Doing so could damage the entity’s relationship with its customers.

In general, most businesses request payment within 30 days of the delivery of goods. Most customers tend to delay payment for some time beyond this. Alpha’s ratio appears reasonable: customers are not taking an unrealistic time to pay and there is nothing to suggest that Alpha is putting undue pressure on its customers.

If the entity sells goods for cash and for credit then it is important to divide the trade receivables figure by credit sales only. If sales cannot be broken down then the ratio will be distorted. The classic case of this occurred when a student divided the receivables of a super-market chain by the sales revenue figure (virtually all of which was cash) and came to the conclusion that the receivables turnover ratio was approximately 0.007 days (about 10 minutes!).

19.4.3 Payables turnover

This is the average time taken to pay suppliers:

$$\frac{\text{Payables}}{\text{Purchases}} \times 365$$

Alpha’s payables turnover was:

$$\frac{57,875}{305,000} \times 365 = 69 \text{ days}$$

While the entity should collect cash from its customers as quickly as possible, it should try to delay making payments to its suppliers. Effectively, this is equivalent to taking out an interest-free loan, which can be used to help finance working capital. Again, the entity must use some restraint. If it becomes regarded as a slow payer then it might find it difficult to obtain credit. Indeed, there are credit-rating agencies which compile lists of entities that have poor reputations.

Alpha's ratio of just over two months does not seem too unreasonable, although it does seem fairly slow.

Published financial statements do not usually state the purchases figure. It is possible to obtain a crude estimate of the payables turnover by using the cost of sales figure instead, this method will often have to be used in examination questions.

19.5 The working capital cycle

The efficiency ratios are related to those which measure liquidity. The working capital cycle gives an indication of the length of time cash spends tied up in current assets.

The working capital cycle is the length of time between the entity's outlay on raw materials, wages and other expenditures, and the inflow of cash from the sale of the goods.

In a manufacturing entity this is the average time that raw materials remain in inventory less the period of credit taken from suppliers plus the time taken for producing the goods plus the time the goods remain in finished inventory plus the time taken by customers to pay for the goods. On some occasions this cycle is referred to as the cash cycle or operating cycle.

This is an important concept for the management of cash or working capital because the longer the working capital cycle, the more financial resource the entity needs. Management needs to ensure that this cycle does not become too long. The working capital cycle can be calculated approximately as shown in the calculation below. Allowances should be made for any significant changes in the level of inventory taking place over the period. If, for example, the entity is deliberately building up its level of inventory, this will lengthen the working capital cycle.

Calculation of the working capital cycle

<i>Raw materials</i>		<i>Days</i>
Period of turnover of raw materials inventory	= $\frac{\text{average value of raw material inventory}}{\text{Consumption of raw material per day}} \times 365$	x
Less		
Period of credit granted by suppliers	= $\frac{\text{average level of payables}}{\text{purchase of raw materials per day}} \times 365$	(x)
Add		
Period of production	= $\frac{\text{average value of work in progress}}{\text{average cost of goods sold per day}} \times 365$	x
Period of turnover of finished goods inventory	= $\frac{\text{average value of inventory of finished goods}}{\text{average cost of goods sold per day}} \times 365$	x
Period of credit taken by customers	= $\frac{\text{average values of receivables}}{\text{average value of sales per day}} \times 365$	<u>x</u>
Total working capital cycle		<u>x</u>

Some writers advocate computation of an annual working capital cycle and of a cycle for each quarter, since with a seasonal business the cycle would vary over different periods. The numerators in the equations can be found by taking the arithmetic mean of the opening and closing balances for inventories, payables and receivables. If a quarterly statement is being prepared, the opening and closing balances for the quarter would be used.

The calculation of the working capital cycle may alternatively be expressed as:

		<i>Days</i>
Raw materials inventory turnover period	$= \frac{\text{average raw materials inventory}}{\text{purchases}} \times 365$	x
Less		
Payables payment period	$= \frac{\text{trade payables}}{\text{purchases}} \times 365$	(x)
Add		
Work in progress turnover period	$= \frac{\text{average work in progress}}{\text{manufacturing cost}} \times 365$	x
Finished goods turnover period	$= \frac{\text{average finished goods inventory}}{\text{cost of sales}} \times 365$	x
Receivables collection period	$= \frac{\text{average finished goods inventory}}{\text{cost of sales}} \times 365$	<u>x</u>
		<u>x</u>

In an examination situation, the information supplied in order to calculate the length of the working capital cycle is often simplified as shown below.

Example 19.A

The table below gives information extracted from the annual accounts of Davis for the past 2 years.

You are required to calculate the length of the working capital cycle for each of the 2 years.

Davis Extracts from annual accounts

	Year 1	Year 2
	\$	\$
Inventories: Raw materials	108,000	145,800
Work in progress	75,600	97,200
Finished goods	86,400	129,600
Purchases	518,400	702,000
Cost of goods sold	756,000	972,000
Sales	864,000	1,080,000
Receivables	172,800	259,200
Trade payables	86,400	105,300

Solution

	Year 1		Year 2	
	%	Days	%	Days
Raw materials inventory holding (raw materials inventory ÷ purchases)	20.83	76	20.77	76
Less: Finance from suppliers (trade payables ÷ purchases)	16.67	<u>(61)</u>	15.00	<u>(55)</u>
		<u>15</u>		<u>21</u>
Production time (work in progress ÷ cost of sales)	10.00	37	10.00	37
Finished goods inventory holding (finished goods inventory ÷ cost of sales)	11.43	42	13.33	49
Credit given to customers (receivables ÷ sales)	20.00	<u>73</u>	24.00	<u>88</u>
		<u>167</u>		<u>195</u>

Note that, owing to the nature of the simplified information provided, end-of-year values rather than average values have been used for inventory, receivables and payables. The percentages calculated are multiplied by 365 to give figures expressed in numbers of days.

In a non-manufacturing entity the working capital cycle can be calculated as follows:

$$\text{Inventory turnover} + \text{receivables turnover} - \text{payables turnover}$$

The logic behind this is that inventory cannot be converted into cash until it has been sold and then the customer pays for the goods. This must be offset against the fact that no cash is actually invested until the entity has paid the supplier for the goods. Thus, Alpha's working capital cycle is:

$$37 + 46 - 69 = 14 \text{ days}$$

This means that, on average, the entity's money is tied up in any given item of inventory for 14 days before it is recovered (with profit).

19.6 Shortening the working capital cycle

A number of steps could be taken to shorten the working capital cycle:

- *Reduce raw materials inventory holding.* This may be done by reviewing slow-moving lines and reorder levels. Inventory control models may be considered if not already in use. More efficient links with suppliers could also help. Reducing inventory may involve loss of discounts for bulk purchases, loss of cost savings from price rises, or could lead to production delays due to inventory shortages.
- *Obtain more finance from suppliers by delaying payments.* This could result in a deterioration in commercial relationships or even loss of reliable sources of supply. Discounts may be lost by this policy.
- *Reduce work in progress* by reducing production volume (with resultant loss of business and the need to cut back on labour resources) or improving production techniques and efficiency (with the human and practical problems of achieving such change).
- *Reduce finished goods inventory* perhaps by reorganising the production schedule and distribution methods. This may affect the efficiency with which customer demand can be satisfied and result ultimately in a reduction of sales.
- *Reduce credit given to customers* by invoicing and following up outstanding amounts more quickly, or possibly offering discount incentives. The main disadvantages would be the potential loss of custom as a result of chasing too hard and a loss of revenue as a result of discounts.

The volume of receivable balances could be cut by a quicker collection of debt; finished goods could be turned over more rapidly; the level of raw materials inventory could be reduced or the production period could be shortened.

The working capital cycle is only the *time span* between production costs and cash returns; it says nothing in itself about the amount of working capital that will be needed over this period. In fact, less will be required at the beginning than at the end.

19.7 Summary

In this chapter we have examined working capital ratios and we have considered a range of techniques that may be used to manage the working capital cycle.

Revision Questions

19

? Question 1

An entity has a current ratio of 1.75. It has decided in future to pay its trade payables after 40 days, rather than after 30 days as it has in the past. What will be the effect of this change on the entity's current ratio and its cash operating cycle?

- | | Current ratio | Working capital cycle |
|-----|---------------|-----------------------|
| (A) | Increase | Increase |
| (B) | Increase | Decrease |
| (C) | Decrease | Increase |
| (D) | Decrease | Decrease |
- (2 marks)**

? Question 2

Which of the following is most likely to reduce a firm's working capital?

- (A) Paying payables early
 - (B) Lengthening the period of credit given to receivables
 - (C) Repaying an overdraft out of cash
 - (D) Giving a discount to a customer for immediate cash settlement
- (2 marks)**

? Question 3

An entity has a current ratio of 1.5:1. It decides to use surplus cash balances to settle 30% of its total current liabilities. The current ratio will

- (A) decrease by more than 30%
 - (B) decrease by less than 30%
 - (C) increase by more than 30%
 - (D) increase by less than 30%
- (2 marks)**

? Question 4

An entity buys goods on credit and then, before payment is made, it is forced to sell all of these goods on credit for less than the purchase price. What is the consequence of these two transactions immediately after the sale has taken place?

- (A) Inventory decreases and cash decreases
- (B) Cash decreases and payables increase
- (C) Inventory decreases and receivables increase
- (D) Receivables increase and payables increase

(2 marks)**? Question 5**

A retailing entity has an annual turnover of \$36 million. The entity earns a constant margin of 20% on sales. All sales and purchases are on credit and are evenly distributed over the year. The following amounts are maintained at a constant level throughout the year:

- Inventory \$6 million
- Receivables \$8 million
- Payables \$3 million

What is the entity's working capital cycle to the nearest day (i.e. the average time from the payment of a supplier to the receipt from a customer)?

- (A) 81 days
- (B) 111 days
- (C) 119 days
- (D) 195 days

(4 marks)**? Question 6**

Working capital is most likely to increase when

- (A) payments to trade payables are delayed
- (B) the period of credit extended to customers is reduced
- (C) fixed assets are sold
- (D) inventory levels are increased

(2 marks)**? Question 7**

An entity's current assets exceed its current liabilities (which include an overdraft). The entity pays a trade payable, taking advantage of a cash discount. What will be the effect of this transaction upon the entity's working capital and on its current ratio?

- | | Working capital | Current ratio |
|-----|-----------------|---------------|
| (A) | Constant | Decrease |
| (B) | Constant | Increase |
| (C) | Decrease | Decrease |
| (D) | Increase | Increase |

(2 marks)

? Question 8

Which ONE of the following transactions is most likely to affect the overall amount of working capital?

- (A) Receipt of full amount of cash from a receivable
- (B) Sale of a fixed asset on credit at its net book value
- (C) Payment of a trade payable
- (D) Purchase of inventory on credit

(2 marks)**? Question 9**

If the current ratio for an entity is equal to its acid test (that is, the quick ratio), then

- (A) the current ratio must be greater than one
- (B) the entity does not carry any inventory
- (C) trade receivables plus cash is greater than trade payables minus inventory
- (D) working capital is positive

(2 marks)**? Question 10**

‘Although many financial analysts use the current ratio to assess the liquidity position of firms, it is essential that care is taken in reaching any decision.’

The following information has been obtained from two small entities regarding the working capital that is being used at 30 September 2003.

	<i>Entity A</i>	<i>Entity B</i>
	\$	\$
Inventories	6,000	20,000
Trade receivables	5,800	10,000
Cash	2,200	–
Trade payables	7,000	7,000
Bank overdraft	–	3,000

Requirements

- (a) Calculate the current ratio for each of the two firms. **(2 marks)**
- (b) Discuss the implications of the ratios that you have calculated in terms of a request for credit from both of these entities. **(3 marks)**

(Total marks = 5)

Solutions to Revision Questions

19

✓ **Solution 1**

The correct answer is (D), see Sections 19.3 and 19.5.

✓ **Solution 2**

The correct answer is (D), see Section 19.3.

✓ **Solution 3**

The correct answer is (D), see Section 19.3.

$$\begin{aligned}\text{Original ratio} &= 1.5/1 = 1.5 \\ \text{Settlement} &= 0.3 \\ \text{New current ratio} &= 1.2/0.7 = 1.71 \\ \text{Increase} &= [(1.71/1.5) - 1] = 14\%\end{aligned}$$

✓ **Solution 4**

The correct answer is (D), see Section 19.3.

✓ **Solution 5**

The correct answer is (C), see Section 19.5.

$$\begin{aligned}\text{Receivable days} &= (8/36) \times 365 = 81.11 \\ \text{Inventory days} &= (6/36 \times 0.8) \times 365 = 76.04 \\ \text{Payable days} &= (3/36 \times 0.8) \times 365 = (38.02) \\ \text{WCC} &= 81.11 + 76.04 - 38.02 = 119.13\end{aligned}$$

✓ **Solution 6**

The correct answer is (C), see Section 19.3.

**Solution 7**

The correct answer is (D), see Section 19.3.3.

Payables fall more than the overdraft increases because of the discount. Current assets are unchanged. Thus working capital and the current ratio increase.

**Solution 8**

The correct answer is (B), see Section 19.3.

**Solution 9**

The correct answer is (B), see Section 19.3.3.

**Solution 10**

- (a) The current ratio is calculated as:
Current assets/Current liabilities

Entity A	$\$14,000/7,000 = 2$
Entity B	$\$30,000/10,000 = 3$

- (b) From the ratios, it would appear that the liquidity position of Entity B is superior to that of Entity A. However, this does not reflect the real situation. Entity B owes more than Entity A and has an overdraft already. On the other hand, it also has significantly more inventory and trade receivables than Entity A.

To form an opinion on the liquidity position of these two entities, it is necessary to judge the likelihood of the inventory being sold and the amounts being collected from the trade receivables. It is necessary to focus on the time that will be needed to turn all these current assets into cash. The position of Entity B is not necessarily better as implied by the current ratio. In assessing the request for credit from both entities, the current ratio is not particularly helpful and should be used with caution.

Sources of Short-term Finance and Types of Investment

20

LEARNING OUTCOMES

After completing this chapter you should be able to:

- ▶ identify sources of short-term funding;
- ▶ identify appropriate methods of finance for trading internationally;
- ▶ identify alternatives for investment of short-term cash surpluses.

The syllabus topics covered in this chapter are as follows:

- types and features of short-term finance: trade payables, overdrafts, short-term loans and debt factoring;
- use and abuse of trade payables as a source of finance;
- the principles of investing short-term (i.e. maturity, return, security, liquidity and diversification);
- types of investments (e.g. interest-bearing bank accounts, negotiable instruments including certificates of deposit, short-term treasury bills and securities);
- the difference between the coupon on debt and the yield to maturity;
- export finance (e.g. documentary credits, bills of exchange, export factoring, forfeiting).

20.1 Introduction

In the first part of this chapter we consider a number of potential short-term sources of finance. Some of these sources (e.g. trade credit, overdrafts, factoring, and invoice discounting) are introduced here, with a more detailed explanation of their nature and characteristics contained in later chapters. The classification of some sources as short-term is fairly arbitrary given that they may in some cases be used over a number of years. We conclude this chapter with an evaluation of the alternatives for investing short-term cash surpluses.

20.2 Sources of short-term finance

Short-term finance may be obtained from a variety of sources including:

- trade credit from suppliers;
- overdrafts;
- short-term loans;
- using trade receivables as security for a loan, through factoring or invoice discounting.

There are other sources that tend to be specifically associated with financing export sales such as:

- bills of exchange;
- documentary credits.

20.2.1 Trade credit

Trade credit is an important source of finance for most businesses. Trade credit is the money owed to the suppliers of goods and services as a result of purchasing goods or services on one date, but paying for those goods on a later date. Trade credit is often viewed as being a free source of finance as interest is not usually charged by a supplier unless payment is overdue. Trade credit does have a cost, however, although those costs may be hidden.

As interest is not usually charged on trade credit, the temptation is to maximise the use of trade credit, but it is important that this is not abused. Exceeding the normal credit terms may lead to a number of potential problems:

- difficulty in obtaining credit terms from new suppliers;
- cash-flow problems for key suppliers that could adversely affect the viability of both organisations;
- existing suppliers may be unwilling to extend further credit;
- supplier goodwill will be eroded;
- suppliers may refuse to supply in the future;
- credit rating may be reduced.

The problems of late payment have been a particular concern for smaller entities selling goods on credit to large entities in a number of countries. For example, the difficulties in obtaining payment from large entities prompted the UK government to introduce legislation in 1998 to help smaller entities. In the UK, smaller entities now have a statutory right to charge larger entities interest at a high interest rate (base rate + 8 per cent) on any overdue amounts. Entities that suffer from late payment usually have to resort to additional overdraft finance while waiting for their customers to pay.

20.2.2 Overdrafts

One of the most important external sources of short-term finance, particularly for small firms, is the overdraft. Features that make the overdraft popular are:

- *Flexibility.* The bank will agree to a maximum overdraft limit or facility. The borrower may not require the full facility immediately, but may draw funds up to the limit as and when required.

- *Minimal documentation.* Legal documentation is fairly minimal when arranging an overdraft. Key elements of the documentation will be to state the maximum overdraft limit, the interest payable and the security required.
- Interest is only paid on the amount borrowed, rather than on the full facility.

The drawback of overdraft finance is that it is, strictly speaking, repayable on demand, which means that the facility could be withdrawn at any time. Entities with few assets to offer as security will find it difficult to arrange further overdraft finance. The interest rate charged by the bank will vary depending on the perceived credit risk of the borrower.

20.2.3 Term loans

Term loans are offered by the high street banks and their popularity has increased for a number of reasons, not least their accessibility, which is of importance to smaller businesses. A term loan is for a fixed amount with a fixed repayment schedule. Usually the interest rate applied is slightly less than for a bank overdraft. The lender will require security to cover the amount borrowed and an arrangement fee is payable dependent on the amount borrowed.

Term loans also have the following qualities:

- *They are negotiated easily and quickly.* This is particularly important when a cash-flow problem has not been identified until recently and a quick but significant fix is needed.
- *Banks may offer flexible repayments.* High street banks will often devise new lending methods to suit their customers; for example, no capital repayments for, say, 2 years, thus avoiding unnecessary over-borrowing to fund capital repayment.
- *Variable interest rates.* This may be important given the uncertainty that exists with interest rates.

20.2.4 Factoring

Entities selling goods on credit may have to wait 30, 60 or more days to receive payment from the customer. In the meantime they have to finance their day-to-day activities, and purchase more supplies. Factoring organisations may help improve cash flow by speeding up the cash receipt relating to outstanding invoices by:

- advancing, say, 80 per cent of invoice value immediately, a balance being settled when the client's customer settles the debt.
- taking over responsibility for the operation of the client's sales ledger, including assessment of creditworthiness and dealing with customers.
- offering non-recourse finance, that is, guarantee settlement even if they are not paid by the customer.

For a full discussion of factoring see 21.6.

20.3 Export finance

Selling goods overseas may involve offering longer credit periods than for similar domestic sales. The credit customer may not be as well known as a domestic customer. There is

potentially a greater risk of delay or non-payment for goods. Entities may seek to raise finance in such circumstances to ease cash-flow problems.

20.3.1 Export factoring

Export factoring is essentially the same as for domestic factoring described above, with the factor providing a cash advance, typically of about 80 per cent of invoice value. The credit insurance element of the factor's service will also protect against bad-debt risk.

Whereas factoring and the methods of finance mentioned above are relevant to an entity to finance domestic or export sales, there are methods of finance that are specifically associated with financing export sales.

20.3.2 Bill of exchange

A bill of exchange is defined in CIMA's *Management Accounting: Official Terminology* as follows:



A negotiable instrument, drawn by one party on another, for example, by a supplier of goods on a customer, who by accepting (signing) the bill, acknowledges the debt, which may be payable immediately (a sight draft) or at some future date (a time draft). The holder of the bill can thereafter use an accepted time draft to pay a debt to a third party, or can discount it to raise cash.

The bill of exchange is essentially a written acknowledgement of a debt. They are more commonly used for export transactions than for domestic transactions.

A bill of exchange is a device that may enable the supplier to receive the benefit of payment well before the customer actually pays. The way it works is like this:

1. The *supplier* draws up a simple document (the bill of exchange) requiring the customer to pay the amount due at some fixed future date. (The supplier is the *drawer* of the bill.)
2. The supplier signs the bill and sends it to the customer, who also signs it to signify that he/she agrees to pay, and returns the bill to the supplier. (The customer is the *acceptor* of the bill.)
3. The supplier now has a piece of paper that is worth money, because it constitutes an agreement on the customer's part to pay the debt on the due date. The supplier can now do one of three things:
 - (a) hold the bill until the due date and collect the money;
 - (b) arrange to transfer the benefit of the bill to the bank in exchange for immediate cash. The bank will make a charge for what is effectively a loan, so the amount received by the supplier will be less than the face value of the bill. This is called *discounting* the bill of exchange with the bank;
 - (c) transfer the bill to his/her own supplier in a settlement of the debt. That supplier may in turn pass the bill to one of his/her own supplier, discount it or hold it to maturity.

When the due date of the bill arrives, the person holding it at that time presents it to the original acceptor for payment. If the acceptor pays, that is the end of the matter. If the acceptor does not pay on the due date the bill is said to be *dishonoured*. Legal action by the parties concerned may then be initiated to recover the money from the original acceptor.

20.3.3 Documentary credits

Documentary credits, or letters of credit as they are also called, provide an exporter with a very secure method of obtaining payment for overseas sales. Documentary credits also provide the exporter with a method of raising short-term finance from a bank.

CIMA's *Management Accounting: Official Terminology* defines a letter of credit as follows:



A document issued by a bank on behalf of a customer authorising a person to draw money to a specified amount from its branches or correspondents, usually in another country, when the conditions set out in the document have been met.

The process of payment using a documentary credit would be as follows. An exporter and a foreign buyer would complete a sales contract with payment agreed to be by documentary credit. The foreign buyer would then advise its bank (the issuing bank) to provide credit in favour of the exporter. The issuing bank would then ask the exporter's bank to advise and/or confirm credit to the exporter. The issuing bank would at this stage be providing a guarantee of payment for the goods. The exporter would then dispatch the goods and present the documents of title for the goods to its bank. Once the exporter's bank has checked the documents, it will be prepared to advance finance to the exporter and will forward the documents to the issuing bank. The issuing bank will check the documents and, if satisfied, will reimburse the exporter's bank. The issuing bank will release the documents to the foreign buyer after payment has been received, which will then enable the foreign buyer to take delivery of the goods.

Documentary credits are time-consuming and expensive to arrange and so will only tend to be used in situations where there is a high risk of non-payment.

20.3.4 Forfeiting

Forfeiting is an arrangement whereby exporters, normally of capital goods or raw materials, can obtain medium-term finance. The forfeiting bank buys at a discount to face value a series of promissory notes (or bills of exchange) usually extending over a period of between six months and five years. The promissory notes may be in any of the world's major currencies. For promissory notes to be eligible for forfeiting (and to provide the forfeiting bank's security) the notes must be guaranteed or avalised by a highly rated international bank (often in the importer's country). Forfeiting is non-recourse, with no claim on the exporter after the notes have been purchased by the bank; payment of the notes is guaranteed by the avalising bank.

Advantages of forfeiting include the following.

- (i) trade receivables are turned into immediate cash;
- (ii) as it is non-recourse, no liability appears on the balance sheet;
- (iii) future foreign-exchange and interest-rate risk is eliminated;
- (iv) overdraft and other credit limits are not affected;
- (v) forfeited notes are negotiable.

Forfeiting was developed for East European trade, where governments sought finance for capital equipment purchases, but the time span of the projects was too long for bank or government export credits financing. Forfeiting enables exporters to offer clients medium-term fixed-rate finance with which to fund the order, while at the same time offering the exporter a means of obtaining immediate cash payment for the order, transferring default risk to the forfeiter.

20.4 Managing cash surpluses

When the cash budget of an organisation indicates a cash surplus, the financial manager needs to consider opportunities for short-term investment. A cash surplus may arise as a result of profitable trading, an uneven trade cycle or from a lack of suitable long-term investment opportunities, or perhaps as a result of a disposal programme. In principle, where there is no foreseeable use for the surpluses, the cash should be returned to shareholders or used to repay debt. Usually, though, cash will be retained to protect against unexpected losses or to fund unexpected investment opportunities.

Any cash surplus beyond the immediate needs should be put to work, even if only invested overnight. The following considerations should be made in assessing how to invest short-term cash surpluses:

- length of time for which the funds are available;
- amount of funds available;
- return offered on the investment in relation to the amount involved;
- risks associated with calling in the investment early (e.g. the need to give three months' notice to obtain the interest);
- ease of realisation.

The aim would be to maximise the post-tax return from the investment, but also to minimise the risk to the original capital invested.

20.5 Debt yields

The rate of return, or yield, on debentures, loan stocks and bonds is measured in two different ways.

20.5.1 Interest yield

Interest yield is also referred to as running yield or flat yield and is calculated by dividing the gross interest by the current market value of the stock as follows:

$$\text{Interest yield} = \frac{\text{gross interest}}{\text{market value}} \times 100\%$$

Example 20.A

A 6 per cent debenture with a current market value of \$90 per \$100 nominal would have an interest yield of:

$$\frac{6}{90} \times 100\% = 6.7\% \text{ gross or pre-tax}$$

20.5.2 Yield to maturity (redemption yield)

The yield to maturity (or redemption) is the effective yield on a redeemable security, taking into account any gain or loss due to the fact that it was purchased at a price different from the redemption value.

**Exercise 20.1**

You are asked to put a price on a bond with a coupon rate of 8 per cent. It will repay its face value of \$100 at the end of fifteen years. Other similar bonds have a yield to maturity (YTM) of 12 per cent.

**Solution**

The price of the bond is:

$$\begin{aligned} & \$8 \times (\text{annuity factor for } t = 15, r = 12) + \$100 \times (\text{discount factor } t = 15, r = 12) \\ & = (\$8 \times 6.811) + (\$100 \times 0.1827) = \$72.76 \end{aligned}$$

Note: the annuity factors and discount factors are obtained from tables at the end of this chapter. These tables will be provided in the examination.

What we are doing here is adding the NPV of 15 years of interest payments to the present value of the sum receivable on redemption.

We can turn this example round to calculate the YTM. If the price of the bond is known to be \$78.40, what is the yield to redemption? This is basically an internal rate of return calculation and the answer is approximately 11 per cent.

The calculation is as follows. Assume two discount rates as for an IRR interpolation, between which the required percentage is likely to fall. Let us say, in this case, 10 per cent and 14 per cent. Then the equations are:

$$t = 15, r = 10, \text{ so } \$8 \times 7.606 + \$100 \times 0.239 = \$84.75$$

$$t = 15, r = 14, \text{ so } \$8 \times 6.142 + \$100 \times 0.140 = \$63.14$$

Then, by interpolation, bearing in mind that $r = 10$ is closer to \$78.40 than is $r = 14$, so that the required rate must be nearer 10, then:

$$\begin{aligned} \text{Redemption yield} &= 10\% + \left(\frac{84.75 - 78.40}{84.75 - 63.14} \times 4 \right) \\ &= 10\% + 1.17\% = 11\% \end{aligned}$$

20.5.3 Coupon rate

A connected issue that is often misunderstood is the relationship of face value to market value and coupon rate (on debt) to rate of return.

When a bond or debenture or any fixed-interest debt is issued, it carries a 'coupon' rate. This is the interest rate that is payable on the face, or nominal, value of the debt. Unlike shares, which are rarely issued at their nominal value, debt is frequently issued at par, usually \$100 payable for \$100 nominal of the bond. At the time of issue the interest rate will be fixed according to interest rates available in the market at that time for bonds of similar maturity. The credit rating of the entity will also have an impact on the rate of interest demanded by the market.

Example 20.B

An entity issues bonds at par (the face or nominal value) with a coupon rate of 12 per cent. This means that for every \$100 of debt the buyer will receive \$12 per annum in gross interest. Assume that interest is payable annually (it is usually paid bi-annually but this would require more tricky calculations). Mr A bought \$1,000 of this debt on 1 January 2002. He will receive \$120 in interest every year as long as he owns the bond. This might be until it matures or it might

be when he sells it in the market. If the opportunity cost to investors of bonds of similar risk and maturity is 12 per cent, then the coupon rate and the rate of return are the same.

However, assume that inflation increases at a much higher rate than expected by the market when the bond was issued. In January 2004, the opportunity cost to investors of similar bonds has risen to 15 per cent. Mr A continues to receive \$120 on his \$1,000 nominal value, but no new buyer would now pay \$1,000 to get a return of 12 per cent – they now want 15 per cent. The price of the bond therefore falls to the level where the return on the debt is 15 per cent. This is \$80 per \$100 nominal of the bond.

Mr B buys \$1,000 nominal of the bond in January 2004. He will receive \$120 per year in interest, just like Mr A, but as Mr B paid only \$800, his return is 15 per cent ($120/800 \times 100$). The coupon rate stays at 12 per cent, the nominal value at \$1,000, but the rate of return is 15 per cent and the market value \$800.

20.6 Short-term investments

Examples of short-term investment opportunities that might be considered by an organisation include the following.

20.6.1 Treasury bills

Treasury bills are issued by central banks, they are guaranteed by the government of the country of issue. No interest is paid as such, but they are issued at a discount and redeemed at par after a fixed period, for example UK Treasury Bills are 91 days. They are negotiable, so the bills can be sold on the discount market at any time before their maturity date. There is an implied rate of interest in the price at which Treasury bills are traded.

20.6.2 Bank deposits

A wide range of interest-earning investment opportunities are available from the banks. A *term deposit* offers a fixed rate of interest for a fixed period, usually from one month to 6 years. For shorter periods, typically up to three months, the interest may be at a variable rate based on money-market rates.

20.6.3 Certificates of deposit

Certificates of deposit (CDs) are issued by the banks at a fixed interest rate for a fixed term (usually between three and five years). CDs are negotiable documents for which there is an active secondary market, meaning that the holder of a CD can realise the investment on the discount market at any time.

20.6.4 Money-market accounts

Most major financial institutions offer schemes for investment in the money market at variable rates of interest. There is a very large money market in the UK for inter-bank borrowing and lending, with terms ranging from overnight to twelve months or more. Large entities will be able to lend surplus cash directly to a borrowing bank on the inter-bank market.

20.6.5 Local authority deposits

Local authorities have a requirement for short-term cash, with terms ranging from overnight to 12 months or more. Interest would be payable on these deposits.

20.6.6 Commercial paper

Large entities may issue unsecured short-term loan notes, referred to as commercial paper. These loan notes will generally mature within nine months, typically between a week and three months. Commercial paper is negotiable, so the bills can be sold on the discount market at any time before their maturity date. There is an implied rate of interest in the price at which the commercial paper is traded.

20.6.7 Local authority bonds

These bonds are issued by local authorities and may be purchased with their remaining maturity. They are tradable, but have a lower level of marketability than most marketable securities, although this is dependent upon the size of the particular local authority.

20.6.8 Corporate bonds

These are bonds issued by entities to raise debt finance. They are long term, but are tradable and thus can be sold in money markets at any time. The level of liquidity depends on the cumulative volume issued by the entity. The level of risk depends on the individual entity and on the terms of the bond, but a credit score is available from credit rating agencies.

20.6.9 Government bonds

These are bonds issued by a government. They normally have lower default risk than corporate bonds (depending upon the government that issued them). They are tradable in money markets and tend to be more liquid than corporate bonds as they are issued in higher volumes.

20.6.10 Risk and return

When investing surplus cash in short-term investments, consideration must be given to the trade-off between return and risk.

- *Default risk.* The risk that interest and/or principal will not be paid on schedule on fixed-interest investments. Most short-term investment in marketable securities is confined to investments with negligible risk of default.
- *Price risk.* Where interest rates change and this has not been anticipated, this will have an impact upon the tradable value of a security. Thus, if interest rates rise unexpectedly, then the value of a tradable fixed interest security will tend to fall until its yield is equal to the equivalent market yield for that type of security. If securities are held to redemption, the full nominal value is repaid, but the risk still exists in the opportunity cost of the higher interest lost on alternative investments. Financial managers normally wish to avoid substantial price risk.
- *Foreign exchange risk.* If the funds are invested in an overseas currency, there is the risk that exchange rate movements may reduce the value of the principal in terms of the domestic currency. Given, however, that the entity may purchase an overseas entity, then the investment may represent hedging against this in terms of currency matching. This may actually reduce risk. This, of course, depends upon identifying the particular country in which the entity is to be purchased.

- *Taxation and regulation risk.* Unexpected changes in tax rates or other regulation changes may impact upon the tradable value of a marketable security.
- *Return.* Managers will usually try to achieve the maximum yield possible, consistent with a satisfactory level of risk and marketability. It is unlikely that short-term cash surpluses will be invested in equities owing to the risks associated with achieving that return over a short period.

20.7 Summary

In this chapter, we have identified a number of sources of short-term finance, as well as considering alternatives for investing short-term cash surpluses.

Revision Questions

20

? Question 1

Which ONE of the following most appropriately describes *forfeiting*?

- (A) It is a method of providing medium-term export finance
 - (B) It provides long-term finance to importers
 - (C) It provides equity finance for the redemption of shares
 - (D) It is the surrender of a share because of the failure to make a payment on a partly-paid share
- (2 marks)**

? Question 2

Which of the following is *not* a method used for raising finance to fund export sales?

- (A) Bills of exchange
 - (B) Credit insurance
 - (C) Documentary credits
 - (D) Countertrade
- (2 marks)**

? Question 3

Which of the following would NOT be regarded as a source of short-term finance:

- (A) Trade credit from suppliers
 - (B) Treasury bills
 - (C) Factoring of trade receivables
 - (D) Bank overdraft
- (2 marks)**

? Question 4

List six sources of short-term investments. **(3 marks)**

**Question 5**

In no more than 40 words, define the meaning of 'yield to maturity'. **(2 marks)**

**Question 6**

(A) Explain the main sources of short-term and medium-term funds. **(8 marks)**

(B) Discuss a situation where it is better to obtain overdraft facilities rather than a term loan. **(6 marks)**

(C) 'Delaying payment to suppliers of goods and services is always a cheap form of borrowing funds.' Discuss this statement. **(6 marks)**

(Total marks = 20)

Solutions to Revision Questions

20

Solution 1

The correct answer is (A), see Section 20.3.4.

Solution 2

The correct answer is (B), see Section 20.3.

Solution 3

The correct answer is (B), see Sections 20.2 and 20.6.

Solution 4

Any six from the following list:

- treasury bills,
- bank deposits,
- certificates of deposit,
- bills of exchange,
- money-market accounts,
- local authority deposits,
- commercial paper,
- local authority bonds,
- corporate bonds,
- government bonds.

See Section 20.6.

Solution 5

The yield to maturity is the effective yield on a redeemable security, taking into account any gain or loss due to the fact that it was purchased at a price different from the redemption value, see Section 20.5.2.



Solution 6

- (a) An overdraft from a bank is a common form of short-term loan and most businesses would have overdraft facilities arranged with their bank. However, term loans are also used widely to provide medium-term finance.

By being able to withdraw more than was deposited in a bank account, a business can use an overdraft to fund temporary shortages of cash resources. The problem is that the bank can withdraw the right to use the overdraft at any time and so there is an element of uncertainty. However, banks tend to treat their customers fairly and so will usually try to assist them in difficult times.

Trade credit is another form of short-term credit that is used by businesses. By delaying payments to suppliers, credit can be obtained without incurring cost unless cash discounts are forgone or suppliers increase prices recognising that payments are delayed unduly by some of their customers.

- (b) An overdraft provides the management with flexibility. The exact amount of funding required and the timings, especially of repayment, can be adjusted to suit the funding needs of the organisation.

If the overdraft facilities are only used when it is essential, the cost of borrowing can be kept to a minimum. The interest on an overdraft is calculated on the daily balance and so interest will only be incurred when the facilities are used. It is likely, however, that the rate of interest charged will be high.

At any time, the bank can ask for the amount outstanding to be repaid. The bank manager will regularly require cash-flow projections in order to judge the borrower's creditworthiness, and it is not unusual for the owners or the managers responsible for the organisation to be asked to provide collateral security to reduce the default risk of the lender.

It is generally recognised that bank overdrafts are a convenient form of short-term borrowing that is used by most businesses because of the flexibility that it provides at a relatively low cost.

- (c) By delaying payments to suppliers, it is possible for a business to obtain short-term finance. Thus, by taking a relatively long time before settling the amounts owed to trade payables, the funds can be used for other purposes. In the simplest position, inventory will be delivered and sold before a payment is made to the supplier of the inventory. It is possible that the firm's customer has already paid before the amount is paid to the supplier.

Provided that the selling price is not increased or cash discounts lost, trade credit is provided free and is particularly beneficial to small firms, although it is used by all businesses. It is extremely important that opportunities to receive cash discounts are not lost, as the annualised rate of interest forgone can be very significant. However, as the annualised cost of offering cash discounts is high, it is relatively unusual to be offered this form of discount and so it is not often necessary to pay trade payables early. The period that is acceptable will be a matter that will be negotiated at the time of placing the order and it is not unusual to delay payments and so enjoy the 'free loan' for a longer period of time.

Working Capital: Receivables and Payables

21

LEARNING OUTCOMES

After completing this chapter, you should be able to:

- ▶ analyse trade receivable information;
- ▶ evaluate receivable and payable policies.

The syllabus topics covered in this chapter are as follows:

- the credit cycle from receipt of customer order to cash receipt;
- evaluation of payment terms and settlement discounts;
- preparation and interpretation of age analyses of receivables and payables;
- establishing collection targets on an appropriate basis (e.g. motivational issues in managing credit control);
- the payment cycle from agreeing the order to making payments.

21.1 Introduction

This chapter will discuss the credit cycle from the receipt of the customer order through to the collection of the debt and the payment cycle from the placing of an order to the payment of the supplier. The chapter will also discuss payment terms and discounts and the preparation and use of an age analysis of receivables and payables.

21.2 Managing receivables

An entity may have a ratio of trade receivables to total assets in the region of 20–25 per cent. This represents a considerable investment of funds and so the management of this asset can have a significant effect on the profit performance of an entity.

By international standards, the UK does not have a good record for the collection of debts. In the UK manufacturing sector, it takes on average about 60 days for an entity to

collect the funds due from a receivable. In contrast, in the USA the average collection period for manufacturing industry is in the region of 40 days.

In order to reduce the trade receivable days to a more respectable figure, entities may offer customers inducements in the form of *cash discounts*. These discounts may well speed up collection but reduce the amount from each sale when collected.

Credit management involves balancing the benefits to be gained from extending credit to customers against the costs of doing so and finding the optimum level of credit and discounts that will maximise the entity's profits. It also involves such things as assessing the credit risk of customers wanting credit, collecting debts which are overdue, assessing what effect changing credit terms will have on the occurrence of bad debts and setting individual credit limits for customers.

21.3 The credit cycle

The credit cycle refers to the events that take place between the receipt of a customer's order, through to the receipt of cash from the customer. The credit cycle can be broken down into two elements: the order cycle, being the period between the receipt of a customer's order and the raising of an invoice; and the collection cycle, which is the period from raising the invoice until cash is received from the customer.

The stages in the credit cycle are as follows:

- receipt of customer order;
- credit screening and agreement of terms;
- goods dispatched with delivery note;
- invoice raised stating credit terms;
- debt collection procedures;
- receipt of cash.

The longer the credit cycle, the more cash there is locked into working capital. Reducing the length of the credit cycle will improve cash flow and thus improve the entity's liquidity position.

21.3.1 Credit control

As stated above, to have good credit management you should assess the credit risk of your customer base. This would involve giving consideration to your credit control procedures. Detailed below are key elements that need to be taken into account in setting a *credit control policy*.

- The terms of trade, notably the period of credit to be granted and any discounts to be allowed for early settlement. This will largely be determined by practice within the industry but there is usually some scope for differentiation – from competitors and between customers (the riskier prospects being put on a shorter-period, higher-discount arrangement). It is important to record all the terms agreed.
- On a customer-by-customer basis it is necessary to assess creditworthiness and to establish limits in terms of amount and time. New customers should be checked for creditworthiness before being given a credit account.

Late payment is seen as a major problem in UK industry, with large entities accused of pressuring small ones. Various ideas have been put forward to counteract this:

- legislation to give suppliers a statutory right to interest on overdue debts;
- disclosure in published accounts of credit taken;
- a code of practice, including paying according to agreed terms;
- inclusion of payment to agreed terms as a requisite for receiving a quality certificate.

21.3.2 Payment terms

The payment terms will need to consider the period of credit to be granted and how the payment will be made. The terms agreed will need to specify the price, the date of delivery, the payment date or dates, and any discounts to be allowed for early settlement.

Examples of payment terms may be:

- *Payment within a specified period.* For example customers must pay within 30 days.
- *Payment within a specified period with discount.* For example a 2 per cent discount would be given to customers who pay within 10 days, and others would be required to pay within 30 days.
- *Weekly credit.* This would require all supplies in a week to be paid by a specified day in the following week.
- *Related to delivery of goods.* For example, cash on delivery (COD).

21.3.3 Cash discounts

Cash discounts are sometimes offered by entities as a means of improving cash flow by encouraging customers to settle their accounts early. The cost of offering a cash discount in order to generate better cash flow is sometimes overlooked. The savings made by the entity from a lower receivable balance and shorter average collecting period should be compared with the cost of the discount to see if the reduced period of credit could be financed by alternative means, for example, a bank overdraft.



Exercise 21.1

Tandijono normally offers its customers 50-day payment terms, but to improve its cash flow is considering a 2 per cent discount for payment within 10 days.

You are required to advise the entity on the cost of this proposed action.

Assume a 365-day year and an invoice for \$100.



Solution

The entity would receive \$98 on day 10 instead of \$100 on day 50. Tandijono would then be able to invest the \$98 for 40 days (50 – 10).

If the prevailing interest rate is r per cent per annum, the entity will benefit as follows:

$$\$98 \times r\% \times \frac{40}{365}$$

However, to achieve this the entity has to grant \$2 in discount. To break even on this scheme, we must have:

$$\$98 \times r\% \times \frac{40}{365} \geq \$2$$

Rearranging:

$$r\% \geq \frac{\$2}{\$98} \times \frac{365}{40} = 18.6\%$$

The 18.6 per cent would then be compared with the entity cost of capital to establish if this is an efficient method of financing the shorter credit period.

Note: A more accurate method can be used that deals with the compound interest effect.

The compound interest formula states that the value S attained by a single sum X , after n periods at r per cent, is:

$$S = X(1 + r)^n$$

Using this formula to quantify the cost of offering the cash discount:

$$100 = 98(1 + r)^1$$

where

r = periodic rate (in this case the rate is for a 40-day period)

$$1 + r = 1.0204$$

$$r = 2.04\%$$

This periodic rate must then be converted into an annual rate using the formula:

$$(1 + \text{annualised rate}) = (1 + \text{periodic rate})^n$$

where

n = number of compounding periods in the year (in this example $\frac{365}{40} = 9.125$)

$$(1 + \text{annualised rate}) = (1.0204)^{9.125} = 1.202$$

$$\text{annualised rate} = 20.2\%$$

This compounding process can be short cut as shown below:

$$1 + r = \left(\frac{100}{98}\right)^{9.125}$$

$$1 + r = 1.202$$



The cost of offering the cash discount is then 20.2 per cent.

For the examination, the compound interest approach should be used.

21.3.4 Methods of payment

Payments from customers may be accepted in a number of forms, including:

- cash;
- Bankers Automated Clearing Service (BACS);
- cheques;
- banker's draft;
- standing orders;
- direct debit;

- credit cards;
- debit cards;
- Clearing House Automated Payments System (CHAPS).

21.3.5 The stages in debt collection

There is no optimal debt collection policy that will be applicable to all entities. Debt collection policies will differ according to the nature of the business and the level of competition.

An effective solution will require the following:

- dedicated, well-trained credit control personnel;
- well-defined procedures for collection of overdue debts that take account of the potential costs of collecting an outstanding debt, and the need to maintain good relationships with customers;
- monitoring of overdue accounts;
- flexibility to allow for changing circumstances.

The longer a debt is outstanding, the higher the probability of default. There need to be well-defined procedures for following up – allowing in the first instance for the possibility of a genuine query – and keeping notes that can be referred to later. If the worst comes to the worst, there will be a need to understand the law relating to contracts, insolvency, winding up and liquidation. In practical terms, the danger of ‘throwing good money after bad’ needs to be considered.

One way of encouraging customers to pay within the agreed credit period is to charge interest on any overdue debts. While this would normally have to be agreed by the parties at the time of the sale, small businesses in the UK are provided with some protection against late payment by the Late Payment Act.

Since 1 November 1998 small businesses – those with less than 50 employees – can choose whether to charge large entities interest at 8 per cent above base rate on bills that are paid more than 30 days after they fall due.

21.4 Age analysis of trade receivables

As an aid to effective credit control, an age analysis of outstanding debts may be produced. This is simply a list of the customers who currently owe money, showing the total amount owed and the period of time for which the money has been owed. The actual form of the age analysis report can vary widely, but a typical example is shown below.

Robins

Age analysis of trade receivables as at 30 September 2005

<i>Account number</i>	<i>Customer name</i>	<i>Balance</i>	<i>Up to 30 days</i>	<i>31–60 days</i>	<i>61–90 days</i>	<i>Over 90 days</i>
B002	Brennan	294.35	220.15	65.40	8.80	0.00
G007	Goodridge	949.50	853.00	0.00	96.50	0.00
T005	Taylor	371.26	340.66	30.60	0.00	0.00
T010	Thorpe	1,438.93	0.00	0.00	567.98	870.95
T011	Tinnion	423.48	312.71	110.77	0.00	0.00
Totals		<u>3,477.52</u>	<u>1,726.52</u>	<u>206.77</u>	<u>673.28</u>	<u>870.95</u>
Percentage		100%	49.6%	6%	19.4%	25%

The age analysis of trade receivables can be used to help decide what action should be taken about debts that have been outstanding for longer than the specified credit period. It can be seen from the table above that 41 per cent of Robins's outstanding trade receivable balance is due by Thorpe. It may be that Thorpe is experiencing financial difficulties. There may already have been some correspondence between the two entities about the outstanding debts.

As well as providing information about individual customer balances, the age analysis of trade receivables provides additional information about the efficiency of cash collection. The table above shows that over 50 per cent of debts at 30 September 2005 have been outstanding for more than 30 days. If the normal credit period is 30 days, there may be a suggestion of weaknesses in credit control. It may also be useful to show the credit limit for each customer on the report, to identify those customers who are close to, or have exceeded, their credit limit.

The age analysis can also provide information to assist in setting and monitoring collection targets for the credit control section. A collection target could be expressed as a percentage of credit sales collected within a specified period or it could be expressed in terms of the average number of trade receivable days outstanding. When trying to achieve a collection target the age analysis can be very useful in identifying large balances that have been outstanding for long periods; these can be targeted for action to encourage payment.

21.5 Credit insurance

To protect against the risk of bad debts, an entity can take out credit insurance. There are a number of entities specialising in this form of insurance, offering a wide variety of services with costs to match.

Policies may be arranged that cover the whole of an entity's turnover. The credit insurer will normally place a limit on value of a single invoice that will be insured without special approval. The insured entity will need to assess each customer's creditworthiness, using approved information sources to ensure it is covered under the terms of the insurance.

Alternatively, an entity may wish to take out insurance on specific invoices. The premium payable will be determined by the perceived risk of non-payment.

21.6 Factoring

In CIMA's *Management Accounting: Official Terminology* factoring is defined as follows:



The sale of debts to a third party (the factor) at a discount, in return for prompt cash. A factoring service may be *with recourse*, in which case the supplier takes the risk of the debt not being paid, or *without recourse* when the factor takes the risk.

Specialist finance entities (usually subsidiaries of banks) offering factoring arrangements will provide three main services:

- provide finance by advancing, say, 80 per cent of invoice value immediately, the remainder being settled when the client's customer settles the debt (but net of a charge for interest, typically 3 per cent per annum above base rate);

- take responsibility for the operation of the client's sales ledger, including assessment of creditworthiness and dealing with customers for an additional service charge, typically 2 per cent of turnover;
- they may, for an additional fee, offer non-recourse finance, that is, guarantee settlement even if they are not paid by the customer.

In order to do this economically, they have developed their expertise in credit control in term of market intelligence (including credit scoring), information management (sophisticated databases, processing and decision support systems) and the skills required for dealing with customers especially those who are in no hurry to pay!

Alternatively, they may offer a *confidential invoice discounting* facility under which they provide the finance as above, but do not get involved with the operation of the sales ledger or hence become known to the customers. This has, to date, been more popular than the overt factoring arrangement. It is cheaper, of course, and avoids creating a barrier between the business and its customers. It is less attractive to the providers of finance, however, being in the nature of supplying a commodity rather than adding value through expertise.

Though, as mentioned, these financiers are usually subsidiaries of banks, they like to distinguish their approach from that of their parents. They argue that the mainstream banks, when deciding on the extent to which they are prepared to lend, have traditionally looked backwards – to an entity's past profits and tangible assets. This explains why they are reluctant to lend just when the entity needs it, that is, ahead of a growth phase. A sales-based package is a logical, flexible alternative. Having siphoned off the trade receivables in this way, the returns from a business are going to be more uncertain, making it difficult to raise more traditional forms of finance except at high interest rates. It is also worth noting that factoring is associated in many people's minds with financial difficulties ('the banks do not refer their best prospects to their factoring subsidiaries') or at best with small businesses, which may have an impact on the image of the business in the eyes of its suppliers.

Apart from the factors and invoice discounters, it is worth noting some other players in the receivables industry:

- the specialist information providers, covering credit assessments, increasingly available electronically. This means that the sales function can have access, thereby reducing the potential for friction, for example, taking an order only to find that 'finance' reject it on the grounds of credit risk;
- *credit insurance*: clients typically pay around 1 per cent of sales, depending on the industry into which they are selling and on their perceived credit control skills. It should be seen as complementary to, rather than a substitute for, in-house vigilance;
- debt collectors, often members of the legal profession, who take over responsibility for dealing with unpaid bills – sometimes on commission, otherwise for a fee.

These various services are mutually supportive and there have been signs of convergence, that is, of providers who offer a menu from which businesses can pick.



Examination questions could ask you to consider whether it is beneficial for an entity to use factoring or to raise the finance by an alternative method, for example, bank overdraft.

**Exercise 21.2**

- (a) *You are required to* summarise the services that may be obtained from various forms of agreement for the factoring of trade debts and from invoice discounting. **(5 marks)**
- (b) B has been set up for the purpose of importing commodities that will be sold to a small number of reliable customers. Sales invoicing is forecast at \$300,000 per month. The average credit period for this type of business is 2½ months.

The entity is considering factoring its accounts receivable under a full factoring agreement without recourse. Under the agreement the factor will charge a fee of 2½ per cent on total invoicing. He will give an advance of 85 per cent of invoiced amounts at an interest rate of 13 per cent per annum.

The agreement should enable B to avoid spending \$95,000 on administration costs.

You are required:

- (i) to calculate the annual net cost of factoring;
 (ii) to discuss the financial benefits of such an agreement, having regard to current interest rate on bank overdrafts of 12½ per cent. **(10 marks)**

(Total marks = 15)

**Solution**

- (a) Factoring and invoice discounting are methods of raising finance from trade receivables. In factoring the debts are sold, while invoice discounting is the assignment of debts as security for a loan.

The main services associated with entities offering this finance are:

- Provision of finance of between 80 per cent and 85 per cent of approved debts from the moment the goods or services are invoiced.
- Sales ledger service covering credit-checking, invoicing and collection. In effect, the sales ledger function or part thereof is subcontracted.
- Bad-debt insurance to cover the firm in the event of default on an invoice or invoices.
- Confidentiality to prevent the arrangement being apparent to customers and others.

- (b) (i)

Annual sales: \$300,000 × 12	\$3,600,000
<i>Annual net cost of factoring</i>	<i>\$</i>
Fee: 2.5% of \$3,600,000	90,000
Annual interest* (85% × 2.5/12 × 3.6m × 13%)	<u>82,875</u>
Total annual cost	172,875
Less: administration costs	<u>95,000</u>
Net cost	<u>77,875</u>

* Assuming the agreement is based on existing invoices and does not phase in.

- (ii) The borrowing of \$637,500 (2.5/12 × 3.6m × 85%) from the bank would cost \$79,687.50. Therefore factoring offers a saving of around \$2,000 as well as providing certain advantages:
- *Flexibility.* As sales increase with the corresponding demand for finance, so finance from this source increases.
 - *Security.* It allows the firm to pledge other assets as security for the finance.

- *Last resort.* It may be the most cost-effective lender to a firm that has no assets to offer as security.
- *Responsibility.* Relieves management of the responsibility for the sales ledger and can probably perform credit-checking better than the firm. Management must balance the disruption from cutting back its administrative costs with the financial and other advantages of factoring. Before reaching a decision, management should consider the possibility that the financial advantages may change and that re-establishing a sales ledger function may be costly.

21.7 Assessing the effectiveness of credit control

An outsider wishing to assess the effectiveness of a credit control function is generally limited to using static information and ratios, for example:

	Year 1	Year 2
<i>\$ million:</i>		
(a) sales for the year	100.0	120.0
(b) trade receivables at the end of the year	16.0	20.0
Times per annum		
Asset velocity (a)/(b)	6.3	6.0
Days		
Average collection period $365(b)/(a)$	58.4	60.8

This would be interpreted as an apparent deterioration in performance, but such an approach inevitably ignores a number of possible explanations:

- changes in the pattern of sales across the year, for example, more towards the end;
- changes in the mix of sales as between customers, for example, more to those granted longer credit;
- changes in terms, for example, less attractive discounts to some or all customers;
- different degrees of window dressing, for example, sales pulled forward from subsequent year.

Internally, of course, these problems do not arise, thanks to the availability of management information, including daily sales and receipts. As sales are entered into the ledger, for example, it is possible to identify when they should be paid, thus providing an appropriate yardstick against which to measure performance.

Entities that seek to apply the principles of value assurance to activities characterised as giving rise to 'indirect costs' could do worse than start with credit control. Value in this context is the cost of the next best alternative, for example, handing over the job to the professional factors.

This amounts to regarding the function as a business unit. It is credited with its actual receipts, having been debited with:

- the price at which the factor would buy the debts, for example, 98 per cent of their face value;
- the cost of finance, say 0.03 per cent per day on the aggregate balance;
- the costs of administration, etc.

If the net result is positive, the function is adding value to the entity.

21.8 Evaluating a change in credit policy



In an examination you may be required to evaluate whether a proposed change in credit policy is financially justified. The example below illustrates the approach required to carry out this evaluation.



Exercise 21.3

The table below gives information extracted from the annual accounts of Supergeordie.

	\$
Raw materials	180,000
Work in progress	93,360
Finished goods	142,875
Purchases	720,000
Cost of goods sold	1,098,360
Sales	1,188,000
Trade receivables	297,000
Trade payables	126,000

The sales director of Supergeordie estimates that if the period of credit allowed to customers was reduced from its current level to 60 days, this would result in a 25 per cent reduction in sales but would probably eliminate about \$30,000 per annum bad debts. It would be necessary to spend an additional \$20,000 per annum on credit control. The entity at present relies heavily on overdraft finance costing 9 per cent per annum.

You are required to make calculations showing the effect of these changes, and to advise whether they would be financially justified. Assume that purchases and inventory holdings would be reduced proportionally to the reduction in sales value.



Solution

The first stage is to identify the reduction in the level of working capital investment as a result of the change in policy. Inventory and trade payables are assumed to fall by 25 per cent in line with sales, but the new level of trade receivables will need to be calculated using the trade receivable collection formula.

	Reduction in working capital			
	<i>Existing level</i>		<i>New level</i>	<i>Change</i>
	\$		\$	\$
Raw materials	180,000	×75%=	135,000	45,000
Work in progress	93,360	×75%=	70,020	23,340
Finished goods	142,875	×75%=	107,156	35,719
Trade receivables	297,000	*	146,466	150,534
Trade payables	(126,000)	×75%=	(94,500)	(31,500)
Total	587,235		364,142	223,093

$$\text{Receivable collection period} = \frac{\text{trade receivables}}{\text{sales}} \times 365$$

$$60 = \frac{\text{trade receivables}}{1,188,000} \times 75\% \times 365$$

$$\begin{aligned} \text{Trade receivables} &= \frac{891,000 \times 60}{365} \\ &= \$146,466 \end{aligned}$$

The second stage is to consider the annual costs and benefits of changing the credit policy. A key element here is to recognise the saving in finance costs as a result of the reduction in the level of working capital investment recognised above.

Annual costs and benefits		
		\$
Saving in finance costs	$223,093 \times 9\% =$	20,078
Reduction in gross profit (1,188,000 – 1,098,360)	$= 89,640 \times 25\% =$	(22,410)
Reduction in bad debts	=	30,000
Credit control costs	=	(20,000)
Net saving per annum before tax		<u>7,668</u>

The change in credit policy appears to be justified financially, but it should be remembered that there are a number of assumptions built in that could invalidate the calculations.

21.9 Trade payables

The term trade payables refers to the money owed to suppliers for goods and services. Taking credit from suppliers is a normal part of business, and is often viewed as being a free source of finance. The policy adopted regarding trade payables often then tends to be to maximise this resource, paying suppliers as late as possible. This policy may lead to a number of potential problems, discussed in the previous chapter, Section 20.2.1.

Trade payable management will broadly reflect trade receivable management, as one entity's receivable will be another entity's payable. Trade payable management will involve trying to maximise the credit period without jeopardising relationships with suppliers, while also seeking to optimise the level of inventory held.

21.10 The payment cycle

The payment cycle refers to the events that take place between agreeing the order, through to making payment.

The stages in the payment cycle are as follows:

- agreeing the order;
- credit control – evaluating whether to accept settlement discounts and deciding which invoices to pay first;
- method of payment;
- making payment to supplier.

Example: Trade payable payment policy at Marks and Spencer plc

The annual report for 2003 of Marks and Spencer plc states that its policy concerning the payment of its trade payables is:

'For all trade payables, it is the company's policy to:

- agree the terms of payment at the start of business with that supplier;
- ensure that suppliers are aware of the terms of payment;
- pay in accordance with its contractual and other legal obligations.'

The main trading company's (Marks and Spencer plc) policy concerning the payment of its trade creditors is as follows:

- General merchandise is automatically paid for 11 working days from the end of the week of delivery.
- Foods are paid for 13 working days from the end of the week of delivery (based on the timely receipt of an accurate invoice) and
- Distribution suppliers are paid monthly, for costs incurred in that month, based on estimates, and payments are adjusted quarterly to reflect any variations to estimate.

Trade creditor days for Marks and Spencer plc for the year ended 29 March 2003 were 14.3 days (10.3 working days), based on the ratio of company trade creditors at the end of the year to the amounts invoiced during the year by trade creditors.

21.10.1 Cash discounts

An entity may benefit from paying a supplier early in order to take advantage of settlement discounts. However, the benefit of the discount must be evaluated against the finance cost involved.

Exercise 21.4

Claud has been offered credit terms from a supplier whereby, Claud may claim a cash discount of 2 per cent if payment is made within 10 days of the invoice or pay on normal credit terms within 50 days.

You are required to advise the entity whether it should take advantage of the cash discount.

Assume a 365-day year and an invoice for \$100.

Solution

This is the mirror image of Exercise 21.1 (Tandijono). There we calculated that offering the discount was equivalent to an interest rate of 18.6 per cent per annum.

The implied interest cost of 18.6 per cent would then be compared with the overdraft rate. If Claud Ltd could borrow \$98 for 40 days at a rate less than 18.6 per cent, it would be worthwhile taking advantage of the cash discount.

As before, by using the compound interest formula we arrive at a more accurate figure of 20.2 per cent per annum for the interest rate.

21.10.2 Methods of payment

Businesses may use a number of methods of payment for goods and services provided, including:

- cash;
- Bankers Automated Clearing Services (BACS);
- cheques;
- banker's draft;
- standing orders;
- direct debit;
- credit cards;
- debit cards;
- Clearing House Automated Payments System (CHAPS).

21.11 Age analysis of trade payables

As an aid to effective management, an age analysis of trade payables may be produced. This is similar to the age analysis of trade receivables we saw earlier and is simply a list of the suppliers to whom we currently owe money, showing the total amount owed and the period of time for which the money has been owed. The actual form of the age analysis report can vary widely, but a typical example is shown below.

Anglo-Dutch

Age analysis of trade payables as at 30 September 2003

<i>Account number</i>	<i>Customer name</i>	<i>Balance</i>	<i>Up to 30 days</i>	<i>31–60 days</i>	<i>61–90 days</i>	<i>Over 90 days</i>
B004	Van Basten	294.35	220.15	65.40	8.80	0.00
D002	Van Dalen	949.50	853.00	0.00	96.50	0.00
D005	Dunister	371.26	340.66	30.60	0.00	0.00
H001	Van den Hoeven	1,438.93	0.00	0.00	567.98	870.95
K006	Koeman	423.48	312.71	110.77	0.00	0.00
Totals		<u>3,477.52</u>	<u>1,726.52</u>	<u>206.77</u>	<u>673.28</u>	<u>870.95</u>
Percentage		100%	49.6%	6%	19.4%	25%

The age analysis of trade payables will highlight any supplier accounts that are overdue. In the table above, \$870.95 owed to Van den Hoeven has been outstanding for more than three months. The age profile shows that of the debts outstanding at 30 September 2003, nearly 45 per cent have been outstanding for more than 60 days, with the majority of those being outstanding payments due to Van den Hoeven.

21.12 Summary

In this chapter we have considered a range of techniques that may be used to manage trade receivables and trade payables.

Factoring and invoice discounting have been considered in this chapter as techniques for the management of receivables, but they can equally have been considered as useful alternative methods of raising short-term finance.

APPLICABLE MATHS TABLES AND FORMULAE**(Provided in the examination)****Present value table**

Present value of \$1, that is $(1 + r)^{-n}$ where r = interest rate; n = number of periods until payment or receipt.

Periods (n)	Interest rates (r)									
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239
16	0.853	0.728	0.623	0.534	0.458	0.394	0.339	0.292	0.252	0.218
17	0.844	0.714	0.605	0.513	0.436	0.371	0.317	0.270	0.231	0.198
18	0.836	0.700	0.587	0.494	0.416	0.350	0.296	0.250	0.212	0.180
19	0.828	0.686	0.570	0.475	0.396	0.331	0.277	0.232	0.194	0.164
20	0.820	0.673	0.554	0.456	0.377	0.312	0.258	0.215	0.178	0.149

Periods (n)	Interest rates (r)									
	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093
14	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078
15	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.079	0.065
16	0.188	0.163	0.141	0.123	0.107	0.093	0.081	0.071	0.062	0.054
17	0.170	0.146	0.125	0.108	0.093	0.080	0.069	0.060	0.052	0.045
18	0.153	0.130	0.111	0.095	0.081	0.069	0.059	0.051	0.044	0.038
19	0.138	0.116	0.098	0.083	0.070	0.060	0.051	0.043	0.037	0.031
20	0.124	0.104	0.087	0.073	0.061	0.051	0.043	0.037	0.031	0.026

Cumulative present value of \$1 per annum

Receivable or Payable at the end of each year for n years $\frac{1 - (1 + r)^{-n}}{r}$

Periods (n)	Interest rates (r)									
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606
16	14.718	13.578	12.561	11.652	10.838	10.106	9.447	8.851	8.313	7.824
17	15.562	14.292	13.166	12.166	11.274	10.477	9.763	9.122	8.544	8.022
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.372	8.756	8.201
19	17.226	15.679	14.324	13.134	12.085	11.158	10.336	9.604	8.950	8.365
20	18.046	16.351	14.878	13.590	12.462	11.470	10.594	9.818	9.129	8.514

Periods (n)	Interest rates (r)									
	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528
3	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106
4	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589
5	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991
6	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326
7	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605
8	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837
9	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031
10	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192
11	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.486	4.327
12	6.492	6.194	5.918	5.660	5.421	5.197	4.988	4.793	4.611	4.439
13	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533
14	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611
15	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675
16	7.379	6.974	6.604	6.265	5.954	5.668	5.405	5.162	4.938	4.730
17	7.549	7.120	6.729	6.373	6.047	5.749	5.475	5.222	4.990	4.775
18	7.702	7.250	6.840	6.467	6.128	5.818	5.534	5.273	5.033	4.812
19	7.839	7.366	6.938	6.550	6.198	5.877	5.584	5.316	5.070	4.843
20	7.963	7.469	7.025	6.623	6.259	5.929	5.628	5.353	5.101	4.870

This article is about late payment of trade payables and even when entities have been given a statutory right to compensation they are reluctant to exercise it.

A Timely Reminder

Peter Rowe, *Financial Management*, February 2004

A poll conducted by the Better Payment Practice Group (BPPG) recently revealed that 10 per cent of firms would continue paying their suppliers late even if all of their customers paid them on time. Furthermore, various surveys have shown that creditors are unwilling to exercise their statutory right to charge interest on late payments. Critics therefore claim that the legislation has failed to solve the problem.

Those who doubt that the BPPG is realistic in seeking a change to the payment culture in the UK are missing the point: late payers will persist if their creditors let them. The key to tackling the issue in any business is a sound credit policy and the conviction to change.

It remains an unfortunate fact that, although many firms have their policies on equal opportunities and health and safety etc, they don't yet have a standard credit policy. Without one in place, they cannot realistically expect to be paid punctually.

What constitutes a good credit policy is well documented.

Key elements of an effective credit management policy

- Check a new customer's creditworthiness before drawing up a contract.
- Refuse orders if a customer has an unacceptable payment record, or obtain payments in advance.
- Set strict credit limits and keep to them.
- Prepare unambiguous written contracts and/or terms and conditions of trading.
- Involve the sales force in negotiating the payment terms and ensuring that these are understood and agreed at the start.
- Make sure that you know and comply with the procedures used by your customers' buying and accounts departments.
- Initiate and maintain close contact with your customers, particularly with the person responsible for paying your account. Try to create a rapport so that you are top of the list to be paid even when money is tight.

- Make regular credit checks on customers.
- Ensure that all despatch notes and invoices are accurate and delivered to the right person at the right address at the right time.
- Put a stop on supplies to customers who aren't paying, and use their desire for further supplies to encourage them to pay up.
- Send regular reminders and chase payments persistently by phone, fax, e-mail and visits to your customers.
- If all else fails, place the matter in the hands of a debt-collection agency or a solicitor who specialises in debit collection.

Effective credit management gives businesses the means to tackle late payment. A good example of this is the last resort of taking action against a late payer. In order to take such action it is important to answer five basic questions:

- Who is the debtor?
- Can you prove the claim?
- Have all genuine queries been resolved?
- Can you show you are taking a 'reasonable' approach to collection?
- Is the debtor worth suing (can they pay)?

Answering these questions is possible only through the implementation of a good credit policy. In light of this, the BPPG's message is a simple one: all the tools are there, including the legislation, so it's now important for businesses to take control.

There is a precedent in Europe for a major improvement in payment culture. Three decades ago Scandinavian payment patterns were similar to those that exist in the UK now. Sweden's government started tackling the problem with the Debt Recovery Act 1974, which dealt with a major cause of late payment: lack of clarity about what the payment terms actually were. This law stated that all demands against a debtor should be in writing and contain clear information on the creditor's name, the debt's nature, the capital sum, the interest charge and the payment method.

Soon afterwards the government introduced statutory interest. Sweden's Interest Act 1975 ruled that, in the absence of a contractual rate, debtors were obliged to pay interest on over-due debts from the due date. Compensation for administrative collection costs was then introduced by the Debt Recovery (Reimbursement of Costs) Act 1981. With the catalysts in place and the commitment to implement change, Sweden has transformed its payment culture. According to Grant Thornton's 2003 international business owner's survey, the country now has one of the lowest average payment periods in the world.

We have started the process of change in the UK. It now requires the conviction of business owners and their advisers to maintain this momentum. And it's up to all of us to play our part.

Revision Questions

21

? Question 1

FGH requires a rate of return of 12.85% each year.

Two of FGH's suppliers, P and Q, are offering the following terms for immediate cash settlement:

<i>Entity</i>	<i>Discount period</i>	<i>Normal settlement</i>
P	1%	1 month
Q	2%	2 months

Which of the discounts should be accepted to achieve the required rate of return?

- (A) Both P and Q
- (B) P only
- (C) Q only
- (D) Neither of them

(2 marks)

? Question 2

A retailing entity had cost of sales of \$60,000 in April. In the same month, trade payables increased by \$8,000 and inventory decreased by \$2,000. What payment was made to suppliers in April?

- (A) \$50,000
- (B) \$54,000
- (C) \$66,000
- (D) \$70,000

(2 marks)

? Question 3

Which ONE of the following services is NOT normally undertaken by a debt factor?

- (A) Taking customer orders and invoicing
- (B) Attempting to recover doubtful debts
- (C) Making payments to entities before the cash is received from trade receivables
- (D) Administering a entity's sales ledger

(2 marks)



Question 4

A business is experiencing cash problems and the advice of an accountant has been obtained. The accountant has identified the problem as being an excessive amount of trade receivables and it is clear that steps must be taken to reduce the time that is currently being taken by trade receivables. In addition, it seems that the level of bad debts is greater than for most other firms in the same line of business and this is reducing the firm's profitability.

Requirements

- (a) Design a system that will reduce the amount tied up in trade receivables and also reduce the amount of bad debts. **(12 marks)**
- (b) The managing director is keen to improve the situation but is worried that the proposed steps may affect the business adversely. Discuss the nature of the possible problems that might result from the proposals in your answer to (a). **(8 marks)**

(Total marks = 20)



Question 5

- (a) An entity offers its goods to customers on 30 days' credit, subject to satisfactory trade references. It also offers a 2 per cent discount if payment is made within ten days of the date of invoice.

Requirements

- (i) Calculate the cost to the entity of offering the discount, assuming a 365-day year.
- (ii) Compare offering discounts to customers to encourage early settlement of bills with using debt factors.
- (iii) Describe two methods, other than debt factoring, that a entity might use to obtain finance by using trade receivables as security. **(15 marks)**
- (b) Two aspects of working capital policy that require managerial decisions are the level of current assets and the manner in which they are financed.

Discuss aggressive, moderate and conservative policies in these areas. **(10 marks)**

(Total marks = 25)



Question 6

AAD is a newly created subsidiary of a large listed entity. It commenced business on 1 October 2004, to provide specialist contract cleaning services to industrial customers. All sales are on credit.

More favourable credit terms are offered to larger customers (class A) than to smaller customers (class B). All sales are invoiced at the end of the month in which the sale occurs. Class A customers will be given credit terms requiring payment within 60 days of invoicing, while class B customers will be required to pay within 30 days of invoicing.

Since it is recognised, however, that not all customers comply with the credit terms they are allowed, receipts from trade receivables have prudently been estimated as follows:

<i>Customer type</i>	<i>Within 30 days</i>	<i>31 to 60 days</i>	<i>61 to 90 days</i>	<i>91 to 120 days</i>	<i>Bad debts</i>
Class A		50%	30%	15%	5%
Class B	60%	25%	10%		5%

The above table shows that trade receivables are expected either to pay within 60 days of the end of the credit period, or not at all. Bad debts will therefore be written off 60 days after the end of the credit period.

Budgeted credit sales for each class of customers in the first 4 months of trading are as follows:

<i>Customer</i>	<i>October</i>	<i>November</i>	<i>December</i>	<i>January</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Class A	100	150	200	300
Class B	60	80	40	50

Assume all months are of 30 days.

Requirements

- (a) Prepare a statement showing the budgeted cash to be received by AAD from trade receivables in each of the three months of November 2004, December 2004 and January 2005, based upon the prudently estimated receipts from trade receivables. **(7 marks)**
- (b) Prepare a budgeted age analysis of trade receivables for AAD at 30 January 2005 for each of the two classes of customer. It should show the total budgeted trade receivables outstanding at that date analysed into each of the following periods:
- (i) within credit period;
 - (ii) up to 30 days overdue;
 - (iii) 30 to 60 days overdue. **(8 marks)**
- (c) Explain the purposes of entities preparing an age analysis of trade receivables analysed by individual customers. **(5 marks)**
- (Total marks = 20)**

Solutions to Revision Questions

21

✓ **Solution 1**

The correct answer is (C), see Section 21.10.1.

$$P = (100/99)^{12} - 1 = 12.82\%$$

$$Q = (100/98)^6 - 1 = 12.89\%$$

✓ **Solution 2**

The correct answer is (A), see Section 21.10.

✓ **Solution 3**

The correct answer is (A), see Section 21.6.

✓ **Solution 4**

- (a) Delays in the collection of the amounts owing by receivables can be seen as a loan to customers and will mean that the business 'lending' the money may become short of funds themselves. It is, therefore, imperative that a system be introduced that will identify the amounts that are overdue and ensure that steps are taken to collect the debts.

At the same time as collecting the debts on time, an efficient debt-collection process is likely to reduce the level of bad debts. A system will ensure that receivables are contacted as soon as the debt is overdue and this will put the collection procedure into action at the earliest opportunity.

The firm's credit policy must be designed to ensure that:

- the cash is received according to the firm's credit policy;
- bad debts are avoided by ensuring that prompt attention is given to any accounts that are overdue;
- customers are aware of the credit terms and the collection procedures that will be used to collect outstanding debts.

Initially, the management of the firm must agree on the credit terms that will be offered to customers and the conditions under which special credit arrangements will be granted. This policy should be made clear to the customers and the sales management so that misunderstandings are avoided.

Once an order is received, the customer must be screened to eliminate any potential problems before the goods or services are provided. This screening could include prior experience of the payment record of customers from either the firm or other businesses that collaborate on credit control. References from banks and specialised agencies will also be important in determining the creditworthiness of both new and existing customers.

Once the invoice has been produced, records must be maintained of the dates on which payment is due. This should be monitored and ageing schedules produced regularly to ensure that steps are taken to remind customers that the payment is overdue. The offer of cash discounts is a matter that has to be addressed when the credit policy is formulated. It is important that the cost of offering cash discounts should be made clear as it can be an expensive way of speeding up the collection process.

Another policy decision that needs to be addressed is whether factoring is to be used as a means of ensuring that the cash is received promptly. It is important that the costs and benefits of factoring are investigated.

Finally, once the account is overdue, the debt collection process must be started to pursue the customer for payment. This is a procedure that must be cautiously but resolutely followed as errors can occur and this might alienate customers if they have already settled the account.

A control mechanism must be instituted to monitor the time that receivables are taking and the extent to which bad debts are being incurred. These are important aspects of the credit control process and a balance between the prompt collection of outstanding debts and the effect on the existing and new customers must be assessed.

- (b) Although it is important that the cash must be collected within the agreed time, inflexible credit control can affect the business adversely. Initially, sales may be lost if credit is not offered. This means that the credit screening must be able to cope with many different situations in different industries.

The follow-up of overdue accounts can cause problems with customers and it is important that both the administrative staff and the sales management are involved in the collection process. Every effort should be made to avoid annoying customers but it is important that the funds are received from the receivables without undue delay. It is a matter of balance and will be influenced by the past experience with each individual customer. This would mean that a more lenient approach could be adopted if it is known that the customer is experiencing short-term problems. It is possible that a sympathetic approach could lead to customer loyalty and also ensure that the cash is collected, which is the real purpose of the credit control section of the accounting department.

Once the legal process is used to recover the debt, it is unlikely that the customer will purchase from the business again. This means that the customer is lost but this benefits the business as they are clearly an unsuitable customer.



Solution 5

- (a) (i) On the policy as described, the entity is offering 2 per cent for 20 days, i.e. 36.5 per cent per annum using simple interest. In accounting terms, the cost to the entity is 2 per cent of the sales in respect of which the discount is taken, but it will show correspondingly lower receivables. Assume sales of \$1,000 per day, for simplicity:

the discount would cost \$7,300 per annum, but receivables would be \$20,000 lower, $7,300/20,000 = 36.5$ per cent. The cost of offering a cash discount should ideally be calculated using a compounded annual rate. In this example, the compounded annual rate is given by:

$$\left(\frac{100}{98}\right)^{365/20} - 1 = 1.446 - 1 = 44.6\%$$

This can be compared with the entity's cost of capital to arrive at an opportunity cost.

- (ii) The offering of a discount to customers is normally influenced by practice in the industry/trade in question and may therefore be unavoidable in principle although subject to customisation, firm by firm. The benefits (compared with factoring) are attributable to the maintenance of a direct relationship with the customer. In these days of developing long-term relationships, this can be very important. Also, sales ledger clerks and managers can pick up useful 'intelligence' from their contacts and head off potential problems, including bad debts, and all managers are prompted to think about the time value of money. There is a cost, however, that is not limited to the actual discount: keeping on top of the situation (e.g. reacting quickly to lapses) can be costly, though the latest computer systems have eliminated the need for clerks to go through ledgers.

Factoring, on the other hand, takes the administration of the sales ledger away from the entity and exploits the economies of scale and expertise of the specialists. Different payment terms can be negotiated, for example, some payment immediately on invoicing, thereby releasing further working capital, and/or the guaranteeing of payment. A particular advantage of this approach is that receipts are more predictable: customers may or may not pay in time to earn their discount, but the factor must pay to terms. There is a cost, of course, in respect of the administration and financing, and it must be acknowledged that the factor can be a barrier between the entity and its customers. A 'confidential invoice discounting' service can be an effective compromise.

Experience suggests that, thanks to avoiding double handling, a well-run sales accounting function adds value to a business; factoring is primarily attractive to entities who cannot raise funds from more traditional sources.

- (iii) An entity might raise funds on the strength of its receivables by:
- arranging a bank loan or overdraft on terms that require a certain minimum receivables figure (or working capital generally) to be maintained;
 - setting up a separate entity, funded by the bank, which owns the receivables.
- (b) Some working capital is essential to the process, e.g. where different crops are blended or need time to mature or incubate. Some, such as trade credit, is a straight trade-off between cost and investment. The remainder, to which the question addresses itself, is determined by uncertainty and the response thereto. Take, for example, a business that chooses to sell from inventory, rather than to order. Its production plan is going to be based on a forecast of demand, but the latter must be subject to a margin of error. Should the entity plan to carry enough inventory to meet the maximum demand, with all that entails in terms of holding costs? Or should it carry enough to meet the minimum, with all that means in terms of lost business and hence contribution? Put in that way, it is clear that a rational business will seek to optimise, to produce to the point where

incremental holding cost equates with incremental contribution. Different degrees of sophistication are applied, e.g. some work on three numbers – lowest, highest, and most likely – while others use probability curves. The difficult part in practice is assessing the value of lost contribution: what future orders might be lost, owing to customer dissatisfaction? The terms ‘aggressive ... conservative ... moderate’ mean different things to different people but could correspond to preparing to meet maximum demand, minimum demand, or something in between. Alternatively, if we characterise aggressive as being prepared to shoulder a greater risk, it would be associated with lowering cash and inventory, but raising receivables.

Modern financial practice does not think in terms of current assets (an accounting term, after all), being financed separately from fixed assets and revenue investments – rather the focus is on projected cash flows and the margin of error therein. However, there are some empirical relationships, e.g. businesses with a high proportion of current (as opposed to fixed or intangible) assets that are likely to be able to attract a higher proportion of their funds in the form of bank overdraft finance. On a different axis, those with wide margins of error in sales forecasts are likely to find it difficult to attract such finance. The scales on these axes have changed considerably over recent years as banks have ‘burned their fingers’ on loans they thought were safe, but were not.

The link between the investment needs and the funding pattern of a business boils down to the familiar relationship between risk and reward. The more conservative the policy (as defined above) the lower the return, but the lower the risk associated with it.



Solution 6

(a)

<i>Credit sales</i>	<i>Total sales</i>	<i>November</i>	<i>Cash received</i>	
<i>Class A</i>			<i>December</i>	<i>January</i>
October	100		50	30
November	150			75
December	200		–	–
Total			<u>50</u>	<u>105</u>
<i>Class B</i>				
October	60	36	15	6
November	80		48	20
December	40	–	–	24
Total		<u>36</u>	<u>63</u>	<u>50</u>
Overall total (A + B)		<u>36</u>	<u>113</u>	<u>155</u>

(b)

	Age Analysis of Receivables			
	<i>Total</i>	<i>Within credit period</i>	<i>Up to 30 days late</i>	<i>30 to 60 days late</i>
Class A <W1>	595	500	75	20
Class B <W2>	78	50	16	12

*Working 1 –
Class A*

	<i>Total</i>	<i>Cash received (per (a))</i>	<i>Within credit period</i>	<i>Overdue up to 30 days</i>	<i>Overdue 31–60 days</i>	<i>Bad debts</i>
Oct	100	80			20	
Nov	150	75		75		
Dec	200		200			
Jan	300		300			

*Working 1 –
Class B*

	<i>Total</i>	<i>Cash received (per (a))</i>	<i>Within credit period</i>	<i>Overdue up to 30 days</i>	<i>Overdue 31–60 days</i>	<i>Bad debts</i>
Oct	60	57				3
Nov	80	68			12	
Dec	40	24		16		
Jan	50		50			

- (c) An age analysis of receivables is a useful control tool to identify those receivables that are at greatest risk of non-payment or late payment.

It provides an analysis of the total amounts outstanding according to their age. This may be based upon total receivables, a class of receivable or a particular receivable.

Individual receivable data can show accounts that are at risk and appropriate follow-up procedures can be entered into depending upon the period by which normal credit terms have been exceeded.

Progressively this might mean:

- a reminder letter;
- telephone call;
- personal visit;
- withhold supplies;
- debt collection agency;
- legal action.

This progression is likely to be based upon the age of the receivable, but also the nature of the response to initial enquiries. More general age analysis data of classes of business or total or receivables will, when compared over time, enable credit managers to pick up trends in payments giving early warning signals. This might include problems with liquidity in the sector (for example through a downturn) or reduced internal efficiency in invoicing and follow-up procedures.

The information about the age of receivables may also help predict cash inflows from the business and decide appropriate action to speed up receipts arising from receivables (e.g. cash discounts, debt factoring, invoice discounting). The age analysis may also indicate when to make a provision for doubtful debts and how much this should be.

Working Capital: Inventory

22

LEARNING OUTCOME

By the end of this chapter you should be able to:

- ▶ evaluate appropriate methods of inventory management.

The syllabus topics covered in this chapter are as follows:

- centralised versus decentralised purchasing.
- the relationship between purchasing and inventory control.
- the economic order quantity (EOQ) model (i.e. reorder levels, reorder quantities, safety inventory and evaluating whether bulk order discounts should be accepted).

22.1 Introduction

This chapter continues with the theme of working capital management and concentrates on inventory management. Valuation of inventory and its accounting treatment was discussed in Chapter 15, we are now going to examine the different types of inventory and its management. The chapter first defines inventory and then looks at the cost of holding inventory and methods that can be used to control it.

22.2 Inventory management

Inventory, like receivables, involve the commitment of a large amount of a firm's resources. Their efficient management is of great concern to the financial manager. Inventory should not be viewed as an idle asset, rather they are an essential part of a firm's investment and operations. The optimum holding of inventory will maximise the benefits less costs involved.

Holding higher levels of finished goods inventory will enable the entity to be more flexible in supplying customers. More customers would receive immediate delivery rather than waiting for new items to be produced, and they might obtain a greater choice of types of product. There would be a smaller chance of sales being disrupted through interruptions in

production. These benefits would have to be balanced against the storage costs incurred, the capital costs of financing the inventory and the cost of inventory becoming obsolete.

22.3 The nature of inventory

There are three main categories of inventory: raw materials, work-in-progress and finished goods.

22.3.1 Raw materials

These are used in the manufacturing or production process, for example, components, materials, fuel, etc. Inventory of raw materials are important because they allow the *production* process to be kept separate from the *supply* of raw materials.

22.3.2 Work-in-progress

These are partly finished goods, sub-assemblies, etc., that arise at, or between, various stages of the production process. They allow these various stages of production to be treated independently of each other.

22.3.3 Finished goods

These are completed goods, ready for sale, and held in inventory to meet anticipated customer demand.

The distinction between the categories is somewhat arbitrary (e.g. the finished goods of one entity may be the raw material of another – the ‘finished’ flour from a mill is a raw material to a bakery).

22.4 The costs of inventory

Three main types of cost are distinguishable.

22.4.1 Holding costs

These include storage costs, insurance, handling, auditing, deterioration, etc. Also, when money is tied up in inventory, it clearly cannot be used for other purposes, so that the opportunity cost of holding inventory (e.g. interest on other capital investments) must be considered.

22.4.2 Order costs

This is the cost of placing a (repeat) order to replenish inventory, for example, administrative costs, computer time, postage, unloading, quality control, etc. – whether the goods are obtained from outside or inside the entity.

22.4.3 The cost of running out of inventory

The costs associated with the consequences of running out of inventory include the obvious loss of contribution to profit arising from lost sales, as well as the loss of goodwill and

the effect on future sales of unsatisfied customers going elsewhere. These costs are often difficult to quantify. There is also the cost of interrupted production.

22.4.4 Unit cost

Although not a category of cost in the same sense as the three types above, this is a term widely used to indicate the cost of acquiring one unit of product, taking all costs into account.

22.5 Inventory control policy

Though often undervalued as a management activity, inventory control policy, or a lack of it, can have a critical effect on working capital requirements, on the liquidity of the entity, on the smooth working of the production system and on customer service levels.

Therefore, an inventory control policy should reflect the following four criteria (despite the fact that they usually operate against each other):

- keep total costs down (ideally to a minimum);
- provide satisfactory service levels to customers;
- ensure smooth-running production systems;
- be able to withstand fluctuations in business conditions, for example, changes in customer demand, prices, availability of raw materials, etc.

Entity policy will dictate which of these will take precedence.

22.5.1 Dependent or independent demand

Products may be loosely considered to be subject to ‘dependent’ or ‘independent’ demand. For example, a mountain bike would be considered to have an ‘independent’ demand, whereas its components – wheels, tyres, frame, pedals, saddle, gears, etc. – have a dependent demand. This chapter will consider only ‘independent demand’.

22.6 Inventory control systems

Three main systems are used to monitor and control inventory levels:

- reorder level system;
- periodic review system;
- mixed systems, incorporating elements of both of the above.

22.6.1 Reorder level system

With this system, whenever the current inventory level falls below a pre-set ‘reorder level’ (ROL) a replenishment (replacement) order is made. Since there is normally a gap (delivery time) between issue and receipt of orders, say T , this ‘lead time’ (T) has to be allowed for. This is illustrated in Figure 22.1, with the reorder quantity (for the replenishment order) shown as Q . (The actual size of this Q is often the economic order quantity, which is defined in the next section.) Buffer inventory is usually held as insurance against variations in demand and lead time.

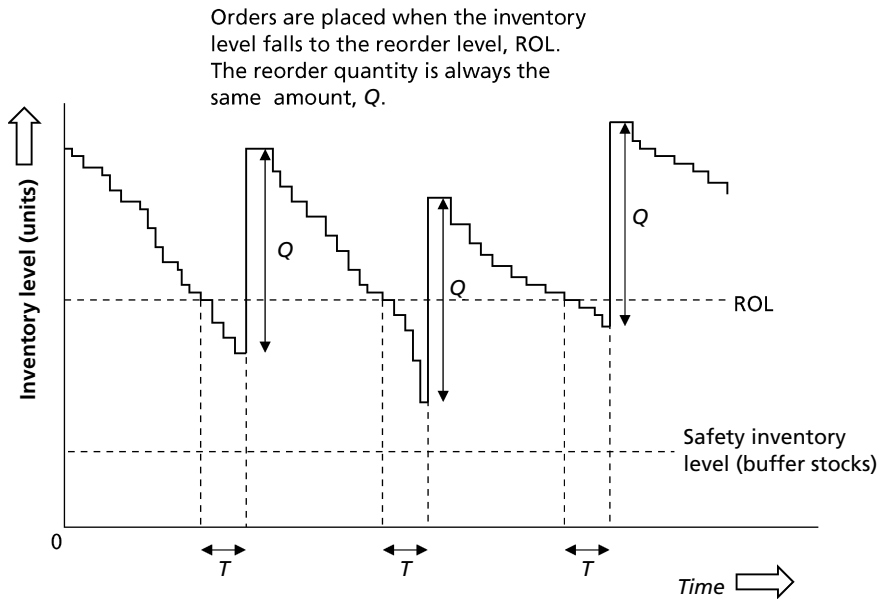


Figure 22.1 A simple reorder level system for inventory control

This system used to be known as the ‘two-bin’ system. Inventory is kept in two bins, one with an amount equal to the ROL quantity, and the rest in the other. Inventory is drawn from the latter until it runs out, whence a replenishment order is triggered.

A reorder level system is simple enough to implement if the variables (such as average usage, supplier lead time, etc.) are known with certainty. In practice, this is rarely the case.

22.6.2 Periodic review system

This is also referred to as a ‘constant cycle’ system. Inventory levels are reviewed after a fixed interval, e.g. on the first of the month. Replenishment orders are issued where necessary, to top up inventory levels to pre-set target levels. This means that order sizes are variable (see Figure 22.2, where the Q -values, set by management, do

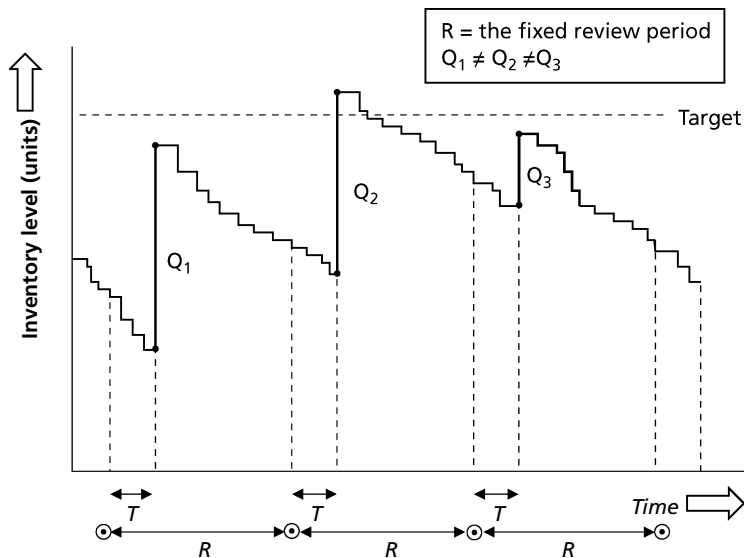


Figure 22.2 Periodic review system for inventory control

not always ensure that the target is met, owing to variations in demand during the lead time, T).

22.6.3 Mixed systems

In practice, mixtures of both systems are sometimes used, depending on the nature of the problem, the amount of computerisation and so on.

22.7 Economic order quantity (EOQ)

Consider the following simplified situation, in which an entity requires 24,000 boxes a year at a price of \$8 per box. The order costs are \$200 (delivery, admin, etc.) and the holding costs are 10 per cent per year, i.e. each order costs \$200 to place and each box costs \$0.80 per year to hold in inventory.

The table below shows a few simple calculations that illustrate how the economic order quantity operates. (These types of calculations are usually carried out using a spreadsheet.)

Order size (000)	Average orders/yr $24,000 \div \text{Col 1}$	Annual order cost (\$) $\text{Col 2} \times 200$ (3)	Mean inventory- holding $\text{Col 1} \div 2$ (4)	Annual holding cost (\$) $\text{Col 4} \times \$0.80$ (5)	Total variable cost (\$) $\text{Col 3} + \text{Col 5}$ (6)	Total annual cost (\$) $\text{Col 6} + \text{cost of purchase}$ (\$192,000)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	24	4,800	500	400	5,200	197,200
2	12	2,400	1,000	800	3,200	195,200
3	8	1,600	1,500	1,200	2,800	194,800
4	6	1,200	2,000	1,600	2,800	194,800
4.8	5	1,000	2,400	1,920	2,920	194,920
6	4	800	3,000	2,400	3,200	195,200

By inspection of the table (column 6), it appears that total variable cost is least when the order size is between 3,000 and 4,000 boxes, maybe about halfway between them since total variable cost is a curve. This is confirmed by Figure 22.3, which shows cost plotted against order size, using columns 1, 3, 5 and 7. The total annual cost (column 7) = total variable cost (column 6) + the purchase cost of 24,000 boxes at \$8 (\$192,000). The large differences between column 6 and column 7 should not be taken to imply that the basic purchase cost of inventory is always large in comparison to the variable costs of holding and ordering inventory and, of course, many entities have to hold a considerable range of inventory lines, so that a small saving in column 7, for many inventory lines, can mean big savings overall.

22.7.1 Comments on Figure 22.3

1. The annual total variable cost is minimised at the point where holding costs equal order costs, in this case when the order size is about 3,460 units.
2. The minimum annual total cost associated with a reorder quantity of 3,460 units is about \$2,770 plus the purchase cost of \$192,000, i.e. \$194,770.
3. A reorder quantity of 3,460 units implies 6.93 orders per year, which is obviously impractical. In practice, this would clearly be rounded to 7 orders of 3,430 units. ($24,000/7 = 3,430$ to the nearest 10).
4. Such a reorder quantity is termed the *economic order quantity*.

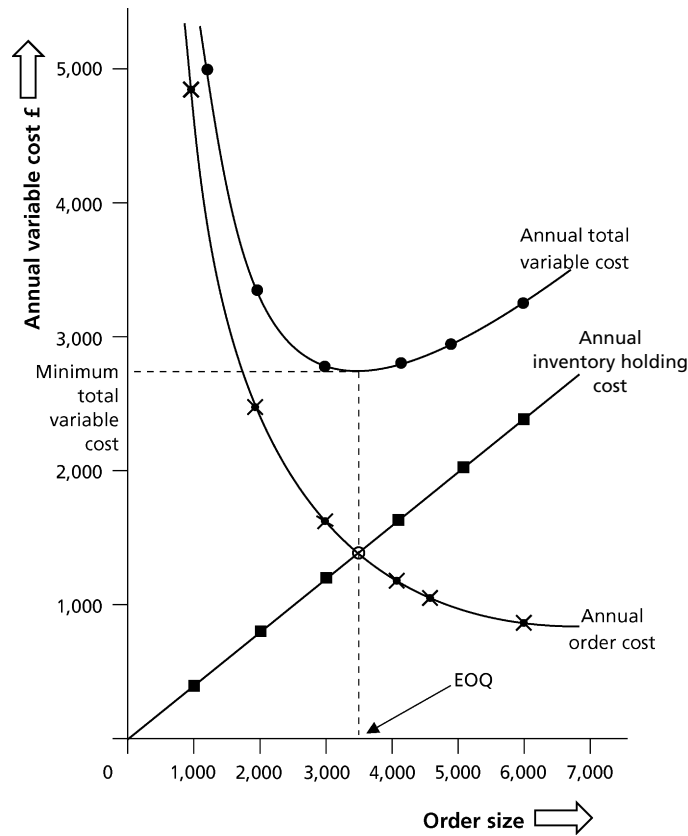


Figure 22.3 Graphical illustration of the economic order quantity

The EOQ model assumes that there is a steady demand for a product, causing its level of inventory to be depleted at a constant rate. It is also assumed that inventory levels are replenished (replaced) by a reorder quantity (ROQ) at regular time intervals, with negligible lead time.

Two types of variable inventory costs have been considered above: order costs, which will be denoted C_o per order, and holding costs, which will be denoted C_h per unit per year. Let the annual demand for the product be D units and the reorder quantity (ROQ) be shortened to Q for simplicity. Then the EOQ is

$$Q = \sqrt{\frac{2 \times C_o \times D}{C_h}}$$

Note: The EOQ formula is provided on the formula sheet in the examination.

We shall use the data from the previous example to illustrate how it works.

The requirement is for 24,000 boxes a year, $\therefore D = 24,000$, $C_o = 200$, $C_h = \$8 \times 10\% = \0.80 . Substituting these numbers into the EOQ formula gives:

$$EOQ = \sqrt{\frac{2 \times \$200 \times 24,000}{\$0.80}} = \sqrt{\$12,000,000} = 3,464 \text{ units}$$

\therefore The number of orders made per year = $24,000/3,464 = 6.93$. In practical terms this means seven orders a year of about $24,000/7 = 3,430$ units for the reorder quantity.

It could be seen from the costs graph (Figure 22.3) that total variable costs are minimised, theoretically, when total ordering cost = total holding cost, i.e. when the holding costs are $\$0.80 \times 3,464/2$, that is, $\$1,385.60$. Therefore, in theory, total variable costs are $2 \times \$1,385.60 = \$2,771.20$.

In practice, $C_o = 7 \times 200 = \$1,400$, and $C_h = 0.5 \times 3,430 \times \$0.80 = \$1,372$, giving a total variable cost of \$2,772, which is extremely close to the theoretical value of \$2771.20.



Exercise 22.1

A retailer has a steady demand for 600 units a year. Each unit costs the retailer \$20. The costs of ordering are \$100, regardless of the size of the order. The cost of holding a unit in inventory is 40 per cent of its value per year. What order size will minimise total inventory cost, and what is the minimum total annual inventory cost?



Solution

$$D = 600 \quad C_o = \$100 \quad C_h = \$20 \times 40\% = \$8$$

$$EOQ = \sqrt{\frac{2 \times C_o \times D}{C_h}}$$

$$EOQ = \sqrt{\frac{2 \times \$100 \times 600}{\$8}} = \sqrt{\$15,000} = 122.47 \text{ units}$$

In practice, this would be rounded to 120 units, which would be ordered $600/120 = 5$ times a year, i.e. every 10 weeks or so.

The annual order costs would be	$5 \times \$100$	= \$500
The annual holding costs would be	$0.5 \times 120 \times \$8$	= \$480
The purchase cost would be	$\$20 \times 600$	= <u>\$12,000</u>
\therefore The total annual inventory cost would be		<u>\$12,980</u>

22.8 Quantity discounts

It is quite common for some suppliers to offer discounts on items that are bought in large quantities. This not only reduces the unit purchase cost, but also the order cost because fewer orders will be made. On the other hand, the higher average inventory levels result in increased holding costs. Although it may not be appropriate to use the EOQ formula (because the price per item is not fixed), the calculations shown below, manually, are quite easily done with a spreadsheet.



Exercise 22.2

Suppose that our manufacturer (with $D = 24,000$, $C_o = \$200$, $C_h = \$0.80$ and with the assumptions of the EOQ model), faced with buying from an external supplier, is offered a discount of 5 per cent on purchases of 5,000 boxes or more, all other factors being the same. What are the implications of this offer?



Solution

A sketch graph will illustrate the situation (see Figure 22.4).

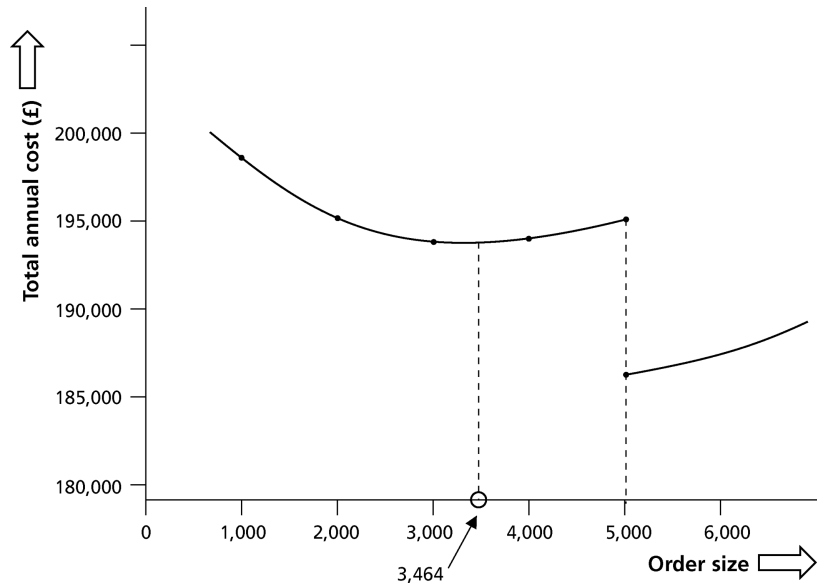


Figure 22.4 Total annual cost and order size: price discount of 5%.

The total annual cost in column 7 of the table developed earlier is discontinuous at the point where the discount begins to operate. The EOQ formula can only be used up to the point where $Q = 5,000$.

The graph demonstrates this point clearly, where $Q = 5,000$. Some calculations at this value are now made to see if the discount is worth while and by how much.

At $Q = 5,000$ units, with the discount

$$\text{Total order costs} = \$200 \times D/Q = \$200 \times 24,000/5,000 = \$960$$

With the 5 per cent discount, the price per item falls from \$8 to \$7.60.

$$\therefore \text{Holding cost per item} = \$7.60 \times 10\% = \$0.76$$

$$\therefore \text{Total holding cost} = 0.5 \times 5,000 \times \$0.76 = \$1,900$$

$$\text{Total variable cost} = \$960 + \$1,900 = \$2,860$$

$$\begin{aligned} \text{The total annual cost} &= \text{total variable cost} + \text{purchase cost} \\ &= \$2,860 + 24,000 \times \$7.60 \\ &= \$2,860 + \$182,400 \\ &= \$185,260 \end{aligned}$$

At $Q = 3,464$ units (EOQ), without the discount

The total variable cost was \$2,772.

The purchase cost was \$192,000.

The total annual cost was \$194,772.

Therefore, the discount produces a saving of $\$(194,772 - 185,260)$, that is, \$9,512.

22.9 Lead times

The models considered here assume that lead times (the time lags between the issuing of orders and their receipt) are negligible or at least constant. In practice, time lags occur and vary, so it is crucial to allow for them. We look here at constant lead times so that EOQ values remain the same, but the timings of placing orders have to change.

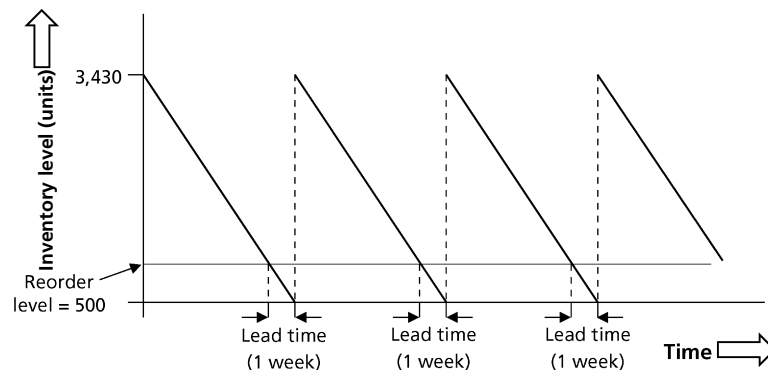


Figure 22.5 Graph showing lead time of 1 week for the data of Example 1

22.9.1 Lead times with constant demand

Suppose that our supplier requires one week to fulfil an order. The annual requirement of the manufacturer was for 24,000 units, so that $24,000/48 = 500$ units are needed each week, assuming 48 working weeks to a year. Thus, whenever the inventory level falls to 500, a replenishment order to the EOQ value of 3,430 units should be made. Figure 22.5 illustrates this situation.

This leaves no margin for error and assumes constant usage, if 501 units were required in the week there would be a shortfall. If demand is not constant or lead times are variable the ROL will need to be increased to ensure that inventory does not run out before the order is delivered.

In principle a new order is placed whilst there is still sufficient inventory to cover the maximum demand over the maximum likely lead time. Setting ROL at this level will create a buffer inventory which is a quantity of inventory that will not usually be needed but could be needed if demand or lead times are above average.

22.10 Just-in-time (JIT) purchasing

JIT was developed in Japan, and it is claimed that the implementation of JIT systems has been one of the major factors contributing to the country's economic progress. It involves a continuous commitment to the pursuit of excellence in all phases of manufacturing. Its aims are to produce the required items of the required quality in the required quantity at the required time.

There are two aspects to JIT: JIT purchasing and JIT production. CIMA's *Management Accounting: Official Terminology* provides the following definitions:

- *Just-in-time.* A system whose objective is to produce or to procure products or components as they are required by a customer or for use, rather than for inventory. A just-in-time system is a 'pull' system, which responds to demand, in contrast to a 'push' system, in which inventory act as buffers between the different elements of the system, such as purchasing, production and sales.
- *Just-in-time production.* A production system which is driven by demand for finished products whereby each component on a production line is produced only when needed for the next stage.
- *Just-in-time purchasing.* A purchasing system in which material purchases are contracted so that the receipt and usage of material, to the maximum extent possible, coincide.

With JIT purchasing it means that materials or components are received from the supplier just in time to use them. They are in effect delivered to the factory floor.

The objectives of JIT purchasing may be stated as:

- raw material inventory reduction;
- frequent deliveries with smaller orders from a smaller number of suppliers;
- long-term contracts with suppliers;
- quality assurance, with the supplier becoming responsible for the inspection of goods supplied.

The objectives of JIT production are to obtain low-cost, high-quality, on-time production, to order, by minimising inventory levels between successive processes and, therefore, minimising idle equipment, facilities and workers.

The introduction of JIT may bring the following benefits:

- reduced inventory;
- savings in storage space required;
- increased customer satisfaction – elimination of waste will lead to a better-quality product;
- weaknesses and problems may be identified – problems such as bottlenecks, supplier reliability and inadequate documentation may be revealed;
- flexibility and the ability to supply small batches.

JIT will not, however, be appropriate in all situations. A full work study will be required to look at the production methods. A large amount of capital is needed to operate a JIT system, and flexibility is lost due to the nature of the contracts with suppliers.

22.11 Summary

Various types of inventory costs have been considered. Brief criteria for an inventory control policy were examined. The simpler characteristics of inventory control systems were described. The simple EOQ model was studied in detail. The effects of quantity discounts and lead times were explained briefly at the end. The need for a scientific approach to the control of inventory should have been evident throughout.

The article included here examines issues involved in inventory and work in progress. It begins by looking at the traditional view that most entities will need to maintain a certain level of inventory to prevent production or operational delays, but recognises the costs involved in holding inventory. The article goes on to consider the possibility of reducing inventory and working capital levels to zero, and the implications of doing so.

Taking stock

Rob Dixon. Reproduced by permission of the author. This article originally appeared in *Accounting Technician*

As much as 20 to 25 per cent of a company's total assets can be taken up by stock. The traditional view is that most companies need to carry at least some stock, even if it is just stationary.

Manufacturing firms will face the apparent need for stocks in raw materials, work in progress and finished goods. In the retail world, both wholesalers and retailers carry a large quantity of finished goods ready for sale as stock.

The traditional view is that a buffer is needed between supply and demand. For a manufacturing firm, a stock of raw materials helps to keep the production process running smoothly.

Substantial costs can be involved in holding stock – holding costs, goods deterioration, labour and rent, insurance, obsolescence and administration – in addition to the cost of having cash tied up in the inventory.

There is clearly an optimum level of stock to gain the best advantage from all its associated costs. The obverse of this argument is that running stocks too low can incur costs of completely running out of materials. The practice of sustaining the optimum stock level has to be supported by reordering policies that are capable of maintaining the required level.

Improving stock management

There is an inverse relationship between reorder costs and stockholding cost, so if a company holds large stocks, then reordering costs are relatively low because the orders are infrequent. The company holding a small inventory, on the other hand, will have higher reorder costs because of the frequency of the orders.

The economic order quantity model exhibits the point where the combined costs are least, i.e. the optimum level of inventory:

$$EOQ = \sqrt{\frac{2cd}{b}}$$

and the total cost associated with EOQ is:

$$TC = \frac{b \times \text{EOQ}}{2} + \frac{cd}{\text{EOQ}}$$

where:

- c = ordering costs per order
- d = annual demand
- b = holding costs per unit

If a carpentry business uses 12 tonnes of wood per year, and it costs the business \$2 per year to store one tonne, and \$10 to place each order (e.g. for delivery), its EOQ would be as follows:

$$\text{EOQ} = \sqrt{(2 \times \text{£}10 \times 12) \text{£}2} = \sqrt{120} = 11 \text{ tonnes}$$

The total costs associated with the economic order quantity for the carpentry business would work out as follows:

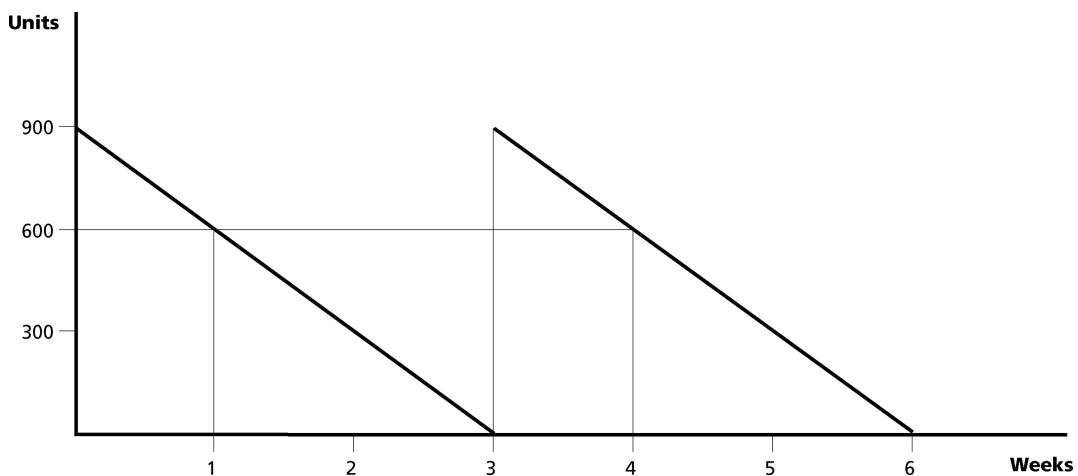
$$TC = \frac{\text{£}1 \times 11}{2} + \frac{\text{£}10 \times 12}{11} = 11 + 11 = 22$$

In the real world there will be, and is, a delay between an order being placed and the goods being delivered. This delay is known as the lead time, and can vary from being served in a fish and chip bar, say a lead time of five minutes, to a lead time of several years for the Royal Navy to take delivery of a new ship.

This means that in order to avoid the ‘stock-out’ position, it is necessary to know the minimum level of stock at which an order should be placed.

Figure 1 shows a situation where 300 units are used per week and the EOQ has been calculated at 900 units with a lead time of two weeks, so reordering needs to take place when the stock level reaches 600 units. However, even in the best run establishments, delays can occur which could lead to a stockout, so some margin of error is built in to provide a buffer.

Figure 2 shows this technique with the effect of a 300 unit buffer stock incorporated into the graph.



With lead time = 2 weeks
Reorder at stock = 600 units

Figure 1 Stock reorder levels

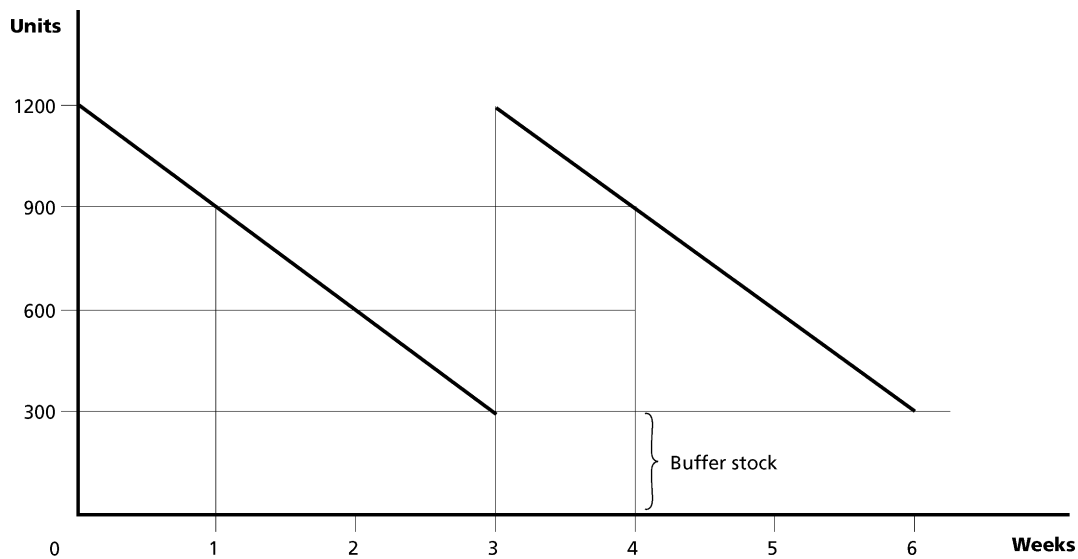


Figure 2 Buffer stock

Note: maximum stock level = 1200. Delay in delivery results in use of buffer stock.

The relationship between inventory and the sale value of that inventory was first highlighted by Pareto. His analysis showed that approximately 80 per cent of a firm's total sales revenue is earned from about 20 per cent of a firm's products. This suggests that it is crucial to concentrate first on controlling that 20 per cent, perhaps using more sophisticated pricing methods for this highly productive section of the stock.

In terms of stock value, another version splits stock into three categories or classes, A, B and C. The analysis states that 60 per cent of the value of any particular inventory is made up from 10 per cent of the stock (Class A stock), 30 per cent of the stock value made up from 30 per cent of the stock (Class B) and 10 per cent of stock value made up from the remaining 60 per cent of the stock (Class C). The conclusion from this is as clear as the earlier relationship – management should focus its attention on controlling Class A stock.

Information needs

No management in terms of control can function without information. It is important that managers receive the right information for a particular task. There are four key indicators which relate to the optimum stock level.

- Production requirements
- Sales forecasts
- Seasonal or cyclical factors
- Changes in technology and/or fashion

Reference was made earlier to the traditional view of stock and inventory. During the 1960s and 1970s a new view of stock control was developed in Japan which helped the Japanese dramatically improve both the quality of their goods and their output.

The philosophy involved in their revival was concerned with eliminating all waste in a manufacturing process. Waste is defined as anything which adds costs but not value to a product. Stocks of inventory came into this category.

Just-in-time (JIT), as its name implies, demands that the supply of parts and materials only be made as and when they are actually required on the production line at the moment they are needed – thereby eliminating unnecessary inventory stocks.

We have looked at the traditional western pattern of holding buffer stocks and inventory almost as an insurance against unexpected events. Even the most careful use of materials requirement planning (MRP) did not obviate the need for buffer stocks.

JIT, in contrast, aims at zero inventory. This is possible through a step-by-step reduction in inventory levels through a ‘pull’ system of production control. This means that the production system draws the exact amount of parts and materials it needs from the previous operation just as it needs them. This is repeated all the way down the production line.

In MRP the production of parts was according to a preset schedule and the parts were duly ‘pushed’ onto the next operating stage. The ‘pull’ system, on the other hand, is the production idea behind what is known as the Kanban system, which literally means ‘visible records’ or cards.

The original pull system (at Toyota) used two cards for each container – a production Kanban and a withdrawal Kanban. Each card carries details of the container’s capacity, part numbers, etc.

The production Kanban, say for 450 ‘E’ type widgets, acts as the authorisation to the production department to produce the items listed on the card. Once 450 are completed and placed in the container, the container moves onto the next stage in the process.

At this stage, the production Kanban card is replaced by the withdrawal Kanban, so the production Kanban returns as the production authorisation for the next container of widgets. This cannot happen until the following stage in the process accepts (withdraws) the container. So when there is no demand for widgets, i.e. the next stage has not yet accepted the container, no further widgets are made. This reduces the possibility of excess stock.

It is at this stage that the operators can clean and maintain or service the machines, to avoid trouble in the future.

One question to be answered by management is how many containers of widgets are required in the process. A minimum of two are required between processes, one being used and one being filled. If 900 ‘E’ type widgets are needed at a time, clearly one container used may not be sufficient.

In Japan, the optimum number is found by arranging a generous number to begin with, and gradually removing one at a time until a problem arises. At this point management examines the problem to determine whether it can be corrected in another way (changing work organisation, for example). Only if it cannot one container will be added into the system, giving the final number. In this way any unnecessary inventory is eliminated.

One consequence of this, of course, is that should a problem arise a great deal of attention is paid to it, for a problem in producing a container of widgets could bring the entire production line to a halt. Concentration is focused on solving the problem rather than hiding it.

To reduce the levels of buffer stocks or work in progress, and ensure the desirable smooth flow of work through different production stages, there are improvements to be made in two key areas of the production process – machine set-up and plant layout.

Set-up time is the period of time needed to re-tool a machine to produce a variety of components. In our example, the machine that makes ‘E’ type widgets may, with a few adjustments, produce the new ‘F’ type. The time taken to adapt the machine is the set-up time.

If a short set-up time can be achieved, a number of benefits can accrue – greater choice of product, smoother production flow and less work in progress lying idle while the machine is stopped and altered.

There are two elements which combine to make the total set-up time. There are those alterations which can only be made when the machine is stopped (fitting new parts), which are internal elements. Then there are elements which can be carried out while the machine is running. These external elements include fetching parts, cleaning tools, etc.

It is obvious that the external parts could and should be carried out while the machine is running. If tools were kept near the machine instead of in the storeroom, set-up times can be reduced by as much as 50 per cent. Operators might make the changeover rather than waiting for a fitter, making the procedure more straightforward. A startling example of what is possible is the Toyota production of a particular engine part – the set-up time was reduced from four hours to three minutes.

Plant layout can also have a major impact on production times. For example, a component that needs painting may have to leave the production line to get to the paint shop, only to return later as part of a greater component, which is to be painted in its turn. This approach results in much work in progress and increased lead times.

The aim of the plant layout should be to achieve a fast and continuous flow of goods through the process. This can be achieved by placing machines near each other to reduce handling time and storage between operations. Operation may be combined wherever possible.

One of the key responsibilities of management is that of quality. Clearly, in the just in time environment, quality control becomes vital. If there is a large inventory of finished goods or work in progress, then a few defective ones can be rejected without difficulty.

JIT, on the other hand, which aims to reduce inventory and work in progress, demands good quality first time and every time. This requires all levels of the company to have a concern for quality control, from the product designers and machine designer to the machine operators. JIT demands that each employee passes on a perfect piece of work to the next employee.

Defective products can be prevented by using quality circles, early warning systems and continual monitoring of the process. A series of stop lights along the production line can be activated by an operator experiencing defective parts or poor quality, the whole line may slow down or stop, thus focusing management's attention on it. Information may then be gathered and the problem considered and solved in the quality circles.

Generally speaking, JIT results in factories working at less than capacity, allowing time for problems to be sorted out and avoiding quality faults by operating in haste.

The final consequence of JIT is on the companies supplying the firm operating JIT. Without carrying buffer stocks, the requirement will be for high quality materials and parts, first time and every time and on time.

Good relations with high quality suppliers are a prerequisite for JIT. In the JIT system the responsibility for quality passes from the buyer of the materials to the supplier. This enables some Japanese companies to allow their suppliers' trucks to unload directly on to the production line.

This means that suppliers become partners in the whole affair, knowing the production schedules they have to meet rather than simply filling an order for parts from time to time. As part of the team, knowing the pattern of future production, their system can also turn towards JIT so that they need not carry expensive buffer stocks.

This challenges the view that multiple source supplies results in keen price as well as protecting them from disruption from single source supply. The JIT philosophy suggests that single source supply builds up long-term relations with suppliers because the company has a large account, plus loyalty – the final argument against the likelihood of disruption.

Discussion questions

1. Are buffer stocks held in your organisation (or an organisation with which you are familiar)?
2. What are the potential benefits and disadvantages of a JIT approach to stockholding for your organisation?

Revision Questions

22

? Question 1

Which ONE of the following would not normally be considered a cost of holding inventory?

- (A) Inventory obsolescence
- (B) Insurance cost of inventory
- (C) Lost interest on cash invested in inventory
- (D) Loss of sales from running out of inventory

(2 marks)

? Question 2

An entity uses the economic order quantity model (EOQ model). Demand for the entity's product is 36,000 units each year and is evenly distributed each day. The cost of placing an order is \$10 and the cost of holding a unit of inventory for a year is \$2. How many orders should the entity make in a year?

- (A) 60
- (B) 120
- (C) 300
- (D) 600

(2 marks)

? Question 3

An entity uses the economic order quantity model (that is, the EOQ model) to manage inventory.

Situation 1 – interest rates rise.

Situation 2 – sales volumes increase.

What would happen to the economic order quantity in each of these two situations?

- | | <i>Situation 1</i> | <i>Situation 2</i> |
|-----|--------------------|--------------------|
| (A) | Increase | Increase |
| (B) | Increase | Decrease |
| (C) | Decrease | Increase |
| (D) | Decrease | Decrease |

(2 marks)



Question 4

WCM is an entity that sells a wide range of specialist electrical and manual tools to professional builders through a trade catalogue.

The entity is considering the improvement of its working capital management in order to reduce its current overdraft. Most customers are required to pay cash when they place an order and thus there is little that can be done to reduce trade receivables. The focus of the board's attention is therefore on trade payables and inventory.

The working capital position at 30 April 2002 was as follows:

	\$	\$
Inventory	300,000	
Trade receivables	<u>50,000</u>	350,000
Trade Payables	150,000	
Overdraft	<u>550,000</u>	
		<u>700,000</u>
Net current liabilities		<u>350,000</u>

Trade payables

WCM has two major suppliers, INT and GRN.

INT supplies electrical tools and is one of the largest entities in the industry, with international operations. GRN is a small, local manufacturer of manual tools of good quality. WCM is one of its major customers.

Deliveries from both suppliers are currently made monthly, and are constant throughout the year. Delivery and invoicing both occur in the last week of each month. Details of the credit terms offered by suppliers are as follows:

<i>Supplier</i>	<i>Normal credit period</i>	<i>Cash discount</i>	<i>Average monthly purchases</i>
INT	40 days	2% for settlement in 10 days	\$100,000
GRN	30 days	none	\$50,000

WCM always takes advantages of the cash discount from INT and pays GRN after 30 days.

Inventory

The entity aims to have the equivalent of 2 months' cost of sales (equal to 2 months' purchases) in inventory immediately after a delivery has been received.

New working capital policy

At a meeting of the board of directors, it was decided that from 1 May 2002 all payments would be based upon taking the full credit period of 40 days from INT, and similarly taking 40 days before paying GRN.

A review of inventory is also to be commissioned to assess the level of safety (that is buffer) inventory held. In particular, it would examine the feasibility of a just-in-time inventory management system. Meanwhile, it was decided to make no purchases in May in order to reduce inventory levels.

While most of the board supported these changes, the *purchasing manger* disagreed, arguing that working capital would be even worse after the changes.

Requirements

- (a) Calculate the annual rate of interest implied in the cash discount offered by INT. Assume a 365-day year. **(3 marks)**
- (b) Calculate the anticipated current ratio of WCM at 31 May 2002, assuming that the changes in trade payable payment policy take place, and that there are no inventory purchases during May 2002.
Assume for this purpose that, in the absence of any change to trade payable policy, the overdraft would have remained at its 30 April 2002 level.
Clearly state any assumptions made. **(5 marks)**
- (c) As a management accountant of WCM, write a memorandum to the directors that evaluates:
(i) the proposed changes to the trade payable payment policy;
(ii) the proposed policy to introduce a just-in-time system for inventory management. **(12 marks)**
- (Total marks = 20)**

**Question 5**

STK sells bathroom fittings throughout Europe. In order to obtain the best price, it has decided to purchase all its annual demand of 10,000 shower units from a single supplier. After investigation, it has identified two possible manufacturers – SSS and RRR. Each has offered to provide the required number of showers each year under an exclusive long-term contract.

Demand for shower units is at a constant rate all year. The cost to STK of holding one shower unit in inventory for one year is \$4 plus 3% of the purchase price.

SSS is located only a few miles from the STK main showroom. It has offered to supply each shower unit at \$400 with a transport charge of \$200 per delivery. It has guaranteed such a regular and prompt delivery service that STK believes it will not be necessary to hold any safety inventory (i.e. buffer inventory) if it uses SSS as its supplier.

RRR is located in the Far East. It has offered to supply each shower unit at \$398 but transport charges will be \$500 per delivery. There is also a minimum order size of 1,000 shower units. Deliveries will be by ship and will therefore take some time to arrive. There is also significant uncertainty about the lead time which means that STK will need to hold a safety inventory of 600 shower units.

Requirements

- (a) Using the EOQ model, calculate the optimal order size, assuming that SSS is chosen as the sole supplier of shower units for STK. **(4 marks)**
- (b) (i) Prepare calculations to determine whether SSS or RRR should be chosen as the sole supplier of shower units for STK. **(7 marks)**
(ii) Describe any further factors that STK should consider before making a final choice of supplier. **(4 marks)**
- (c) Assume you are a consultant advising the Far East based entity RRR. Write a brief memorandum explaining how RRR could finance the necessary working capital for its proposed contract to supply STK. **(5 marks)**
- (Total marks = 20)**

Solutions to Revision Questions

22

✓ Solution 1

The correct answer is (D), see Section 22.4.

✓ Solution 2

The correct answer is (A), see Section 22.8.

$$\text{EOQ} = \sqrt{(2 \times 36,000 \times \$10)/2} = 600$$

$$\text{Orders} = 36,000/600 = 60$$

✓ Solution 3

The correct answer is (C), see Section 22.8.

✓ Solution 4

(a)

$$(100/98)^{365/30} - 1 = 27.86\%$$

(b)

	\$
Payables (April deliveries)	150,000
Overdraft (550,000 – 150,000)	400,000
Inventory (one month's purchases)	150,000
Receivables	50,000

$$\text{Current assets} : \text{Current liabilities} = 200,000:550,000 = 0.36 \text{ to } 1$$

(c)

Memorandum

To:	The Board of WCM	From:	Management Accountant
Subject:	Working capital Management	Date:	21 May 2002

Introduction

If the objective of the review is to reduce the entity's overdraft, then, while working capital can have a role, it must be viewed alongside other methods of reducing the overdraft including the raising of new long-term finance, divestment of assets and improvements in operating results.

The entity currently has negative working capital, but this is not of itself a problem and it is not unusual for cash business. If receivables are low because of mainly cash sales, but credit is taken from suppliers, then essentially cash is being received before the entity pays for the goods.

(i) Payable payment policy

INT

The entity currently pays after 10 days to take advantage of a cash discount. Delaying payment improves short-term liquidity, but loses the discount of 27.86% per year (see requirement (a)). This is quite a high rate of return to lose, but must be weighed against the saving in overdraft interest.

In addition, while the overdraft will be lower in May than it was in April, this is a one-off benefit in the sense that continuing the policy will not lower the overdraft any further.

GRN

The current terms being offered by GRN are 30 days settlement. Taking 40 days is essentially a breach of this contract, although not uncommon in practice. The potential cost is that if this policy is decided upon unilaterally by WCM, then it may damage the relationship with the supplier.

Given that GRN is only a small entity, it may not wish to alienate WCM as a major customer. On the other hand, much may depend upon whether there are alternative suppliers at equivalent cost for WCM.

Moreover, GRN may seek to recover the cost of lost liquidity by other means: for example, higher prices, charging interest on overdue amounts, delaying deliveries until payment is made, reduced goodwill. More generally, the payment delay, if it becomes more widely known, may damage WCM's credit rating. This may make obtaining credit finance in future more difficult or more costly.

(ii) Just-in-time system (JIT)

Inventory

JIT may be defined as: 'A system whose objective is to produce or to procure products or components as they are required by a customer or for use, rather than for inventory' (from *CIMA Terminology* 2005 edition).

The basic decision for WCM is therefore whether it wishes to supply customers from inventory, or obtain supplies to match customer orders (i.e. obtaining inventory just in time). In the latter case, minimal (or even zero) inventory could be held.

The major disadvantage of supplying to order is that the delay in supplying customers may reduce sales and therefore profitability. Ultimately, this will feed through into reduced liquidity. If, however, demand is very predictable, then very low levels of safety inventory could be maintained with orders being made on a JIT basis in anticipation of imminent sales, rather than responding to actual orders.

The advantages of holding lower inventory as a result of JIT include:

- Lower storage costs;
- Less cash tied up in inventory;
- Saved interest costs;
- Lower costs from damage, wastage and obsolescence.

In order to obtain these advantages, certain procedures and relationships must be in place. However, the current policy of monthly deliveries is incompatible with JIT, which requires:

- frequent deliveries (preferably daily);
- small deliveries being economic;
- reliable and quick deliveries in terms of timing (i.e. a short and certain lead time);
- reliable deliveries in terms of product quality;
- good relationship with suppliers;
- supplier flexibility.

The credit policy of delaying may be seen as incompatible with maintaining the good supplier relationships necessary for JIT.

Comparing the current policy to JIT indicates the actions necessary for implementation. Historically, it appears that at the time of a new delivery, there are one month's sales in inventory. Immediately after the delivery, there are two month's sales in inventory.

The new policy of omitting May's purchases will mean that if the next order is in the last week in June, then inventory will have fallen to zero before the order and one month's sales immediately thereafter. This seems inappropriate as:

- monthly orders cause wide fluctuations in inventory levels;
- many different lines of inventory are held. Unless sales can be predicted a month in advance then rather than zero inventory, some lines of inventory are likely to run out while significant inventory could be held for other goods;
- while zero or near zero inventory is held for part of the month, none of the above conditions for JIT appears to be met.

Conclusion

Overall, the policy changes have worsened the current ratio from 0.5:1 to 0.36:1. Of itself, this does not matter if inventory and payables are being managed efficiently without affecting the service to customers.

This does not, however, appear to be the case at the moment and careful consideration of the conditions necessary for JIT need to be assessed and agreed with suppliers before the costs and benefits can be judged.

The issue of supplier payment management is inter-related to the issue of JIT inventory management and thus should be considered simultaneously.

Signed: Management Accountant.



Solution 5

(a)

$$\text{Holding cost} = \$4 + (3\% \times \$400) = \$16$$

$$\text{EOQ} = \sqrt{(2 C_o D / C_h)} = \sqrt{2 \times 10,000 \times \frac{\$200}{\$16}} = 500 \text{ units}$$

(b)

$$\text{Holding cost} = \$4 + (3\% \times \$398) = \$15.94$$

$$\text{EOQ} = \sqrt{\frac{(2 \times 10,000 \times \$500)}{15.94}} = 792$$

Examiner’s note

It is necessary to check the EOQ to ascertain if the minimum delivery volume of 1,000 is a relevant (that is binding) constraint. In this case it is, thus an order quantity of 1,000 applies.

	<i>SSS</i>	<i>RRR</i>
Order size	500	1,000
Annual demand	10,000	10,000
Number of orders	20	10
	\$	\$
Order cost	4,000	5,000
Holding cost	4,000	17,534
Purchase cost	<u>4,000,000</u>	<u>3,980,000</u>
	<u>4,008,000</u>	<u>4,002,534</u>

Thus ordering from overseas is \$5,466 cheaper than the domestic purchase.

	<i>Ordering cost</i>	
SSS	\$200 × 20 =	<u>\$4,000</u>
RRR	\$500 × 10 =	<u>\$5,000</u>
	<i>Holding costs (EOQ/2 × C_h)</i>	
SSS	$\frac{500}{2} \times \$16.00 =$	\$4,000
RRR	$\frac{1,000}{2} \times \$15.94 =$	\$7,970
Plus safety inventories:	600 × \$15.94 =	<u>\$9,564</u>
		<u>\$17,534</u>
	<i>Purchase cost</i>	
SSS	10,000 × \$400 =	<u>\$4,000,000</u>
RRR	10,000 × \$398 =	<u>\$3,980,000</u>

Further factors that need to be considered are:

- The uncertainty of supply from RRR may lead to additional costs from running out of inventory, despite the safety inventory.
- Exchange rate movements may mean that the cost may increase if the contract with RRR has been written in the overseas currency. Hedging may lead to additional costs. Given that the two options are very close in terms of overall costs this may make a difference to the decision.
- If deliveries are incorrect or faulty then re-supply may take a significant amount of time from RRR.
- The length of the lead time with RRR will require additional forward planning of inventory requirements.

(c)

Memorandum

To: RRR
Subject: Financing STK contract

From: A Consultant
Date: 19 November 2002

Financing needs

In financing exports, there are a number of specific factors to be considered in addition to those present for domestic sales:

- The long lead time in delivering to STK by ship will mean additional working capital is tied up in inventory.
- International settlement may take longer as, for instance, it may be more difficult to put pressure on STK if it is slow in settling its debts.
- Foreign currency exchange may cause additional costs and/or risks depending on which of the two currencies forms the basis of the contract.
- Regulatory and compliance problems may cause additional delays in the transfer of goods or funds.
- There is an increased risk of bad debts where it is more difficult to obtain information due to geographic remoteness.

Methods of export finance

Examiner's note

Explanations by candidates do not require the level of detail supplied below in order to earn the required mark.

Export factoring

Debts may be sold to an export factor in much the same way as domestic factoring. This may include credit insurance to reduce bad debt risk.

Bills of exchange

A bill of exchange is an unconditional order by one person/entity to pay another a given sum at a specified future date. These are tradable, having a short date, normally within 180 days. They are, however, subject to default risk depending upon the creditworthiness of the drawee.

Bills of exchange are commonly used in export finance and will mean they can be sold at a discount to obtain more immediate cash.

Documentary credits (letters of credit)

This is a document issued by a bank on behalf of a customer authorising a person to draw money to a specified amount from its branches or correspondents, usually in another country, when the conditions set out in the document have been met.

It thus provides a secure means of obtaining payment from an overseas sale. These are, however, time consuming and expensive for trade and are thus only normally used where there is a high risk of a bad debt.

Forfeiting

This is normally most appropriate to capital goods where payment is over a number of years, but may also apply to a long-term contract such as that with STK as a means of obtaining medium-term export finance.

The buyer (STK) must undertake to make regular payments. It issues a series of promissory notes maturing on a regular basis (for example every six months). The buyer must also find a bank to guarantee (avalise) the notes.

RRR must find a bank to act as forfeiter. RRR will then receive the notes when STK receives the goods. It can then sell them to the forfeiting bank, at a discount, but without recourse, for immediate payment.

This reduces bad debt risk, reduces foreign exchange risk and provides immediate settlement – at a cost.

Advanced payment

As part of the contract, partial or full advanced payment might be arranged with STK (for example when the goods are in transit).

Signed: A Consultant

Working Capital: Cash

23

LEARNING OUTCOMES

By the end of this chapter you should be able to:

- ▶ prepare and analyse cash flow forecasts over a 12-month period;
- ▶ compare and contrast the use and limitations of cash management models and identify when each model is most appropriate;
- ▶ identify measures to improve a cash forecast situation.

The syllabus topics covered in this chapter are as follows:

- cash flow forecasts, use of spreadsheets to assist in this in terms of changing variables (e.g. interest rates or inflation) and in consolidating forecasts;
- variables that are most easily changed, delayed or brought forward in a forecast;
- the link between cash, profit and the balance sheet;
- the Baumol and Miller–Orr cash management models.

23.1 Introduction

This is the final chapter on elements of working capital, in the previous chapters we covered trade receivables, trade payables and inventory. In this chapter we are going to discuss cash, cash-forecasting and cash-management models.

23.2 Cash management

The management of cash resources holds a central position in the area of short-term financing decisions. Results of investment decisions are estimated in cash terms and the value of an entity to a shareholder lies in its ability to add to their command over resources over time, which means to add to the shareholder's command over cash.

Cash management is part of the wider task of treasury management, which covers not only the management of the entity's cash in the normal course of business – making sure

the entity always has enough cash on hand to meet its bills and expenses, and investing any surplus cash – but also other things too. Examples include foreign exchange dealings when the entity either imports or exports goods, arranging suitable mixes of short-, medium- and long-term borrowing, and dealing on the foreign currency markets and the Eurocurrency market to maximise investment opportunities or to borrow funds on the most advantageous terms.

However, holding cash carries with it a cost – the opportunity cost of the profits that could be made if the cash were either used in the entity or invested elsewhere. Therefore, an entity has to balance the advantages of liquidity against profitability: cash should be held until the marginal value of the liquidity it gives is equal to the value of the interest lost.

Cash management is therefore concerned with optimising the amount of cash available to the entity and maximising the interest on any spare funds not required immediately by the entity.

23.2.1 The time value of money

A recurring theme of financial management is the time value of money – or the money value of time, depending on your point of view. It needs to be remembered, however, that there is not one generally applicable, constant price of money. Interest rates vary, according to the length of time of the investment, as portrayed in the familiar yield curve, and the yield curve itself varies over time. Interest rates are different according to whether you are lending to, or borrowing from, the banking system, and according to the flexibility of the arrangement, for example, how much notice is required to move funds into or out of an account.

Other things being equal, in what amounts to a reflection of their expected costs, the banks:

- pay higher interest on accounts subject to longer notices of withdrawal than they do on current accounts;
- charge higher interest on fluctuating overdrafts than they do on term loans.

A key task for the treasury function in any entity, therefore, is the management of the various accounts. Money is switched between them, so as to minimise aggregate costs (or maximise net income, as the case may be), recognising both transaction costs and interest rate differentials.

23.3 Cash budgets

It is vital for entities to identify their cash requirements, so as to optimise the method of financing. It is equally important, therefore, for entities to budget for future financing needs so that the funding process can be planned and achieved as smoothly and efficiently as possible.

Cash budgets are vital to the management of cash. They show, over periods varying between a single day, a week, a month, a year or even longer, the expected inflows and outflows of cash through the entity. They help to show cash surpluses and cash shortages.

Management can therefore use cash budgets to plan ahead to meet those eventualities – arranging borrowing when a deficit is forecast, or buying short-term securities during times of excess cash.

The accuracy of the budget depends on the forecasts on which it is based, principally the forecast of future sales. This affects not only the amount of cash that will come into the entity but also the timing of the receipts: credit sales will mean that payment for goods is delayed a month or two, while seasonal sales will mean that the entity will have some months of large cash inflows and some of much smaller ones. This causes problems because, generally, cash outflows associated with production and day-to-day operations do not vary as much. The entity may thus face *cash shortages* at times during the budget period and these will have to be made up somehow.

Deviations from budgeted figures are almost inevitable and so some entities will prepare several budgets based on possible future situations:

- an optimistic budget, which assumes that the entity achieves above-forecast growth;
- a pessimistic budget, which assumes below-forecast growth;
- a target budget, which assumes forecast growth is achieved.

Computer spreadsheets are almost essential to modern entities, as they allow managers to change their original specifications to present alternative ‘versions of the future’.

23.3.1 Preparation of cash budgets

Four distinct stages are involved:

1. *Forecast the anticipated cash receipts.* The main source of cash is likely to be sales and the sales forecast will therefore be the primary data source. Sales can be divided into cash sales and credit sales, the cash flow arising from the latter depending on the agreed credit terms. Thus, for example, the sales forecast for January would appear in the cash budget in April if all sales were on credit terms of 90 days. Other cash receipts would include income on investments, cash from sales of non-current assets, etc.
2. *Forecast the anticipated cash payments.* The principal payment is generally the payment of trade purchases. Once again, the credit period taken must be allowed for. Other cash payments include wages and salaries, administrative costs, taxation, capital expenditure and dividends.
3. *Compare the anticipated cash payments and receipts* to determine the net cash flow for each period.
4. *Calculate the cumulative cash flow* for each period by adding the opening cash balance to the net cash flow for the period.

Remember that there will be differences between the cash budget for a period and the forecast income statement for that period. This is because the cash budget is concerned with cash payments and cash receipts, while the income statement is concerned with income earned and expenses consumed in a period.

Areas where the two statements may show different amounts are:

- the cash budget will record budgeted cash receipts from customers, while the income statement will show forecast sales for the period;
- the cash budget will record budgeted cash payments to suppliers, while the income statement will show forecast cost of sales, which will reflect opening inventory, plus purchases, less closing inventory;
- the cash budget shows the budgeted cash payments for expenses such as wages, electricity and rates. The income statement will record the expenditure expected to be consumed in the period, which will reflect any accruals or prepayments;

- the cash budget will reflect the cost of purchasing a non-current asset at the expected date of purchase and the proceeds at the date of sale. The income statement will record a depreciation charge for the consumption of the asset and a profit or loss on disposal;
- the cash budget will show the anticipated payment for tax at the time when it is due to be paid. The income statement will show the expected tax charge against profits earned in that period.



Exercise 23.1

The following information relates to Mansel, a publishing entity.

The selling price of a book is \$15, and sales are made on credit through a book club and invoiced on the last day of the month.

Variable costs of production per book are materials (\$5), labour (\$4), and overhead (\$2).

The sales manager has forecast the following volumes:

	<i>Nov</i>	<i>Dec</i>	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>	<i>Jul</i>	<i>Aug</i>
No of books:	1,000	1,000	1,000	1,250	1,500	2,000	1,900	2,200	2,200	2,300

Customers are expected to pay as follows:

One month after the sale	40%
Two months after the sale	60%

The entity produces the books two months before they are sold and the trade payables for materials are paid two months after production.

Variable overheads are paid in the month following production and are expected to increase by 25 per cent in April; 75 per cent of wages are paid in the month of production and 25 per cent in the following month. A wage increase of 12.5 per cent will take place on 1 March.

The entity is going through a restructuring and will sell one of its freehold properties in May for \$25,000, but it is also planning to buy a new printing press in May for \$10,000. Depreciation is currently \$1,000 per month, and will rise to \$1,500 after the purchase of the new machine.

The entity's income tax (of \$10,000) is due for payment in March.

The entity presently has a cash balance at bank on 31 December 2003, of \$1,500.

Requirement

Produce a cash budget for the six months from 1 January 2004 to 30 June 2004.



Solution

Workings

1. Sales receipts

<i>Month</i>	<i>Nov</i>	<i>Dec</i>	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>
Forecast sales (\$)	1,000	1,000	1,000	1,250	1,500	2,000	1,900	2,200
	\$	\$	\$	\$	\$	\$	\$	\$
S × 15	15,000	15,000	15,000	18,750	22,500	30,000	28,500	33,000
Trade receivables pay:								
1 month 40%		6,000	6,000	6,000	7,500	9,000	12,000	11,400
2 month 60%	–	–	9,000	9,000	9,000	11,250	13,500	18,000
Total sales receipts	–	<u>6,000</u>	<u>15,000</u>	<u>15,000</u>	<u>16,500</u>	<u>20,250</u>	<u>25,500</u>	<u>29,400</u>

2. Payment for materials – books produced two months before sale

Month	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Qty produced (Q)	1,000	1,250	1,500	2,000	1,900	2,200	2,200	2,300
	\$	\$	\$	\$	\$	\$	\$	\$
Materials (Q × 5)	5,000	6,250	7,500	10,000	9,500	11,000	11,000	11,500
Paid (2 months after)	–	–	5,000	6,250	7,500	10,000	9,500	11,000

3. Variable overheads

Month	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Qty produced (Q)	1,000	1,250	1,500	2,000	1,900	2,200	2,200	2,300
	\$	\$	\$	\$	\$	\$	\$	\$
Var. overhead (Q × 2)	2,000	2,500	3,000	4,000	3,800			
Var. overhead (Q × 2.50)						5,500	5,500	5,750
Paid (one month later)		2,000	2,500	3,000	4,000	3,800	5,500	5,500

4. Wages payments

Month	Dec	Jan	Feb	Mar	Apr	May	Jun
Qty produced (Q)	1,250	1,500	2,000	1,900	2,200	2,200	2,300
	\$	\$	\$	\$	\$	\$	\$
Wages Q × 4	5,000	6,000	8,000				
Wages Q × 4.50				8,550	9,900	9,900	10,350
75% this month	3,750	4,500	6,000	6,413	7,425	7,425	7,762
25% next month	–	1,250	1,500	2,000	2,137	2,475	2,475
cash paid in wages	<u>3,750</u>	<u>5,750</u>	<u>7,500</u>	<u>8,413</u>	<u>9,562</u>	<u>9,900</u>	<u>10,237</u>

Cash budget – 6 months ended June

	Jan	Feb	Mar	Apr	May	Jun
	\$	\$	\$	\$	\$	\$
Receipts:						
Credit sales	15,000	15,000	16,500	20,250	25,500	29,400
Premises disposal	–	–	–	–	25,000	–
	<u>15,000</u>	<u>15,000</u>	<u>16,500</u>	<u>20,250</u>	<u>50,500</u>	<u>29,400</u>
Payments:						
Materials	5,000	6,250	7,500	10,000	9,500	11,000
Var. overheads	2,500	3,000	4,000	3,800	5,500	5,500
Wages	5,750	7,500	8,413	9,562	9,900	10,237
Non-current assets	–	–	–	–	10,000	–
Income tax	–	–	10,000	–	–	–
Net cash flow	1,750	(1,750)	(3,413)	(3,112)	15,600	2,663
Balance b/f	1,500	3,250	11,500	(11,913)	(15,025)	575
Cumulative cash flow	<u>3,250</u>	<u>1,500</u>	<u>(11,913)</u>	<u>(15,025)</u>	<u>575</u>	<u>3,238</u>

23.3.2 Managing cash deficits

Short-term cash deficits are usually financed (by default) by utilising the entity's overdraft facility. In the example above, we are not aware of any *overdraft facility* and as such need to identify a suitable method of financing the deficit that exists in March and April.

Efficiency improvements arising from prompt banking (see below) are unlikely to release sufficient funds to cover a cash requirement of \$15,025, so Mansel should consider the following steps:

- *Delay major items of capital expenditure.* The purchase of the new printing press could be delayed and although this would not affect the deficit in March or April, delaying the purchase until, say, June or July would ease the cash drain in a very difficult month – particularly if the premises sale did not go through in May.
- *Improve collection period or delay trade payable collection period.* This was referred to above and there are associated problems (such as lost customers). However, if Mansel could increase the trade receivable collection period so that 80 per cent of money was collected one month after the sale and only 20 per cent two months after the sale, the cash flow would benefit significantly.

Similarly, if payments for materials could be delayed by another month (although this would seem unlikely) this would also have a beneficial effect.

- *Reduce inventory levels.* Mansel is effectively holding two months' inventory. Cash flow would improve if this figure was reduced.
- *Delay non-essential payments.* Delaying the income tax could be problematic: would the Revenue authorities consider payment by instalments?

If none of the above is possible, then the entity must consider approaching a bank to obtain an *overdraft facility*, consider some form of *factoring*, *invoice discounting*, or *sale and leaseback* or *raise additional long term funding through a bank loan or a share issue*.

23.3.3 Float

Float refers to the money tied up because of the time lag between a customer initiating payment (perhaps posting a cheque), and those funds being available for use by the recipient once the cheque has been cleared by the bank. This time lag will mean that the entity's cash at bank figure will be different in its own books of account from the figure on its bank statement.

There are three elements of time delay that cause float:

- Transmission delay.* This is the time delay caused by sending a cheque through the post.
- Lodgement delay.* When a cheque is received, there may be a delay in presenting the cheque to the bank for clearance.
- Clearance delay.* When a cheque is presented to a bank for clearance, it may take three days or more to clear.

Float could be reduced if customers paid by electronic funds transfer. Payment by electronic funds transfer has the advantage over cheque payment of being more secure, and it will reduce administrative time. However, these systems can be expensive to introduce.

23.4 Cash-management models

23.4.1 The Baumol model

Early theories in this area (generally credited to W.J. Baumol in the early 1950s) borrowed from the techniques that had been developed for controlling inventory.

We saw in the last chapter that the economic order quantity for inventory is given by the following:

$$\text{EOQ} = \sqrt{\frac{2C_o D}{C_h}}$$

where C_o is the cost of placing an order, C_h is the inventory-carrying cost, and D is the annual demand.

Baumol argued that cash can be considered in a similar way, assuming that cash is steadily consumed over time. Baumol also assumed that a business would hold an inventory of marketable securities, assumed to be treasury bills, which would be sold in order to replenish the cash balance. The main carrying cost of holding cash is the interest forgone from not investing that cash. The cost of placing an order would be the administration cost incurred for each sale of treasury bills.

The Baumol model identifies the optimum amount of treasury bills to sell, by value, each time the cash balance needs replenishing. This is given by the following:

$$\text{Optimal sale} = \sqrt{\frac{2 \times \text{annual cash disbursements} \times \text{cost per sale of securities}}{\text{interest rate}}}$$

where annual cash disbursements is the annual demand for cash (cash consumed in a year), interest rate is the interest rate on treasury bill, cost per sale of securities is the transaction cost for sale of treasury bills.

Assume, for example, that:

- outgoings are \$300,000 per annum, spread evenly throughout the year;
- money on deposit earns 10 per cent per annum more than money in a current account;
- switching costs \$20 per transaction.

According to Baumol, the optimum amount to be transferred (in \$) each time is stated as:

$$\sqrt{\frac{2 \times \text{annual cash disbursements} \times \text{cost per sale of securities}}{\text{interest rate}}}$$

that is:

$$\sqrt{\frac{2 \times 20 \times 300,000}{0.1}}$$

that is, approximately \$11,000. At this point, the number of transactions would be around 27 per annum, the average balance in the short notice account would be \$5,500, for an aggregate cost of \$540 + \$550, that is, \$1,090 per annum.

Such a model was a gross oversimplification, of course, but did draw attention to the directional impact of the various factors, for example if the interest rate differential was increased, then the size of the optimum transfer would be reduced.

One of the most serious weaknesses was seen to be the assumption that the net cash outflow from the short-notice account was steady and therefore predictable. In the real world, there are bound to be fluctuations, the exact timing of which may be difficult to predict.

23.4.2 The Miller–Orr model

In the late 1950s, a more elaborate approach was developed, M.H. Miller and D. Orr being credited with its origination.

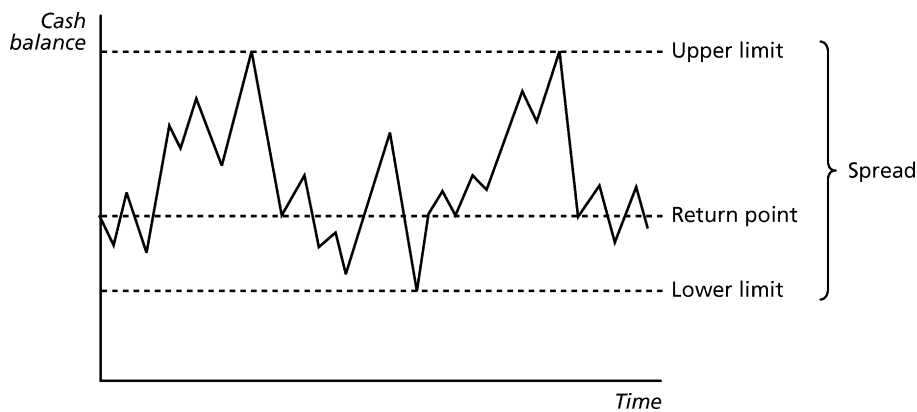


Figure 23.1 Miller–Orr cash management model

Instead of assuming that cash is consumed at a constant rate, Miller and Orr assumed that cash flows are entirely unpredictable. The approach of their model is to set upper and lower cash limits rather than considering how often the cash balance needs replenishing. When the cash balance hits an upper limit, the treasurer will buy short-term investments to bring the cash balance back to a predetermined normal level, called the return point. When the cash balance hits a lower limit, the treasurer will sell short-term investments to bring the cash balance back to the return point. This is illustrated in Figure 23.1.

The lower limit would be set by management, and the upper limit and return points by way of formulae that assume that cash inflows and outflows are random, their dispersion usually being assumed to repeat a pattern exhibited in the past. The Miller–Orr formulae are:

- Spread between upper and lower limits

$$= 3 \times \left(\frac{3/4 \times \text{transaction cost} \times \text{variance of daily cash flow}}{\text{interest rate}} \right)^{1/3}$$

where return point is the lower limit plus one-third of spread.

Assume, for example, that:

- a lower control limit of \$1,000 is decided upon;
- the interest rate is 0.025 per cent per day;
- the standard deviation of the daily cash flows has been measured as \$500, i.e. a variance of \$250,000 (the variance is the standard deviation squared);
- switching costs \$20 per transaction.

Then the spread would be

$$3 \times \left(\frac{3/4 \times \$20 \times \$250,000}{0.00025} \right)^{1/3}$$

that is, approximately \$7,400. Hence the upper limit would be \$8,400 (lower limit of \$1,000 plus spread) and the return point \$3,467 (lower limit of \$1,000 plus one-third of \$7,400).

Again, the directional pointers provide useful reminders, for example, if the variability of cash flows increases, so does the spread. Variations on the theme can be developed to take account of seasonality, numerous different accounts, the lead time between breaking the limit and cash actually being transferred, etc., but these are likely to be of only specialist appeal.

More to the point is the recognition that cash flows are not completely random, are not totally unpredictable, and are not independently variable. Treasurers will be forewarned of

many of the payments to be made, for example, wages, dividends and tax. Also, they will have some flexibility as regards the timing of many others, for example, to hold a payment to a trade payable until after receipt from a trade receivable. Consequently, as in so many fields, decisions are rarely made on the basis of models that require you to believe that cash flows behave like a game of chance, constrained by a pattern derived from an analysis of the facts of the past.

Rather, they are made on the basis of a synthesis of judgements about the future. Spreadsheets provide a useful form in which to prepare and express these and offer the facility of asking the ‘what if?’ type of question.

23.5 Efficient-cash management

The amount of cash available to an entity at any given time is largely dependent on the efficiency with which cash flows are managed. Purely from the point of view of efficiency, for a given level of sales, debts should be collected and banked as quickly as possible while payments owed (to suppliers, etc.) should be delayed as long as possible. This approach is something of an oversimplification – it ignores the fact that a reduction in the credit granted to customers may reduce the overall sales level. Also, excessive delay in paying trade payables may reduce the entity’s credit standing so that suppliers will only be prepared to deal with the entity on slightly less favourable terms. Cheques normally take three working days to progress through the banking system and be credited to or debited from the entity’s account. The delay will, of course, be greater if the cheque is posted! These delays can be both advantageous to the entity (payments that have been made remaining in the entity’s account a few days longer, either to earn interest or to keep overdraft interest down) or disadvantageous (cash not becoming available for the entity’s use until a few days after debts have been paid by customers).

Part of the efficient management of cash is the practice of prompt banking of cash takings. By banking takings only once or twice a week the entity misses the opportunity to earn interest on a positive cash balance or to reduce interest payments on an overdraft.

23.6 The link between cash, profit and the balance sheet



Examination questions in this area can require you to calculate profit forecasts from cash forecasts or cash flow forecasts from profit and balance sheet forecasts.



Exercise 23.2

CBA is a manufacturing entity in the furniture trade. Its sales have risen sharply over the past six months as a result of an improvement in the economy and a strong housing market. The entity is now showing signs of ‘overtrading’ and the financial manager, Ms Smith, is concerned about its liquidity. The entity is one month from its year end. Estimated figures for the full 12 months of the current year and forecasts for next year, on present cash management policies, are shown below.

	<i>Next year</i> \$000	<i>Current year</i> \$000
Income Statement		
Turnover	5,200	4,200
<i>Less</i>		
Cost of sales (Note 1)	3,224	2,520
Operating expenses	650	500
Operating profit	1,326	1,180
Interest paid	54	48
Profit before tax	1,272	1,132
Tax payable	305	283
Profit after tax	<u>967</u>	<u>849</u>
Dividends declared	387	339
<i>Current assets and liabilities as at the end of the year</i>		
Inventory/work in progress	625	350
Trade receivables	750	520
Cash	0	25
Trade payables	(464)	(320)
Other payables (tax and dividends)	(692)	(622)
Overdraft	<u>(11)</u>	<u>0</u>
Net current assets/(liabilities)	<u>208</u>	<u>(47)</u>
<i>Note 1:</i>		
Cost of sales includes depreciation of	225	175

Ms Smith is considering methods of improving the cash position. A number of actions are being discussed:

Trade receivables

Offer a 2 per cent discount to customers who pay within 10 days of despatch of invoices. It is estimated that 50 per cent of customers will take advantage of the new discount scheme. The other 50 per cent will continue to take the current average credit period.

Trade payables and inventory

Reduce the number of suppliers currently being used and negotiate better terms with those that remain by introducing a 'just-in-time' policy. The aim will be to reduce the end-of-year forecast cost of sales (excluding depreciation) by 5 per cent and inventory/work in progress levels by 10 per cent. However, the number of days' credit taken by the entity will have to fall to 30 days to help persuade suppliers to improve their prices.

Other information

- All trade is on credit. Official terms of sale at present require payment within 30 days. Interest is not charged on late payments.
- All purchases are made on credit.
- Operating expenses will be \$650,000 under either the existing or proposed policies.
- Interest payments would be \$45,000 if the new policies are implemented.
- Capital expenditure of \$550,000 is planned for next year.

Requirements

- (a) Provide a cash flow forecast for next year, assuming:
 - (i) the entity does not change its policies;
 - (ii) the entity's proposals for managing trade receivables, trade payables and inventory are implemented.

In both cases, assume a full twelve-month period, i.e. the changes will be effective from day 1 of next year. **(14 marks)**

- (b) As assistant to Ms Smith, write a short report to her evaluating the proposed actions. Include comments on the factors, financial and non-financial, that the entity should take into account before implementing the new policies. **(6 marks)**

(Total marks = 20)



Solution

- (a) *All figures in \$000s*

	<i>No change in policy</i>	<i>Changes implemented</i>
Profit from operations	1,326	1,424
Add depreciation	225	225
+/- change in trade receivables	-230	+72
+/- change in trade payables	+144	-86
Cash flow from operations	1,465	1,635
Interest paid	-54	-45
Tax paid	-283	-283
Dividends paid	-339	-339
<i>Investing activities</i>		
Non-current assets	-550	-550
Inventory	-275	-212
Net cash flow	-36	206
Opening balance	25	25
Closing balance	-11	231

Changes implemented

1. Profit from operations:

Turnover	= 5,200
Less discounts	= -52
CoS $(3,224 - 225) \times 95\% + 225$	= -3,074
Operating expenses (unchanged)	= -650
	<u>1,424</u>

2. Decrease in trade receivables:

$$\$520 - [(\$2,600/365 \times 53^*) + (\$2,600/365 \times 10^*)] = 72$$

Decrease in trade payables:

$$[\$320 - (\$2,849^{**}/365 \times 30)] = 86$$

3. Inventory:

$$[\$350 - (625 \times 90\%)] = 212$$

* Forecast receivables = $\$750/5,200 \times 365 = 53$ reduces to 10 for 50% of turnover.

** Payables forecast are $\$3,224 - 225 = \$2,999$; these reduce by 5% to $\$2,849$.

- (b) **Report**

To: Ms Smith
 From: Assistant
 Subject: Proposed working capital policy changes

The answer should be set out in report format and include the following key points:

- Comment that cash flow is improved by almost a quarter of a million pounds if the proposed changes are made.
- Problems appear to have arisen because trade receivables and inventory control have not been adequate for increased levels of turnover.
- Liquidity: current ratio was 0.95:1 (all current assets to trade and other payables), will be around 1.2:1 under both options. Perversely, ratio looks to improve even if

entity takes no action and causes an overdraft. This is because of high receivables and inventory levels. Moral: high current assets do not mean high cash. Cash ratio perhaps a better measure.

- Receivables' days last year was 45, forecast to rise to 53 on current policies despite 'official' terms being 30. Entity could perhaps look to improve its credit control before offering discounts.
- Trade payables' days were 46, forecast to rise to 52. Are discounts being ignored? Are relationships with suppliers being threatened?*
- Dramatic increase in inventory levels forecast: 50 days last year, 71 days forecast this year. If change implemented, inventory will still be 67 days.*
- Operating profit percentage forecast to fall to 25.5 per cent from 281.1 per cent if no changes made. Percentage will fall to 27.4 per cent if changes implemented; a fall probably acceptable if cash flow improved and overdraft interest saved.
- Non-financial factors include relationships with customers and suppliers.
- Other financial factors, is increase in turnover sustainable?

* Using cost of sales figures including depreciation.

23.7 Summary

Cash budgets are an essential tool for the financial manager. They enable him or her to obtain a vision of the future, facilitating financial decision-making that will utilise the entity's cash/credit resources in the most efficient manner.

The preparation of cash budgets will help to identify periods of cash surplus or cash deficits that will require management action. In this chapter we have identified some of the factors affecting investment of short-term cash surpluses as well as techniques for managing cash surpluses and cash deficits.

Revision Questions

23

? Question 1

An entity commenced trading on 1 January and total sales for January were \$150,000. Sales are made up of 60% on credit and 40% for cash. Sales grow at a monthly rate of 10%. Bad debts were 3% of credit sales. Half of the remaining trade receivables paid in the month following the sale and the remainder in the month after that.

The cash received during February was:

- (A) \$103,650
- (B) \$107,670
- (C) \$109,650
- (D) \$153,300

(2 marks)

? Question 2

The following items were extracted from an entity's budget for next month:

	\$
Purchases on credit	360,000
Expected decrease in inventory over the month	12,000
Expected increase in trade payables over the month	15,000

What is the budgeted payment to trade payables for the month?

- (A) \$333,000
- (B) \$345,000
- (C) \$357,000
- (D) \$375,000

(2 marks)

? Question 3

Examine the validity of the following statements with respect to the Miller–Orr cash management model.

Statement 1 The greater the variability in cash flows, the greater is the spread between the upper and lower cash balance limits.

Statement 2 The return point is the lower limit plus one third of the spread.

	Statement 1	Statement 2	
(A)	True	False	
(B)	True	True	
(C)	False	False	
(D)	False	True	(2 marks)

? Question 4

An entity uses the Baumol cash management model. Cash disbursements are constant at \$20,000 each month. Money on deposit earns 5% a year, while money in the current account earns a zero return. Switching costs (that is, for each purchase or sale of securities) are \$30 for each transaction. What is the optimal amount (to the nearest \$100) to be transferred in each transaction?

- (A) \$500
 - (B) \$1,700
 - (C) \$4,900
 - (D) \$17,000
- (2 marks)

? Question 5

Which ONE of the following transactions would NOT affect the amount of a bank overdraft?

- (A) A payment by direct debit
 - (B) A bad debt write off
 - (C) An investment in treasury bills
 - (D) Bank charges
- (2 marks)

? Question 6

An entity commenced business on 1 April 2002. Sales in April 2002 were \$20,000, but this is expected to increase at 2% a month. Credit sales amount to 60% of total sales. The credit period allowed is one month. Bad debts are 3% of credit sales, but other trade receivables pay on time. Cash sales represent the other 40% of sales. The cash expected to be received in May 2002 is

- (A) \$19,560
 - (B) \$19,640
 - (C) \$19,800
 - (D) \$20,160
- (2 marks)

? Question 7

KL is a privately owned manufacturer of sports equipment. Information about the entity is as follows:

1. The business is growing modestly at present but faster growth is planned.
2. The business is seasonal, with sales peaking in the autumn.
3. KL is anticipating cash flow problems as a result of its planned growth. It has prepared a cash budget for 20X6, details of which are given below.
4. The current overdraft facility is \$150,000. The bank has indicated it would be unwilling to increase this amount without a substantial increase in the interest rate payable, which is currently 5 per cent over bank base rate.

Cash flow forecast for 20X6

	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>June</i>	<i>July</i>	<i>Aug</i>	<i>Sept</i>	<i>Oct</i>	<i>Nov</i>	<i>Dec</i>	<i>Total</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Receipts from customers	175	135	115	75	50	50	65	75	90	150	215	295	1,490
Other income			45			45			45			45	180
Total inflows	<u>175</u>	<u>135</u>	<u>160</u>	<u>75</u>	<u>50</u>	<u>95</u>	<u>65</u>	<u>75</u>	<u>135</u>	<u>150</u>	<u>215</u>	<u>340</u>	<u>1,670</u>
Payments to trade suppliers	53	41	35	23	15	15	20	23	27	53	75	103	480
Wages and salaries	53	53	53	53	55	57	57	55	55	53	53	53	650
Other operating expenses	25	25	25	30	30	30	35	35	35	35	35	40	380
Capital expenditure			45			35			40				120
Dividends payable		100											100
Tax payable									65				65
Total outflows	<u>131</u>	<u>219</u>	<u>158</u>	<u>106</u>	<u>100</u>	<u>137</u>	<u>112</u>	<u>113</u>	<u>222</u>	<u>141</u>	<u>163</u>	<u>196</u>	<u>1,795</u>
Net cash inflow/ (outflow)	44	(84)	2	(31)	(50)	(42)	(47)	(38)	(87)	9	52	144	(125)
Opening bank balance	50	95	11	14	(17)	(67)	(109)	(156)	(193)	(280)	(271)	(219)	50
Closing balance	<u>94</u>	<u>11</u>	<u>13</u>	<u>(17)</u>	<u>(67)</u>	<u>(109)</u>	<u>(156)</u>	<u>(194)</u>	<u>(280)</u>	<u>(271)</u>	<u>(219)</u>	<u>(75)</u>	<u>(75)</u>

The following information is also available:

- (i) All sales are on credit. The entity's usual terms of trade allow 60 days' credit. Customers take 90 days to pay, on average. This has been allowed for in the cash budget. Sales in the three months to the end of December 20X6 are expected to be \$660,000. No increases in selling prices are planned.
- (ii) Production is evenly scheduled throughout the year and finished goods for inventory are stored until the peak selling period. The entity estimates inventory of finished goods will be \$170,000 higher at the end of December 20X6 than at the beginning of the year.
- (iii) The entity's premises are all owned by the entity. Other income is rental from letting some of its premises.
- (iv) Suppliers, on average, allow KL six weeks' credit, although the entity typically takes up to 90 days to pay. Purchases for the three months to the end of December 20X6 are expected to be \$231,000. All other expenses are paid in the month in which they arise.
- (v) The capital expenditure forecast for 20X6 is for the following items of expenditure:

March 20X6	New plant and machinery	\$45,000
June 20X6	New motor vehicles	\$35,000
September 20X6	Building renovations	\$40,000
Further capital expenditure is planned in 20X7.		

Requirements

- (a) Estimate the profit before depreciation of the entity for 20X6. Use whatever reasonable assumptions you think necessary, but state, briefly, what they are. **(6 marks)**
- (b) Review the cash budget and advise the board of KL on possible actions it might take to improve its budgeted cash flow for the year and the likely effect of these actions on the entity's business. Make whatever reasonable assumptions you think necessary. **(14 marks)**
- (Total marks = 20)**

? Question 8

CF is about to commence trading as a wholesaler of hats. CF's only shareholders, Mr and Mrs Topper, worked as employees of a hat retailer for many years, but have recently been made redundant. They intend to subscribe \$200,000 as the initial share capital.

Sales in 2002 are expected to be as follows:

	<i>Units</i>
January	2,400
February	3,600
March	4,800
Thereafter	9,600 each month

The average selling price of each hat is to be \$10. All sales will be made on credit terms, requiring settlement two months after the date of sale. However, if settlement is made by customers within one month, a 2.5% cash discount will be given. Of the total sales, 60% are expected to be settled two months after the date of sale and 40% (before any discount is deducted) are expected to be settled one month after the date of sale.

The average purchase price for each hat will be \$7. CF intends to make purchases at the end of each month in order to maintain inventory at a sufficient level to cover the following month's sales. Initially, therefore, purchases of 2,400 hats will be made in December 2001. Payment for purchases will be made one month in arrears.

Fixed assets are expected to cost \$250,000, payable in January 2002. Depreciation on these assets will be \$5,000 each month, commencing January 2002. These fixed assets are likely to have a low net realisable value.

Annual rent is expected to be \$24,000 and will be payable quarterly in advance, commencing January 2002.

Monthly wages are expected to be \$4,000 and are payable in the month they are incurred. Other overheads are expected to be \$6,000 each month, half of which are payable in the month they are incurred and half are payable one month later.

Mr and Mrs Topper are considering approaching the bank for an overdraft or loan finance, or a mixture of both. They are also unsure of the conditions that might attach to any finance that the bank may offer.

Requirements

- (a) Prepare a monthly cash budget for CF for the period January 2002 to May 2002 inclusive. It should show the expected net cash flow for each month and the cumulative budgeted cash surplus or deficit at the end of each month. Assume for the purposes of this cash budget that the bank has not provided any loan finance. Ignore interest charges and taxation payments. **(10 marks)**

- (b) Write a memorandum to Mr and Mrs Topper explaining the factors that the bank would be likely to consider:
- in deciding whether to provide finance to CF;
 - in determining the amount and nature of the finance to be provided.
- Where appropriate, show supporting calculations. **(10 marks)**

(Total marks = 20)

? Question 9

PRT is a rapidly growing printing entity that uses the latest technology to operate a quick and efficient service to other businesses and to private individuals. Some printing is undertaken to order, while other work, such as posters, is held in inventory until sold. Sales to business customers are on credit, while sales to individuals are for cash.

Expansion has been rapid, as indicated by the number of print shops owned at each financial year ended 31 March:

Year	1998	1999	2000	2001	2002
Number of print shops	8	12	18	27	40

While expansion has been very rapid, concerns have arisen regarding the increasing overdraft, which is now approaching the limit of \$1 million set by the bank. The entity has used equity and debt finance to expand in recent years, but is unlikely to be able to raise further finance from the sources in the immediate future.

Extracts from the financial statements for the years ended 31 March are as follows:

	2001	2002
	\$000	\$000
Raw materials inventory	55	80
Finished goods inventory	185	185
Purchases of raw materials	600	850
Cost of sales	1,570	1,830
Administrative expenses	45	65
Revenue	1,684	1,996
Trade receivable	114	200
Trade payable	50	70
Overdraft	400	950
Additions to non-current assets	700	900

Cost of sales includes all relevant production costs including manufacturing overheads and labour.

Requirements

- Calculate the length in days of PRT's operating cycle, for the year ended 31 March 2002. **(5 marks)**
- So far as the information permits, calculate the cash generated from operating activities for PRT for the year ended 31 March 2002. State any relevant assumptions. **(4 marks)**
- As PRT's management accountant, write a memorandum to the board that analyses the entity's cash and working capital position, recommending appropriate actions. Indicate any additional information that would be needed to make a fuller assessment. **(11 marks)**

(Total marks = 20)

Solutions to Revision Questions

23

Solution 1

The correct answer is (C), see Section 23.3.

$$\begin{array}{l} \text{Jan } (0.6 \times 150,000 \times 0.97)/2 = \$43,650 \\ \text{Feb } (0.4 \times 150,000 \times 1.1) = \underline{\$66,000} \\ \text{Total} = \underline{\underline{\$109,650}} \end{array}$$

Solution 2

The correct answer is (B), see Section 23.3.

$$\$360,000 - \$15,000 = \$345,000$$

Solution 3

The correct answer is (B), see Section 23.4.2.

Solution 4

The correct answer is (D), see Section 23.4.1.

$$\sqrt{[(2 \times 30 \times 240,000)/0.05]} = \$16,970 \text{ (that is approximately } \$17,000\text{).}$$

Solution 5

The correct answer is (B), see Section 23.6.

Solution 6

The correct answer is (C), see Section 23.3.

$$(20,000 \times 1.02 \times 40\%) + (20,000 \times 60\% \times 0.97) = \$19,800$$



Solution 7

- (a) KL appears to be a profitable entity. Preparing a rough estimate of profits from a reverse funds-flow statement shows that it expects to earn around 18 per cent profit before tax and depreciation charges.

	<i>\$000</i>
Decrease in bank balance	(125)
Increase in finished goods	170
Increase in receivables	235 (660 - 425) + Oct to Dec-Jan to Mar
Increase in payables	(102) (231 - 129) + Oct to Dec-Jan to Mar
Capital expenditure	120
Dividends	100
Taxation	<u>(165)</u>
Profit before non-cash items (e.g. depreciation)	<u>463</u>

Turnover is expected to be \$1,725,000, that is, (\$1,490,000 + \$660,000 - \$425,000).

Profit (before depreciation charges and tax) as a percentage of turnover is 17.8 per cent.

- (b) The entity's existing overdraft facility is clearly inadequate to cover the months of July to November. The entity is starting 20X7 with an overdraft of \$75,000 as compared with a positive balance of \$50,000 at the beginning of 20X6. If further capital expenditure is planned in 20X7 and dividends continue at a similar level, the problem will arise again even earlier in 20X7. Suppliers' costs also seem to have risen (30 per cent of sales until September when it increases to 35 per cent), but sales prices have been held steady.

A number of measures are possible to reduce the cash requirement mid-year, and possibly into 20X7.

1. Reduce or defer the dividend. If this is not acceptable to the shareholders there is little they can do about it. Shares in unlisted entities are difficult to trade, particularly when the entity has just cut its dividend.
2. Defer paying the tax, with the agreement of the tax authority. This would involve interest charges, but they might be less than the bank's.
3. Investigate the build-up of inventory. This may well be in anticipation of sales growth, but an investigation into inventory control methods might be useful.
4. Review terms of trade with both customers and suppliers. These require separate discussion:
 - (i) Customers are taking on average 30 days longer than they are allowed. This is typical in the UK. KL could consider introducing discounts for prompt payment, although these usually work out expensive if they are high enough to be effective and often customers take the discount, even if they pay late.
 - (ii) KL may be forgoing discounts for early payment by paying its debts so late. If it paid on time the cash deficit would be worse, as the entity gives two months to customers but is allowed, officially, only six weeks from suppliers.
5. If this inequality between terms of trade cannot be resolved, by either reducing credit terms to customers or negotiating longer terms from suppliers, KL could consider factoring its debts. However, this is a policy decision that should not be taken as a short-term solution.
6. Defer capital expenditure, particularly on motor vehicles unless they are so old it would not be cost-effective. The expenditure on plant and buildings may be necessary for the sales growth. Plant and machinery could perhaps be leased.

7. If the premises KL rents out are unwanted, they could perhaps be sold to bring cash into the business, but again this is a long-term solution.
8. Existing assets could be sold and leased back.
9. Review the production process. Producing evenly throughout the year for a seasonal business is unusual, although there are arguments in favour of such methods.
10. Some services, possibly even production, could be outsourced.
11. Medium- or long-term finance such as bank loans, debt or equity from shareholders could be sought.
12. Part of the business could be sold or assistance sought from a venture capital entity, although effect on ownership may be a consideration here.



Solution 8

(a)

	January	February	March	April	May
	\$	\$	\$	\$	\$
<i>Receipts</i>					
Capital	200,000				
Discount sales (W1)		9,360	14,040	18,720	37,440
Credit sales (W1)			14,400	21,600	28,800
<i>Payments</i>					
Fixed assets	250,000				
Purchases (W2)	16,800	25,200	33,600	67,200	67,200
Wages	4,000	4,000	4,000	4,000	4,000
Overheads	3,000	6,000	6,000	6,000	6,000
Rent	6,000			6,000	
Net cash flow	<u>(79,800)</u>	<u>(25,840)</u>	<u>(15,160)</u>	<u>(42,880)</u>	<u>(10,960)</u>
Balance b/d	0	(79,800)	(105,640)	(120,800)	(163,680)
Balance c/d	<u>(79,800)</u>	<u>(105,640)</u>	<u>(120,800)</u>	<u>(163,680)</u>	<u>(174,640)</u>

(W1) Receipts

	January	February	March	April	May
	\$	\$	\$	\$	\$
Discounted (after 1 month) (units sold × \$10) (40% × 0.975)		9,360	14,040	18,720	37,440
Normal credit (after 2 months) (units sold × \$10) (60%)			14,400	21,600	28,800

(W2) Purchases – paid 1 month in arrears

	December	January	February	March	April
	\$	\$	\$	\$	\$
Opening inventory	0	16,800	25,200	33,600	67,200
Closing inventory	16,800	25,200	33,600	67,200	67,200
Inventory increase	16,800	8,400	8,400	33,600	0
Cost of sales	<u>16,800</u>	<u>16,800</u>	<u>25,200</u>	<u>33,600</u>	<u>67,200</u>
Purchases – cash to be paid	<u>16,800</u>	<u>25,200</u>	<u>33,600</u>	<u>67,200</u>	<u>67,200</u>

(b)

Memorandum

To: Mr & Mrs Topper
Subject: Application to the bank for financing

From: Management Accountant
Date: 20 November 2001

Factors to be considered by the bank

Conduct of the account – If you have a previous history at the bank, this could be viewed favourably. In these circumstances, however, any such history is likely to be as salaried employees, rather than in the context of running a business account.

Gearing – You have committed \$200,000 of your own money, but the bank is unlikely to commit itself to a high proportion of this figure, as the majority financing would normally be equity. The maximum financing requirement of \$174,640 might be rather high relative to this figure, representing gearing of 47%.

Security – Where assets can be offered giving adequate security, the bank is more likely to extend finance. In terms of corporate assets, the fixed assets of \$250,000 may offer some security, but this seems unlikely to be significant given their highly specific nature and low net realisable value. Working capital may offer some security as a floating charge but, to the extent that working capital levels may fluctuate, their ability to act as security is also reduced. Notwithstanding this, at the end of May when the maximum financing requirement occurs there is a closing inventory of \$67,200 (see W2) and closing receivables of \$95,040 (see Appendix A). This totals to \$162,240 of current assets, which could act as some security under a floating charge. Other than inventory and receivables, personal guarantees by the directors secured on their homes look to be the only reasonable security that would suggest a loan approaching the maximum of \$174,640.

Term – A shorter-term commitment is likely to be less risky to the bank than a longer-term loan. When cash flows reach a steady state based upon sales of 9,600 units, there will be a significant net cash inflow of \$15,840 each month, which will systematically reduce the deficit (see Appendix A). Thus, to a large extent, the financing requirement is short-term and self-correcting. This may be viewed favourably by the bank if it considers that the budgeted cash flows can be achieved with a high degree of certainty.

Management – You have some previous knowledge of the industry and, in a different context, some experience of management. If this can be demonstrated to the bank, it might be given greater confidence to extend financial support. This might include appropriate planning and a cash flow statement based upon reasonable assumptions.

Profitability – It is necessary for the entity to demonstrate profitability as well as surplus operating cash flows if the business is to be sustained and assets replaced in the longer run. The monthly operating cash surplus in steady state (from the calculations in Appendix A) is \$15,840. From this, however, it is necessary to deduct depreciation of \$5,000 per month in order to obtain profit (Appendix B). Monthly profit is thus \$10,840 in steady state. Any interest, tax and dividends would need to be deducted to calculate retained profit.

Risk – Where the business is seen as risky, the bank might be less willing to lend money (or might charge a higher rate of interest) as, to an extent, it participates in this risk. The factors the bank is likely to consider include:

- whether you have purchased an established business with customers or whether it has just been set up;
- state of the order book;
- competitors;
- stability of the industry;
- level of fixed costs;
- existence of long term contracts.

Appendix A

Steady state cash flow (per month)

	\$
Cash flow	15,840
Less: Depreciation	<u>(5,000)</u>
Monthly profit	<u>(10,840)</u>



Solution 9

(a)

	Length in days	
Raw materials cycle	$\frac{(55 + 80)/2}{850} \times 365$	= 29 days
Finished goods cycle	$\frac{(185 + 185)/2}{1,830} \times 365$	= 37 days
Receivables cycle	$\frac{(114 + 200)/2}{1,996} \times 365$	= 29 days
Payables cycle	$\frac{(50 + 70)/2}{850} \times 365$	= 26 days
Cash operating cycle		= 69 days

(b)

	<i>Receipts/(Payments)</i>
	\$000
Sales (1,996 - 200 + 114)	1,910
Expenses (1,830 - 70 + 50 + 80 - 55 + 65)	<u>(1,900)</u>
Cash generated from operations	<u>10</u>

This calculation assumes that there are no non-cash items in cost of sales. (It thus ignores depreciation on plant and machinery, accruals, prepayments and so on.)

(c)

Memorandum

To: The Board of PRT
Subject: Cash Management

From: Management Accountant
Date: 21 May 2002

Introduction

The entity appears to be suffering from over-trading as indicated by the number of outlets growing at 50% a year. These appear to be purchased, hence this would be a major drain on cash resources.

To the extent that this expansion could be financed by new equity and new debt, it is not a major problem. It would appear, however, that more recently an overdraft has been used to finance some of the expansion. This appears to be particularly unwise as it is financing a long-term asset with a short-term liability.

In particular, if no new finance can be raised, then the bank could force the entity into liquidation by calling-in the overdraft at any time. This may occur notwithstanding the actual, and potential, profitability of the business.

Cash management

The most important feature of cash management would therefore appear to be maintaining a good relationship with the bank. This could include:

- supplying monthly management accounts;
- informing the bank of any problems in advance, that is before they affect the management accounts;
- provision of additional security if possible – either entity assets or director's personal assets.

Notwithstanding efforts to maintain the banks goodwill, it is necessary to reduce the overdraft or at least prevent it increasing. If this does not occur, the overdraft is almost

certain to be called-in. The most obvious remaining sources of finance (given debt and equity capital appear to be exhausted) are:

- capital assets;
- operating activities;
- improved working capital management.

Current ratios

Current ratios provide a summary measure of working capital. These are as follows:

2001

$$\frac{55 + 185 + 114}{50 + 400} = 0.787$$

2002

$$\frac{80 + 185 + 200}{70 + 950} = 0.456$$

The deterioration in the current ratio reflects the increase in the overdraft. The ratio is, however, a static representation at a point in time. The primary concern is whether future cash inflows are sufficient to meet the future cash outflows necessary to sustain and expand the business.

Capital assets

The cause of the cash management problems appears to be over-investment in new outlets. No further outlets should therefore be opened. Cash can, however, be raised from existing outlets given that they appear to be owned by the entity.

Outlets could be sold. Unfortunately, sales of property may take some time unless the price is reduced significantly. This is likely to generate a significant loss. This is even more true of plant, machinery and fixtures, which are likely to have a low net realisable value.

Rather than buying the outlets, significant cash savings could have been made by leasing them. While the purchase decision is in the past, cash can still be recovered using a sale and leaseback arrangement – perhaps with the entity's bankers.

Operating cash flows

While the number of outlets has risen by 50% a year, sales have increased by only 18.5% in the last year. There may be a number of reasons for this:

- sales have not yet become established at new outlets;
- price cutting has taken place to penetrate new markets so sales volume growth has not been matched by sales value growth;
- the size of later outlets could be smaller than earlier outlets.

Whatever the reason, the cash flow generated from operations is small at \$10,000 in the current year (see requirement (b)). As a result, either substantial growth in operating cash flows is needed or realisation of capital assets by sale or lease.

Working capital management

Improved working capital management may generate extra funds, but it is unlikely to be sufficient on its own.

The *raw materials cycle* appears reasonable at 29 days, but some materials are purchased for immediate use on made-to-order jobs. This means that the holding period on the remaining inventory may be significant. More information is therefore needed on the holding period for individual inventory lines. Similarly, some of the sales are in respect of made-to-order

jobs, thus the *finished goods inventory* relating to the remaining sales may be disproportionately high.

The *receivables cycle* appears reasonable at 29 days, but this is an average, and given that sales to private customers are for cash, it means that the credit period extended to business customers is rather longer than 29 days. Improvements to cash flow from receivables management may include:

- factoring of debts may produce increased cash, but may be costly;
- similarly, the credit terms offered by the entity could be managed via an outside finance entity;
- discounts for cash settlement or reduced credit terms may be offered.

The payables cycle at 26 days seems rather short and it might be worth investigating the possibility of suppliers extending further credit. If cash discounts are taken, this may explain the short cycle, but they may be worth forgoing in the short term to help liquidity. As with all ratios, care needs to be taken as the balance sheet figure may be atypical because of:

- growth;
- seasonality;
- large sales/purchases just before the year end;
- manipulation.

Conclusion

The need for cash is urgent. While operating activities and improved working capital management may provide some help, a more significant immediate injection of cash may be needed to maintain the goodwill and co-operation of the bank. In this context, the sale or the sale and leaseback of fixed assets may be the most appropriate policy. Information in respect of these possibilities is therefore urgently needed.

Signed: Management Accountant.

Preparing for the Examination

This chapter is intended for use when you are ready to start revising for your examination. It contains:

- a summary of useful revision techniques;
- details of the format of the examination;
- a bank of examination-standard revision questions and suggested solutions. These solutions are of a length and level of detail that a competent student might be expected to produce in an examination;
- a complete past examination paper. This should be attempted when you consider yourself to be ready for the examination, and you should emulate examination conditions when you sit it.

Revision technique

Planning

The first thing to say about revision is that it is an addition to your initial studies, not a substitute for them. In other words, don't coast along early in your course in the hope of catching up during the revision phase. On the contrary, you should be studying and revising concurrently from the outset. At the end of each week, and at the end of each month, get into the habit of summarising the material you have covered to refresh your memory of it.

As with your initial studies, planning is important to maximise the value of your revision work. You need to balance the demands for study, professional work, family life and other commitments. To make this work, you will need to think carefully about how to make best use of your time.

Begin as before by comparing the estimated hours you will need to devote to revision with the hours available to you in the weeks leading up to the examination. Preparing a written schedule setting out the areas you intend to cover during particular weeks, and break that down further into topics for each day's revision. To help focus on the key areas try to establish:

- which areas you are weakest on, so that you can concentrate on the topics where effort is particularly needed,
- which areas are especially significant for the examination – the topics that are tested frequently.

Don't forget the need for relaxation, and for family commitments. Sustained intellectual effort is only possible for limited periods, and must be broken up at intervals by lighter activities. And don't continue your revision timetable right up to the moment when you enter the exam hall: you should aim to stop work a day or even two days before the exam.

Beyond this point the most you should attempt is an occasional brief look at your notes to refresh your memory.

Getting down to work

By the time you begin your revision you should already have settled into a fixed work pattern: a regular time of day for doing the work, a particular location where you sit, particular equipment that you assemble before you begin and so on. If this is not already a matter of routine for you, think carefully about it now in the last vital weeks before the exam.

You should have notes summarising the main points of each topic you have covered. Begin each session by reading through the relevant notes and trying to commit the important points to memory.

Usually this will be just your starting point. Unless the area is one where you already feel very confident, you will need to track back from your notes to the relevant chapter(s) in the *Learning System*. This will refresh your memory on points not covered by your notes and fill in the detail that inevitably gets lost in the process of summarisation.

When you think you have understood and memorised the main principles and techniques, attempt an exam-standard question. At this stage of your studies you should normally be expecting to complete such questions in something close to the actual time allocation allowed in the exam. After completing your effort, check the solution provided and add to your notes any extra points it reveals.

Tips for the final revision phase

As the exam approaches, consider the following list of techniques and make use of those that work for you:

- Summarise your notes into more concise form, perhaps on index cards that you can carry with you for revision on the way into work.
- Go through your notes with a highlighter pen, marking key concepts and definitions.
- Summarise the main points in a key area by producing a wordlist, mind map or other mnemonic device.
- On areas that you find difficult, rework questions that you have already attempted, and compare your answers in detail with those provided in the *Study System*.
- Rework questions you attempted earlier in your studies with a view to producing more 'polished' answers (better layout and presentation may earn marks in the exam) and to completing them within the time limits.
- Stay alert for practical examples, incidents, situations and events that illustrate the material you are studying. If you can refer in the exam to real-life topical illustrations you will impress the examiner and may earn extra marks.

Format of the examination

Structure of the paper

The examination for *Financial Accounting and Tax Principles* is a 3-hour written paper which has three sections:

- Section A will be compulsory for 50 per cent of the marks, this section will comprise between 18 and 24 objective test questions with a total of 50 marks. The questions will

include a number of multiple choice questions and other objective test question formats. Each question will be worth between 2 and 4 marks. Questions worth 3 or 4 marks will allow marks for correct workings where the final answer is incorrect.

- Section B will be a compulsory section worth 30 marks. There will be six questions of 5 marks each.
- Section C will offer a choice of one question from two, for 20 marks.

The paper will include a formula sheet.

Any changes in the structure of the examination or in the format of questions will be indicated well in advance in the appropriate CIMA journals.

The rest of this chapter is split into two sections, the first is objective test questions and answers; the second is more traditional type of examination questions and answers, the third section is the *Financial Accounting and Tax planning* past examination paper and answers.

Revision Questions I

Objective Test Questions

Each of the questions below, has only **one** correct answer.

Please note that in the examination you will not receive marks for any workings to questions unless they are worth 3 marks or more.

Objective test questions matched to learning outcomes

Learning Outcomes	Question Number
A – Principles of Business Taxation – 20%	
(i) Identify the principal types of taxation likely to be of relevance to an incorporated business in a particular country, including direct tax on the entity's trading profits and capital gains, indirect taxes collected by the entity, employee taxation withholding taxes on international payments	1, 3, 11, 14, 15
(ii) Describe the features of the principal types of taxation likely to be of relevance to an incorporated business in a particular country (e.g. in terms of who ultimately bears the tax cost, withholding responsibilities, principles of calculating the tax base)	2, 4, 5, 6, 7, 8, 9, 12, 13
(iii) Describe the likely record-keeping, filing and tax payment requirements associated with the principal types of taxation likely to be of relevance to an incorporated business in a particular country	
(iv) Describe the possible enquiry and investigation powers of taxing authorities	
(v) Identify situations in which foreign tax obligations (reporting and liability) could arise and methods for relieving foreign tax	19, 20
(vi) Explain the difference in principle between tax avoidance and tax evasion	16, 17
(vii) Describe sources of tax rules and explain the importance of jurisdiction	18, 35
(viii) Explain and apply the accounting rules contained in IAS 12 for current and deferred taxation	21, 22, 23, 26, 27, 47 74
B – Principles of Regulation of Financial Reporting – 10%	
(i) Explain the need for regulation of published accounts and the concept that regulatory regimes vary from country to country	
(ii) Explain potential elements that might be expected in a regulatory framework for published accounts	
(iii) Describe the role and structure of the International Accounting Standards Board (IASB) and the International Organisation of Securities Commissions (IOSCO)	76
(iv) Explain the IASB's <i>Framework for the Presentation and Preparation of Financial Statements</i>	43, 77, 78

(v) Describe the process leading to the promulgation of an international accounting standard (IAS)	
(vi) Describe ways in which IAS's can interact with local regulatory frameworks	
(vii) Explain in general terms, the role of the external auditor, the elements of the audit report and types of qualification of that report	79, 86
C – Single Entity Financial Accounts – 45%	
(i) Prepare financial statements in a form suitable for publication, with appropriate note	24, 25, 49
(ii) Prepare a cash flow statement in a form suitable for publication	
(iii) Explain and apply the accounting rules contained in IAS's dealing with reporting performance, tangible non-current assets and inventories	28, 29, 36, 52
(iv) Explain the accounting rules contained in IAS's governing share capital transactions	10, 41, 50, 87
(v) Explain the principles of the accounting rules contained in IAS's dealing with disclosure of related parties to a business, construction contracts (and related financing costs), research and development expenditure, intangible non-current assets (other than goodwill on consolidation), impairment of assets, post-balance sheet events, contingencies, and leases (lessee only)	30, 31, 32, 33, 34, 38, 39, 44, 45, 46, 48, 51,
D – Managing Short Term Finance – 25%	
(i) Calculate and interpret working capital ratios for business sectors	40, 63, 65, 66, 67, 70, 72
(ii) Prepare and analyse cash-flow forecasts over a twelve-month period	55, 56
(iii) Identify measures to improve a cash forecast situation	69
(iv) Compare and contrast the use and limitations of cash management models and identify when each model is most appropriate	54, 60, 61, 64
(v) Analyse trade receivable information	68
(vi) Evaluate receivable and payable policies	42, 53, 88
(vii) Evaluate appropriate methods of inventory management	58
(viii) Identify alternatives for investment of short-term cash surpluses	57, 59, 73, 37
(ix) Identify sources of short-term funding	56, 71
(x) Identify appropriate methods of finance for trading internationally	75

? Question 1

List Adam Smith's characteristics of a good tax. (2 marks)

? Question 2

In no more than 25 words define the meaning of the tax gap. (2 marks)

? Question 3

The following are common taxes used in many countries:

- (i) Corporate income tax
- (ii) Import duty payable on alcoholic drinks
- (iii) Value added tax/sales tax
- (iv) Individual income tax deducted at source (such as PAYE)

Which of the above would normally be defined as a direct tax:

- (A) (i) and (ii)
- (B) (i) and (iv)
- (C) (ii) and (iii)
- (D) (ii) and (iv)

(2 marks)

? Question 4

In no more than 30 words define 'effective incidence'.

(2 marks)

? Question 5

What is the meaning of 'Hypothecation':

- (A) the tax charge is estimated by the tax authorities
- (B) a new tax law has to be passed each year for the tax to be legally collected
- (C) the products of certain taxes are devoted to specific types of expenditures
- (D) tax is deducted from amounts due before they are paid to the recipient

(2 marks)

? Question 6

In a country the tax on entity profits is:

- 0% on the first \$30,000,
- 10% on amounts between \$30,001 and \$50,000,
- 30% on amounts over \$50,001.

The above tax regime could be described as:

- (A) Proportional
- (B) Regressive
- (C) Stepped
- (D) Progressive

(2 marks)

? Question 7

In no more than 15 words define the meaning of 'tax base'.

(2 marks)

? Question 8

An entity commenced business on 1 January 2002, making up the first accounts for the year to 31 December 2002.

The entity's purchases and sales of non-current assets were as follows:

<i>Purchases</i>			\$
2002	1 January	Industrial building	400,000
	1 January	Plant	60,000
2004	1 January	Plant	80,000
<i>Sales</i>			
2003	31 December	Plant bought on 1 June 2002	20,000

The entity qualifies for accelerated first-year allowance on the plant at the rate of 50% for the first year. The second and subsequent years will be at 25% on the reducing balance method. No additional charge will result if the asset is disposed of early.

The industrial building qualifies for an annual tax depreciation allowance of 5% on the straight line basis.

What is the entity's tax depreciation for the year ended 31 December 2003?

(4 marks)

? Question 9

The following payments were made by an entity during the year:

- (i) payments to the spouse of a director for living expenses,
- (ii) dividends paid to equity share holders,
- (iii) salaries and pensions paid to directors,
- (iv) fees and charges paid to solicitors for the purchase of new office buildings,
- (v) interest paid on loan notes.

Which of the above are normally allowable as deductions from revenue for tax purposes:

- (A) (i) and (iii)
- (B) (ii) and (iv)
- (C) (iii) and (v)
- (D) (iv) and (v)

(2 marks)

? Question 10

IAS 32 *Financial Instruments – Disclosure and Presentation* classifies issued shares as either equity instruments or financial liabilities. An entity has the following categories of funding on its balance sheet:

- (i) A preference share that is redeemable for cash at a 10% premium on 30 May 2015.
- (ii) An ordinary share which is not redeemable and has no restrictions on receiving dividends.
- (iii) A loan note that is redeemable at par in 2020.
- (iv) A cumulative preference share that is entitled to receive a dividend of 7% a year.

Applying IAS 32, how would *each* of the above be categorised on the balance sheet?

- | <i>As an equity instrument</i> | <i>As a financial liability</i> |
|--------------------------------|---------------------------------|
| (A) (i) and (ii) | (iii) and (iv) |
| (B) (ii) and (iii) | (i) and (iv) |

- (C) (ii) (i), (iii) and (iv)
 (D) (i), (ii) and (iii) (iv) **(2 marks)**

? Question 11

An entity makes a taxable profit of \$200,000 and pays corporate income tax at 25%, tax paid \$50,000.

The entity pays a dividend to shareholders, a shareholder receiving \$2,000 dividend then pays personal income tax on the dividend at the standard personal income tax rate of 20% and pays a further \$400 tax.

In the country described the corporate income tax system could be said to be a:

- (A) Split rate system
 (B) Imputation system
 (C) Partial imputation system
 (D) Classical system

(2 marks)

? Question 12

A Country has the following tax regulations:

Taxable profits are subject to tax at 25%.

Capital gains are added to profits from trading to give taxable profits.

Trading losses can be carried forward indefinitely but cannot be carried back to previous years.

Capital gains/losses cannot be offset against trading gains/losses or visa versa.

An entity started trading in 2001 and has the following profits/losses

	<i>Trading profit/(loss) \$000</i>	<i>Capital gain/(loss) \$000</i>
2001	(450)	0
2002	(220)	0
2003	660	(150)
2004	800	120

Calculate the amount of tax due for 2004. **(4 marks)**

? Question 13

A Country has a VAT system which allows organisations to reclaim input tax paid. VAT is at 20% of selling price.

X manufactures sports clothing and sells an outfit to Y, a wholesaler. Y resells them to Z a retailer. Z eventually sells them to C for \$180 plus VAT. The prices at which transactions take place (excluding VAT) are as follows:

- X sells to Y for \$70
- Y sells to Z for \$110

Calculate the VAT due from X, Y and Z. **(4 marks)**

**Question 14**

A country has a duty that is levied on all tobacco and tobacco products. This levy is \$100 per kilo. This duty could be said to be:

- (A) Ad valorem tax
- (B) Specific unit tax
- (C) General consumption tax
- (D) Value added tax

(2 marks)**Question 15**

An entity provides services which are all classified as exempt for VAT purposes. For VAT this means that the entity can:

	<i>Input tax</i>	<i>Output tax</i>
(A)	Reclaim	Charge
(B)	Not reclaim	Charge
(C)	Reclaim	Not charge
(D)	Not reclaim	Not charge

(2 marks)**Question 16**

Which of the following statements is the least likely to be a description of tax evasion:

- (A) the illegal manipulation of the tax system to avoid paying taxes
- (B) exploiting loopholes in the legislation to legally avoid paying tax
- (C) the intentional disregard of legislation in order to escape paying taxes
- (D) falsifying tax returns and claiming fictitious expenses.

(2 marks)**Question 17**

Tax authorities attempt to reduce tax avoidance and tax evasion.

- (i) deduct tax at source whenever possible;
- (ii) increase tax rates to compensate for losses due to evasion;
- (iii) simplify the tax structure, reduce the number of allowances and exceptions;
- (iv) reduce penalties for avoidance.

Which of the above methods could be used to help reduce tax evasion and tax avoidance:

- (A) (i) and (ii)
- (B) (i) and (iii)
- (C) (ii) and (iv)
- (D) (iii) and (iv)

(2 marks)**Question 18**

The most important criteria for determining corporate residence is:

- (A) The country where the entity is registered.
- (B) The country where the entity has its main office.

- (C) The country where the effective management of the entity is carried out.
 (D) The country where the majority of the entity's trade is carried out. **(2 marks)**

? Question 19

Which of the following would normally be subject to a withholding tax if paid to an entity abroad:

- (A) Fees for work done
 (B) Payments for materials
 (C) Dividends
 (D) Payments for the purchase of capital equipment **(2 marks)**

? Question 20

An entity receives dividends from an overseas subsidiary. The withholding tax on the dividend is \$5,000. The entity deducts the \$5,000 tax paid overseas from its 'home' tax bill and pays the net amount. This is called:

- (A) Relief by exemption
 (B) Relief by tax credit
 (C) Relief by deduction
 (D) No relief from double taxation **(2 marks)**

? Question 21

The corporate income tax estimate for the current year is \$330,000. The settlement of income tax due for last year left a credit balance of \$7,000 outstanding on the income tax account. Deferred tax was estimated to require an increase of \$32,000 in the balance sheet provision. The income tax charge for the year in the income statement and the payables due in less than one year – income tax on the balance sheet should be:

	<i>Income statement</i>	<i>Balance sheet</i>
(A)	\$323,000	\$330,000
(B)	\$355,000	\$330,000
(C)	\$362,000	\$323,000
(D)	\$369,000	\$362,000

(3 marks)

? Question 22

An asset cost \$320,000 and had an estimated useful life of eight years, with no residual value at the end. Depreciation was calculated on the straight-line basis. Capital allowances were given at 25 per cent on a reducing balance basis. Assume corporate income tax at 25 per cent. At the end of the second year of operation the deferred tax provision on the balance sheet should be:

- (A) \$15,000
 (B) \$20,000
 (C) \$60,000
 (D) \$80,000 **(3 marks)**

**Question 23**

Plant and machinery, original cost 1 April 20X0, was \$60,000. This was depreciated for 2 years at 25 per cent using the reducing-balance method. On 1 April 20X2 the machinery, original cost \$20,000, was sold for \$15,000. Replacement machines were acquired on the same date for \$40,000. What was the net book value at 1 April 20X3?

- (A) \$45,000
- (B) \$33,750
- (C) \$44,062
- (D) \$46,875

(3 marks)**Data for Questions 24 and 25**

Trade receivables as at 31 December 20X1 were \$25,000.

The bad debt provision as at 1 January 20X1 was \$812.

During the year to 31 December 20X1 bad debts of \$2,000 have been written off to administration expenses.

After the year end, but before the accounts had been completed, the entity discovered that a major trade receivable had gone into liquidation and that their outstanding balance of \$3,000 was very unlikely to be paid.

As a result of the recent bad debt experience the directors have decided to increase the bad debt provision at 31 December 20X1 to 5 per cent of outstanding trade receivables.

**Question 24**

What is the correct balance for trade receivables, net of bad debt provision, as at 31 December 20X1?

- (A) \$19,000
- (B) \$20,900
- (C) \$23,750
- (D) \$21,188

(2 marks)**Question 25**

What is the correct charge to the income statement for bad debts and bad debt provisions for the years to 31 December 20X1?

- (A) \$4,100
- (B) \$6,100
- (C) \$5,288
- (D) \$3,288

(2 marks)

Data for Questions 26 and 27

The corporation tax estimate for the current year 20X1 is \$280,000. The balances on the taxation accounts in the balance sheet for last year were:

	20X0
	\$
Current tax liability	240,000
Deferred tax liability	60,000

The settlement of income tax due for last year left a debit balance of \$15,000 outstanding on the income tax account. Deferred tax was estimated to require an increase of \$11,000 in the balance sheet provision for 20X1.

? Question 26

The income tax charge for the year in the income statement should be:

- (A) \$284,000
- (B) \$276,000
- (C) \$306,000
- (D) \$254,000

(2 marks)**? Question 27**

The taxation paid shown in the cash-flow statement would be:

- (A) \$280,000
- (B) \$255,000
- (C) \$240,000
- (D) \$251,000

(2 marks)**? Question 28**

A non-current asset cost \$150,000 and had an estimated useful life of fifteen years, with no residual value at the end. Depreciation was calculated on the straight-line basis. Tax depreciation allowances were given at 25 per cent on a reducing-balance basis. Assume income tax at 30 per cent. At the end of the second year of operation the deferred tax provision on the balance sheet should be:

- (A) \$13,687
- (B) \$16,500
- (C) \$45,625
- (D) \$6,187

(2 marks)**? Question 29**

Inventory code ABC290 had 1,153 items in inventory at 31 March, the entity year end. The original cost of the inventory, according to the inventory control system, was \$4,612.

Alternative valuations were obtained at 31 March for this inventory item. Which value should be used in the accounts at 31 March?

- (A) Original cost \$4,612
- (B) Replacement cost \$2,306
- (C) Net realisable value \$3,459
- (D) Selling price \$5,765

(2 marks)**Data for Questions 30, 31 and 32**

Details of long-term contract number 12234-56 are:

	<i>\$000</i>
Values of work completed	520
Costs incurred to date:	
Attributable to work completed	545
Further costs attributable to partly completed work	<u>60</u>
	<u>605</u>
Progress payments received	550
Expected further loss on completion	55

Using the above data, identify the correct entries required in Questions 30, 31 and 32 for contract 12234-56.

? Question 30

The cost of sales figure should be:

- \$000
- (A) 545
 - (B) 550
 - (C) 600
 - (D) 605

(2 marks)**? Question 31**

The 'value of payables, gross amounts due to customers' figure should be:

- \$000
- (A) 5
 - (B) 25
 - (C) 30
 - (D) 90

(2 marks)**? Question 32**

The 'value of gross amounts due from customers for long-term contract work' figure should be:

- \$000
- (A) 0
 - (B) 5
 - (C) 60
 - (D) 545

(2 marks)

? Question 33

The finance lease runs for four years, with annual payments in arrears of \$30,000. The fair value of the asset was \$100,000. Using the sum of the digits method, what would the balance sheet figure be for the outstanding lease payable at the end of year 2.

- (A) \$50,000
- (B) \$54,000
- (C) \$60,000
- (D) \$74,000

(2 marks)**? Question 34**

Z is currently defending two legal actions:

- (a) a competitor is suing Z for \$500,000, claiming that Z has copied their product infringing their copyright. Z's lawyers are contesting the claim and have advised the directors of Z that there is not really a case to answer and there is very little chance of Z losing.
- (b) a customer is suing for \$50,000, claiming that Z's sun tan products damaged their skin and gave no protection from the sun. Z's lawyers are contesting this claim, but have advised Z's directors that the claim is almost certain to succeed.

How much should Z provide in its year end accounts for these legal claims?

- (A) \$0
- (B) \$50,000
- (C) \$500,000
- (D) \$550,000

(2 marks)**? Question 35**

In no more than 15 words, define the meaning of "competent jurisdiction". **(2 marks)**

? Question 36

IAS 8 – Net Profit or Loss for the Period, Fundamental Errors and changes in Accounting Policies, specifies the definition and treatment of a number of different items. Which of the following is not specified by IAS 8:

- (A) The effect of a change in an accounting estimate
- (B) Prior period adjustments
- (C) Extraordinary items
- (D) Provisions

(2 marks)**? Question 37**

A bond with a coupon rate of 7% is redeemable in 8 years' time for \$100. Its current purchase price is \$82. What is the percentage yield to maturity? **(4 marks)**

Data for Questions 38 and 39

B entered into a three year construction contract to build a leisure centre for an entity. The contract value was \$6 million. B recognises profit on the basis of certified work completed. At the end of the first year the following figures were extracted from B's accounting records:

	<i>\$000</i>
Certified values of work completed (progress payments billed)	2,000
Cost of work certified as complete	1,650
Cost of work in progress (not included in completed work)	550
Estimated cost of remaining work required to complete the contract	2,750
Progress payments received from entity	1,600
Cash paid to suppliers for work on the contract	1,300

? Question 38

How much profit should B recognise in its income statement at the end of the first year?

- (A) \$200,000 (loss)
- (B) \$300,000
- (C) \$350,000
- (D) \$400,000

(2 marks)**? Question 39**

What values should B record as 'current liabilities – trade and other payables' and 'Gross amounts due from customers for contract work'?

	<i>Current liabilities – trade and other payables</i>	<i>Gross amounts due from customers for contract work</i>
(A)	\$350,000	\$950,000
(B)	\$600,000	\$1,250,000
(C)	\$900,000	\$950,000
(D)	\$900,000	\$2,550,000

(2 marks)**? Question 40**

The following balances were extracted from the books of A:

	<i>31 March 03</i>
	<i>\$000</i>
Revenue	300
Cost of Sales	<u>200</u>
Gross profit	<u>100</u>
Closing inventory	15
Trade receivables	36
Trade payables	28

A's average working capital cycle for the year ended 31 March 2003 is:

- (A) 11.0 days
- (B) 20.1 days
- (C) 34.7 days
- (D) 37.1 days

(3 marks)

? Question 41

R issued 500,000 new \$1 equity shares on 1 April 2002. The issue price of the shares was \$1.50 per share. Applicants paid \$0.20 per share with their applications and a further \$0.80 on allotment. All money was received on time.

A final call of \$0.50 per share was made on 31 January 2003. One holder of 5,000 shares failed to pay the call by the due date and the shares were forfeited. The forfeited shares were reissued for \$1 per share on 31 March 2003. Which of the following is the correct set of accounting entries to record the reissue of the forfeited shares?

	<i>Investment in own shares a/c</i>	<i>Bank a/c</i>	<i>Investment in own shares a/c</i>	<i>Share premium a/c</i>
(A)	\$5,000 credit	\$5,000 debit	\$2,500 debit	\$2,500 credit
(B)	\$5,000 credit	\$5,000 debit	0	0
(C)	\$5,000 credit	\$5,000 debit	\$2,500 credit	\$2,500 debit
(D)	\$5,000 debit	\$5,000 credit	\$2,500 credit	\$2,500 debit

(2 marks)

? Question 42

AL's customers all pay their accounts at the end of 30 days. To try and improve its cash flow, AL is considering offering all customers a 1.5% discount for payment within 14 days.

Calculate the implied annual (interest) cost to AL of offering the discount, using compound interest methodology and assuming a 365-day year.

(3 marks)

? Question 43

The IASB's *Framework for the preparation and presentation of financial statements* (Framework) lists the qualitative characteristics of financial statements.

- (i) Comparability
- (ii) Relevance
- (iii) Prudence
- (iv) Reliability
- (v) Understandability
- (vi) Matching
- (vii) Consistency

Which *three* of the above are *not* included in the principal qualitative characteristics listed by the Framework?

- (A) (i), (iii) and (vii)
- (B) (i), (ii) and (v)
- (C) (iii), (vi) and (vii)
- (D) (iii), (iv) and (vi)

(2 marks)

? Question 44

Which of the following is *not* regarded as a related party of an entity by IAS 24 – *Related party disclosures*?

- (A) Directors of the entity.
- (B) A bank providing a loan to the entity.
- (C) The entity's employee pension fund.
- (D) A close relative of a director of the entity.

(2 marks)

? Question 45

IAS 10 – *Events after the balance sheet date*, distinguishes between adjusting and non-adjusting events.

Which of the following is an adjusting event?

- (A) One month after the year end, a customer lodged a claim for \$1,000,000 compensation. The customer claimed to have suffered permanent mental damage as a result of the fright she had when one of the entity's products malfunctioned and exploded. The outcome of the court case cannot be predicted at this stage.
- (B) There was a dispute with the workers and all production ceased one week after the year end.
- (C) A fire destroyed all of the entity's inventory in its finished goods warehouse two weeks after the year end.
- (D) Inventory valued at the year end at \$20,000 was sold one month later for \$15,000.

(2 marks)

? Question 46

X signed a finance lease agreement on 1 October 2002. The lease provided for five annual payments, in arrears, of \$20,000. The fair value of the asset was agreed at \$80,000.

Using the sum of digits method, how much should be charged to the income statement for the finance cost in the year to 30 September 2003?

- (A) \$4,000
- (B) \$6,667
- (C) \$8,000
- (D) \$20,000

(2 marks)

? Question 47

D purchased a non-current asset on 1 April 2000 for \$200,000. The asset attracted tax depreciation allowances at 25% on the reducing balance. Accounting depreciation was 10% on the straight-line basis. Assume income tax is at 30%.

The deferred tax balance for this asset at 31 March 2003 is

- (A) \$9,000
- (B) \$16,688
- (C) \$27,000
- (D) \$55,625

(3 marks)

? Question 48

C started work on a contract to build a dam for a hydro-electric scheme. The work commenced on 24 August 2001 and is scheduled to take four years to complete. C recognises profit on the basis of the certified percentage of work completed. The contract price is \$10 million.

An analysis of C's records provided the following information:

<i>Year to 30 September</i>	<i>2002</i>	<i>2003</i>
Percentage of work completed and certified in year	30%	25%
	<i>\$000</i>	<i>\$000</i>
Total cost incurred during the year	2,900	1,700
Estimated cost of remaining work to complete contract	6,000	3,900
Total payments made for the cost incurred during the year	2,500	2,000

How much profit should C recognise in its income statement for the years ended

	<i>30 September 2002</i>	<i>30 September 2003</i>
	<i>\$000</i>	<i>\$000</i>
(A)	100	375
(B)	330	375
(C)	330	495
(D)	500	825

(4 marks)

? Question 49

F's year end is 30 June. F purchased a non-current asset for \$50,000 on 1 July 2000.

Depreciation was provided at the rate of 20% per annum on the straight-line basis. There was no forecast residual value.

On 1 July 2002, the asset was revalued to \$60,000 and then depreciated on a straight-line basis over its remaining useful economic life which was unchanged. On 1 July 2003, the asset was sold for \$35,000.

- (i) Debit income statement with a loss on disposal of \$5,000.
- (ii) Credit income statement with a gain on disposal of \$25,000.
- (iii) Transfer \$60,000 from revaluation reserve to retained profits as movement on reserves.
- (iv) Transfer \$30,000 from revaluation reserve to retained profits as movement on reserves.

- (v) Transfer \$30,000 from revaluation reserve to income statement.
- (vi) Transfer \$60,000 from revaluation reserve to income statement.

In addition to the entries in the non-current asset account and provision for depreciation account, which TWO of the above statements correctly record the entries required on disposal of the non-current asset?

- (A) (i) and (iv)
- (B) (ii) and (iii)
- (C) (i) and (v)
- (D) (ii) and (vi)

(2 marks)

? Question 50

S announced a rights issue of 1 for every 5 shares currently held, at a price of \$2 each.

S currently has 2,000,000 \$1 ordinary shares with a quoted market price of \$2.50 each. Directly attributable issue costs amounted to \$25,000.

Assuming all rights are taken up and all money paid in full, how much will be credited to the share premium account for the rights issue?

- (A) \$200,000
- (B) \$308,333
- (C) \$375,000
- (D) \$400,000

(2 marks)

? Question 51

Which of the following best describes an operating lease?

- (A) A contract for a specific time that is usually the expected working life of the asset leased.
- (B) A short-term lease that can be terminated easily.
- (C) An agreement that can be cancelled but the cost is usually prohibitive.
- (D) A lease agreement in which a firm sells assets to a finance house, which then allows the firm to continue to use the asset in return for regular payments.

(2 marks)

? Question 52

An item of plant and equipment was purchased on 1 April 2001 for \$100,000. At the date of acquisition its expected useful economic life was 10 years. Depreciation was provided on a straight-line basis, with no residual value.

On 1 April 2003, the asset was revalued to \$95,000. On 1 April 2004, the useful life of the asset was reviewed and the remaining useful economic life was reduced to 5 years, a total useful life of 8 years.

Calculate the amounts that would be included in the balance sheet for the asset cost/valuation and provision for accumulated depreciation at 31 March 2005. **(4 marks)**

? Question 53

An entity is considering a proposal to offer a cash discount of 2 per cent to customers if they settle the amounts owing within 10 days. All sales offer 30 days' credit currently. What is the annualised compounded cost of giving this cash discount to a customer?

- (A) 24.83%
- (B) 36.5%
- (C) 37.23%
- (D) 44.6%

(2 marks)**? Question 54**

The Miller–Orr cash model assumes that short-term cash movements cannot be predicted since they change in a random fashion. This means that the following tactics should be used to manage the cash resources of an entity:

- (A) if the daily variation in cash balances is large, then the control limits should be set far apart;
- (B) if the cost of buying and selling securities is high, then the control limits should be set far apart;
- (C) if the rate of interest is high, the control limits should be set close together;
- (D) all these factors should be considered.

(2 marks)**? Question 55**

Cash-flow forecasts will be affected adversely by which one of the following?

- (A) A reduction in the operating profit as a result of increased rates of depreciation being charged on the firm's plant and machinery.
- (B) A change in purchasing policy so that all cash discounts are now taken and this has reduced the payables in the balance sheet.
- (C) Non-current assets have been sold at a substantial loss.
- (D) The working capital cycle has been reduced.

(2 marks)**? Question 56**

Which of the following statements about an overdraft facility is incorrect?

- (A) The overdraft is repayable on demand
- (B) Assets are normally required as security
- (C) Interest is paid on the full facility
- (D) Legal documentation is minimal compared with other types of loan

(2 marks)**? Question 57**

Which one of the following statements about certificates of deposit is *not* true?

- (A) Certificates of deposit are negotiable deposits issued by banks
- (B) Certificates of deposit will typically have maturity periods of between 1 month and 5 years

- (C) Certificates of deposit are non-negotiable
 (D) Certificates of deposit are issued in bearer form **(2 marks)**

? Question 58

PB uses 2,500 units of component X per year. The entity has calculated that the cost of placing and processing a purchase order for component X is \$185, and the cost of holding one unit of component X for a year is \$25.

What is the economic order quantity (EOQ) for component X and, assuming a 52-week year, what is the average frequency at which purchase orders should be placed?

	<i>EOQ</i>	<i>Frequency of orders</i>	
(A)	136 units	3 weeks	
(B)	136 units	6 weeks	
(C)	192 units	4 weeks	
(D)	192 units	5 weeks	(2 marks)

? Question 59

BACS (Bankers Automated Clearing Services) is an example of an electronic funds transfer system. Which of the following best describes the system?

- (A) Provides same-day settlement for large sums of money
 (B) Is most concerned with processing payrolls and transactions involving standing orders and direct debits
 (C) Is a network for rapid transmission of international remittances between participating banks
 (D) Requires cheques to be completed to ensure settlement of a transaction **(2 marks)**

? Question 60

An entity maintains a minimum cash holding of \$1,000. The variance of its daily cash flows has been measured as \$250,000. The transaction cost for each sale or purchase of treasury bills is \$20. The daily interest rate is 0.025 per cent per day and is not expected to change in the foreseeable future. Using the Miller–Orr cash management model, the maximum cash-holding level would be:

- (A) \$1,594
 (B) \$2,594
 (C) \$7,400
 (D) \$8,400 **(2 marks)**

? Question 61

An entity has cash outgoings of \$1,260,000 per annum, spread evenly throughout the year. The interest rate on a Treasury bill is 8 per cent per annum, and every sale of Treasury bills costs \$20. According to the Baumol cash-management model, the optimum amount of Treasury bills to be sold each time cash is replenished is:

- (A) \$7,937
 (B) \$17,748

- (C) \$25,100
(D) \$88,741

(2 marks)

? Question 62

LM is a trading entity. During the year to 31 December 20X8 LM received \$850,000 from trade receivables, and paid \$325,000 to trade payables. Purchase for the three months to the end of December 20X7 were \$90,000; sales revenue for that period was \$150,000. Purchases for the three months ended December 20X8 were \$80,000; sales revenue for that period was \$120,000. LM typically takes 90 days to pay for goods supplied, and allows 90 days' credit to customers. Production is scheduled evenly throughout the year. Inventories increased by \$75,000 during the year.

The gross profit for the year was:

- (A) \$505,000
(B) \$525,000
(C) \$580,000
(D) \$600,000

(4 marks)

? Question 63

The balance sheet of KSS includes the following figures:

	\$
Current assets	
Inventory	300,000
Trade receivables	<u>200,000</u>
	<u>500,000</u>
Current liabilities: Amounts due within one year	
Trade payables	200,000
Bank overdraft	<u>50,000</u>
	<u>250,000</u>

The quick ratio calculated from these figures is:

- (A) 0.8
(B) 1.0
(C) 1.2
(D) 2.0

(2 marks)

? Question 64

An entity has cash outgoings of \$1,850,000 per annum, spread evenly throughout the year. The interest rate on a Treasury bill is 6 per cent per annum, and every sale of Treasury bills costs \$20. According to the Baumol cash-management model, the optimum amount of Treasury bills to be sold each time cash is replenished is:

- (A) \$1,434
(B) \$3,512
(C) \$35,119
(D) \$143,372

(2 marks)

? Question 65

Swinson, a retailing entity, has an annual revenue of \$40 million. The entity earns a constant margin of 20% on sales. All sales and purchases are on credit and are evenly distributed throughout the year. The following amounts are maintained at a constant level throughout the year:

Inventory	\$5 million
Trade receivables	\$7 million
Trade payables	\$2 million

What is the length of the entity's cash cycle to the nearest day?

- (A) 64 days
- (B) 92 days
- (C) 98 days
- (D) 114 days

(2 marks)**? Question 66**

Working capital is most likely to decrease when

- (A) The period of credit extended to customers is increased
- (B) Inventory levels are decreased
- (C) Non-current assets are purchased
- (D) Payables are paid before the balance is due

(2 marks)**? Question 67**

In October, an entity made credit purchases of \$18,000 and credit sales of \$24,000. All sales are made on the basis of cost plus 25%. By how much will working capital increase in October as a result of these transactions?

- (A) \$2,000
- (B) \$4,000
- (C) \$4,800
- (D) \$6,000

(2 marks)**? Question 68**

The following items have been extracted from an entity's budget for next month:

	\$
Sales on credit	240,000
Expected increase in inventory next month	20,000
Expected decrease in trade receivables next month	12,000

What is the budgeted receipt from trade receivables next month?

- (A) \$228,000
- (B) \$232,000
- (C) \$252,000
- (D) \$272,000

(2 marks)

? Question 69

An entity has a positive level of working capital but has an overdraft. What will be the impact of the following transactions on the current ratio?

Transaction 1:

Cash is received from trade receivables and is then used to reduce the overdraft.

Transaction 2:

A non-current asset is sold for cash thus is used to reduce the overdraft.

	<i>Transaction 1</i>	<i>Transaction 2</i>
(A)	Increase	Increase
(B)	Increase	Decrease
(C)	Decrease	Increase
(D)	Decrease	Decrease

(2 marks)**? Question 70**

If payments to trade payables are delayed, what is the impact on the total level of working capital (ignore cash discounts)?

- (A) Increase
- (B) Decrease
- (C) No effect
- (D) Depends on whether working capital is positive or negative

(2 marks)**? Question 71**

Invoice discounting normally involves

- (A) Offering a cash discount for early settlement of invoices
- (B) Selling an invoice to a discount house at a profit
- (C) Selling individual invoice for cash to a factoring entity at a discount
- (D) Writing off an invoice, partly or in total, as a bad debt.

(2 marks)**? Question 72**

Which of the following is not normally associated with over-trading?

- (A) Falling sales
- (B) Increase overdraft
- (C) Falling current ratio
- (D) Rising profit

(2 marks)**? Question 73**

The Clearing House Automated Payment System (CHAPS) provides

- (A) A system to clear cheques for customers within 3 working days
- (B) Same-day settlements between banks which are members of the clearing system

- (C) A system of payment for the purchase of shares within the settlement period
 (D) A financial transfer system, normally for the payment of payrolls by entities
(2 marks)

? Question 74

BC, a small entity, purchased its only non-current tangible asset on 1 October 2003. The asset cost \$900,000, all of which qualified for tax depreciation.

BC's asset qualified for an accelerated first-year tax allowance of 50%. The second and subsequent years qualified for tax depreciation at 25% per year on the reducing balance method.

BC's accounting depreciation policy is to depreciate the asset over its useful economic life of five years, assuming a residual value of \$50,000.

Assume that BC pays tax on its income at the rate of 30%.

Calculate BC's deferred tax balance required in the balance sheet as at 30 September 2005 according to IAS 12 *Income taxes*.
(4 marks)

? Question 75

Which of the following most appropriately describes *forfeiting*?

- (A) It is a method of providing medium-term export finance.
 (B) It provides short-term finance for purchasing non-current assets which are denominated in a foreign currency.
 (C) It provides long-term finance to importers.
 (D) It is the forced surrender of a share due to the failure to make a payment on a partly paid share.
(2 marks)

? Question 76

The International Accounting Standards Committee (IASC) Trustees have a number of responsibilities, which of the following is a responsibility of the IASC Trustees?

- (A) Fundraising
 (B) To publish reports on international accounting standards
 (C) To enforce international accounting standards
 (D) To report to the international organisation of securities commissions on financial reporting matters
(2 marks)

? Question 77

According to the International Accounting Standards Board's (IASB) Framework for the preparation and presentation of financial statements (Framework) Chapter 4, 'equity' is defined as:

- (A) The amount paid into the business by the owner
 (B) Accumulated profits less amounts withdrawn
 (C) A residual interest in the assets less liabilities
 (D) Owners capital investment in the business
(2 marks)

? Question 78

Chapter 3 of the IASB Framework sets out the characteristics of useful information.

- (i) Confirmatory value
- (ii) Completeness
- (iii) Prudence
- (iv) Consistency
- (v) Neutrality
- (vi) Predictive value

According to the IASB Framework Chapter 3, which three of the above are not sub-characteristics of 'reliability'?

- (A) (i), (iii) and (vi)
- (B) (i), (iv) and (vi)
- (C) (ii), (iv) and (v)
- (D) (ii), (iii) and (v)

(2 marks)**? Question 79**

When an external auditor is unable to agree the accounting treatment of a material item with the directors of an entity, but the financial statements are not seriously misleading, he will issue

- (A) an unqualified audit report
- (B) an adverse opinion
- (C) a qualified audit report using 'except for'
- (D) an unqualified audit report using 'except for'

(2 marks)**? Question 80**

If an external auditor does not agree with the directors' treatment of a material item in the accounts, the first action they should take is to

- (A) give a qualified opinion of the financial statements
- (B) give an unqualified opinion of the financial statements
- (C) force the directors to change the treatment of the item in the accounts
- (D) persuade the directors to change the treatment of the item in the accounts

(2 marks)**? Question 81**

BN is a listed entity and has the following balances included on its opening balance sheet:

	<i>\$000</i>
Equity and reserves:	
Equity shares, \$1 shares, fully paid	750
Share premium	250
Retained earnings	500
	<u>1,500</u>

BN reacquired 100,000 of its shares and classified them as 'treasury shares'. BN still held the treasury shares at the year end.

How should BN classify the treasury shares on its closing balance sheet in accordance with IAS 32 *Financial instruments – disclosure and presentation*?

- (A) As a non-current asset investment
- (B) As a deduction from equity
- (C) As a current asset investment
- (D) As a non-current liability

(2 marks)



Question 82

BE has been offering 60-day payment terms to its customers, but now wants to improve its cash flow. BE is proposing to offer a 1.5% discount for payment within 20 days.

Assume a 365-day year and an invoice value of \$1,000.

What is the effective annual interest rate that BE will incur for this action? **(4 marks)**

Solutions to Revision Questions I

Solution 1

- Equity
- Certainty
- Convenience
- Efficiency

Solution 2

The tax gap is the difference between the amount of tax owed and the amount of tax collected.

Solution 3

The correct answer is (B).

The following are direct taxes:

- corporate income tax,
- individual income tax deducted at source (such as PAYE).

Solution 4

Effective (or actual) incidence, the person or organisation who ends up bearing the cost of the tax as they cannot pass it on to someone else.

Solution 5

The correct answer is (C).

Hypothecation means the products of certain taxes are devoted to specific types of expenditures.

**Solution 6**

The correct answer is (D).

This tax is progressive.

**Solution 7**

A tax base is something that is liable to tax.

**Solution 8**

		<i>Industrial building</i>	<i>Plant</i>	<i>Total tax depreciation for year</i>
		\$	\$	\$
01/01/2002	Purchase	400,000	60,000	
31/12/2002	First year allowance		(30,000)	}
	Tax depreciation for the year	<u>(20,000)</u>		} 50,000
	Balance at 31/12/2002	380,000	30,000	
31/12/2003	Disposal		(20,000)	
	Balancing allowance		(10,000)	}
	Tax depreciation for the year	<u>(20,000)</u>		} 30,000
	Balance at 31/12/2003	360,000	0	
01/01/2004	Purchase		80,000	

The entity's tax depreciation for the year to 31/12/2003 is \$30,000.

**Solution 9**

The correct answer is (C).

Payments for domestic expenses are not allowable; Dividends paid to equity share holders are usually paid out of taxed profits; Fees and charges paid to solicitors for the purchase of new office buildings relate to capital expenditure and should be included as part of the cost of the asset.

Salaries and pensions paid to directors and interest paid on loan notes are legitimate expenses normally allowed as deductions for tax purposes.

**Solution 10**

The correct answer is (C).

An ordinary share which is not redeemable and has no restrictions on receiving dividends is classified by IAS 32 as equity. All the other options have a restriction and are therefore classified as debt.

**Solution 11**

The correct answer is (D).

The country is using the classical system which causes dividends to be taxed twice.



Solution 12

The correct answer is \$197,500

	<i>Trading profit/(loss)</i> \$000	<i>Capital gain/(loss)</i> \$000	<i>Taxable profit</i> \$000	<i>Tax due at 25%</i> \$000
2001	(450)	0	0	0
Loss carried forward	(450)			
2002	(220)	0	0	0
Loss carried forward	(450 + 220) = 670	0		
2003	(660 - 660) = 0	(150)	0	0
Loss carried forward	(670 - 660) = 10	(150)		
2004	(800 - 10) = 790	(120 - 120) = 0	790	197.50
Loss carried forward	0	(30)		

The tax due in 2004 is \$197,500.



Solution 13

The correct answer is X pays \$14; Y pays \$8 and Z pays \$14.

<i>Entity</i>	<i>Input tax</i> \$	<i>Output tax</i> \$	<i>VAT paid</i> \$
X			
Sale to Y		14.00	14.00 paid by X
Y			
Purchase from X	14.00		
Sale to Z		22.00	8.00 paid by Y
Z			
Purchase from Y	22.00		
Sale to C		36.00	14.00 paid by Z
Total suffered by C			<u>36.00</u>



Solution 14

The correct answer is (B).

This is an example of a Specific unit tax.



Solution 15

The correct answer is (D).

The entity cannot charge any VAT and cannot reclaim any VAT suffered on inputs.



Solution 16

The correct answer is (B).

Exploiting loopholes in the legislation to legally avoid paying tax is tax avoidance rather than tax evasion.



Solution 17

The correct answer is (B).

Using taxation at source reduces the opportunity for evasion and simplifying the tax system also removes opportunities to falsify claims for non-existent expenses etc.

**Solution 18**

The correct answer is (C).

The country where the effective management of the entity is carried out is the main criterion used in the OECD model convention.

**Solution 19**

The correct answer is (C).

The other items are payments made in the normal course of business and are not normally subject to withholding taxes.

**Solution 20**

The correct answer is (B).

This is relief by taking credit for the tax already paid. It is not relief by deduction as that means deducting the tax paid from the taxable income in its 'home' country.

**Solution 21**

The correct answer is (B).

The credit balance on the corporate income tax account means that there was an over-provision last year. The over-provision of \$7,000 can be deducted from the current year's estimate. The increase in deferred tax needs to be included under the tax charge for the year. The income statement would show the income tax expense as \$355,000, the note to the income statement would show the \$355,000 made up as follows:

	\$
Estimate of current year's income tax charge	330,000
Over-provision previous year	(7,000)
Increase in deferred tax provision	<u>32,000</u>
	<u>355,000</u>

The balance sheet payables for income tax would be the estimate for the current years tax charge, \$330,000.

**Solution 22**

The correct answer is (A).

	\$
Cost	320,000
Two years' accounting depreciation at \$40,000 per year is	<u>(80,000)</u>
Carrying value in accounts	240,000
Cost	320,000
Two years' tax depreciation at 25% is	<u>(140,000)</u>
Tax written down value	<u>(180,000)</u>
Temporary difference (240,000 – 180,000)	60,000
Tax at 25%	<u>15,000</u>

**Solution 23**

The correct answer is (D).

		\$
Cost		60,000
25% depreciation		<u>15,000</u>
		45,000
25% depreciation		<u>11,250</u>
		<u>33,750</u>
Less disposal, net book value		
Cost	20,000	
Depreciation, 2 years	<u>8,750</u>	
		11,250
		<u>22,500</u>
Add acquisition		<u>40,000</u>
		62,500
Less 25% depreciation		<u>15,625</u>
		<u>46,875</u>

**Solution 24**

The correct answer is (B).

	\$
Trade receivables balance	25,000
Less bad debt	<u>3,000</u>
	22,000
Less 5% provision	<u>1,100</u>
	<u>20,900</u>

**Solution 25**

The correct answer is (C).

		\$
Bad debts already written off in year		2,000
Bad debt at year end		<u>3,000</u>
		5,000
Increase in provision		
Bad debt provision b/f	812	
Bad debt provision c/f	<u>1,100</u>	
Increase		<u>288</u>
Total		<u>5,288</u>

**Solution 26**

The correct answer is (C).

The debit balance on the income tax account means that there was an underprovision last year. The underprovision of \$15,000 needs to be added on to the current year's estimate. The increase in deferred tax needs to be included under the tax charge for the year.

The note to the income statement would show the change for the year as \$306,000, made up as follows:

	\$
Estimate of current year's corporation tax charge	280,000
Underprovision previous year	15,000
Increase in deferred tax provision	<u>11,000</u>
	<u>306,000</u>

Solution 27

The correct answer is (B).

Last year's outstanding balance plus the underprovision of \$15,000.

Solution 28

The correct answer is (A).

	\$
Two years' depreciation at 1/15 per year is	20,000
Two years' tax depreciation allowances at 25% is	<u>65,625</u>
Cumulative difference	45,625
Tax at 30%	13,687

Solution 29

The correct answer is (C).

IAS 2 requires inventory to be valued at cost or net realisable value, whichever is the lower.

Solution 30

The correct answer is (C).

The cost of sales must include the full provision for expected future losses: $545 + 55 = 600$.

Solution 31

The correct answer is (C).

The excess payment received $550 - 520 = 30$.

Solution 32

The correct answer is (B).

The 'gross amounts due from customers for long-term contract work' balance of partly completed work is \$60,000. This has been set off against the provision for future losses, leaving a balance of \$5,000.

 **Solution 33**

The correct answer is (B).

Payments (4 of \$30,000) =	\$120,000
Fair value	<u>\$100,000</u>
Finance charge	<u>\$20,000</u>
Interest charges	
Year 1 – $4/10 \times 20 = \$8,000$	
Year 2 – $3/10 \times 20 = \$6,000$	
<i>Lease payables</i>	
Initial balance	\$100,000
Interest	\$8,000
Payment 1	(\$30,000)
Interest	\$6,000
Payment 2	<u>(\$30,000)</u>
Balance	<u>\$54,000</u>

 **Solution 34**

The correct answer is (B).

The directors need to create a provision for \$50,000, as the customer’s claim is probably going to succeed but the competitor’s claim is not. Provisions have to be created when it is probable that the organisation will lose. Probable is usually taken as more than 50 per cent likely.

 **Solution 35**

The competent jurisdiction is the country whose tax laws apply to the enterprise.

 **Solution 36**

The correct answer is (D).

 **Solution 37**

$t = 8; r = 10$

$(7 \times 5.335) + (100 \times 0.467) = 37.345 + 46.7 = \84.045

$t = 8; r = 12$

$(7 \times 4.968) + (100 \times 0.404) = 34.776 + 40.4 = \75.176

By interpolation:

$10\% + (((84.045 - 82.0)/(84.045 - 75.176)) \times 2) = 10\% + (2.045/8.869 \times 2) =$

$10\% + 0.461 = 10.461\% \approx 10.5\%$

 **Solution 38**

The correct answer is (C).

		\$000
	Certified value of work completed	2,000
Less	Cost of work certified as complete	<u>1,650</u>
		<u>350</u>

**Solution 39**

The correct answer is (C).

		\$000
<i>Current liabilities – trade and other payables are calculated as:</i>		
	Cost of work certified as complete	1,650
	Cost of work in progress (not included in completed work)	<u>550</u>
		2,200
Less	Cash paid to suppliers for work on the contract	<u>1,300</u>
		<u>900</u>
<i>Gross amounts due from customers are calculated as:</i>		
	Certified value of work completed	2,000
Less	Cash received from entity	<u>1,600</u>
		400
Plus	Work in progress	<u>550</u>
		<u><u>950</u></u>

**Solution 40**

The correct answer is (B).

Inventory turnover is inventory divided by cost of goods sold times 365 days:

$$(15/200) \times 365 = 27.4 \text{ days}$$

$$\text{Receivables } (36/300) \times 365 = 43.8 \text{ days}$$

$$\text{Payables } (28/200) \times 365 = 51.1 \text{ days}$$

$$\text{Working capital cycle} = 27.4 + 43.8 - 51.1 = 20.1 \text{ days}$$

**Solution 41**

The correct answer is (A).

		\$
	Cash received on application and allotment $\$1.00 \times 5,000$	<u>5,000</u>
	Balance share capital due	2,500
	Cash received on reissue of shares $\$1 \times 5,000$	<u>5,000</u>
	Additional share premium	<u>2,500</u>
	Investment in own Shares a/c	\$2,500 Dr
	Share Premium	\$2,500 Cr
	Bank	\$5,000 Dr
	Investment in own Shares a/c	\$5,000 Cr

**Solution 42**

AL offers 1.5% interest for 16 days

$$(100/98.5)^{(365/16)} - 1 =$$

$$(1.015)^{22.813} - 1 = 40.4\% \text{ or } 41.2\% \text{ depending on rounding}$$

**Solution 43**

The correct answer is (C).

 **Solution 44**

The correct answer is (B).

 **Solution 45**

The correct answer is (D).

 **Solution 46**

The correct answer is (B).

	\$
Lease payments $5 \times 20,000 =$	100,000
Fair value	<u>(80,000)</u>
Finance charge	<u>20,000</u>

Year one using sum of digits is $\$20,000 \times \frac{5}{15} = \$6,667$

 **Solution 47**

The correct answer is (B).

Tax depreciation allowances are:

	\$
2001 – $200,000 \times 25\% =$	50,000
2002 – $150,000 \times 25\% =$	37,500
2003 – $112,500 \times 25\% =$	<u>28,125</u>
Total =	<u>115,625</u>

Accounting depreciation is $\$200,000 \times 10\% \times 3 \text{ years} = \$60,000$

Deferred tax is therefore $\$115,625 - \$60,000 = \$55,625 \times 30\% = \$16,688$

 **Solution 48**

The correct answer is (C).

	2002	2003
	\$000	\$000
Revenue	10,000	10,000
Costs (incurred and estimated)	<u>(8,900)</u>	<u>(8,500)</u>
Total Profit	1,100	1,500
Cumulative profit	30%	55%
	<u>330</u>	825
Less: Already recognised		<u>330</u>
		<u>495</u>

**Solution 49**

The correct answer is (A).

		\$
Cost	(on 1/7/00)	50,000
Depreciation	(to 30/6/01)	(10,000)
Depreciation	(to 30/6/02)	<u>(10,000)</u>
		30,000
Revaluation	(at 1/7/02)	<u>30,000</u>
		60,000
Depreciation	(to 30/6/03)	<u>(20,000)</u>
		40,000
Disposal	(on 1/7/03)	<u>(35,000)</u>
Loss on disposal recognised in income statement		<u>5,000</u>

In addition, the revaluation gain of \$30,000 becomes realised on disposal and can be transferred to accumulated profits. This is treated as a movement on reserves.

**Solution 50**

The correct answer is (C).

2,000,000 shares with 1 for 5 rights =	400,000	new shares
400,000 shares at a premium of \$1 =	\$400,000	
Less: Issue costs	<u>(\$25,000)</u>	
	<u>\$375,000</u>	

**Solution 51**

The correct answer is (B).

Operating leases commit the lessee to a short-term contract and it is not expected that the lease will remain in force for the whole life of the asset.

**Solution 52**

Cost	100,000
Two years depreciation at 10%	<u>(20,000)</u>
	80,000
Revaluation	<u>15,000</u>
	95,000
Depreciation at 12.5%	<u>(11,875)</u>
	83,125
Depreciation at 20%	<u>(16,625)</u>
Net book value	66,500
Either	
At valuation	95,000
Accumulated depreciation	<u>(28,500)</u>
Net book value	<u>66,500</u>
OR	
Alternative treatment allowed by IAS 16:	
At valuation	115,000
Accumulated depreciation	<u>(48,500)</u>
Net book value	<u>66,500</u>

✓ Solution 53

The correct answer is (D).

$$1 + r = (100/80)^{365/20}$$

$$1 + r = (1.0204)^{18.25}$$

$$1 + r = (1.446)$$

$$\text{Cost of discount} = 44.6\%$$

✓ Solution 54

The correct answer is (D).

All three propositions are correct.

✓ Solution 55

The correct answer is (B).

Settling the amounts owed to trade payables earlier will reduce the cash balance sooner and so will affect the cash forecasts.

✓ Solution 56

The correct answer is (C).

Interest is paid on the amount borrowed, rather than on the whole facility.

✓ Solution 57

The correct answer is (C).

✓ Solution 58

The correct answer is (C).

$$\text{EOQ} = \sqrt{\frac{2C_oD}{C_b}}$$

$$\text{Economic order quantity} = \sqrt{\frac{2 \times 185 \times 2,500}{25}} = 192 \text{ units}$$

$$\text{Frequency of ordering} = \frac{192}{2,500} \times 52 \text{ weeks} = 4 \text{ weeks}$$

✓ Solution 59

The correct answer is (B).



Solution 60

The correct answer is (D).

$$\text{Spread} = 3 \left[\frac{3/4 \times \text{transaction cost} \times \text{variance of cash flows}}{\text{interest rate}} \right]^{1/3}$$

$$\begin{aligned} \text{Spread} &= 3 \left(\frac{3/4 \times 20 \times 250,000}{0.00025} \right)^{1/3} = 7,400 \quad \text{Upper limit} = 7,400 + 1,000 \\ &= 8,400 \end{aligned}$$



Solution 61

The correct answer is (C).

$$\text{Optimal sale} = \sqrt{\frac{2 \times \text{annual cash disbursements} \times \text{cost per sale of securities}}{\text{interest rate}}}$$

$$Q = \sqrt{\frac{2 \times 1,260,000 \times 20}{0.08}} = 25,100$$



Solution 62

The correct answer is (C).

	\$
Closing trade receivables	120,000
Cash received	850,000
Opening trade receivables	<u>(150,000)</u>
Sales	<u>820,000</u>
Closing trade payables	<u>80,000</u>
Cash paid	325,000
Opening trade payables	<u>(90,000)</u>
Purchases	<u>315,000</u>
Sales	820,000
Cost of sales (\$315,000 – \$75,000)	<u>(240,000)</u>
Gross profit	<u>580,000</u>



Solution 63

The correct answer is (A).

$$\begin{aligned} \text{Quick ratio} &= \frac{\text{current assets} - \text{stock}}{\text{current liabilities}} \\ &= \frac{200,000}{250,000} = 0.8 \end{aligned}$$

**Solution 64**

The correct answer is (C).

$$\text{Optimal sale} = \sqrt{\frac{2 \times 1,850,000 \times 20}{0.06}} = 35,119$$

**Solution 65**

The correct answer is (C).

Cost of sales	=	40 million	×	80%	=	32 million
Receivable days	=	5/32	×	365	=	57
Inventory days	=	7/40	×	365	=	64
Payable days	=	2/32	×	365	=	(23)
					=	<u>98</u>

**Solution 66**

The correct answer is (C).

**Solution 67**

The correct answer is (C).

Purchases increase inventory and increase trade payables, leaving working capital unchanged.

$$\begin{aligned} \text{Profit on sales increase in WC} &= \$24,000 \times \frac{0.25}{1.25} \\ &= \$4,800 \end{aligned}$$

**Solution 68**

The correct answer is (C).

$$\$240,000 + \$12,000 = \$252,000$$

**Solution 69**

The correct answer is (A).

**Solution 70**

The correct answer is (C).



Solution 71

The correct answer is (C).



Solution 72

The correct answer is (A).



Solution 73

The correct answer is (B).



Solution 74

Accounting depreciation = cost – residual value = \$900,000 – \$50,000 = \$850,000
 \$850,000/5 = \$170,000 per year

	<i>2004/05</i>
	<i>\$000</i>
Cost	900
Depreciation	<u>(340)</u>
Carrying value	<u>560</u>
Tax base	<i>\$000</i>
Cost	900
First year allowance 50%	<u>(450)</u>
	450
30 September 25%	<u>(112)</u>
Tax base	<u>337</u>
	<i>2004/05</i>
	<i>\$000</i>
Carrying value	560.0
Tax base	<u>(337.5)</u>
	<u>222.5</u>
Tax at 30%	66.75
Required deferred tax provision	\$66,750



Solution 75

The correct answer is (A).



Solution 76

The correct answer is (A).



Solution 77

The correct answer is (C).

**Solution 78**

The correct answer is (B).

**Solution 79**

The correct answer is (C).

**Solution 80**

The correct answer is (D).

**Solution 81**

The correct answer is (B).

**Solution 82**

$$s = x (1 + r)^n$$

$$1,000 = 985 (1 + r)^{365/40}$$

$$1 + r = (1,000/985)^{9.125}$$

$$1 + r = 1.148$$

$$r = 14.8\%$$

Revision Questions II

Many of the questions in this chapter are prior examination questions.

Questions matched to learning outcomes

Learning Outcomes	Question Numbers
A – Principles of Business Taxation – 20%	
(i) Identify the principal types of taxation likely to be of relevance to an incorporated business in a particular country, including direct tax on the entity's trading profits and capital gains, indirect taxes collected by the entity, employee taxation, withholding taxes on international payments	
(ii) Describe the features of the principal types of taxation likely to be of relevance to an incorporated business in a particular country (e.g. in terms of who ultimately bears the tax cost, withholding responsibilities, principles of calculating the tax base)	2
(iii) Describe the likely record-keeping, filing and tax payment requirements associated with the principal types of taxation likely to be of relevance to an incorporated business in a particular country	
(iv) Describe the possible enquiry and investigation powers of taxing authorities	
(v) Identify situations in which foreign tax obligations (reporting and liability) could arise and methods for relieving foreign tax	
(vi) Explain the difference in principle between tax avoidance and tax evasion	
(vii) Describe sources of tax rules and explain the importance of jurisdiction	
(viii) Explain and apply the accounting rules contained in IAS 12 for current and deferred taxation	1, 3, 24
B – Principles of Regulation of Financial Reporting – 10%	
(i) Explain in need for regulation of published accounts and the concept that regulatory regimes vary from country to country	
(ii) Explain potential elements that might be expected in a regulatory framework for published accounts	
(iii) Describe the role and structure of the International Accounting Standards Board (IASB) and the International Organisation of Securities Commissions (IOSCO)	
(iv) Explain the IASB's <i>Framework for the Presentation and Preparation of Financial Statements</i>	5, 6, 11, 12
(v) Describe the process leading to the promulgation of an international accounting standard (IAS)	8(a), 42
(vi) Describe ways in which IAS's can interact with local regulatory frameworks	

(vii) Explain in general terms, the role of the external auditor, the elements of the audit report and types of qualification of that report	8(b), 9, 10
C – Single Entity Financial Accounts – 45%	
(i) Prepare financial statements in a form suitable for publication, with appropriate notes	4, 27
(ii) Prepare a cash flow statement in a form suitable for publication	13, 14, 15
(iii) Explain and apply the accounting rules contained in IAS's dealing with reporting performance, tangible non-current assets and inventories	7, 16, 17 18,21,43
(iv) Explain the accounting rules contained in IAS's governing share capital transactions	20
(v) Explain the principles of the accounting rules contained in IAS's dealing with disclosure of related parties to a business, construction contracts (and related financing costs), research and development expenditure, intangible non-current assets (other than goodwill on consolidation), impairment of assets, post-balance sheet events, contingencies, and leases (lessee only)	19, 22, 23 25, 26
D – Managing Short-Term Finance – 25%	
(i) Calculate and interpret working capital ratios for business sectors	29, 32, 40
(ii) Prepare and analyse cash-flow forecasts over a 12-month period	28, 33, 35
(iii) Identify measures to improve a cash forecast situation	36
(iv) Compare and contrast the use and limitations of cash management models and identify when each model is most appropriate	39
(v) Analyse trade receivable information	
(vi) Evaluate receivable and payable policies	34
(vii) Evaluate appropriate methods of inventory management;	30, 31
(viii) Identify alternatives for investment of short-term cash surpluses	41
(ix) Identify sources of short-term funding	37, 38
(x) Identify appropriate methods of finance for trading internationally	

? Question 1

On 1 January 2003 TX had an opening debit balance of \$12,000 on its income tax account, which represented the balance remaining after settling its tax liability for the previous year. TX had a credit balance on its deferred tax account of \$990,000 at the same date.

TX has been advised that the estimated income tax due for the year ended 31 December 2003 will be \$600,000. TX has been advised that it should increase its deferred tax account by \$100,000.

Requirement

Prepare extracts from the income statement for the year ended 31 December 2003, balance sheet at that date and notes to the accounts showing the tax entries required.

(5 marks)

? Question 2

BC commenced business on 1 January 2001, making up the first accounts for the year to 31 December 2001.

The entity's purchases and sales of non-current assets were as follows:

			\$
<i>Purchases</i>			
2001	1 January	Industrial building	400,000
	1 January	Plant	60,000
2004	1 January	Plant	75,000
<i>Sales</i>			
2004	31 December	Plant bought on 1 January 2001	10,000

BC qualifies for accelerated first-year allowance on the plant at the rate of 50% for the first year. The second and subsequent years will be at 25% on the reducing balance method.

The industrial building qualifies for an annual tax depreciation allowance of 3% on the straight line basis.

Calculate BC's tax depreciation for the years ended 31 December 2001, 2002 and 2003.

(5 marks)

? Question 3

CD purchases an item of plant and machinery costing \$300,000 in 20X1 which qualifies for 33.33% capital allowances (on straight-line basis) in the first three years. CD's policy in respect of plant and machinery is to charge depreciation on a straight line basis over 5 years.

Requirement

Assuming there are no other capital transactions in the period and a tax rate of 25% over the 5 years, calculate the income statement and balance sheet impact of deferred tax from 20X1 to 20X5.

(5 marks)

? Question 4

AF is a furniture manufacturing entity. The trial balance for AF at 31 March 2005 was as follows:

	<i>\$000</i>	<i>\$000</i>
6% loan notes (redeemable 2010)		1,500
Accumulated profits at 31 March 2004		388
Administrative expenses	1,540	
Available for sale investments at market value at 31 March 2004	1,640	
Bank and cash	822	
Cost of sales	3,463	
Distribution costs	1,590	
Dividend paid 1 December 2004	275	
Interest paid on loan notes – half year to 30 September 2004	45	
Inventory at 31 March 2005	1,320	
Investment income received		68
Land and buildings at cost	5,190	
Ordinary shares of \$1 each, fully paid		4,500
Plant and equipment at cost	3,400	
Provision for deferred tax		710
Provisions for depreciation at 31 March 2004: Buildings		1,500
Provisions for depreciation at 31 March 2004: Plant and equipment		1,659
Revaluation reserve		330
Sales revenue		8,210
Share premium		1,380
Trade payables		520
Trade receivables	<u>1,480</u>	
	<u>20,765</u>	<u>20,765</u>

Additional information provided:

- (i) Available for sale investments are carried in the financial statements at market value. The market value of the available for sale investments at 31 March 2005 was \$1,750,000.
- (ii) There were no sales or purchases of non-current assets or available for sale investments during the year ended 31 March 2005.
- (iii) Income tax due for the year ended 31 March 2005 is estimated at \$250,000. There is no balance outstanding in relation to previous years' corporate income tax. The deferred tax provision needs to be increased by \$100,000.
- (iv) Depreciation is charged on buildings using the straight-line basis at 3% each year. The cost of land included in land and buildings is \$2,000,000. Plant and equipment is depreciated using the reducing balance method at 20%. Depreciation is regarded as a cost of sales.
- (v) AF entered into a non-cancellable five-year operating lease on 1 April 2004 to acquire machinery to manufacture a new range of kitchen units. Under the terms of the lease, AF will receive the first-year rent-free, then \$62,500 is payable for four years commencing in year two of the lease. The machine is estimated to have a useful economic life of 20 years.
- (vi) The 6% loan notes are 10-year loans due for repayment March 2010. AF incurred no other finance costs in the year to 31 March 2005.

Requirement

Prepare the income statement for AF for the year to 31 March 2005 and a balance sheet at that date, in a form suitable for presentation to the shareholders and in accordance with the requirements of International Financial Reporting Standards.

Notes to the financial statements are *not* required, but all workings must be clearly shown. Do not prepare a statement of accounting policies or a statement of changes in equity.

(20 marks)



Question 5

Requirement

List the *five* elements of financial statements defined in the IASB's *Framework* and explain the meaning of each.

(5 marks)



Question 6

BG provides office cleaning services to a range of organisations in its local area. BG operates through a small network of depots that are rented spaces situated in out-of-town industrial developments. BG has a policy to lease all vehicles on operating leases.

The trial balance for BG at 30 September 2005 was as follows:

	\$000	\$000
10% bonds (redeemable 2010)		150
Administrative expenses	239	
Available for sale investments at market value at 30 September 2004	205	
Bank and cash	147	
Bond interest paid – half year to 31 March 2005	8	
Cost of cleaning materials consumed	101	
Direct operating expenses (including cleaning staff)	548	
Dividend paid	60	
Equipment and fixtures, cost at 30 September 2005	752	
Equity shares \$1 each, fully paid		200
Income tax	9	
Inventory of cleaning materials at 30 September 2005	37	
Investment income received		11
Provision for deferred tax		50
Provision for depreciation at 30 September 2004:		
Equipment and fixtures		370
Provision for legal claim balance at 30 September 2004		190
Retained earnings at 30 September 2004		226
Revaluation reserve at 30 September 2004		30
Revenue		1,017
Share premium		40
Trade payables		24
Trade receivables	141	
Vehicle operating lease rentals paid	61	
	<u>2,308</u>	<u>2,308</u>

Additional information:

- (i) Available for sale investments are carried in the financial statements at market value. The market value of the available for sale investments at 30 September 2005 was \$225,000. There were no purchases or sales of available for sale investments held during the year.
- (ii) The income tax balance in the trial balance is a result of the underprovision of tax for the year ended 30 September 2004.
- (iii) The taxation due for the year ended 30 September 2005 is estimated at \$64,000 and the deferred tax provision needs to be increased by \$15,000.
- (iv) Equipment and fixtures are depreciated at 20% per annum straight line. Depreciation of equipment and fixtures is considered to be part of direct cost of sales. BG's policy is to charge a full year's depreciation in the year of acquisition and no depreciation in the year of disposal.
- (v) The 10% bonds were issued in 2000.
- (vi) BG paid an interim dividend during the year, but does not propose to pay a final dividend as profit for the year is well below expectations.
- (vii) At 30 September 2004, BG had an outstanding legal claim from a customer alleging that BG had caused a major fire in the customer's premises. BG was advised that it would very probably lose the case, so a provision of \$190,000 was set up at 30 September 2004. During 2005, new evidence was discovered and the case against BG was dropped. As there is no further liability, the directors have decided that the provision is no longer required.

Requirement

Prepare the income statement and a statement of changes in equity for BG for the year to 30 September 2005 and a balance sheet at that date, in a form suitable for presentation to the shareholders and in accordance with the requirements of International Financial Reporting Standards.

Notes to the financial statements are *not* required, but all workings must be clearly shown. All workings should be to the nearest \$000. *Do not* prepare a statement of accounting policies.

(20 marks)**? Question 7**

IAS 1 *Presentation of Financial Statements (revised)* recommends that the income statement and balance sheet should be laid out in prescribed formats. These statements should also be supplemented by a number of further disclosures, which are usually presented in the form of notes to the income statement and the balance sheet.

Requirements

- (a) Explain how the requirement to present the income statement and balance sheet in prescribed formats helps the readers of financial statements. **(7 marks)**
- (b) Briefly describe two notes to the financial statements which are typically found in a set of published financial statements and which are provided in response to IAS 1 *Presentation of Financial Statements (revised)* disclosure requirements. Explain why this information is useful to the readers of financial statements. **(8 marks)**

(Total marks = 15)**? Question 8**

One of your friends has recently decided to invest in some quoted securities. He is, however, concerned that the entities in which he is interested may have inflated their share prices by publishing misleading financial statements. He is aware that the accountancy profession has established a standard-setting body, but has read that this entity is subject to a number of influences.

Requirements

- (a) Explain how the International Accounting Standards Board (IASB) goes about setting an international financial reporting standard (IFRS). Explain how the process could be influenced by the preparers of financial statements. **(8 marks)**
- (b) Explain the procedures which must be followed if an entity's management and auditors consider that the application of the requirements of an accounting standard would give a misleading impression. **(7 marks)**

(Total marks = 15)

? Question 9

The latest annual report of G contained the following audit report:

Auditor's report to the shareholders of GC

Disagreement on accounting treatment – failure to allow for debt – qualified opinion

We have audited the accompanying balance sheet of GC as of 31 December, 20X1, and the related statements of income and cash flows for the year then ended. These financial statements are the responsibility of the entity's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with International Standards on Auditing. Those Standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

Included in the receivables shown on the balance sheet is an amount of \$960,000 due from an entity which has ceased trading. GC has no security for this debt. In our opinion, GC is unlikely to receive any payment and full allowance of \$960,000 should have been made, reducing profit before tax and net assets by that amount.

In our opinion, except for the absence of this allowance, the financial statements give a true and fair view of the entity as of 31 December 20X1, and of the results of its operations and its cash flows for the year then ended in accordance with International Accounting Standards and relevant statutes.

AUDITOR

Date

Address

At the annual general meeting following the publication of this annual report, GC's management explained that this audit report was 'qualified' because of a disagreement between the management and the auditor.

Requirements

- Explain why this report should be described as qualified and explain the meaning of this qualification to the readers of the financial statements. **(8 marks)**
- Describe the circumstances in which the auditor would be forced to qualify the report on the financial statements using the form of qualification as applied above.

(8 marks)

(Total marks = 16)

? Question 10

A friend has asked you for some advice. She owns some shares in S, a large quoted entity. The external auditor of her entity has recently been criticised for failing to detect a staff fraud. The auditor has rejected the criticisms on the grounds that the fraud was not, in itself, material and, in any case, it is not the auditor's responsibility to prevent or detect all fraud.

Requirements

- (a) Explain what is meant by ‘materiality’ and describe the importance of the concept of materiality in the audit process. **(8 marks)**
- (b) Describe the auditor’s duties with respect to the financial statements, explaining why it is not the auditor’s duty to detect all fraud. **(8 marks)**

(Total marks = 16)**Question 11**

It has been suggested that accounting information should be both relevant and reliable, but that more of one may mean less of the other. (In this context, relevance would imply that the information was useful for decision-making while reliability would suggest that it is free from error or bias.)

Requirement

Explain why there may be a conflict between the characteristics of relevance and reliability, and state, with reasons, which of these you consider to be the more important in financial reporting. **(8 marks)**

**Question 12**

The International Accounting Standards Board’s (IASB’s) Framework for the preparation and presentation of financial statements (*Framework*) identifies four principal qualitative characteristics of financial information.

Requirement

Identify and explain *each* of the *four* principal qualitative characteristics of financial information listed in the IASB’s Framework. **(5 marks)**

**Question 13**

The following information relates to Z:

Income statement for the year ended 30 September 20X8

	<i>\$000</i>
Revenue	8,000
Cost of sales	<u>(4,500)</u>
	3,500
Other operating expenses	<u>(1,000)</u>
	2,500
Finance cost	<u>(14)</u>
Profit before tax	2,486
Income tax	<u>(800)</u>
	<u>1,686</u>

Balance sheets at 30 September

	20X8		20X7	
	\$000	\$000	\$000	\$000
Non-current assets		8,100		6,800
Current assets				
Inventories	800		600	
Receivables	670		620	
Bank	<u>80</u>	<u>1,550</u>	<u>300</u>	<u>1,520</u>
		<u>9,650</u>		<u>8,320</u>
Equity and liabilities				
Equity				
Share capital	1,100		1,000	
Share premium	509		225	
Retained earnings	<u>5,386</u>	6,995	<u>4,400</u>	5,625
Non-current liabilities				
Long-term loans		1,200		1,400
Current liabilities				
Payables	420		340	
Final dividend (declared before balance sheet date)	400		360	
Income tax	<u>635</u>	<u>1,455</u>	<u>595</u>	<u>1,295</u>
		<u>9,650</u>		<u>8,320</u>

During the year the entity purchased non-current assets costing \$1,900,000.
 Non-current assets which had a net book value of \$310,000 were sold for \$80,000.
 An interim dividend of \$300,000 was paid during the year.

Requirement

Use the above information to prepare a cash flow statement for Z for the year ended 30 September 20X8. **(15 marks)**

? Question 14

The financial statements of AG are given below:

<i>Balance sheets as at</i>	<i>31 March 2005</i>		<i>31 March 2004</i>	
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
<i>Non-current assets:</i>				
Plant, property and equipment	4,500		4,800	
Development expenditure	<u>370</u>	4,870	<u>400</u>	5,200
<i>Current assets:</i>				
Inventories	685		575	
Trade receivables	515		420	
Cash and cash equivalents	<u>552</u>	<u>1,752</u>	<u>232</u>	<u>1,227</u>
Total assets		<u>6,622</u>		<u>6,427</u>
<i>Equity and liabilities</i>				
Equity:				
Share capital	2,600		1,900	
Share premium account	750		400	
Revaluation reserve	425		300	
Retained earnings	<u>1,430</u>		<u>1,415</u>	
Total equity		5,205		4,015

<i>Non-current liabilities:</i>			
10% loan notes	0	1,000	
5% loan notes	500	500	
Deferred tax	<u>250</u>	<u>200</u>	
Total non-current liabilities:	750		1,700
<i>Current liabilities:</i>			
Trade payables	480	350	
Income tax	80	190	
Accrued expenses	<u>107</u>	<u>172</u>	
Total current liabilities:	<u>667</u>		<u>712</u>
<i>Total equity and liabilities</i>	<u>6,622</u>		<u>6,427</u>

Income statement for the year ended 31 March 2005

	\$000	\$000
Revenue		7,500
Cost of sales		<u>4,000</u>
Gross profit		3,500
Distribution costs	900	
Administrative expenses	<u>2,300</u>	<u>3,200</u>
Profit from operations		300
Finance costs		<u>45</u>
Profit before tax		255
Income tax expense		<u>140</u>
Profit for the period		<u>115</u>

Additional information:

- (i) On 1 April 2004, AG issued 1,400,000 \$0.50 ordinary shares at a premium of 50%.
- (ii) On 1 May 2004, AG purchased and cancelled all its 10% loan notes at par.
- (iii) Non-current tangible assets include properties which were revalued upwards by \$125,000 during the year.
- (iv) Non-current tangible assets disposed of in the year had a net book value of \$75,000; cash received on disposal was \$98,000. Any gain or loss on disposal has been included under cost of sales.
- (v) Cost of sales includes \$80,000 for development expenditure amortised during the year.
- (vi) Depreciation charged for the year was \$720,000.
- (vii) The accrued expenses balance includes interest payable of \$87,000 at 31 March 2004 and \$12,000 at 31 March 2005.
- (viii) The income tax expenses for the year to 31 March 2005 is made up as follows:

	\$000
Corporate income tax	90
Deferred tax	<u>50</u>
	<u>140</u>

- (ix) Dividends paid during the year were \$100,000.

Requirement

Prepare a cash flow statement, using the indirect method, for AG for the year ended 31 March 2005, in accordance with IAS 7 *Cash Flow Statements*.

(Total for Question Four = 20 marks)

? Question 15

Y's income statement for the year ended 31 December 20X2 and balance sheets at 31 December 20X1 and 31 December 20X2 were as follows:

Y – income statement for the year ended 31 December 20X2

	\$000	\$000
Revenue		360
Raw materials consumed	35	
Staff costs	47	
Depreciation	59	
Loss on disposal	<u>9</u>	
		(150)
Profit from operations		210
Interest payable		<u>(14)</u>
Profit before tax		196
Income tax		<u>(62)</u>
		<u>134</u>

Y: balance sheets at 31 December

	20X2		20X1	
	\$000	\$000	\$000	\$000
Non-current assets				
Cost		798		780
Depreciation		<u>159</u>		<u>112</u>
		639		668
Current assets				
Inventory	12		10	
Trade receivables	33		25	
Bank	<u>24</u>	<u>69</u>	<u>28</u>	<u>63</u>
		<u>708</u>		<u>731</u>
<i>Equity and liabilities</i>				
Equity				
Share capital		180		170
Share premium		18		12
Retained earnings		<u>343</u>		<u>245</u>
		541		427
Non-current liabilities				
Long-term loans		100		250
Current liabilities				
Trade payables	6		3	
Income Tax	46		39	
Dividend (declared before balance sheet date)	<u>15</u>	<u>67</u>	<u>12</u>	<u>54</u>
		<u>708</u>		<u>731</u>

During the year Y paid:

- \$45,000 for a new piece of machinery.
- \$21,000 interim dividend

Requirement

Prepare a cash flow statement for Y for the year ended 31 December 20X2 in accordance with the requirements of IAS 7 *Cash Flow Statements*. **(20 marks)**



Question 16

BJ is an entity that provides a range of facilities for holiday makers and travellers. At 1 October 2004 these included:

- a short haul airline operating within Europe; and
- a travel agency specialising in arranging holidays to more exotic destinations, such as Hawaii and Fiji.

BJ's airline operation has made significant losses for the last two years. On 31 January 2005, the directors of BJ decided that, due to a significant increase in competition on short haul flights within Europe, BJ would close all of its airline operations and dispose of its fleet of aircraft. All flights for holiday makers and travellers who had already booked seats would be provided by third party airlines. All operations ceased on 31 May 2005.

On 31 July 2005, BJ sold its fleet of aircraft and associated non-current assets for \$500 million, the carrying value at that date was \$750 million.

At the balance sheet date, BJ were still in negotiation with some employees regarding severance payments. BJ has estimated that in the financial period October 2005 to September 2006, they will agree a settlement of \$20 million compensation.

The closure of the airline operation caused BJ to carry out a major restructuring of the entire entity. The restructuring has been agreed by the directors and active steps have been taken to implement it. The cost of restructuring to be incurred in year 2005/2006 is estimated at \$10 million.

Requirement

Explain how BJ should report the events described above and quantify any amounts required to be included in its financial statements for the year ended 30 September 2005. (Detailed disclosure notes are not required.) **(5 marks)**

? Question 17

Emm is preparing a segmental report to include with its financial accounts prepared for the year ended 30 June 20X5. The following information has been taken from Emm's accounting records:

	20X5	20X4
	\$000	\$000
Sales made by group to European customers	352,450	325,060
Sales made by group to American customers	<u>317,205</u>	<u>292,554</u>
Sales made by group to other areas of the world	<u>35,245</u>	<u>32,506</u>
Sales made to customers outside the group by the electronic components division	255,000	240,420
Sales made to customers outside the group by the software division	193,000	164,000
Sales made to customers outside the group by the systems division	256,900	245,700
Assets used by the European entities	59,100	59,520
Assets used by the American entities	39,400	32,050
Assets used by the electronic components division	42,500	40,070
Assets used by the software division	19,300	16,400
Assets used by the systems division	36,700	35,100
Segmental net operating profit by industry		
Electronic components	76,500	72,126
Software	135,100	114,800
Systems	<u>115,605</u>	<u>110,565</u>
Consolidated segmental net operating profit	<u>327,205</u>	<u>297,491</u>
Segmental net operating profit by geographical area		
European	196,323	178,495
American	91,617	83,297
Other areas	<u>39,265</u>	<u>35,699</u>
Consolidated segmental net operating profit by geographical area	<u>327,205</u>	<u>297,491</u>

Requirements

- Prepare an industry and geographical segmental report for inclusion in the annual report which complies with IAS 14 *Segment Reporting* insofar as the information provided allows. **(8 marks)**
 - Explain why segment reports are useful to shareholders and describe the problems which limit their usefulness in practice. You may use your answer to part (a) to illustrate your explanation. **(12 marks)**
- (Total marks = 20)**

? Question 18

It can be difficult to determine precisely when a profit has been earned. Even a simple manufacturing process can create the following events, any of which might be deemed to be the critical event:

- customer places an order for goods which have not yet been manufactured,*
- raw materials acquired to fill order,*
- goods produced,*
- goods delivered,
- customer pays,
- customer makes use of agreed after-sales service or warranties.

(* If the customer places an order for goods that have already been manufactured then these steps will occur in the order (ii), (iii) then (i).)

Requirements

- (a) Explain which of the events (i) to (vi) listed above is the most sensible point at which to recognise a profit according to IAS 18 *Revenue*. **(6 marks)**
- (b) Publisher is an entity that publishes a range of popular fiction. The entity has recently launched a new novel written by one of its established authors. Publisher has entered into the following contracts:
- (i) *Bigseller books*. This is a large chain of bookstores. Publisher has supplied Bigseller Books with a large number of copies of the new novel on a 'sale or return basis'. This is a common arrangement in book publishing. From experience, Publisher expects approximately 20 per cent of the books to be returned for a full refund.
 - (ii) *Smallfry bookseller*. This is a small independent bookshop. Publisher has supplied 20 copies of the new novel to Smallfry Bookseller. Publisher's conditions are far less attractive for small customers and Smallfry cannot return any of the books unless it pays a substantial administration fee. Publisher rarely has any returns from small customers operating under these conditions.
 - (iii) *Newspro*. Newspro publishes a leading Sunday newspaper. It has signed a contract which will allow it to publish three substantial extracts from the new novel in return for a fee of \$800,000.

You are required to explain how the principles for recognising income, as defined in IAS 18 *Revenue*, would apply to each of the cases (i) to (iii) above. **(9 marks)**

(Total marks = 15)

**Question 19**

V is a large manufacturing entity. During the year the entity entered into the following transactions:

- (a) Q Consultancy undertook a comprehensive study of V's marketing practices and submitted a detailed report. The fee for this work amounted to \$67,000. The husband of V's finance director owns Q Consultancy.
- (b) Hector own 22 per cent of V's ordinary shares. During the year the entity ordered a substantial quantity of inventory from H, an entity that is wholly owned by Hector. H charged its normal selling price and required payment under its normal terms and conditions.

Requirements

- (a) Explain whether either Q Consultancy or H are related parties, as defined by IAS 24 *Related Party Disclosures*. **(6 marks)**
- (b) Explain how the transactions described above should be treated in V's financial statements. **(6 marks)**

(Total marks = 12)

? Question 20

R's latest balance sheet is shown below:

R – balance sheet as at 31 December 20X0		
	<i>\$000</i>	<i>\$000</i>
Non-current assets		4,800
<i>Net current assets</i> (excluding cash)	2,100	
Cash	<u>850</u>	
		<u>2,950</u>
		<u>7,750</u>
Equity and liabilities		
\$1 ordinary shares		2,500
8% redeemable preference shares		1,000
Share premium		2,200
Retained earnings		<u>2,050</u>
		<u>7,750</u>

The redeemable preference shares were originally issued at par to an entity which supports new businesses. The terms of the redemption are that R must pay a premium of 10 per cent on redemption.

The directors have decided to redeem the shares. They plan to issue 600,000 \$1 ordinary shares at a premium of 20 cents per share. The balance of the redemption will be paid for from the entity's existing cash balances.

The legal requirements in force in this situation in the country in which R is resident are:

- (i) An amount equal to the nominal value of shares redeemed must be transferred from retained earnings to a non-distributable capital reserve, unless they are redeemed out of a new issue of shares;
- (ii) Any premium on redemption must be charged against retained earnings.

Requirements

- (a) Prepare R's balance sheet, showing how it will appear immediately after the redemption of the redeemable preference shares and the issue of the fresh ordinary shares. **(10 marks)**
 - (b) Explain the purpose of the required transfer to capital reserve. **(5 marks)**
- (Total marks = 15)**

? Question 21

T is a manufacturing entity which produces several product ranges at a number of factories spread across the country.

The directors of T have asked for your advice on the following issues relating to tangible non-current assets.

- (i) The entity is in the process of building a new factory. T is required to pay for the construction work in instalments throughout the building work. T has arranged a loan to cover the cost of the new factory. The directors are unsure whether they should capitalise the interest costs as part of the cost of the factory.
- (ii) The entity has a production line in an existing factory. This line is used to manufacture a product which has a declining market. The production line has a net book value of \$2.3m. The line could be dismantled and sold for \$0.9 m. T's accountants have estimated that if

the production line is retained, it will generate net cash flows worth \$1.1m to the entity. The directors are unsure whether an impairment has occurred on this asset and, if so, how the asset should be valued.

- (iii) The directors are concerned about the valuation of the entity's delivery vehicle engine division. This division has three factories in different parts of the entity. The capacity of all three factories taken together exceeds demand for the engines that the entity makes. However, there is insufficient slack capacity to enable the entity to close down even one of the factories. The directors are unsure how to identify the income-generating unit for the delivery vehicle engine division.

Requirements

- (a) Describe the arguments both for and against the capitalisation of interest charges on the construction of non-current assets. Explain why IAS 23 *Borrowing Costs* requires consistency in this area, even though it does not specify a correct treatment.
- (b) Calculate the value that should appear in respect of the book value of the production line in (ii) above. Your answer should reflect the requirements of IAS 35 *Impairment of Assets*.
- (c) Identify the income-generating unit associated with the delivery vehicle engine division and explain why IAS 36 *Impairment of Assets* has created the concept of the income-generating unit.

(5 marks)

(5 marks)

(5 marks)

(Total marks = 15)



Question 22

C is a major computer manufacturer. The entity has incurred the following expenditure during the year ended 31 December 20X0:

- (i) \$130,000 paid to the University of Teetown to sponsor a research project which will investigate the properties of a new material that may have some uses in manufacturing high-capacity computer disks.
- (ii) \$2.6 million on the design of a new computer screen which provides a larger, clearer display than existing monitors and at a lower selling price. The screen is to be launched at a major technology fair in the spring of 20X1 and will be sold to the general public immediately thereafter.
- (iii) \$500,000 on market research into the desirability of the new computer screen to end user.
- (iv) \$1.2 million on the design of a new printer. This will be a highly profitable product when it is sold eventually, but design work has been suspended for the moment because the designers cannot identify a suitable material for the print heads. All existing materials that have been tried so far have either been too heavy or too weak.

Requirement

Classify each of these projects as research or as development, as defined by IAS 38 *Intangible Assets*, and explain how it should be accounted for.

(12 marks)

? Question 23

B commenced trading on 1 January 20X4. The entity entered into three long-term construction contracts during the year. Details of the contracts were as follows:

<i>Expected contract period</i>	<i>(i)</i> <i>3 years</i>	<i>(ii)</i> <i>2 years</i>	<i>(iii)</i> <i>4 years</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Agreed contract price (fixed)	800	300	440
At 31 December 20X4			
Costs to date	100	100	180
Progress payments	160	80	140
Further estimated costs to completion	400	150	360
Value of work to date agreed by architect	160	120	150
At 31 December 20X5			
Costs to date	240	240	380
Progress payments	320	220	300
Further estimated costs to completion	280	–	180
Value of work to date agreed by architect	360	300	320

The entity's accounting policy is to take credit on all contracts for that proportion of the estimated final profit on completion which the value of work completed to date, as certified by the architect, bore to the total contract price. Expected losses are provided for as soon as they are foreseen.

Requirement

Show how the contracts would appear in B's income statements for each of the years ended 31 December 20X4 and 20X5 and balance sheets as at those dates. **(15 marks)**

? Question 24

The following figures were used by H in order to calculate the provision for deferred taxation in its balance sheet as at 31 March 20X0:

Net book value of non-current assets according to balance sheet	\$850,000
Tax written-down value of non-current assets	\$450,000

The actual depreciation charge for the year ended 31 March 20X1 was \$140,000 and the actual tax allowances claimed amounted to \$210,000.

Assume an income tax rate of 30 per cent throughout.

Requirements

- Calculate H's liability for deferred tax as at 31 March 20X1 and 31 March 20X2. **(4 marks)**
 - Explain the purpose of the provision for deferred taxation. **(6 marks)**
- (Total marks = 10)**

? Question 25

D is a large paper manufacturing entity. The entity's finance director is working on the published accounts for the year ended 31 March 20X3. The chief accountant has prepared

the following list of problems which will have to be resolved before the statements can be finalised:

(a) *Events occurring after the balance sheet date (LAS 10)*

A fire broke out at the entity's Westtown factory on 4 April 20X3. This has destroyed the factory's administrative block. Many of the costs incurred as a result of this fire are uninsured.

A major customer went into liquidation on 27 April 20X3. The customer's balance at 31 March 20X3 remains unpaid. The receiver has intimated that unsecured payables will receive very little compensation, if any. **(6 marks)**

(b) *Possible development expenditure (LAS 38)*

The entity paid the engineering department at Northtown University a large sum of money to design a new pulping process which will enable the use of cheaper raw materials. This process has been successfully tested in the university's laboratories and is almost certain to be introduced at D's pulping plant within the next few months.

The entity paid a substantial amount to the university's biology department to develop a new species of tree which could grow more quickly and therefore enable the entity's forests to generate more wood for paper manufacturing. The project met with some success in that a new tree was developed. Unfortunately, it was prone to disease and the cost of the chemical sprays needed to keep the wood healthy rendered the tree uneconomic. **(8 marks)**

(c) *Possible contingent liabilities (LAS 37)*

One of the entity's employees was injured during the year. He had been operating a piece of machinery which had been known to have a faulty guard. The entity's lawyers have advised that the employee has a very strong case, but will be unable to estimate likely financial damages until further medical evidence becomes available.

One of the entity's customers is claiming compensation for losses sustained as a result of a delayed delivery. The customer had ordered a batch of cut sheets with the intention of producing leaflets to promote a special offer. There was a delay in supplying the paper and the leaflets could not be prepared in time. The entity's lawyers have advised that there was no specific agreement to supply the goods in time for this promotion and, furthermore, that it would be almost impossible to attribute the failure of the special offer to the delay in the supply of the paper. **(8 marks)**

Requirement

Explain how each of these matters should be dealt with in the published accounts for the year ended 31 March 20X3 in the light of the accounting standards referred to above. You should assume that the amounts involved are material in every case. **(Total marks = 22)**



Question 26

H needs to acquire a highly specialised piece of machinery costing \$1,200,000 and which has an estimated useful life of ten years. They have asked a finance entity to provide them with an estimate for the cost of acquiring this item. The finance entity has offered the following alternatives:

- *Package 1.* A term loan of \$1,200,000, commencing on 1 April 20X0. This will be repaid by means of a series of 10 annual repayments of \$195,300. The first repayment will be due one year after the loan is granted. This is equivalent to an interest rate of 10 per cent per annum.

- *Package 2.* The finance entity could purchase the machine and lease it to H for 10 years from 1 April 20X0. H would pay \$195,300 per annum with the first payment due on the day that the machine is delivered. The finance entity states that this package is based on an interest rate of 17 per cent per annum. Discounting the lease payments at 17 per cent gives a net present value of \$1,064,496.

The directors of H chose Package 2 on the grounds that it could be treated as an operating lease and would, therefore, have a less damaging effect on the entity's balance sheet. This was despite the obvious commercial benefits of Package 1.

Requirements

- (a) Show how the acquisition of the machine under each of the two packages would affect H's income statement for the year ended 31 March 20X1 and balance sheet and their related notes as at that data. Assume that the first instalment was paid on 31 March 20X1. **(10 marks)**
- (b) Use your figures to explain why the directors preferred Package 2. **(5 marks)**
(Total marks = 15)

? Question 27

Hi, listed on its local stock exchange, is a retail organisation operating several retail outlets. A reorganisation of the entity was started in 2002 because of a significant reduction in profits. This reorganisation was completed during the current financial year.

The trial balance for Hi at 30 September 2003 was as follows:

	\$000	\$000
10% loan notes (redeemable 2010)		1,000
Retained earnings at 30 September 2002		1,390
Administrative expenses	615	
Bank and cash	959	
Buildings	11,200	
Cash received on disposal of equipment		11
Cost of goods sold	3,591	
Distribution costs	314	
Equipment and fixtures	2,625	
Interest paid on loan notes – half year to 31 March 2003	50	
Interim dividend paid	800	
Inventory at 30 September 2003	822	
Investment income received		37
Non-current asset investments at market value 30 September 2002	492	
Ordinary shares of \$1 each, fully paid		4,000
Provision for deferred tax		256
Provision for reorganisation expenses at 30 September 2002		1,010
Provisions for depreciation at 30 September 2002:		
Buildings		1,404
Equipment and fixtures		1,741
Reorganisation expenses	900	
Revaluation reserve		172
Sales revenue		9,415
Share premium		2,388
Trade payables		396
Trade receivables	852	
	<u>23,220</u>	<u>23,220</u>

Additional information provided

- (i) The reorganisation expenses relate to a comprehensive restructuring and reorganisation of the entity that began in 2002. Hi's financial statements for 2002 included a provision for reorganisation expenses of \$1,010,000. All costs had been incurred by the year end, but an invoice for \$65,000, received on 2 October 2003, remained unpaid and is not included in the trial balance figures. No further restructuring and reorganisation costs are expected to occur and the provision is no longer required.
- (ii) Non-current asset investments are carried in the financial statements at market value. The market value of the non-current asset investments at 30 September 2003 was \$522,000. There were no movements in the investments held during the year.
- (iii) On 1 November 2003, Hi was informed that one of its customers, X, had ceased trading. The liquidators advised Hi that it was very unlikely to receive payment of any of the \$45,000 due from X at 30 September 2003.
- (iv) Another customer is suing for damages as a consequence of a faulty product. Legal advisers are currently advising that the probability of Hi being found liable is 75%. The amount payable is estimated to be the full amount claimed of \$100,000.
- (v) The income tax due for the year ended 30 September 2003 is estimated at \$1,180,000 and the deferred tax provision needs to be increased to \$281,000.
- (vi) During the year, Hi disposed of old equipment for \$11,000. The original cost of this equipment was \$210,000 and accumulated depreciation at 30 September 2002 was \$205,000. Hi's accounting policy is to charge no depreciation in the year of the disposal.
- (vii) Depreciation is charged using the straight-line basis on non-current assets as follows:
- | | |
|------------------------|-----|
| Buildings | 3% |
| Equipment and fixtures | 20% |
- Depreciation is regarded as a cost of sales.
- (viii) On 1 April 2003, Hi made a rights issue of 1 new share for 4 existing shares, at a price of \$3. The fair value of one share prior to the rights issue was \$4.25 per share. All the rights were taken up and all money paid by 30 September 2003.

Requirements

- (a) Prepare the income statement for Hi for the year to 30 September 2003 and a balance sheet at that date, in a form suitable for presentation to the shareholders, in accordance with the requirements of International Accounting Standards.
- Notes to the financial statements are NOT required, but all workings must be clearly shown. DO NOT prepare a statement of accounting policies or a statement of recognised gains and losses.

(20 marks)

- (b) Prepare a statement of changes in equity for Hi for the year ended 30 September 2003.

(5 marks)**(Total marks = 25)****Question 28**

BB is a private sector training entity, which provides short courses and various in-house courses for large employers.

BB's forecast financial statements for the year ended 31 December includes the following:

Forecast Balance Sheet at 31 December 2005 (extract)

Current assets:	
Trade receivables: In-house training courses	\$34,100
Bank	\$12,460

Forecast Income Statement for the year ended 31 December 2005 (extract)

Revenue: In-house training courses	\$125,000
------------------------------------	-----------

BB is preparing its budgets for the year 1 January 2006 to 31 December 2006, but the cash budget has not yet been completed. The Finance Director is concerned about the cash flow forecast for the first six months and has asked you, a trainee management accountant, to prepare a cash budget for the six months from January to June 2006 from the budgeted information provided.

Budgeted revenue

Short training courses

Short training courses budgeted charge \$100 per person per course.

Short courses are generally one night a week for four weeks commencing on the first of each month, except December and January.

<i>Budgeted short course information:</i>	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>	<i>Jul</i>
Number of courses	0	2	3	3	4	4	4
Forecast students per course	0	10	12	12	14	13	15

BB expects to receive payment in advance of each course. Experience shows that, on average, one-third of students pay one month in advance and the rest pay on the first day of the course.

In-house training courses

The exact number and type of in-house training courses is unknown at present but, during 2006, BB is expecting to earn \$130,000 spread evenly throughout the year. Based on previous experience, the following receipts are forecast:

	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>
In-house training course fee receipts (including trade receivables at 31 December 2005)	\$5,000	\$8,000	\$10,000	\$11,000	\$12,000	\$6,000

BB has previously experienced problems of slow payment from some large employers and is monitoring the trade receivables collection period.

Budgeted expenditure

BB employs permanent full-time members of staff to run the entity and provide key lecturing skills. Most of the trainers are part-time tutors at an hourly rate.

<i>Budgeted wages 2006</i>	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>
Part-time tutor wages	\$0	\$2,500	\$4,000	\$4,000	\$5,000	\$6,000

Permanent staff salaries are currently \$4,000 a month. All full-time staff will receive an increase of 5% from 1 March 2006.

BB rents the premises for \$2,500 a year, payable in quarterly instalments in January, April, July and October.

Teaching materials, printing and photocopying average \$150 per short course (paid in the month of the course). The in-house courses cost, on average, \$100 per month.

Budgeted payments in respect of overheads (electricity, telephone and so on) for January and April are \$1,500 and for February, March, May and June are \$600.

Capital expenditure in the first six months of 2006 is planned as follows:

- (i) New furniture for the managing director's office \$5,000 payable in April.
- (ii) BB needs to replace all the IT equipment in one of its computer labs early in 2006. This is currently planned to take place in April, with payment in May 2006. The budgeted cost of the equipment is \$40,000 for 20 top-of-the-range PCs and related equipment.

Other information

BB has negotiated an overdraft facility with the bank for an overdraft up to \$5,000.

Requirements

- (a) Calculate BB's in-house training course trade receivables days outstanding
 - (i) according to the forecast at 31 December 2005;
 - (ii) according to the projected figures at 30 June 2006, assuming the revenue and cash flow budgets are implemented. **(5 marks)**
- (b) Prepare BB's cash budget for the first six months of 2006 (January to June). **(10 marks)**
- (c) Advise BB of any actions it can take to make sufficient funds available to purchase the new technology as budgeted in May 2006. **(5 marks)**
(20 marks)



Question 29

BH purchased a bond with a face value of \$1,000 on 1 June 2003 for \$850. The bond has a coupon rate of 7%. BH intends holding the bond to its maturity on 31 May 2008 when it will repay its face value.

Requirements

- (i) Explain the difference between the coupon rate of a security and its yield to maturity. **(2 marks)**
- (ii) Calculate the bond's yield to maturity. **(3 marks)**
(5 marks)



Question 30

BF manufactures a range of domestic appliances. Due to past delays in suppliers providing goods, BF has had to hold an inventory of raw materials, in order that the production could continue to operate smoothly. Due to recent improvements in supplier reliability, BF is re-examining its inventory holding policies and recalculating economic order quantities (EOQ).

- Item “Z” costs BF \$10.00 per unit
- Expected annual production usage is 65,000 units
- Procurement costs (cost of placing and processing one order) are \$25.00
- The cost of holding one unit for one year has been calculated as \$3.00

The supplier of item “Z” has informed BF that if the order was 2,000 units or more at one time, a 2% discount would be given on the price of the goods.

Requirements

- (i) Calculate the EOQ for item “Z” before the quantity discount. **(2 marks)**
- (ii) Advise BF if it should increase the order size of item “Z” so as to qualify for the 2% discount. **(3 marks)**
(5 marks)



Question 31

A firm estimates that it uses 50,000 units of Material B each year to produce its only product. The order costs are \$100 per order and holding costs are \$0.40 per unit.

- (a) Determine the economic order quantity. **(5 marks)**
 - (b) The supplier has offered a quantity discount of \$0.02 per unit if the entity buys batches of 10,000 units. Should the entity take advantage of the quantity discount? **(8 marks)**
 - (c) Discuss the problems that most firms would have in using the EOQ formula. **(7 marks)**
- (Total marks = 20)**



Question 32

Z Industries is an operating subsidiary of a large quoted entity. Group management makes use of net current asset and liquidity ratios to evaluate period-end balance sheets. There is concern that the control exercised by Z Industries over its working capital is less than adequate.

The parent entity establishes targets for inventories, trade receivables and payables and monitors how the subsidiary achieves those targets. For Z Industries it expects:

- (i) inventories to be no more than 10 per cent of sales;
- (ii) trade receivables to be equal to no more than 2.5 months’ credit sales;
- (iii) payables to be equal to no less than 2.5 months’ purchases.

Cash is subject to control limits. Money is put on short-term deposit when holdings exceed 110 per cent of target. This target is the residual arrived at by reference to group norms for the net current assets ratio after the targets referred to above have been applied. When cash holdings drop below 90 per cent of target, withdrawal is made from interest-bearing accounts to meet the target holding.

Requirements

- (a) to discuss what shortcomings are inherent in the adoption of the above criteria; **(10 marks)**
- (b) to explain how the setting of a working capital target based on actual revenue may be more or less appropriate than that based on a forecast; **(10 marks)**
- (c) to suggest how trade receivables' balances may be monitored more appropriately. **(5 marks)**
- (Total marks = 25)**

? Question 33

CBA is a manufacturing entity in the furniture trade. Its sales have risen sharply over the past 6 months as a result of an improvement in the economy and a strong housing market. The entity is now showing signs of 'overtrading' and the financial manager, Ms Smith, is concerned about its liquidity. The entity is one month from its year end. Estimated figures for the full 12 months of the current year and forecasts for next year, on present cash management policies, are shown below.

	<i>Next year</i> \$000	<i>Current year</i> \$000
Income statement		
Revenue	5,200	4,200
Less		
Cost of sales (Note 1)	(3,224)	(2,520)
Operating expenses	(650)	(500)
Operating profit	1,326	1,180
Interest paid	(54)	(48)
Profit before tax	1,272	1,132
Tax payable	(305)	(283)
Profit after tax	<u>967</u>	<u>849</u>
Dividends declared	387	339
Current assets and liabilities as at the end of the year		
Inventory/work in progress	625	350
Trade receivables	750	520
Cash	0	25
Trade payables	(464)	(320)
Other payables (tax and dividends)	(692)	(622)
Overdraft	(11)	0
Net current assets/(liabilities)	<u>208</u>	<u>(47)</u>
Note 1		
Cost of sales includes depreciation of	225	175

Ms Smith is considering methods of improving the cash position. A number of actions are being discussed:

Trade receivables

Offer a 2 per cent discount to customers who pay within 10 days of despatch of invoices. It is estimated that 50 per cent of customers will take advantage of the new discount scheme. The other 50 per cent will continue to take the current average credit period.

Trade payables and inventory

Reduce the number of suppliers currently being used and negotiate better terms with those that remain by introducing a 'just-in-time' policy. The aim will be to reduce the end-of-year forecast cost of sales (excluding depreciation) by 5 per cent and inventory/WIP levels by

10 per cent. However, the number of days' credit taken by the entity will have to fall to 30 days to help persuade suppliers to improve their prices.

Other information

- All trade is on credit. Official terms of sale at present require payment within 30 days. Interest is not charged on late payments.
- All purchases are made on credit.
- Operating expenses will be \$650,000 under either the existing or proposed policies.
- Interest payments would be \$45,000 if the new policies are implemented.
- Capital expenditure of \$550,000 is planned for next year.

Requirements

- (a) Provide a cash-flow forecast for next year, assuming:
- (i) the entity does not change its policies;
 - (ii) the entity's proposals for managing trade receivables, payables and inventory are implemented.
- In both cases, assume a full twelve-month period, i.e. the changes will be effective from day 1 of next year. **(14 marks)**
- (b) As assistant to Ms Smith, write a short report to her evaluating the proposed actions. Include comments on the factors, financial and non-financial, that the entity should take into account before implementing the new policies. **(6 marks)**
- (Total marks = 20)**

? Question 34

MP is a manufacturing entity that trades with a large number of suppliers of raw materials, components, etc. The entity's financial manager has asked you, her assistant, to review the terms of trade and their associated costs. As part of the exercise, you randomly choose three regular suppliers of one particular component. They have the following terms:

Supplier A	Charges a fixed penalty of 2 per cent of invoice value for late payment.
Supplier B	Charges compound interest at 2 per cent per 30-day period after the due date of payment.
Supplier C	Offers a 2 per cent discount if payment is made within ten days of invoice date but charges simple interest at 10 per cent per annum on the invoice value if payment is after the due date.

Assume that the due date for payment in each case is 30 days but that MP's current credit control policy is to take an average of 90 days to pay these suppliers' invoices.

To simplify your calculations, assume also that MP purchases \$1,000 worth of goods from each supplier every month.

Requirements

Write a report to the financial manager that includes:

- (i) a calculation of the annualised interest rate (i.e. per cent per annum) for each of the three suppliers. **(8 marks)**
- (ii) a discussion of the arguments for and against using trade credit as a source of funds, in general and from MP's point of view, given their current credit policy. **(8 marks)**

- (iii) a discussion of the advantages and disadvantages to MP of introducing standard terms of trade with which all suppliers will have to conform. **(4 marks)**

(Total marks = 20)



Question 35

AM is a trading entity operating in a country where there is no sales tax. Purchases are on credit, with 70% paid in the month following the date of purchase and 30% paid in the month after that.

Sales are partly on credit and partly for cash. Customers who receive credit are given 30 days to pay. On average 60% pay within 30 days, 30% pay between 30 and 60 days and 5% pay between 60 and 90 days. The balance is written off as irrecoverable. Other overheads, including salaries, are paid within the month incurred.

AM plans to purchase new equipment at the end of June 2005, the expected cost of which is \$250,000. The equipment will be purchased on 30 days' credit, payable at the end of July.

The cash balance on 1 May 2005 is \$96,000.

The actual/budgeted balances for the six months to July 2005 were:

<i>All figures \$000</i>	<i>Actual</i>				<i>Budgeted</i>	
	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>	<i>Jul</i>
Credit sales	100	100	110	110	120	120
Cash sales	30	30	35	35	40	40
Credit purchases	45	50	50	55	55	60
Other overhead expense	40	40	40	50	50	50

Requirement

Prepare a monthly cash budget for the period May to July 2005 and assess the likelihood of AM being able to pay for the equipment when it falls due. (Round all figures to the nearest \$000.)

(5 marks)



Question 36

SF is a family-owned private entity with five main shareholders.

SF has just prepared its cash budget for the year ahead, details of which are shown below. The current overdraft facility is \$50,000 and the bank has stated that it would not be willing to increase the facility at present, without a substantial increase in the interest rate charged, due to the lack of assets to offer as security.

The shareholders are concerned by the cash projections, and have sought advice from external consultants.

All figures, \$000	MONTH											
	J	F	M	A	M	J	J	A	S	O	N	D
Collections from customers	55	60	30	10	15	20	20	25	30	40	55	80
Dividend on investment						10						
Total inflows	<u>55</u>	<u>60</u>	<u>30</u>	<u>10</u>	<u>15</u>	<u>30</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>40</u>	<u>55</u>	<u>80</u>
Payments to suppliers		20		20		25		28		27		25
Wages and salaries	15	15	15	15	15	20	20	15	15	15	15	15
Payments for non-current assets			2		5	10		15				
Dividend payable				25								
Income tax									30			
Other operating expenses	5	5	5	5	7	7	7	7	7	7	8	8
Total outflows	<u>20</u>	<u>40</u>	<u>22</u>	<u>65</u>	<u>27</u>	<u>62</u>	<u>27</u>	<u>65</u>	<u>52</u>	<u>49</u>	<u>23</u>	<u>48</u>
Net in or (out)	35	20	8	(55)	(12)	(32)	(7)	(40)	(22)	(9)	32	32
Bank balance (overdraft)												
Opening	20	55	75	83	28	16	(16)	(23)	(63)	(85)	(94)	(62)
Closing	<u>55</u>	<u>75</u>	<u>83</u>	<u>28</u>	<u>16</u>	<u>(16)</u>	<u>(23)</u>	<u>(63)</u>	<u>(85)</u>	<u>(94)</u>	<u>(62)</u>	<u>(30)</u>

The following additional information relating to the cash budget has been provided by SF:

- all sales are on credit. Two months' credit on average is granted to customers;
- production is scheduled evenly throughout the year. Year-end inventory of finished goods are forecast to be \$30,000 higher than at the beginning of the year;
- purchase of raw materials are made at two-monthly intervals. SF typically takes up to 90 days to pay for goods supplied. Other expense are paid in the month in which they arise;
- the capital expenditure budget comprises:

Office furniture	March	\$2,000
Progress payment on building extensions	May	\$5,000
Car	June	\$10,000
New equipment	August	\$15,000

Requirement

Assume you are an external consultant employed by SF. Prepare a report for the board advising on the possible actions it might take to improve its budgeted cash flow for the year, and consider the possible impact of these actions on the entity's business. Your report should also identify possible short-term investment opportunities for the cash surpluses identified in the first part of the budget year. **(20 marks)**

? Question 37

ABC is a small manufacturing entity that is suffering cash-flow difficulties. The entity already utilises its maximum overdraft facility. ABC sells an average of \$400,000 of goods per month at invoice value, and customers are allowed 40 days to pay from the date of invoice. Two possible solutions to the entity's cash-flow problems have been suggested.

- *Option 1.* The entity could factor its trade debts. A factor has been found who would advance ABC 75 per cent of the value of its invoices immediately on receipt of the invoices, at an interest rate of 10 per cent per annum. The factor would also charge a service fee amounting to 2 per cent of the total invoices. As a result of using the factor, ABC would save administration costs estimated at \$5,000 per month.
- *Option 2.* The entity could offer a cash discount to customers for prompt payment. It has been suggested that customers could be offered a 2 per cent discount for payments made within 10 days of invoicing.

Requirements

- (a) Identify the services that may be provided by factoring entities. **(4 marks)**
- (b) Calculate the annual net cost (in \$) of the proposed factoring agreement. **(6 marks)**
- (c) Calculate the annualised cost (in percentage terms) of offering a cash discount to customers. **(3 marks)**
- (d) Discuss the relative merits of the two proposals. **(7 marks)**

(Total marks = 20)**Question 38**

DF is a manufacturer of sports equipment. All of the shares of DF are held by the Wong family.

The entity has recently won a major 3-year contract to supply FF with a range of sports equipment. FF is a large entity with over 100 sports shops. The contract may be renewed after 3 years.

The new contract is expected to double DF's existing total annual sales, but demand from FF will vary considerably from month to month.

The contract will, however, mean a significant additional investment in both non-current and current assets. A loan from the bank is to be used to finance the additional non-current assets, as the Wong family is currently unable to supply any further share capital. Also, the Wong family does not wish to raise new capital by issuing shares to non-family members.

The financing of the additional current assets is yet to be decided. In particular, the contract with FF will require orders to be delivered within two days. This delivery period gives DF insufficient time to manufacture items, thus significant inventory need to be held at all times. Also, FF requires 90 days' credit from its suppliers. This will result in a significant additional investment in trade receivables by DF.

If the entity borrows from the bank to finance current assets, either using a loan or an overdraft, it expects to be charged annual interest at 12%. Consequently, DF is considering alternative methods of financing current assets. These include debt factoring, invoice discounting and offering a 3% cash discount to FF for settlement within 10 days rather than the normal 90 days.

Requirements

- (a) Calculate the annual equivalent rate of interest implicit in offering a 3% cash discount to FF for settlement of debts within 10 days rather than 90 days.

Briefly explain the factors, other than rate of interest, that DF would need to consider before deciding on whether to offer a cash discount. **(6 marks)**

- (b) Write a report to the Wong family shareholders explaining the various methods of financing available to DF to finance the additional current assets arising from the new FF contract. The report should include the following headings:
 - (i) bank loan;
 - (ii) overdraft;
 - (iii) debt factoring;
 - (iv) invoice discounting.

(14 marks)**(Total marks = 20)**

? Question 39

HRD owns a number of small hotels. The room occupancy rate varies significantly from month to month. There are also high fixed costs. As a result, the cash generated each month has been very difficult to estimate.

Christmas is normally a busy period and large cash surpluses are expected in December. There is, however, a possibility that a rival group of hotels will offer large discounts in December and this could damage December trade for HRD to a significant extent.

January is a poor period for the industry and therefore all the entity's hotels will close for the month, resulting in a negative cash flow. The Finance Director has identified the following possible outcomes and their associated probabilities:

	\$000s	Probability
Expected cash balance at 30 November 2002	+175	1.0
Net operating cash flow in December 2002	+700	0.7
	-300	0.3
Net operating cash flow in January 2003	-900	1.0

Assume cash flows arise at month ends.

Money can be put on deposit at the following rates:

Maturity period	Compounded annualised yield
1 month	5% (i.e. 0.4074% per month)
2 months	6% (i.e. 0.9759% for two months)

The entity's overdraft carries a compounded annualised interest rate of 10% (i.e. 0.7974% per month).

After January 2003, trade is expected to improve, but there is still a high degree of uncertainty in relation to the cash surpluses or deficits that will be generated in each month.

Requirements

- Calculate the expected cash balance or overdraft of HRD at 31 January 2003. Briefly comment, with reasons, on whether this figure should be used for short-term cash planning. **(5 marks)**
- As a member of the treasury team of HRD, write a memorandum to the Directors, with supporting calculations, advising them regarding the investment of short-term cash balance in December 2002 and January 2003. Ignore transaction costs and make all calculations to the nearest \$1. **(10 marks)**
- Consider whether the use of the Miller-Orr model would be useful for determining HRD's policy for investment of short-term cash balances *beyond* January 2003. Calculations are *not* required. **(5 marks)**

(Total marks = 20)

? Question 40

PRT is a rapidly growing printing entity that uses the latest technology to operate a quick and efficient service to other businesses and to private individuals. Some printing is undertaken to order, while other work, such as posters, is held in inventory until sold. Sales to business customers are on credit, while sales to individuals are for cash.

Expansion has been rapid, as indicated by the number of print shops owned at each financial year ended 31 March:

Year	1998	1999	2000	2001	2002
Number of print shops	8	12	18	27	40

While expansion has been very rapid, concerns have arisen regarding the increasing overdraft, which is now approaching the limit of \$1 million set by the bank. The entity has used equity and debt finance to expand in recent years, but is unlikely to be able to raise further finance from these sources in the immediate future.

Extracts from the financial statements for the years ended 31 March are as follows:

	2001	2002
	\$000	\$000
Raw material inventory	55	80
Finished goods inventory	185	185
Purchases of raw materials	600	850
Cost of sales	1,570	1,830
Administrative expenses	45	65
Sales	1,684	1,996
Trade receivables	114	200
Trade payables	50	70
Overdraft	400	950
Additions to non-current assets	700	900

Cost of sales includes all relevant production costs including manufacturing overheads and labour.

Requirements

- Calculate the length in days of PRT's working capital cycle, for the year ended 31 March 2002. **(5 marks)**
 - So far as the information permits, calculate the cash generated from operating activities for PRT for the year ended 31 March 2002. State any relevant assumptions. **(4 marks)**
 - As PRT's management accountant, write a memorandum to the board that analyses the entity's cash and working capital position, recommending appropriate actions. Indicate any additional information that would be needed to make a fuller assessment. **(11 marks)**
- (Total marks = 20)**

? Question 41

A general manager in your entity has recently enrolled on a management course at the local college. She is studying a module on finance and accounting and is having some difficulty understanding the theory. She has asked you, the trainee management accountant, if you could explain the consultative process used to produce a new International Financial Reporting Standard (IFRS). **(5 marks)**

? Question 42

E, a food retailer, decided to start a home delivery service from 1 November 2002. As E had no vehicles suitable for use by the new service, it purchased three small delivery vehicles to enable them to provide the service.

The invoice for the vehicles included the following details:

	\$
Cost price – per vehicle	12,000
Less: Trade discount	<u>(2,400)</u>
	9,600
Delivery charge	250
One vehicle	<u>9,850</u>
Three vehicles	29,550
1 year's insurance for the three vehicles	2,100
Total cost of three vehicles	<u>31,650</u>

By 31 October 2003, there had been a general price increase in all new delivery vehicles of 25%. The directors of E decided to revalue the three delivery vehicles to 125% of their net book value at 31 October 2003.

During the next year, it became apparent that the delivery service was so successful that the delivery vehicles were now too small. On 1 April 2004, E traded in the three delivery vehicles for three new larger vehicles. The new larger delivery vehicles cost \$18,000 each and the vendor allowed a trade-in value of \$9,000 for each of the old vehicles. E paid the balance of \$9,000 per vehicle on 1 May 2004.

All vehicles are depreciated using the reducing balance method at 25% per annum, charged on a time basis.

E purchased new computer equipment, costing \$5,000, to assist in running the delivery service.

The software required to provide the service was also purchased at the same time. The initial cost of the delivery scheduling software was \$950 plus the cost of adapting the software to E's detailed specifications \$2,600. The computer equipment and the adapted software were delivered on 1 November 2002, and brought into use at once. During December 2002, the software developed reliability problems, often crashing for no apparent reason. E's in-house programmer spent time resolving these problems at an estimated cost of \$2,000 in December 2002 and \$1,000 in January 2003. E depreciates all computer equipment and software on a straight line basis over four years, assuming no residual value.

IAS 16 – *Property, plant and equipment* describes the asset recognition process as:

- Initial recognition
- Subsequent remeasurement
- Derecognition

Requirements

- (i) Apply the IAS 16 asset recognition process to the above situations and explain the relevance of each stage of the process to each of the situations. **(6 marks)**
- (ii) Prepare income statement and balance sheet extracts for the years ended 31 October 2003 and 31 October 2004 to show how the above transactions would be recorded. Explain your treatment with reference to appropriate International Financial Reporting Standards. **(14 marks)**

(Total marks = 20)

Solutions to Revision Questions II



Solution 1

Notes to the accounts

Note 1: Tax expenses

	\$
Balance brought forward	(12,000)
Tax for current year	600,000
Deferred tax increase	<u>100,000</u>
Income statement	<u>688,000</u>

Note 2: Deferred tax

	\$
Deferred tax – balance at 1 January 2003	990,000
Increase in the year	<u>100,000</u>
Balance at 31 December 2003	<u>1,090,000</u>

Income Statement (extract) for the year ended 31 December 2003

Tax expenses (note 1)	\$688,000
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Balance sheet at 31 December 2003 (extracts)

Current liabilities:	
Tax payable	\$600,000
Non-current liabilities:	
Deferred tax (note 2)	\$1,090,000



Solution 2

		<i>Industrial building</i>	<i>Plant</i>	<i>Total tax depreciation for year</i>
		\$	\$	\$
01/01/2001	Purchase	400,000	60,000	
31/12/2001	First year allowance		(30,000)	
	Tax depreciation for the year	(12,000)		42,000
	Balance at 31/05/2002	388,000	30,000	
31/12/2002	Tax depreciation for the year	(11,640)	(7,500)	19,140
	Balance at 31/05/2003	376,360	22,500	
31/12/2003	Disposal		(10,000)	
	Balancing allowance		12,500	
	Tax depreciation for the year	11,290		23,790
	Balance at 31/05/2004	365,070	0	
01/01/2004	Purchase		75,000	



Solution 3

	<i>20X1</i>	<i>20X2</i>	<i>20X3</i>	<i>20X4</i>	<i>20X5</i>
	\$000	\$000	\$000	\$000	\$000
Carrying value	300	240	180	120	60
Accounting depreciation	(60)	(60)	(60)	(60)	(60)
Closing carrying value	<u>240</u>	<u>180</u>	<u>120</u>	<u>60</u>	<u>0</u>
Opening balance for tax purposes	300	200	100	0	
Tax depreciation	(100)	(100)	(100)	0	0
Tax written down value (tax base)	<u>200</u>	<u>100</u>	<u>0</u>	<u>0</u>	<u>0</u>
Temporary difference (carrying value – tax base)	40	80	120	60	0
Deferred tax provision required at 25%	10	20	30	15	0
Charge/(release) to income statement	10	10	10	(15)	(15)



Solution 4

AF – Income statement for the year ended 31 March 2005

		<i>\$000</i>	<i>\$000</i>
Revenue			8,210
Cost of sales	W1		(3,957)
Gross Profit			4,253
Other income			68
Administrative expenses		(1,540)	
Distribution costs		(1,590)	(3,130)
Profit from operations			1,191
Finance cost	W6		(90)
Profit before tax			1,101
Income tax expense	W7		(350)
Profit for the period			<u>751</u>

AF – Balance Sheet as at 31 March 2005

	\$000	\$000	\$000
<i>Non-current assets</i>			
Property, plant and equipment (W4)			4,987
Available for sale investments			1,750
<i>Current Assets</i>			
Inventory		1,320	
Trade receivables		1,480	
Cash and cash equivalents		<u>822</u>	
			<u>3,622</u>
Total Assets			<u>10,359</u>
<i>Equity and liabilities</i>			
<i>Equity</i>			
Share capital		4,500	
Other reserves (W8)		1,820	
Retained earnings (W9)		<u>864</u>	
Total equity			7,184
<i>Non-current Liabilities</i>			
6% Loan	1,500		
Deferred tax (W7)	<u>810</u>		
Total non-current liabilities		2,310	
<i>Current liabilities</i>			
Trade and other payables (W10)	615		
Tax payable (W7)	<u>250</u>		
Total current liabilities		<u>865</u>	
Total liabilities			<u>3,175</u>
Total equity and liabilities			<u>10,359</u>

Workings

W1 Cost of sales	\$000
Cost of goods	3,463
Depreciation – buildings (W2)	96
Depreciation – plant and equipment (W3)	348
Operating lease (W5)	<u>50</u>
	<u>3,957</u>

W2 Depreciation Buildings	
Land and buildings at cost	5,190
Less cost of land	<u>(2,000)</u>
	3,190
Depreciation for year @ 3%	96 (IS)
Depreciation b/f	1,500
Depreciation c/f	<u>1,596</u>

W3 Depreciation Plant and equipment	
Plant and equipment cost	3,400
Depreciation b/f	<u>1,659</u>
	1,741
Depreciation for year at 20%	348
Depreciation c/f	<u>2,007</u>

W4 Property, plant and equipment			
	<i>At cost</i>	<i>Depreciation</i>	<i>Total</i>
	\$000	\$000	\$000
Property	5,190	1,596	3,594
Plant and equipment	3,400	2,007	<u>1,393</u>
			<u>4,987</u>

W5 Operating lease		
Total payments (4×62.5)	250	
Allocated evenly over 5 periods ($250/5$)	50 a year	
Income statement charge	50	
W6 Finance cost		
Interest = $1,500 \times 6\% = 90$		
W7 Income tax expense		
Income Statement		
Income tax accrued for year	250	
Deferred tax charge for year	<u>100</u>	
Income statement	<u>350</u>	
Balance sheet		
Income tax – current	250	
Deferred tax – non-current liability		
Provision for deferred tax, b/f	710	
Charge for Year	<u>100</u>	
Provision for deferred tax c/f	<u>810</u>	
W8 Other Reserves		
Share premium		1,380
Revaluation reserve		
Balance b/f	330	
Increase in year	<u>110</u>	<u>440</u>
		<u>1,820</u>
W9 Retained earnings		
Balance b/f	388	
Profit for the year	<u>751</u>	
	1,139	
Less dividend paid	<u>(275)</u>	
	<u>864</u>	
W10 Trade and other payables		
Trade payables	520	
Operating lease rental accrued	50	
Finance cost	<u>45</u>	
	<u>615</u>	



Solution 5

According to the ASBs *Framework*, the five elements of financial statements are:

Asset	An asset is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity;
Liability	A liability is a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow of resources from the entity;
Equity	The residual interest in the assets of the entity after deducting all its liabilities;
Income	Increases in economic benefits during the accounting period in the form of inflows or enhancements of assets or decreases of liabilities that result in increases in equity, other than those relating to combinations from equity participants;
Expenses	Decreases in economic benefits during the accounting period in the form of outflows or depletions of assets that result in decreases in equity, other than those relating to distributions to equity participants.



Solution 6

BG Income statement for the year ended 30 September 2005

	\$000	\$000
Revenue		1,017
Cost of sales (W1)		<u>(799)</u>
Gross profit		218
Other income		<u>11</u>
		229
Administrative expenses (W4)	(300)	
Release of provision	<u>190</u>	<u>(110)</u>
Profit from operations		119
Finance cost (W3)		<u>(15)</u>
Profit before tax		104
Income tax expense (W5)		<u>(88)</u>
Profit for the period		<u>16</u>

BG Balance sheet as at 30 September 2005

	\$000	\$000	\$000
	<i>At cost/ valuation</i>	<i>Depreciation/ amortisation</i>	<i>Total</i>
<i>Assets</i>			
<i>Non-current tangible assets</i>			
Property, plant and equipment	752	520	232
<i>Non-current financial assets</i>			
Available for sale investments (W6)	225	0	<u>225</u>
			457
<i>Current assets</i>			
Inventories	37		
Trade receivables	141		
Cash and cash equivalents	<u>147</u>		
			<u>325</u>
Total assets			<u>782</u>
<i>Equity and liabilities</i>			
<i>Equity</i>			
Equity shares		200	
Reserves			
Share premium	40		
Retained earnings	182		
Revaluation reserve	<u>50</u>	<u>272</u>	
Total equity			472
<i>Non-current liabilities</i>			
10% loan	150		
Deferred tax (W5)	<u>65</u>		
Total non-current liabilities		215	
<i>Current liabilities</i>			
Trade payables	24		
Tax payable	64		
Interest payable	<u>7</u>		
Total current liabilities		<u>95</u>	
Total liabilities			<u>310</u>
Total equity and liabilities			<u>782</u>

BG Statement of changes in equity for the year ended 30 September 2005

	<i>Equity Shares</i>	<i>Share premium</i>	<i>Retained earnings</i>	<i>Revaluation reserve</i>	<i>Total</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Balance at 1 October 2004	200	40	226	30	496
Non-current investment revaluation				20	20
Profit for period			16		16
Interim dividend	—	—	(60)	—	(60)
Balance at 30 September 2005	200	40	<u>182</u>	<u>50</u>	<u>472</u>

Workings

W1 Cost of sales		<i>\$000</i>	
Direct cost – TB		548	
Add depreciation – equipment & fixtures (W2)		150	
Direct materials		<u>101</u>	
		<u>799</u>	
W2 Depreciation, equipment and fixtures			
Trial balance at cost		752	
Depreciation for year 20%		150	to cost of sales
Depreciation b/fwd		370	
Depreciation for year		<u>150</u>	
Depreciation c/fwd		<u>520</u>	to balance sheet
W3 Finance costs			
Interest on loan 10% × 150 =		15	
W4 Administrative expenses			
Per trial balance		239	
Operating lease		<u>61</u>	
		<u>300</u>	
W5 Income tax expense			
Income statement			
Balance per trial balance		9	
Income tax accrued for year		64	
Deferred tax charge for year		<u>15</u>	
Income statement		<u>88</u>	
Balance sheet			
Income tax – current		64	
Deferred tax – non-current liability			
Provision for deferred tax, b/fwd		50	
Charge for year		<u>15</u>	
Provision for deferred tax c/fwd		<u>65</u>	
W6 Available for sale investments			
Book value		205	
Market value		<u>225</u>	
Revaluation gain		<u>20</u>	

**Solution 7**

- (a) There are many different kinds of users of financial statements, and each group may be interested in different aspects of an entity's financial statements. The requirement that all entities produce an income statement and balance sheet in the prescribed format may mean that any one group of users receives less than the ideal set of information that it would like, but there are also several advantages for all readers. For accounts to be useful, they must be understandable. Information will be wasted if it cannot be understood

by the readers for whom it is intended. If all entities present similar information in a similar form, the financial statements can be used by everyone who is prepared to learn the basics of accounting.

The relevance and reliability of financial statements can be increased by ensuring that they are comparable. The quality of comparability includes the fundamental accounting concept of consistency, since the usefulness of accounting information is increased if it is prepared and presented on a consistent basis from one period to the next. The requirements of IAS 1 attempt to ensure that the accounts are consistent over the years.

Consistency is important too for comparing financial information with corresponding information from some other entity. If entities were not required to present information using the same 'template', the interpretation of accounts using ratio analysis would be extremely difficult, if not impossible.

- (b) International accounting standards require that entities provide details of any guarantees and other financial commitments into which they may have entered. Specific items which must be disclosed include details of any charge on the assets of the entity; details of the amount and nature of any contingent liability not provided in the accounts; details of the amounts of capital expenditure authorised by the directors but not contracted for.

This note is particularly useful to the readers of financial statements, since it discloses information that is otherwise 'invisible' to them. The presence of such items as contingent liabilities or third-party guarantees is not recorded by the double-entry accounting system. They therefore do not appear as part of either the income statement or the balance sheet. Commitments and contingencies can often form a significant part of the overall financial view of the entity and many financial analysts read this note to the accounts before any others.



Solution 8

- (a) The procedure by which the IASB sets a new accounting standard is normally as follows:
- During the early stages of a project, IASB may establish an Advisory Committee to advise on the issues arising in the project. Consultation with this committee and the Standards Advisory Council occurs throughout the project.
 - IASB may develop and publish *Discussion Documents* for public comment.
 - Following receipt and review of comments, IASB develops and publishes an *Exposure Draft* for public comment.
 - Following the receipt and review of comments, the IASB may hold a public hearing or carry out field tests. The IASB issues a final *International Financial Reporting Standard*, along with any dissenting view expressed by an IASB member.

When the IASB publishes a standard, it also publishes a Basis of Conclusions to explain publicly how it reached its conclusions and to provide background information that may help users apply the standard in practice.

- (b) IAS 1 requires that financial statements show a fair presentation of the entity's assets and liabilities, and of its profit and loss for the period. Normally, this will involve the accounts being prepared in accordance with accounting standards. However, it is recognised that in rare cases it may be necessary to depart from a standard in order to show a fair presentation.

If an entity's directors and auditors consider that the application of the requirements of an accounting standard could prevent the accounts showing a fair presentation, they should depart from the standard. The IASB requires that such departures should be

dealt with objectively according to the economic and commercial characteristics of the circumstance. The departure from the standard and its financial effect should be fully disclosed in the notes to the accounts, giving reasons.

If the auditors are in agreement with the departure, and are of the opinion that disclosure is adequate, there is no need for the audit report to be qualified. However, the auditors may be disciplined if the accounts are subsequently found to be defective.



Solution 9

- (a) The report contains a subheading to the effect that it has been qualified. That highlights the more substantive fact that the report goes on to describe a problem with the accounting treatment of a possible bad debt. The auditor is of the opinion that a provision that should have been made has not been accounted for. The final indicator is that the auditor's opinion states that the accounts give a true and fair view, but that is only 'except for' the absence of a provision. That means that the auditor does not have an unreserved opinion that the statements give a fair presentation.

The qualification suggests that the directors have overstated the profit for the year by \$960,000. It also suggests that the current assets have been overstated by the same amount. This would suggest that any ROCE ratios, liquidity ratios and, possibly, receivables turnover ratios could be misleading. It is, however, up to the shareholders to decide for themselves whether they agree with the auditor's opinion on the treatment of the potential bad debt. They may feel that the auditor is an impartial commentator and would not have raised the matter without good reason. Alternatively, they might be of the opinion that the auditor has been overcautious and that the income statement and balance sheet prepared by management are fine as they stand.

- (b) Auditors use this form of qualification if they are of the opinion that the financial statements contain a material misstatement. In other words if they disagree with the facts, figures or disclosures prepared by the directors and if the extent of this disagreement is sufficient to affect the behaviour of the users of the financial statements.

Deciding to use this form of qualification is a serious matter. By reporting in this way, the auditor could undermine the shareholders' confidence in the figures prepared by the directors. They could even undermine confidence in the reliability of the directors themselves.

If the auditor disagrees with the directors, the first question to decide is whether that disagreement is material. If the amounts involved are insignificant then there is very little point in raising them in the audit report.

Then the auditor must decide whether the disagreement is a legitimate difference of opinion or whether there is a matter of fact or principle which is definitely unacceptable. For example, if the directors have chosen one of two acceptable treatments for a particular balance, their treatment is consistent over time and the policy is clearly stated, then it would not really matter that the auditor preferred the alternative treatment.

Finally, the auditor should attempt to persuade the directors to change their statements. It would be better for all concerned if the auditor could justify an opinion that the accounts give a fair presentation. It is possible that the directors will be willing to change their proposed treatment to accommodate the auditor.



Solution 10

- (a) Materiality is the quality that determines whether a matter is worth reporting or disclosing. A matter is material if knowledge of it would alter the behaviour of the users of the financial statements. Thus, the auditor would not normally be concerned about whether something that was immaterial was disclosed in the financial statements or, indeed, uncovered during the audit.

Normally, materiality is determined by size. A matter might be considered material because it exceeds a particular percentage of profit or sales revenue. Materiality can also be associated with qualitative issues. For example, a small error in the disclosure of directors' remuneration if required might not be material because of its size, but could still be of some significance to the shareholders because they take a keen interest in the amounts paid to directors.

Materiality is important to the auditor because the audit is essentially about detecting and reporting material irregularities. Audit tests will be designed to uncover material misstatements. Thus, deciding on a materiality threshold will influence the amount of audit work carried out. Materiality will also affect the reporting decision. Auditors are required to decide whether the financial statements give a true and fair view. It does not really matter whether the auditor agrees with everything in the accounts provided any disagreement is immaterial.

- (b) The auditor's duty is to form an opinion on the fair presentation of the financial statements and to report that opinion to the shareholders. The auditor's responsibilities are, therefore, far narrower than many readers of financial statements realise. For example, the auditor does not prepare the statements, that is the responsibility of the directors.

Forming an opinion on fairness involves a number of subsidiary duties. The auditor must, for example, gather sufficient evidence to support this opinion. The auditor must also consider whether the accounting policies are acceptable, for example, do they comply with international accounting standards?

The auditor has no specific duty to prevent or detect fraud. The auditor must, however, consider the possibility that the statements might have been distorted in order to conceal some fraud. For example, an employee might attempt to conceal the theft of some cash by deliberately understating sales by the amount stolen. The auditor would have no direct interest in the theft itself, but would be concerned if the amount stolen was material because that would lead to a material understatement of the sales figure.

The question of the auditor's duty to report fraud is complicated by the fact that the shareholders might consider any serious fraud to indicate mismanagement on the part of the directors. That could, in turn, lead to the materiality threshold being lower for fraudulent irregularities than for those due to errors. Furthermore, the detection of fraud will normally be complicated by the fact that some attempt will have been made to conceal the theft. That will mean that the auditor will often feel less confident that all significant fraud has been detected.



Solution 11

There is not always a clash between the characteristics of relevance and reliability in accounting. Some figures which appear in financial statements manage to be both relevant and reliable, for example, the declared dividend will be of great interest to the shareholder,

and can be accurately determined. Problems of reliability arise when figures must be estimated, or arrived at by using judgment. There is a great deal of such subjectivity involved in financial accounting. Provisions, depreciation, write-offs, accruals, all involve making an estimate and, therefore, sacrifice some degree of reliability.

Financial reports could be produced which did not require any subjective judgements to be made, and which could therefore be said to be completely reliable. For example, the income statement could be abandoned in favour of a straightforward cash receipts and expenditure account. However, such reports would be of limited use to any user, being wholly reliable but almost totally irrelevant!

It is clear that, in an ideal situation, financial reporting should produce accounting information which is both relevant and reliable. However, if one of these attributes is to be given a greater importance, it should be reliability. This is partly because the readers of financial reports have different information needs, and what might be relevant for one group may not be relevant for another. In other words, financial reports already contain information which is not relevant to all users. The need for reliability of information affects all users of financial reports, and is essential if such reports are to retain any degree of credibility.



Solution 12

Understandability

An essential quality of financial information is that it is readily understandable by users. For this purpose, users are assumed to have a reasonable knowledge of business and economic activities and accounting and a willingness to study the information with reasonable diligence. Information on complex issues should be included if relevant and should not be excluded on the ground that it is too difficult for the average user to understand.

Relevance

Information is relevant when it influences the economic decisions of users by helping them to evaluate past, present or future economic events or confirming, or correcting, their past evaluations.

An item can be relevant by virtue of its nature or materiality. Information is material if its omission or misstatement could influence the decision making of users.

Information should be released on a timely basis to be relevant to users.

Reliability

Information is reliable when it is free from material error and bias and can be considered by users to be a faithful representation of the underlying transactions and events.

To be reliable the information must:

- faithfully represent the transactions it is intended to represent;
- be accounted for and presented on the basis of its commercial reality rather than its legal form – substance over form;
- be neutral, free from bias.

Comparability

The ability to identify trends in performance and financial position and compare those both from year to year and against other entities assists users in their assessments and decision making. To achieve comparability, users must be able to identify where an entity has changed its policy from one year to the next, and where other entities have used different accounting policies for similar transactions.



Solution 13

Z – cash-flow statement for the year ended 30 September 20X8

	\$000	\$000
<i>Cash flows from operating activities</i>		
Net profit before tax	2,486	
Adjustments for:		
Depreciation	290	
Loss on sale of non-current assets	230	
Finance expense	14	
Operating profit before working capital changes	3,020	
Increase in inventories	(200)	
Increase in receivables	(50)	
Increase in payables	80	
Cash generated from operations	2,850	
Interest paid	(14)	
Income tax paid	(760)	
Net cash from operating activities		2,076
<i>Cash flows from investing activities</i>		
Purchase of non-current assets	(1,900)	
Proceeds of sale of non-current assets	80	
		(1,820)
<i>Cash flows from financing activities</i>		
Repayment of loans	(200)	
Proceeds of issue of shares	384	
Dividends paid	(660)	
		(476)
Net decrease in cash and cash equivalents		(220)
Cash and cash equivalents at 30 September 20X7		300
Cash and cash equivalents at 30 September 20X8		<u>80</u>

Workings

Depreciation

	\$000
Non-current assets at start	6,800
Add: purchases	1,900
Less: disposals	(310)
	8,390
Non-current assets at end	(8,100)
Difference (depreciation)	<u>290</u>
Loss on sale of assets:	
Net book value	310
Proceeds	(80)
Loss	<u>230</u>

Taxation

	\$000
Tax due at start	595
Tax charge for the year	800
	1,395
Tax due at end	(635)
Tax paid in year	<u>760</u>

Dividends

	<i>\$000</i>
Due at start	360
Interim dividends paid in the year	<u>300</u>
Dividends paid in year	<u>660</u>

**Solution 14**

(i) AG - Cash Flow Statement for the year ended 31 March 2005

	<i>\$000</i>	<i>\$000</i>
Cash flows from operating activities		
Profit before taxation	255	
Adjustments for:		
Depreciation	720	
Development expenditure amortisation	80	
Finance cost	45	
Gain on disposal of non-current tangible asset (W1)	<u>(23)</u>	
<i>Operating profit before working capital changes</i>		1,077
Increase in inventory	(110)	
Increase in trade receivables	(95)	
Increase in trade payables	130	
Increase in accrued expenses (W2)	<u>10</u>	
		<u>(65)</u>
<i>Cash generated from operations</i>		1,012
Interest paid (W3)	(120)	
Income taxes paid (W4)	<u>(200)</u>	
<i>Net cash from operating activities</i>		692
<i>Cash flows from investing activities</i>		
Purchase of property, plant and equipment (W5)	(370)	
Proceeds from sale of equipment	98	
Development expenditure (W6)	<u>(50)</u>	
<i>Net cash used in investing activities</i>		(322)
<i>Cash flows from financing activities</i>		
Proceeds from issue of share capital (W7)	1,050	
Repayment of loans	(1,000)	
Equity dividends paid*	<u>(100)</u>	
<i>Net cash used in financing activities</i>		<u>(50)</u>
Net increase in cash and cash equivalents		320
Cash and cash equivalents at 1 April 2004		<u>232</u>
Cash and cash equivalents at 31 March 2005		<u>552</u>

* this could also be shown as an operating cash flow

Workings

W1 – Gain on disposal of property plant and equipment		
	<i>\$000</i>	<i>\$000</i>
Net book value	75	
Cash	<u>98</u>	
Gain	<u>23</u>	
W2 – Accrued expenditure		
Balance b/f	172	
Interest b/f	<u>(87)</u>	
		85
Balance c/f	107	
Interest c/f	<u>(12)</u>	
		<u>95</u>
		<u>10</u>
W3 – Interest Paid		
	<i>\$000</i>	
Balance B/F	87	
P&L	<u>45</u>	
	132	
Balance C/F	<u>12</u>	
Paid	<u>120</u>	
W4 – Income Taxes paid		
	<i>\$000</i>	<i>\$000</i>
Balance b/f – corporate income tax	190	
– deferred tax	<u>200</u>	
		390
Income statement		<u>140</u>
		530
Balance c/f – corporate income tax	80	
–deferred tax	<u>250</u>	
		330
Tax paid		<u>200</u>
W5 – Purchase of property, plant and equipment		
	<i>\$000</i>	
Balance b/f	4,800	
Disposals	<u>(75)</u>	
	4,725	
Revaluation	<u>125</u>	
	4,850	
Depreciation for year	<u>(720)</u>	
	4,130	
Balance c/f	<u>4,500</u>	
Purchases	<u>370</u>	
W6 – Development expenditure		
	<i>\$000</i>	
Balance b/f	400	
Amortised in year	<u>80</u>	
	320	
Balance c/f	<u>370</u>	
New expenditure	<u>50</u>	
W7 – Proceeds from issue of share capital		
	<i>\$000</i>	
Shares	1,400 × 0.5	700
Share premium	1,400 × 0.5 × 0.5	<u>350</u>
Received		<u>1,050</u>



Solution 15

Y: cash flow statement for the year ended 31 December 20X2

	\$000	\$000
<i>Cash flows from operating activities</i>		
Net profit before tax	196	
Adjustments for:		
Depreciation	59	
Loss on disposal of non-current assets	9	
Interest expense	14	
Operating profit before working capital changes	<u>278</u>	
Increase in inventory	(2)	
Increase in receivables	(8)	
Increase in payables	3	
Cash generated from operations	<u>271</u>	
Interest paid	(14)	
Income tax paid	<u>(55)</u>	
Net cash from operating activities		202
<i>Cash flows from investing activities</i>		
Purchase of non-current assets	(45)	
Proceeds of sale of non-current assets	<u>6</u>	(39)
<i>Cash flows from financing activities</i>		
Proceeds of issue of shares	16	
Repayment of loans	(150)	
Dividends paid	<u>(33)</u>	<u>(167)</u>
Net decrease in cash and cash equivalents		(4)
Cash and cash equivalents at 31 December 20X1		<u>28</u>
Cash and cash equivalents at end of period at 31 December 20X2		<u><u>24</u></u>

Working notes

Dividends paid

	\$000
Declared dividend at 31 December 20X1	12
Add: Interim dividend paid in the year to 31 December 20X2	<u>21</u>
Dividend paid during year	<u><u>33</u></u>

Income tax

	\$000
Balance due at 31 December 20X1	39
Add: tax charge for the year to 31 December 20X2	<u>62</u>
	101
Less: tax due at 31 December 20X2	<u>46</u>
Tax paid during year	<u><u>55</u></u>

Non-current assets – cost

	\$000
Balance at 31 December 20X1	780
Add: machinery purchased	<u>45</u>
	825
Less: Balance at 31 December 20X2	<u>(798)</u>
Disposal in the year	<u><u>27</u></u>

Non-current assets – depreciation

	<i>\$000</i>
Balance at 31 December 20X1	112
Add: charge for the year	<u>59</u>
	171
Less: balance at 31 December 20X2	<u>(159)</u>
Depreciation on disposal	<u>12</u>

Receipts from sales of tangible non-current assets

	<i>\$000</i>
Cost (calculated above)	27
Depreciation (calculated above)	<u>(12)</u>
Written-down value	15
Loss on sale	<u>(9)</u>
Proceeds from sale	<u>6</u>

**Solution 16**

FRS 5 defines a discontinued operation as a component of an entity that has been disposed of and that represents a separate major line of business. A component of an entity is defined as operations and cash flows that can be clearly distinguished, operationally and for financial reporting purposes, from the rest of the entity. The disposal of the airline business represents a separate major line of business; can be clearly distinguished and it was disposed of during the year.

Conclusion

The closure of the airline business should be treated as a discontinued operation and separately disclosed.

The revenue and profit must be separately disclosed in the income statement.

The \$250 million loss on disposal of the aircraft fleet is material and must be shown on the face of the income statement.

Employee severance payments are committed as a result of a past event (the disposal of the airline), they will have to be paid (they are certain to be paid) but the exact timing and amount are not yet known as they are still being negotiated. IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* requires a provision to be made, using the best estimate which is \$20 million.

The cost of restructuring the remaining division, even although that restructuring is required as a result of the decision to close the airline business, should be classified as restructuring costs within continuing activities, as the costs relate to the travel agency business and this is a continuing activity (IAS 37). As the restructuring has been publicised and the entity is committed to it, the liability of \$10 million should be provided for. The cost should be reported in the income statement under continuing activities.



Solution 17

(a) Segmental report

	Classes of business							
	<i>Electronic components</i>		<i>Software</i>		<i>Systems</i>		<i>Total</i>	
	<i>20X5</i>	<i>20X4</i>	<i>20X5</i>	<i>20X4</i>	<i>20X5</i>	<i>20X4</i>	<i>20X5</i>	<i>20X4</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Revenue	255,000	240,420	193,000	164,000	256,900	245,700	704,900	650,120
Profit before taxation	76,500	72,126	135,100	114,800	115,605	110,565	327,205	297,491
Segment net assets	42,500	40,070	19,300	16,400	36,700	35,100	98,500	91,570

	Geographical							
	<i>Europe</i>		<i>Americas</i>		<i>Other</i>		<i>Total</i>	
	<i>20X5</i>	<i>20X4</i>	<i>20X5</i>	<i>20X4</i>	<i>20X5</i>	<i>20X4</i>	<i>20X5</i>	<i>20X4</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Revenue	352,450	325,060	317,205	292,554	35,245	32,506	704,900	650,120
Profit before taxation	196,323	178,495	91,617	83,297	39,265	35,699	327,205	297,491
Segment net assets	59,100	59,520	39,400	32,050	–	–	98,500	91,570

- (b) Most businesses operate in more than one industry and more than one geographical market. This makes the traditional statements difficult to interpret because different industrial and geographical sectors will have different prospects and different risk characteristics. IAS 14 attempts to overcome this problem to some extent by requiring that the figures for revenue, results and net assets be broken down by segment. This makes it easier to compare results from one year to the next because readers can see how changes in profitability or capital employed have come about in terms of the different segments. It will also make it easier to compare the results between entities because different businesses will be composed differently. Segmental information might, therefore, be easier to compare between businesses.

Unfortunately, there are major costs associated with publishing segmental information. It is likely to be used by competitors to identify potential lucrative markets or opportunities. If entities provide too much useful information they might actually cost their shareholders a considerable amount in terms of profits lost due to additional competition. This creates some pressure to restrict the amount of useful material published. This can be seen in the nature of the disclosures provided above. For example, most readers would prefer a two dimensional analysis of revenue, profit and net assets.

<i>Revenue</i>	<i>Electronic components</i>	<i>Software</i>	<i>Systems</i>	<i>Total</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Europe	A	B	C	352,450
America	D	E	F	317,205
Other	G	H	I	35,245
Total	<u>255,000</u>	<u>193,000</u>	<u>256,900</u>	<u>704,900</u>

This presentation would involve analysing the totals to show, say, revenue from electronic components in Europe in cell A, from America in D and so on. While that information would be useful, it is rarely if ever disclosed because of the commercial sensitivity.

There are further problems of a more technical nature. It is difficult to adequately define segments. In the case of Emm we have broken everything down between three industrial segments. It may, however, be possible to argue that the entity produces different categories of electronic components and that these figures ought to be broken down between two or more further segments. Similarly, it could be argued that geographical analyses by continent are too broad and that American and European figures should be analysed further.

Segmental reporting also creates problems of common costs and assets, for example, the cost of running the head office function and the assets used in the head office itself. In the case of Emm, we appear to have apportioned them to our main segments. Some businesses treat such common items as a separate element of the analysis and show a total before common costs or assets. This difference creates problems when it is necessary to compare segmental information between entities.



Solution 18

- (a) IAS 18 *Revenue* requires revenue from the sale of goods to be recognised when the significant risks and rewards of ownership have been transferred, provided that the amount of revenue can be estimated reliably and it is probable that payment will be received.

It would thus seem reasonable to recognise the revenue when the goods were despatched. That would normally be the point at which the entity would lose any real rights over the asset. It would also normally be the point at which the customer would be deemed to be committed to purchasing the goods.

Recognition at an earlier stage would be misleading because the entity could decide not to despatch the goods (e.g. if they were needed for another transaction or some doubts arose as to the customer's credit rating). Recognition at a later stage would also be misleading because the entity becomes entitled to receive payment in full long before the customer actually pays.

If the likelihood of the customer using any warranty or guarantee at a later date can be predicted and valued with any certainty then the entity might create a provision for such costs and these could be offset against the profit. If these costs cannot be predicted in any meaningful way then the entity would be better to recognise the profit as the selling price less the cost price and to recognise all warranty costs as and when they are incurred.

- (b) (i) Strictly, the entity should not recognise any profits from this arrangement until the books have been sold by Bigseller Books. It would, however, be acceptable to look at the underlying substance of this transaction and to treat the despatch of the books as a sale, but to create a provision for returns against any books in the customer's hands as at the year end.
- (ii) This is the converse of the argument in (i) above. The customer is very unlikely to return any books and so it is realistic to treat the despatch as a sale.
- (iii) The newspaper appears to be committed to publishing the extracts and so there is nothing to stand in the way of Publisher receiving the \$800,000. It would, therefore, be acceptable to treat this as a source of income.



Solution 19

- (a) Q Consultancy is a related party because a relative of a member of the board of directors owns the entity. This creates the possibility that the contract may have been awarded to Q Consultancy because of favouritism or that the report's findings could have been influenced by the consultant's wife.

H is a related party because an individual who holds more than 20 per cent of the entity's share capital is in a position to exercise significant influence over the entity. The fact that H is a major supplier has no direct relevance in itself to the entity's status as a related party.

- (b) The transactions will have to be disclosed if they are deemed to be material. We do not have sufficient information to tell whether the fee paid to Q Consultancy is material in terms of its size. It is, however, likely to be material to the consultancy. Furthermore, the nature of the service provided is such that the readers might feel that they should be informed that the consultancy was awarded to a related party. Even though the cost of the contract may be insignificant to a large entity, the implications of an investigation into the entity's marketing policies could have far-reaching consequences for profitability. It is, therefore, important that the shareholders are informed of this transaction so that they can consider whether the consultancy was well advised.

The purchases from H are probably material in quantitative terms. It is very likely that they will have to be disclosed by V because the shareholders will want to be assured that the purchases have been to the benefit of their entity. The fact that H charged its normal, arm's length price does not necessarily mean that the price was the best available or that H was the most suitable supplier.

In both cases, the statements should disclose:

- the fact that Q Consultancy is owned by the husband of a director and H by a major shareholder;
- descriptions of the transactions;
- any amounts outstanding at the year end;
- pricing policies.



Solution 20

- (a) Nominal value of shares purchased = \$1,000,000
 Nominal value of fresh issue = \$600,000
 Premium on purchase = \$100,000

	\$	\$
Debit 8% redeemable preference share capital	1,000,000	
Debit premium on purchase	100,000	
Credit bank		1,100,000
Debit Retained earnings	500,000	
Credit premium on purchase		100,000
Credit capital redemption reserve		400,000
Debit bank	720,000	
Credit share capital		600,000
Credit share premium		120,000

R: balance sheet as at 31 December 20X0

	\$000	\$000
Non-current assets		4,800
Net current assets (excluding cash)	2,100	
Cash	<u>470</u>	
		<u>2,570</u>
		<u>7,370</u>
Ordinary shares		3,100
Share premium		2,320
Capital reserve		400
Retained earnings		<u>1,550</u>
		<u>7,370</u>

- (b) The capital redemption reserve exists to protect the interests of the lenders. In general, share capital is intended to be a permanent investment of capital in the entity. Dividends are effectively restricted to the amount of retained profits. This means that the book value of assets should always exceed the book value of liabilities by the amount of the undistributable capital. This should mean that the entity will always be able to repay its payables in full, even if it has to dispose of its assets under duress.

Entities are permitted to repurchase their own shares. As part of this process, they are required to transfer a sum equal to the permanent capital that is being repaid out of distributable reserves and into an undistributable capital redemption reserve. This means that the payables are no worse off than they would have been if the entity had made a dividend payment of the same amount. The repurchase may not proceed if there are insufficient distributable profits to make the transfer into capital redemption reserve. This limits the maximum reduction in capital due to share repurchase to the amount that would be permissible from dividend payments.

**Solution 21**

- (a) The arguments in favour of capitalising borrowing costs are largely related to the fact that the construction of a major non-current asset will frequently be financed by a loan which can, therefore, be seen to be directly attributable to the construction project. This means that the entity could view the costs of financing the construction to be just as much a part of the project as the costs of the labour or the building materials.

It might also be argued that those contractors who do not require progress payments will include their financing costs in the final contract price. This means that failure to capitalise finance costs when they arise will lead to inconsistency between assets.

The arguments against capitalisation include the illogical nature of the distinction between interest paid on the loan while the asset is being constructed and that paid on the same loan on the same asset once the construction phase has been completed and the asset is in use.

It can also be argued that interest is a period cost that should be treated as an expense regardless of the reason for the underlying borrowing.

IAS 23 *Borrowing Costs* permits entities either to capitalise borrowing costs during construction or charge it as an expense in the income statement. IAS 23 does,

however, require that there is consistency of treatment between assets. Otherwise, entities could manipulate their income statements and balance sheets by selectively capitalising some costs and expensing others as and when it suited.

- (b) IAS 36 requires that the asset should be written down if its underlying value is less than book value. The underlying value is effectively what the asset is worth to the entity. The production line is worth \$1.1m if it is kept and used for manufacturing purposes or \$0.9m if it is sold. Logically, the asset will be worth more if it is kept and used and so that is the most logical basis on which to value it.

Thus, the asset has suffered an impairment in value because the books attach a value of \$2.3m to it even though it is worth only \$1.1m. It should, therefore, be written down to \$1.1m.

- (c) IAS 36 defines a cash-generating unit as the smallest group of assets which generates cash that is largely independent of the entity's other cash streams. In that case, the individual engine factories are not independent cash-generating units in their own right because the output from each will be affected by the entity's production schedules for the other two factories. Presumably, the entity makes these decisions on the basis of efficient use of resources and minimisation of costs.

This means that the division as a whole is the cash-generating unit in this case.

It is necessary to have the concept of the cash-generating unit because otherwise it would be impossible to place a value on the entity's assets. For example, it would be impossible to tell how much income could be generated by a factory's fire alarm. All that the entity could tell is that it would be illegal to operate without an adequate safety system and so the value of the alarm would have to be considered in the context of the value of the factory as a whole.



Solution 22

The payment to the University of Teetown in (i) appears to be research. The entity is investing in research which will expand knowledge. In the very long term, this knowledge may well have some commercial application and the entity will benefit from it. For the present, there is no guarantee that the expense will result in any revenue. The costs should be written off immediately.

The new screen in (ii) is clearly development expenditure. The project appears to be both technically and commercially viable. This suggests that the entity should capitalise the development costs and can start to amortise them from next year, when the entity starts to sell the new product.

Market research probably cannot qualify as 'research' as defined in IAS 38. Arguably, the entity should refer back to basic accounting concepts. One argument might be that the market research is part of the development cost of the new screen and will bear fruit throughout the commercial exploitation of this product and so it might be acceptable to capitalise the costs and write them off over the anticipated market life of the monitor.

The new printer in (iv) is clearly a development project. It is designed to create a specific product which will be exploited commercially. These costs cannot, however, be capitalised because the product is not presently technically feasible. There is no guarantee that the entity will ever be able to sell this printer and thereby recover these development costs. The costs should, therefore, be written off immediately.

**Solution 23**

Year ended 31 December 20X4			
	<i>Contract (i)</i>	<i>Contract (ii)</i>	<i>Contract (iii)</i>
	\$000	\$000	\$000
Expected profit/(loss)	300	50	(100)
Proportion completed	0.20	0.40	
Profit/(loss) to date	60	20	(100)
Sales	160	120	150
Cost of sales (sales – profit)	(100)	(100)	(250)
Amounts due from customers	(160 – 160) 0	(120 – 80) 40	(150 – 140) 10
Amounts due to customers	0	0	(150 – 140) – (250 – 180) = (60)

Year ended 31 December 20X5			
	<i>Contract (i)</i>	<i>Contract (ii)</i>	<i>Contract (iii)</i>
	\$000	\$000	\$000
Cumulative			
Expected profit/(loss)	280	60	(120)
Proportion completed	0.45	1.00	
Profit/(loss) earned to date	126	60	(120)
Revenue to date	<u>360</u>	<u>300</u>	<u>320</u>
Cost of sales (sales – profit)	<u>(234)</u>	<u>(240)</u>	<u>(440)</u>
For year			
Revenue	200	180	170
Cost of sales	<u>(134)</u>	<u>(140)</u>	<u>(190)</u>
Profit/(loss)	<u>66</u>	<u>40</u>	<u>(20)</u>
Amounts due to customers			(320 – 300) – (440 – 380) = (40)
Amounts due from customers	(360 – 320) + (240 – 234) = 46	80	0

**Solution 24**

- (a) At 31 March 20X0, the accounting profits exceeded the taxable Profits by \$400,000. If all of this timing difference reverses then the tax on this would be $\$400,000 \times 30\% = \$120,000$. At 31 March 20X1, the accounting profits exceeded the taxable profits by \$470,000. If all of this timing difference reverses then the tax on this would be $\$470,000 \times 30\% = \$141,000$. The maximum potential liabilities are \$120,000 and \$141,000 respectively.
- (b) The IASB has defined a liability as ‘a present obligation arising from past events, the settlement of which is expected to result in an outflow of resources embodying economic benefits’. Deferred tax is a liability which follows on logically from this definition because the structure of most tax systems means that it is quite possible for an entity to earn taxable income in one period and to be taxed on it in a later one. These differences should not be confused with permanent differences which affect the total amount of tax payable rather than the timing of its being taxed.

The concept of deferred tax is analogous to the receipt of a loan from the tax authorities. For a variety of reasons, either to simplify the collection of tax or to provide an incentive for business, the tax laws may delay the charge to tax of certain profits, thereby granting a ‘loan’. The deferred tax adjustment is simply required to ensure that the amount of this loan is recognised in the balance sheet. It also ensures that the amount of tax payable on the profits of any given year are matched against that year’s

profits, rather than deducting an artificial charge which has been deflated by recent 'advances' or inflated by 'repayments' of deferred tax.



Solution 25

- (a) IAS 10 deals with events after the balance sheet date which may have an effect on the financial statements in question.

The fire in the administration block is a non-adjusting event, as it concerns conditions which did not exist at the balance sheet date. Because of its size and nature, it does require disclosure by way of a note to the accounts in order to avoid the accounts being misleading.

The liquidation of a major customer is an example of an adjusting event, since it provides additional evidence of conditions existing at the balance sheet date. Adjusting events require changes to be made to the amounts included in the financial statements, and so D should write off the bad debt in the accounts for the year ended 31 March 20X3.

- (b) IAS 38 identifies different types of expenditure on research and development, and outlines the appropriate accounting treatment for each type. All expenditure on research should be written off as it is incurred, and should not be treated as an asset. Expenditure on the development of new products must be deferred and carried forward in the balance sheet where certain conditions are met.

The costs involved in the design of the new pulping process can be carried forward to future periods, as the criteria outlined in IAS 38 appear to be satisfied: the project is clearly defined, the related expenditure is identifiable, and the project is technically feasible and commercially viable. The total amount of expenditure should therefore be included in the balance sheet under intangible non-current assets.

The expenditure involved in the project to develop a new species of tree should be written off in the income statement. It is obviously not a commercially viable product, and its related costs will not be covered by its related revenues.

- (c) IAS 37 requires that a material contingent loss should be accrued in the accounts where the loss can be estimated with reasonable accuracy. In the case of the injury to the entity's employee, although it is likely that the entity will have to pay damages, it is impossible to estimate the amount. As the directors cannot create a provision for this item, they should disclose the matter by way of a note to the accounts. This should include a description of the facts, but should not be worded in such a way as to indicate that the entity accepts liability.

When a contingency has only a remote chance of having a material effect on the financial statements, IAS 37 does not require that it be disclosed in the financial statements. As the entity lawyers have indicated that there is very little likelihood of the customer's claim being successful, the directors need not mention this compensation claim, even by way of a note to the accounts.



Solution 26

(a) Package 1

	\$
<i>Income statement extracts</i>	
Interest	120,000
Depreciation	120,000
<i>Balance sheet extracts</i>	
Non-current assets – cost	1,200,000
Non-current assets – depreciation	<u>120,000</u>
Net book value	<u>1,080,000</u>
Current liabilities	82,830
Non-current liabilities	1,041,870

Workings

		Loan			
		\$			\$
31 Mar. X1	Bank	195,300	1 Apr. X0	Bank	1,200,000
31 Mar. X1	Balance c/d	<u>1,124,700</u>	31 Mar. X1	Interest	<u>120,000</u>
		<u>1,320,000</u>			<u>1,320,000</u>
31 Mar. X2	Bank	195,300	1 Apr. X1	Balance b/d	1,124,700
31 Mar. X2	Balance c/d	<u>1,041,870</u>	31 Mar. X2	Interest	<u>112,470</u>
		<u>1,237,170</u>			<u>1,237,170</u>
			1 Apr. X2	Balance b/d	1,041,870

The total liability outstanding at the end of March 20X1 is \$1,124,700. This includes an element of capital that must be repaid during the next twelve months (and is, therefore, a current liability). This liability is equal to the cash repayment scheduled for next year (\$195,300) minus the interest element of this payment (\$112,470). This difference comes to \$82,830.

If short-term liabilities are \$82,830 then non-current liabilities must be \$1,124,700 – \$82,830 = \$1,041,870.

Package 2

Income statement extracts

	\$
Finance charge	195,300

Notes to the income statement

The entity is committed to paying \$195,300 in the forthcoming year. This in respect of an operating lease which will continue for more than five years.

- (b) The directors of H prefer Package 2 because they believe that it can be treated as an operating lease. If this treatment can be justified then there is no need to capitalise the asset or to show the lease as a liability in the balance sheet. This will make the entity appear to have a lower capital employed and will, therefore, increase the return on capital employed ratio. It will also make the entity appear to have less borrowing, thereby improving the gearing ratio.

It should be stressed that both packages appear to impose very similar obligations and costs on H. It could be argued that Package 2 should be treated as a finance lease too. Thus, the directors are choosing on the basis of the most attractive treatment in the financial statements rather than the most logical commercial decision.



Solution 27

(a)

Hi – Income statement for the year ended 30 September 2003

	<i>\$000</i>	<i>\$000</i>
Revenue		9,415
Cost of sales (W1)		<u>(4,404)</u>
Gross profit		5,011
Other income		37
Administrative expenses (W3)	(760)	
Distribution costs	<u>(314)</u>	<u>(1,074)</u>
		3,974
Reorganisation expenses incurred (W4)	(965)	
Reorganisation provision utilised	<u>1,010</u>	<u>45</u>
		<u>4,019</u>
Finance cost		
Profit before tax		3,919
Income tax expense (W6)		<u>(1,205)</u>
Net profit for the period		<u><u>2,714</u></u>

Hi – Balance sheet at 30 September 2003

	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Non-current assets			
Tangible assets	<i>Cost</i>	<i>Depreciation</i>	<i>Net Book Value</i>
Buildings (W2)	11,200	1,740	9,460
Equipment & fixtures (W2)	<u>2,415</u>	<u>2,019</u>	<u>396</u>
	<u>13,615</u>	<u>3,759</u>	9,856
Available for sale investments			<u>522</u>
			10,378
Current assets			
Inventory		822	
Trade receivables (W5)		807	
Cash at bank & in hand		<u>959</u>	
			<u>2,588</u>
Total assets			<u><u>12,966</u></u>
Equity and liabilities			
Equity			
Called up share capital			
Ordinary share capital – \$1 shares, fully paid		4,000	
Share premium		2,388	
Revaluation reserve (W7)		202	
Retained earnings		<u>3,304</u>	
Total equity			9,894
Non-current liabilities			
10% loan notes (redeemable in 2010)		1,000	
Deferred tax		281	
Other provisions		<u>100</u>	
			1,381
Current liabilities			
Trade payables		396	
Other trade payables including tax (W8)		1,245	
Accrued loan note interest		<u>50</u>	
			<u>1,691</u>
			<u><u>12,966</u></u>

Workings

(W1) Cost of sales	<i>\$000</i>
Cost of goods	3,591
Add depreciation – buildings (W2)	336
– equipment (W2)	483
Gain on disposal of equipment (W2)	<u>(6)</u>
	<u>4,404</u>
 (W2) Depreciation	
Buildings – cost	11,200
Depreciation for year @ 3%	366 (IS)
Depreciation b/fwd	1,404
Depreciation c/fwd	1,740 (BS)
Equipment & fixtures – cost	2,625
Less: Disposal	<u>(210)</u>
	<u>2,415 (BS)</u>
Depreciation for year @ 20%	483 (IS)
Depreciation b/fwd	1,741
Less: Disposal	<u>(205)</u>
Depreciation c/fwd	<u>2,019 (BS)</u>
 Disposal of equipment	
Cost	210
Less: Depreciation	<u>(205)</u>
	5
Cash received	<u>11</u>
Gain	<u>6</u>
 (W3) Administrative expenses	
Per trial balance	615
Provision for legal claim	100
Bad debt written off (W5)	<u>45</u>
	<u>760</u>
 (W4) Reorganisation expenses	
Per trial balance	900
Accrued	<u>65</u>
	<u>965</u>
 (W5) Trade receivables	
Trade receivables	852
Less: Bad debt written off	<u>(45)</u>
	<u>807</u>
 (W6) Tax	
Income tax accrued for year	1,180
Deferred tax charge for year	<u>25</u>
Income statement	<u>1,205</u>
Provision for deferred tax, b/fwd	256
Charge for year	<u>25 (IS)</u>
Provision for deferred tax c/fwd	<u>281 (BS)</u>
 (W7) Revaluation reserve	
Balance b/fwd	172
Increase in available for sale investments	<u>30</u>
Balance c/fwd	<u>202</u>
 (W8) Other trade payables including tax	
Tax	1,180
Reorganisation costs	<u>65</u>
	<u>1,245</u>

(b)

Hi – Statement of changes in equity for the year ended 30 September 2003

	<i>Share capital \$000</i>	<i>Share premium \$000</i>	<i>Revaluation reserve \$000</i>	<i>Retained earnings \$000</i>	<i>Total \$000</i>
Balances 30/9/2002	3,200	788	172	1,390	5,550
Share issue	800	1,600			2,400
Revaluation of non-current assets			30		30
Profit for period				2,714	2,714
Dividends				(800)	(800)
Balances 30/9/2003	<u>4,000</u>	<u>2,388</u>	<u>202</u>	<u>3,304</u>	<u>9,894</u>



Solution 28

(a)

	\$
Trade receivables – in-house training courses	
Forecast balance at 31 December 2005	34,100
Budgeted revenue for half year to 30 June 2006	<u>65,000</u>
	99,100
<i>Less:</i> Budgeted receipts	<u>52,000</u>
Projected balance at 30 June 2006	<u>47,100</u>

Trade receivable days outstanding:

$$\text{At 31 December 2005 } \frac{\$34,100}{\$125,000} \times 365 = 100 \text{ days}$$

$$\text{At 30 December 2006 } \frac{\$47,100}{\$130,000} \times 365 = 132 \text{ days}$$

(b)

Workings

W1 Short course income

	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>	<i>Jul</i>
No. courses	0	2	3	3	4	4	4
Avg no. persons	0	10	12	12	14	13	15
Total persons	0	20	36	36	56	52	60
	\$	\$	\$	\$	\$	\$	\$
Amount due @ \$100 pp	0	2,000	3,600	3,600	5,600	5,200	6,000
Receipts							
$\frac{1}{3}$	667	1,200	1,200	1,867	1,733	2,000	
$\frac{2}{3}$	0	<u>1,333</u>	<u>2,400</u>	<u>2,400</u>	<u>3,733</u>	<u>3,467</u>	
Total	<u>667</u>	<u>2,533</u>	<u>3,600</u>	<u>4,267</u>	<u>5,466</u>	<u>5,467</u>	

BB Cash Budget for six months to June 2006

	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>
	\$	\$	\$	\$	\$	\$
Cash inflows:						
Short courses	667	2,533	3,600	4,267	5,466	5,467
In-house courses	5,000	8,000	10,000	11,000	12,000	6,000
Total cash inflows	<u>5,667</u>	<u>10,533</u>	<u>13,600</u>	<u>15,267</u>	<u>17,466</u>	<u>11,467</u>
Less cash outflows:						
Salaried staff	4,000	4,000	4,200	4,200	4,200	4,200
Wages	0	2,500	4,000	4,000	5,000	6,000
Rent	625			625		
Overheads	1,500	600	600	1,500	600	600
Materials – short courses	0	300	450	450	600	600
Materials – in-house courses	100	100	100	100	100	100
Total outflows (excluding capital expenditure)	<u>6,225</u>	<u>7,500</u>	<u>9,350</u>	<u>10,875</u>	<u>10,500</u>	<u>11,500</u>
MD's furniture				5,000		
IT equipment					40,000	
Net cash flow	(558)	3,033	4,250	(608)	(33,034)	(33)
Balance b/fwd	12,460	11,902	14,935	19,185	18,577	(14,457)
Balance c/fwd	11,902	14,935	19,185	18,577	(14,457)	(14,490)

- (b) The cash flow forecast currently shows that there is likely to be an overdraft of nearly \$15,000 if all the capital expenditure takes place as planned. If the bank overdraft facility is utilised, there is still a shortfall of \$10,000.

Actions that could be taken to increase the amount to provide sufficient funds to purchase the new technology as budgeted could involve either raising new cash or re-examining the forecast and implementing actions to improve the current forecast. It must also be borne in mind that sufficient working capital needs to be available to run BB after the new equipment has been purchased.

Actions could include:

- (i) Considering delaying or cancelling the purchase of the MD's furniture will release \$5,000.
- (ii) Arranging a long-term loan with a bank, or other financial institution, for \$20,000, to provide additional working capital.
- (iii) Issuing new equity to cover the non-current asset purchase and provide additional working capital, a minimum of \$20,000.
- (iv) Negotiating an increase in the overdraft facility from \$5,000 to \$20,000.
- (v) Considering increasing course fees to generate more income.
- (vi) Investigating the possibility of acquiring the IT equipment and furniture by hire purchase or lease.
- (vii) Examining the in-house training courses debt collection procedures and implement action to speed up revenue collection. If the trade receivable days can be reduced from the projected 132, to say, 90 days, an extra one-off receipt of \$15,000 would accrue in the period.
- (viii) Checking the accuracy of the forecast opening bank balance and the likelihood of it being significantly different to forecast.
- (ix) Considering enforcing the requirement for all short course participants to pay in advance of the course instead of allowing payment on the first day of the course.



Solution 29

- (i) The coupon rate is the interest rate payable on the face, or nominal, value of the debt. BH's bond has a coupon rate of 7% on \$1,000, which equals \$70 interest.

The yield to maturity, or redemption yield, is the effective yield on a redeemable security. It takes into account the actual interest receivable and any gain or loss due to the fact that it was purchased at a price different from the redemption value. BH's yield to maturity takes into account that the \$1,000 bond was purchased for \$850.

- (ii) The yield to maturity can be calculated as the discounted annual rate of return at which the present value of future interest payments and redemption value of the bond at maturity equals the current market value of the bond.

Let $t = 5$ and $r = 9$ and

$$(\$70 \times 3.890) + (\$1,000 \times 0.650) = 272.3 + 650 = 922.3$$

Let $t = 5$ and $r = 12$

$$(\$70 \times 3.605) + (\$1,000 \times 0.567) = 252.35 + 567 = 819.35$$

$r = 12$ is the closest to 850,

$$12\% - [(819.35 - 850)/(819.35 - 922.3)) \times 3] =$$

$$12\% - [(30.65/102.95) \times 3] =$$

$$12\% - [0.298 \times 3] =$$

$$12\% - 0.894\% = 11.106$$

The yield to maturity is approximately 11.1%



Solution 30

- (i) Using the formula from the formula sheet:

$$EOQ = \sqrt{\frac{2C_o D}{C_h}} = \sqrt{\frac{2 \times 25 \times 65,000}{3}} = \sqrt{1,083,333} = 1,040.83$$

EOQ for item "Z" is 1,041 units per order

- (ii)

<i>Total cost using EOQ</i>		\$
Unit cost	(65,000 × \$10)	650,000
Holding cost	(\$3 × 1,041/2)	1,562
Ordering cost	(\$25 × 65,000/1,041)	1,561
Total cost		653,123
Assume order size = 2,000 units		\$
Assuming no increase in holding cost per unit		
Unit cost	(65,000 × \$9.8)	637,000
Holding cost	(\$3 × 2,000/2)	3,000
Ordering cost	(\$25 × 65,000/2,000)	813
Revised total cost		640,813

The total cost is 12,310 less, therefore it is worthwhile for BF to increase the order size and claim the discount. Note the answer assumes that there will be no adverse effects from the increase in the order quantity, such as storage problems.



Solution 31

- (a) The formula to determine the economic ordering quantity is as follows:

$$EOQ = \sqrt{\frac{2 \times C_0 \times D}{C_h}}$$

C_0 = Cost of placing one order

D = annual demand

C_h = Cost of holding one unit for a year

$$EOQ = \frac{2 \times 100 \times 50,000}{0.40} = 5,000 \text{ units}$$

This means that the firm will place ten orders each year and the ordering costs will be \$1,000. The holding costs will also be \$1,000 ($0.5 \times 5,000 \times \0.40).

- (b) The annual savings from the discount will be $50,000 \text{ units} \times \$0.02 = \$1,000$
 The savings in ordering costs will be $(10 - 5 \text{ batches}) \times \$100 = \$500$
 However, the holding costs will increase to \$2,000 which is calculated as $(0.5 \times 10,000 \times 0.40)$.

	\$
Net savings as a result of the additional discount is:	
Discount	1,000
Ordering cost	500
Holding cost	<u>(1,000)</u>
	<u>500</u>

The offer of a quantity discount should be accepted.

- (c) The problems that firms face in using the EOQ formula relate to the problems of forecasting the annual demand for each item of inventory. There is always the possibility that unexpected orders will be received or sales of different products will vary unexpectedly. In order to avoid running out of inventory, many firms carry buffer inventories as they consider that the additional holding costs are justified by having the inventory available to meet the unexpected orders.

The holding costs and the ordering costs can also be different from plan but these differences are likely to be less significant than the problems of estimating annual demand.

If the discount is taken, then only five purchases of 10,000 units will be required. This means that the average holding will double from $5,000/2 = 2,500$ units to 5,000 units. The additional costs will, therefore, be $2,500 \times \$0.40 = \$1,000$.



Solution 32

- (a) The approach described is typical of the way one layer of management in an entity has, traditionally, monitored the layer below. It avoids the limitations of rigid budgets, in that working capital targets are adjusted to reflect the actual level of activity.

Provided it is positioned as 'attention-directing' information, and not 'decision support', some argue it is still a worthwhile process. Where there are valid reasons for actual being

different from the targets (often referred to as flexed budgets), it is argued, they can be identified and explained.

All too often, however, the management style of an entity results in ratios and budgets becoming straitjackets, and more attention is paid to avoiding variances (including valid ones) than doing what is right for the business. Specifically, in this case, the limitations of the target are that they are a snapshot in time, and oriented to that point in time, or the recent past. Decision-making, the positive part of control, is essentially dynamic and forward-looking.

Specifically:

- though inventories can be related to past sales, for monitoring purposes, they exist in anticipation of forecast sales, and are influenced by the considerations that comprise the economics of order quantities (essentially the balancing of the cost of holding them against the loss consequent upon their absence);
 - though trade receivables can be compared with a yardstick related to current sales, the operative policy can only be expressed in terms of credit limits and periods, which may vary from customer to customer, as part of the marketing mix. Actual trade receivables will also be affected by previous periods' sales not yet cleared;
 - likewise, payables may be compared with a figure derived from sales, but in practice they are determined by receipts, and are heavily influenced by the precise date of receipt. Too much concentration on managing the balance sheet (i.e. to the point of window dressing) can damage the profitability of a business, through increases in both direct and indirect costs;
 - the important consideration, when deciding how to deal with a cash surplus or shortage, depends on likely cash needs in the future.
- (b) The essence of accountability is the comparison of actual outturns with forecasts made, and agreed by the appropriate authority, at the appropriate time. This weighs heavily in favour of using a forecast as the basis for controlling working capital. Indeed, any other approach risks more heat than light being created in the monitoring process, with the lower layer setting out to demonstrate that the reason for the variance was an inappropriate target. It follows that the target should not be simple multiples of forecast sales, but should take into account changes in product mix, customer mix, and opportunities to improve profits by being more flexible as regards the balance sheet (e.g. increasing inventory ahead of a price increase). There was a time when the calculation task would be too great, but the advent of microcomputers, capable of being programmed by the users, has made it possible in the smallest of businesses.
- The time frame, and the frequency of the forecast, are important. There is no point in imposing arbitrary accounting periods on the process; the business lead times are what count. Also, it is important not to skimp the variance analysis. If the comparison is with a genuine forecast, then the variances will provide important information which needs to be fed back into the decision-making process. This is a very fast-changing area. As demand becomes more volatile, the costs of holding inventory and work in progress increase; many entities are looking to put their production on to something approaching a just-in-time basis, which makes forecasting more difficult, but more important. Updating management accounting systems to reflect this trend is a priority task in many businesses.
- (c) As mentioned in the previous section, the essence of monitoring is to compare what actually happens with what was, at the appropriate time, forecast to happen. Credit

policies (limits and periods) will have been arrived at by assessing their impact on volume, margins, etc. The next step is to apply that to forecast sales, so as to help build up a cash-flow forecast. But credit control is largely about whether customers pay to terms.

Again, before the advent of interactive computing facilities, this probably meant browsing through the sales ledgers every so often, hoping to spot any overdue items. Today it is possible to mark entries in the sales ledger with the expected date of payment. As receipts are accounted for, they are matched with the marks, and a list produced of customers who should have paid but have not. Open access to the information enables a higher level of authority to see what is happening, but this should be on a 'look, but don't touch' basis if the accountability and motivation of the lower level are to be maintained. If the higher layer wishes to have an attention directing statistic, it would be well advised to adopt a backward accumulation approach, that is, calculating how many days' sales have to be added together to reach the trade receivables figure.

Perhaps the main point here, and it is applicable to many areas of the management accountant's work, is that information technology is making it possible to get away from arbitrary periodic assessments and into customised and continuous monitoring.



Solution 33

(a) All figures in \$000s

	<i>No change in policy</i>	<i>Changes implemented</i>
Profit from operations	1,326	1,424
Add depreciation	225	225
½ change in trade receivables	-230	+72
½ change in payables	+144	-86
Cash flow from operations	1,465	1,635
Interest paid	-54	-45
Tax paid	-283	-283
Dividends paid	-339	-339
<i>Investing activities</i>		
Non-current assets	-550	-550
Inventory	-275	-212
Net cash flow	-36	206
Opening balance	25	25
Closing balance	-11	231

Changes implemented

1 Profit from operations:		
Revenue	=	5,200
Less discounts	=	-52
CoS $(3,224 - 225) \times 95\% + 225$	=	-3,074
Operating expenses (unchanged)	=	-650
		<u>1,424</u>
2 Decrease in trade receivables:		
$\$520 - [(\$2,600/365 \times 53) + (\$2,600/365 \times 10)]$	=	72
Decrease in trade payables:		
$[\$320 - (\$2,849/365 \times 30)]$	=	86
3 Inventory:		
$[\$350 - (625 \times 90\%)]$	=	212

(b) **Report***To:* Ms Smith*From:* Assistant*Subject:* Proposed working capital policy changes

To include:

- Comment that cash flow is improved by almost a quarter of a million pounds if the proposed changes are made.
- Problems appear to have arisen because credit and inventory control have not been adequate for increased levels of revenue.
- Liquidity: current ratio was 0.95:1 (all current assets to trade and other payables), will be around 1.2:1 under both options. Perversely, ratio looks to improve even if entity takes no action and causes an overdraft. This is because of high trade receivables and inventory levels. Moral: high current assets do not mean high cash. Cash ratio perhaps a better measure.
- Trade receivables' days last year was 45, forecast to rise to 53 on current policies despite 'official' terms being 30. Entity could perhaps look to improve its credit control before offering discounts.
- Payables' days were 46, forecast to rise to 52. Are discounts being ignored? Are relationships with suppliers being threatened?*
- Dramatic increase in inventory levels forecast: 50 days last year, 71 days forecast this year. If change implemented, inventory will still be 67 days.*
- Operating profit percentage forecast to fall to 25.5 per cent from 28.1 per cent if no changes made. Percentage will fall to 27.4 per cent if changes implemented; a fall probably acceptable if cash flow improved and overdraft interest saved.
- Non-financial factors include relationships with customers and suppliers.
- Other financial factors, is increase in revenue sustainable?

* Using cost of sales figures including depreciation.

**Solution 34****Report***To:* Financial manager*From:* Assistant financial manager*Subject:* Credit taken from suppliers*Date:*

- (i) You asked me to compare the terms of trade imposed by three suppliers. Say, for illustration, that purchases amount to \$1,000 per 30 days, that is, \$12,200 p.a.
- *Supplier A.* If payment is late every period, this would cost \$20 for every \$1,000 owed. If the entity delays payment for 60 days beyond the due date, this is $365 \div 60 \times \$20 = \122 , or 12.2 per cent.
 - *Supplier B.* The formula is $(1 + r)^p - 1$, where p is the number of 30-day delayed payment periods. There are 12.2 30-day periods in 365 days, therefore $(1 + 0.02)^{12.2} - 1 = 27.3$ per cent on an annualised basis.
An alternative approach would use an interest charge of 2 per cent compounded for two 30-day periods = 24.6 per cent.
 - *Supplier C.* If the discount is not taken, the cost of the lost discount is $365 \div 20 = 18.25$ times, approximately 36 per cent or 42 per cent if compounded.

- If MP ignores the discount and also pay late, then the annualised cost is 10 per cent as given in the question, plus the opportunity cost of the lost discount.
- (ii) Trade credit is often talked of as being ‘free’ credit. Of course, it is not free, as the financing costs of the supplier are built into the cost of goods and services. Factors to consider are:
- Suppliers’ goodwill – essential if the entity operates ‘just-in-time’ systems.
 - Entity image – does the firm want a reputation as a poor payer or, worse, as having financial difficulties that might have the result of suppliers increasing their prices to cover perceived risk of default?
 - Effect on credit rating by agencies, which might raise the cost of all borrowing.
 - Buying power of the entity and its relative position in the industry.
 - Industry norms.
 - The cost of lost discounts, which can be substantial.
 - Suppliers’ bargaining position. Very few entities are sole suppliers of anything, but the fewer suppliers there are, the more strength they have to refuse to supply slow payers.
- (iii) An advantage of having a common policy is that the entity can have one payment policy covering all suppliers, which might reduce administrative costs and reduce errors.

Disadvantages are that some suppliers may refuse to supply on MP ‘s terms, which reduces the number of competitive quotes that the entity may need to obtain. If the terms are more onerous than the supplier is accustomed to, it might also result in increased costs although, clearly, the costs of credit would have to be seen alongside the increased cost of goods and services.

Summary

MP already appears to have a partially common policy, in that we insist on 30 days’ credit. The entity should consider whether this is in their best interests, given the evidence of lost discounts. Bank overdraft finance may be cheaper than forgoing discounts. The entity could also approach suppliers who do not give discounts at present, to enquire if they will allow better terms for earlier payment.

I hope that you find the above sufficient for your needs. If I can be of further help, please let me know.



Solution 35

Cash Budget for the three month period May to July 2005

	<i>May</i> \$000	<i>June</i> \$000	<i>July</i> \$000
Cash receipts			
Cash sales	35	40	40
Credit sales receipts (working 1)	101	104	111
Total receipts	136	144	151
Credit purchase payments (working 3)	50	54	55
Expenses paid	50	50	50
Equipment purchase paid	0	0	250
Total payments	100	104	355
Net cash movement in month	36	40	(204)
Balance b/f	96	132	172
Balance c/f	132	172	(32)

Workings**1 Credit sales – receipts:**

	<i>Total</i>	<i>May</i>	<i>June</i>	<i>July</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Feb. sales	100	5		
Mar. sales	100	30	5	
Apr. sales	110	66	33	6
May sales	110		66	33
June sales	120			<u>72</u>
Totals		<u>101</u>	<u>104</u>	<u>111</u>

2 Credit purchases – payments

	<i>Total</i>	<i>May</i>	<i>June</i>	<i>July</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Mar	50	15		
Apr	50	35	15	
May	55		39	16
June	55			<u>39</u>
Totals		<u>50</u>	<u>54</u>	<u>55</u>

**Solution 36**

To: The Board, SF

From: Consultant

Re: Review of cash budget

I have reviewed the cash budget for the year. The closing balance of cash at the bank is \$50,000 lower than at the beginning of the year. Between August and November the deficit is in excess of the overdraft facility that the bank is willing to make available. The following actions might be considered to improve the budgeted cash flow for the year.

- Trade receivables.* SF could attempt to improve the collection period from trade receivables. The normal credit period for the industry is not known, but the existing average credit period of two months does not seem excessive. A selective tightening of credit control (including collection) procedures might be possible. Offering cash discounts might speed up some collections, but could prove an expensive method of improving cash flow. Factoring of debts would be another possibility. The cost of the factoring service will be offset in part by savings from the outsourcing of the credit control and sales ledger departments and potential savings in bad debts.
- Investment.* The amount invested must be significant, given a dividend receivable of \$10,000. It might be possible to dispose of part of this investment. Assuming a return on the investment of 5 per cent, the investment itself may be worth as much as \$200,000. Such action should be taken only if all other possibilities have failed, as this action would remove the opportunity to benefit from the long-term growth of the investment. The nature of the investment is also important, as it may have strategic business links.
- Payables.* The entity is already taking up to 90 days' credit, so the scope for delaying payments to payables further must be limited. It might be possible to take temporary longer

credit from selected suppliers by arrangement. The build-up of inventory should be investigated; it may be in anticipation of a future increase in sales. The business is seasonal, and there may be scope for altering the production pattern. This in turn may lead to changes in the payment pattern for materials, wages and other operating expenses.

- (d) *Wages and salaries.* While not suggesting any actions to improve cash flow, it should be recognised that, if wages are paid weekly, the overdraft at the end of the month understates the maximum position. For instance, the overdraft of \$94,000 at the end of October will continue to rise by three weekly wage payments before any cash is received from customers at the end of November. This assumes that customer receipts are not spread over the month. In this case, it would help if employees could be persuaded to move to a monthly payment basis.
- (e) *Payments for non-current assets.* It may be possible to delay or cancel the purchase of office furniture if it is considered non-essential, although the amount is relatively small and so will have little impact on the cash-flow problems. The progress payment on the building extension is likely to be a commitment that cannot be avoided. The purchase of the car could perhaps be deferred if it is a replacement, as it may not be essential at the time scheduled. The new equipment should be investigated to establish whether it is an essential replacement, or whether it is perhaps in anticipation of an expansion of the business; however, delaying payment by one or two months would not alter the forecast overdraft position. If the equipment must be replaced, consideration may be given to leasing, which would ease the cash-flow problems.
- (f) *Dividend.* The payment of the dividend may be forgone, which will significantly help the cash-flow problems. It is recognised, however, that the dividend may be an important source of income to some of the shareholders. Alternatively, there may be scope to delay payment of the dividend.
- (g) *Taxation.* Corporation tax would be payable nine months after the entity's year end. It would be possible to defer payment, subject to agreement from the revenue authorities. There would be an interest charge, but it might be lower than the bank's interest charge.
- (h) *Long-term capital.* It appears that no new equity investment is being made to cover the proposed capital expenditure. Consideration should therefore be given urgently by the directors to increasing the permanent capital of SF. If the existing shareholders are unable, or unwilling, to provide additional finance, the directors could explore the possibility of attracting new shareholders. External equity may be provided by a venture capital provider, or a 'business angel'. This would possibly involve the new equity providers taking a substantial stake in the business. The budgeted income statement and balance sheet have not been provided, but the income tax bill of \$30,000 would suggest a reasonably profitable business that should help to attract investors.

Additional points

- It should also be recognised that the cash budget does not allow for the interest charged on the overdraft by the bank, which itself will increase the overdraft balance, and will usually be applied each quarter.
- SF's cash balance could potentially be improved by investing cash surpluses identified in the early part of the year for the short term. The possible opportunities may be restricted by the amount of surplus cash available and the length of time the cash is available, but may include bank deposits, gilts close to redemption and bills of exchange.

Signed: Consultant



Solution 37

Working capital management

- (a) Factoring is a method of raising finance from trade receivables, whereby invoices are sold to a factoring entity.

The main services associated with entities offering this finance are:

- provision of finance, often between 75 per cent and 85 per cent of approved debts from the moment the goods or services are invoiced;
- sales ledger administration covering credit checking, invoicing and collection. In effect, the sales ledger function is outsourced;
- bad-debt insurance to cover the firm in the event of default upon an invoice or invoices;
- the provision for a confidentiality agreement to prevent the arrangement being apparent to customers and others.

- (b)

Annual sales \$400,000 × 12 = \$4,800,000	
<i>Annual net cost of factoring</i>	\$
Service fee: \$4,800,000 × 2%	96,000
Interest charge:	
(\$4,800,000 × 75% × 10% × 40/365)	<u>39,452</u>
Total annual cost	135,452
Less: Administration savings (\$5,000 × 12)	<u>60,000</u>
Net cost	<u><u>75,452</u></u>

- (c) Using compound interest:

$$V = X(1 + r)^n, \quad 400 = 392(1 + r)^1, \quad 1.0204 = 1 + r,$$

$r = 2.04\%$ for a 30 day period (40 days – 10 days)

$$(1 + \text{annual rate}) = (1 + \text{periodic rate})^{\text{number of periods in year}}$$

$$(1 + \text{annual rate}) = (1.0204)^{12.17} = 1.2786$$

∴ True cost of cash discount = 27.9%

- (d) The cost of offering the cash discount is high (27.9 per cent), particularly compared with the cost of a bank overdraft, and may not be the most cost-effective way of improving cash flow from trade receivables. Discounts are customary in some industries, and may have to be offered as part of the entity’s overall marketing mix. However, the impact of offering discounts is difficult to access because not all customers will take advantage of the discount. On the other hand, some customers may take the discount *and* the normal credit period, which then creates the problem of having to chase the customer for a relatively small amount.

Factoring of debts should eliminate the need for a sales ledger department, but may lead to a loss of direct contact with the customer. Factoring will improve the certainty of the cash flows from customers. The factor will also be able to assess the credit rating of each customer. Although the image is changing, factoring has traditionally been seen as lending in the last resort.

While both proposals are aimed at improving cash flow, factoring will bring immediate cash on per cent of sales, while discounts will still involve a ten-day delay before cash is received.



Solution 38

(a)

$$\left(\frac{100}{97}\right)^{365/80} - 1 = 14.9\%$$

This is a higher rate of interest than the 12% each year charged by the bank, but there are some benefits of offering a cash discount compared to bank finance:

- Gearing is not increased as with bank finance. Thus, the true cost of bank finance is not just 12% each year, but also the increase in the required rate of return by equity holders to compensate them for increased financial risk as a result of increased gearing.
- Bank finance may involve additional conditions such as more security in the form of fixed and/or floating charges and perhaps more debt covenants. These are likely to result in reduced financial flexibility for DF.
- Discounts are based upon current sales and future cash flows whereas bank finance may, at least in part, be constrained by historic performance and historic assets.

There are, however, a number of problems with offering a cash discount:

- Other customers may require the same credit terms as those offered to FF;
- The annual equivalent rate of interest is quite high at 14.9%;
- The high cost of offering a discount may be worthwhile in overcoming initial liquidity difficulties arising from setting up this contract. However, once established, the discount may be difficult to withdraw when liquidity improves, without the loss of customer goodwill;
- The fact that a discount is offered does not mean it will be accepted. Thus, this form of finance is dependent upon FF taking up the discount at the terms being offered;
- It builds in the norm of a three-month settlement period, which might otherwise be subject to future negotiation.

(b)

Report

<i>To:</i>	The Wong Family	<i>From:</i>	Management Accountant
<i>Subject:</i>	Financing of additional current assets from FF contract	<i>Date:</i>	20 November 2001

The financing of current assets

Individual current assets such as inventory or trade receivables are temporary and should be realised into cash in the short term. Current assets as a pool, however, are, at least in part, permanent, as some are always needed. In the context of the FF contract, the total additional current assets needed are likely to have a permanent element, so long as the contract continues. Also, however, given that sales are expected to fluctuate from month to month, part of the current assets are likely to fluctuate from month to month. This will happen automatically with trade receivables and to the extent that such fluctuations are predictable, it will also happen with inventory.

A simple conclusion is, therefore, that the permanent element of current assets could be financed with long-term finance and the fluctuating element with short-term finance. This conclusion of time dependence is, however, subject to a range of other

considerations. In addition, to some extent, the incremental current assets required for the FF contract are self-financing, in that, the additional sales will be partially matched by increased purchases for which credit terms are likely to be available from suppliers. These additional payables will go some way toward off-setting additional trade receivables.

It should also be noted that the financing of incremental inventory needs to be considered in light of the existing inventory policy. Assuming that existing customers are supplied with similar goods to FF, the inventory holding policy needs to be considered as a whole, rather than separately for FF sales and other sales. In particular, if sales volumes double this does not mean that inventory needs to double. The Economic Order Quantity model would predict that inventory should increase in square root proportion to sales (that is by 41% when sales double). This, of course, depends upon the assumptions of the model holding and in particular the predictability of demand.

Predicting current asset requirements is vital in determining the necessary finance; thus management of working capital is an issue which needs to be considered simultaneously with financing.

Bank loan

The need for financing additional permanent (or hard core) current assets may be most appropriate to a medium term loan in terms of matching the timing. Such a loan in the short term if the conditions are met. Interest rates may also be fixed giving additional certainty.

Disadvantages of an loan include:

- It is likely to come with additional conditions of further security and covenants;
- It will increase gearing and may increase the required return on equity due to increased financial risk thus the real cost would be above 12% each year;
- If existing gearing is high it may place a significant strain on the entity's liquidity to the extent that bankruptcy may become a possibility, particularly as additional equity capital appears to be unavailable in a liquidity crises.

Overdraft

An overdraft must be repaid on demand and thus there are risks if it becomes part of permanent financing, or could not be repaid quickly from other sources of immediately available finance.

An overdraft is, thus, a flexible form of financing which may be most appropriate for financing the fluctuating element of current assets, as interest will only be paid when the account is overdrawn.

It is also likely that the necessary finance will be greater in the early months of the contract, as there will be no cash coming in for the first three months, but inventory needs to be established and payables (with terms of less than 90 days) will need to be paid. Thereafter, profitable trading from the contract should reduce the need for financing. As a result, an overdraft may be appropriate for temporary front-end finance needs.

An overdraft does not always come into gearing calculations, but if it is significant and rolls over into the long term, it would have a similar effect to a loan in terms of financial risk. Also, similar security and covenants may be required. The question of the overdraft facility extended by the bank needs to be considered. If DF is close to this facility, it may be appropriate to use other means to finance the increase in current assets (see below) to leave the maximum financing flexibility with the remaining available overdraft.

Debt factoring

Debt factoring may be defined as:

‘The sale of debts to a third party (the factor) at a discount, in return for prompt cash.’

The nature of the service is likely to vary, but typically:

- an advance of about 80% of the invoice value is made immediately by the factor;
- the balance, less an interest charge (perhaps 3% over the base rate), is paid when the customer settles the account;
- the factor may take responsibility for managing the sales ledger for an additional fee (perhaps 2% of sales);
- factoring may be offered with or without recourse. With recourse is where the client entity takes the risk of bad debts. Without recourse is where the factor takes the bad debt risk. A further charge would be made for non-recourse debt factoring.

The advantages of debt factoring include:

- cash is received immediately without security, covenants or increased gearing;
- the implied interest rates tend to be similar to other forms of finance as the service is offered in a competitive market;
- debt factors have economies of scale and specialist expertise in collecting debts and they may thus be more efficient than DF in this context;
- costs of maintaining the sales ledger are largely saved although some records are needed as a control over the factoring entity;
- bank finance tends to be based, in part at least, on historic sales and profits. Factoring is based upon current sales and profits. This tends to make more finance available when the business is growing, as is the case with DF.

Problems and other considerations relating to factoring for DF include:

- it needs to be decided whether a factoring service is to be used for all trade receivables, only FF or only non-FF customers;
- FF, and indeed other customers, may lose confidence in DF’s continued solvency if they discover that a debt factor is being used;
- non-recourse finance will depend upon an estimate of FF’s creditworthiness relative to the charges the factor is likely to make.

Invoice discounting

Invoice discounting is the sale of specific trade debts to a third party (the provider of the discounting service). It shares many of the same advantages and problems as debt factoring. The key distinguishing features are that:

- it tends not to involve the taking over of the administration of the sales ledger;
- it relates to specific invoices selectively sold by the client entity;
- it can be confidential (that is confidential invoice discounting) whereby the customer remains unaware of the sale of the debt and the involvement of a third party.



Solution 39

(a)

	<i>\$000</i>	<i>\$000</i>
Opening balance (1/12/2002)		175
December		
+ 700 × 0.7	490	
- 300 × 0.3	<u>-90</u>	
		400
January		<u>-900</u>
Closing balance (31/1/2003)		<u><u>-325</u></u>

The expected balance at 31 January is an overdraft of \$325,000. This, however, provides a poor basis for planning, as this particular outcome will not occur.

This is because, based on the probabilities provided, there will either be cash inflow of \$700,000 in December or a cash outflow of \$300,000. The mean expected value would only be relevant if the event could be repeated a significant number of times. The basis of planning should thus be for each of the two possible outcomes.

Examiner's Note:

The above calculations exclude interest paid/received. However, these could be included (see calculations to requirement (b)), but the overall conclusions with respect to the use of the mean expected value would be unchanged.

(b)

Memorandum

<i>To:</i>	The Board	<i>From:</i>	Treasury assistant
<i>Subject:</i>	Investment of short term cash balances	<i>Date:</i>	19 November 2002

Two possibilities arise with respect to trading in December:

- Favourable conditions (70% probability)
- Rival chain discounts (30% probability)

The impact on operating cash flows is as follows:

	<i>Favourable</i>	<i>Rival discounts</i>
	<i>\$000</i>	<i>\$000</i>
Opening balance (1/12/2002)	175	175
December	700	-300
January	<u>-900</u>	<u>-900</u>
Closing balance (31/1/2003)	<u>-25</u>	<u>-1,025</u>

In either case there is no surplus cash at the end of January, so there is no point investing beyond two months (that is 31 January 2003).

The choices are thus:

Option 1. Invest \$175,000 for one month. Then \$875,000 (plus interest on the \$175,000 initial investment) for a further month if conditions are favourable, or borrow \$125,000 (less

interest on the \$175,000 initial investment) in the second month if conditions are unfavourable.

Option 2. Invest \$175,000 for two months. Then a further \$700,000 for a further month if conditions are favourable and borrow \$300,000 in the second month if conditions are unfavourable.

Unfortunately, under option 2, if conditions are unfavourable, then the initial investment will need to be financed by overdraft in the second month at an annualised rate of 10% as opposed to the amount earned of 6%.

Specifically, the interest rates are:

One month deposit	$(1.05)^{1/12} - 1 = 0.004074$
Two month deposit	$(1.06)^{2/12} - 1 = 0.009759$

$$\text{One month overdraft} \quad (1.10)^{1/12} - 1 = 0.007974$$

Option 1

Invest \$175,000 for 1 month	$(0.004074 \times 175,000)$	\$ 713
------------------------------	-----------------------------	--------

Then either:

(1) invest \$875,713 for 1 month	$(0.004074 \times 875,713) \times 70\%$	2,497
(2) overdraft of \$124,287 1 month	$(0.007974 \times 124,287) \times 30\%$	-297
		<u>2,913</u>

Option 2

Invest \$175,000 for 2 months	$(0.009759 \times 175,000)$	\$ 1,708
-------------------------------	-----------------------------	----------

Then either:

(1) \$700,000 for 1 month	$(0.004074 \times 700,000) \times 70\%$	1,996
(2) overdraft of \$300,00 for 1 month	$(0.007974 \times 300,000) \times 30\%$	-717
		<u>2,987</u>

Before a final decision can be taken however a number of other factors should be considered. Expected values ignore risk. Thus, in *Option 2*, there is a significant loss due to overdraft interest if trading is unfavourable in December. While only having a 30% probability this may be regarded as risking additional financial cost at a time of high operating losses.

Transactions costs would reduce the benefit of both options, as in each case there are two deposits.

The scale of the existing overdraft needs to be considered. This is particularly the case if the entity is nearing its overdraft facility. This would favour *Option 1* where the deposit maturing could be used to reduce the overdraft necessary in January 2003.

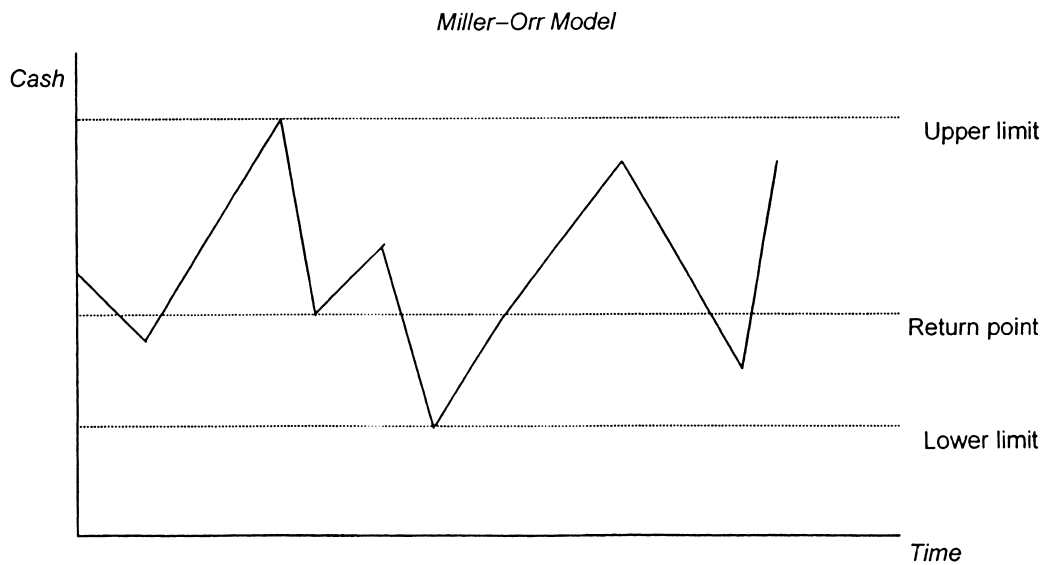
(c)

The Miller Orr model assumes that cash flows are entirely unpredictable. This is consistent with the uncertainty that appears to exist for HRD after January 2003.

The model sets lower and upper bounds for the cash balance.

When cash falls to the lower level, investments are sold to return cash to a pre-determined level – called the return point.

When cash balances rise to the upper level, the treasurer will buy short-term investments to return cash down to the return point.



The lower limit is set by management. The return point and the upper limit are then set by the model based on the formula for the spread between the upper and lower limits.

$$3 \times \left[\frac{3/4 \times \text{transaction costs} \times \text{variance of daily cashflows}}{\text{Interest rate}} \right]^{1/3}$$

Thus, if variability of cash flows increase so does the spread. Variations can however take into account seasonality (for example for HRD's Ltd's Christmas or Holiday trade peaks) different accounts, lead times and so on.

There are, however, a number of problems in applying the Miller-Orr model to HRD Ltd:

- The model assumes cash flows are random whereas there appears to be some predictability in HRD's cash movements. Some costs are known. Also, even sales can be estimated, though only with probabilities attached.
- The difficult trading conditions appear to imply that, as with many entities, a hard core overdraft will be maintained for much of the year, leaving no available surplus cash balances to implement the model.



Solution 40

(a)

Length in days

$$\text{Raw materials cycle} \quad \frac{(55 + 80)/2}{850} \times 365 = 29 \text{ days}$$

$$\text{Finished goods cycle} \quad \frac{(185 + 185)/2}{1,830} \times 365 = 37 \text{ days}$$

$$\text{Trade receivables cycle} \quad \frac{(114 + 200)/2}{1,996} \times 365 = 29 \text{ days}$$

$$\text{Payables cycle} = \frac{(50 + 70)/2}{850} \times 365 = (26 \text{ days})$$

Working capital cycle = **69 days**

(b)

	<i>Receipts/(Payments)</i>
	<i>\$000</i>
Sales (1,996 – 200 + 114)	1,910
Expenses (1,830 – 70 + 50 + 80 – 55 + 65)	<u>(1,900)</u>
Cash generated from operations	<u>10</u>

This calculation assumes that there are no non-cash items in cost of sales. (It thus ignores depreciation on plant and machinery, accruals, prepayments and so on.)

(c)

Memorandum

To: The Board of PRT
Subject: Cash Management

From: Management Accountant
Date: 21 May 2002

Introduction

The entity appears to be suffering from over-trading as indicated by the number of outlets growing at 50% a year. These appear to be purchased, hence this would be a major drain on cash resources.

To the extent that this expansion could be financed by new equity and new debt, it is not a major problem. It would appear, however, that more recently an overdraft has been used to finance some of the expansion. This appears to be particularly unwise as it is financing a long-term asset with a short-term liability.

In particular, if no new finance can be raised, then the bank could force the entity into liquidation by calling-in the overdraft at any time. This may occur notwithstanding the actual, and potential, profitability of the business.

Cash management

The most important feature of cash management would therefore appear to be maintaining a good relationship with the bank. This could include:

- supplying monthly management accounts;
- informing the bank of any problems in advance, that is before they affect the management accounts;
- provision of additional security if possible – either entity assets or directors' personal assets.

Notwithstanding efforts to maintain the bank's goodwill, it is necessary to reduce the overdraft or at least prevent it increasing. If this does not occur, the overdraft is almost certain to be called-in. The most obvious remaining sources of finance (given debt and equity capital appear to be exhausted) are:

- capital assets;
- operating activities;
- improved working capital management.

Current ratios

Current ratios provide a summary measure of working capital. These are as follows:

2001

$$\frac{55 + 185 + 114}{50 + 400} = 0.787:1$$

2002

$$\frac{80 + 185 + 200}{70 + 950} = 0.456:1$$

The deterioration in the current ratio reflects the increase in the overdraft. The ratio is, however, a static representation at a point in time. The primary concern is whether future cash inflows are sufficient to meet the future cash outflows necessary to sustain and expand the business.

Capital assets

The cause of the cash management problems appears to be over-investment in new outlets. No further outlets should therefore be opened. Cash can, however, be raised from existing outlets given that they appear to be owned by the entity.

Outlets could be sold. Unfortunately, sales of property may take some time unless the price is reduced significantly. This is likely to generate a significant loss. This is even more true of plant, machinery and fixtures, which are likely to have a low net realisable value.

Rather than buying the outlets, significant cash savings could have been made by leasing them. While the purchase decision is in the past, cash can still be recovered using a sale and leaseback arrangement – perhaps with the entity's bankers.

Operating cash flows

While the number of outlets has risen by 50% a year, sales have increased by only 18.5% in the last year. There may be a number of reasons for this:

- sales have not yet become established at new outlets;
- price cutting has taken place to penetrate new markets so sales volume growth has not been matched by sales value growth;
- the size of later outlets could be smaller than earlier outlets.

Whatever the reason, the cash flow generated from operations is small at \$10,000 in the current year (see (b)). As a result, either substantial growth in operating cash flows is needed or realisation of capital assets by sale or lease.

Working capital management

Improved working capital management may generate extra funds, but it is unlikely to be sufficient on its own.

The *raw materials cycle* appears reasonable at 29 days, but some materials are purchased for immediate use on made-to-order jobs. This means that the holding period on the remaining inventory may be significant. More information is therefore needed on the holding period for individual inventory lines. Similarly, some of the sales are in respect of made-to-order jobs, thus the *finished goods inventories* relating to the remaining sales may be disproportionately high.

The *trade receivables cycle* appears reasonable at 29 days, but this is an average, and given that sales to private customers are for cash, it means that the credit period extended to business customers is rather longer than 29 days. Improvements to cash flow from trade receivables management may include:

- factoring of debts may produce increased cash, but may be costly;
- similarly, the credit terms offered by the entity could be managed via an outside finance entity;
- discounts for cash settlement or reduced credit terms may be offered.

The payables cycle at 26 days seems rather short and it might be worth investigating the possibility of suppliers extending further credit. If cash discounts are taken, this may explain the short cycle, but they may be worth forgoing in the short term to help liquidity. As with all ratios, care needs to be taken as the balance sheet figure may be atypical because of:

- growth;
- seasonality;
- large sales/purchases just before the year end;
- manipulation.

Conclusion

The need for cash is urgent. While operating activities and improved working capital management may provide some help, a more significant immediate injection of cash may be needed to maintain the goodwill and co-operation of the bank. In this context, the sale or the sale and leaseback of non-current assets may be the most appropriate policy. Information in respect of these possibilities is therefore urgently needed.

Signed: Management Accountant.



Solution 41

The International Accounting Standards Board (IASB) is responsible for devising and issuing international financial reporting standards (IFRS). To issue an IFRS the IASB must have eight of the fourteen members of the Board voting in favour.

The process for the development of an international standard involves the following:

- During the early stages of a project, IASB may establish an Advisory Committee to advise on the issues arising in the project. Consultation with this committee and the Standards Advisory Council occurs throughout the project.
- IASB may develop and publish a *Discussion Document* for public comment.
- Following the receipt and review of comments on the discussion document, IASB develops and publishes an *Exposure Draft* for public comment.
- Following the receipt and review of comments on the exposure draft, the IASB may hold a public hearing or carry out field tests.

- An *International Financial Reporting Standard* is issued along with any dissenting view expressed by an IASB member and a *Basis of Conclusions* to explain how the IASB reached its conclusions.



Solution 42

- (i) **Initial recognition** – on purchase the attributable costs will be recognised.

Delivery vehicles recognised at \$29,550 ($\$9,850 \times 3$).

Computers; the attributable cost is the cost of acquiring and getting the system ready for use or enabling it to become functional. This can include the initial adaptations but does not include the in house programmers as the work was done at a later stage and is regarded as an additional cost incurred. For any additional cost to be capitalised it must enhance or improve the asset beyond its original specification. The in house programmers were checking and fixing the software to get it up to its original specification, not enhancing beyond the original specification.

Subsequently remeasured – the vehicles are subsequently remeasured when they are revalued on 31 October 2003.

The computer system has no subsequent remeasurement.

Derecognised – the vehicles are derecognised when they are traded in as E Ltd no longer has access to the risks and rewards of ownership. On derecognition the value received is deducted from their carrying value to calculate the loss on disposal.

The computers are still in use and have not been derecognised.

- (ii) *IAS 16 Property, plant and equipment* requires the cost of the tangible non-current assets to be recognised. Cost includes delivery charge and is net of any trade discount. Annual running costs such as insurance are revenue expenditure and are charged to the income statement.

IAS 16 allows tangible non-current assets to be revalued; any increase in value is credited to revaluation reserve.

Balance Sheet (extract) as at 31 October 2003

	\$
Tangible non-current assets	
Delivery vehicles at valuation (W1)	27,703
Computers (W2)	8,550
Provision for depreciation – computers (W2)	2,138
Revaluation reserve (W1)	5,541

(Note – VAT would be reclaimed before the year end so does not appear in the year end balances)

Income statement (extract) for the year ended 31 October 2003

	\$
Depreciation – delivery vehicles (W1)	7,388
Depreciation – computers (W2)	2,138
Adjusting software	3,000
Insurance – delivery vehicles	2,100

Balance Sheet (extract) as at 31 October 2004

	\$
Tangible non-current assets	
Delivery vehicles at valuation (18,000 × 3)	54,000
Computers	8,550
Provision for depreciation – delivery vehicles (7/12 × 54,000 × 25%)	7,875
Depreciation – computers	2,138
(As the revaluation is realised on disposal of the vehicles it can be transferred to the income statement)	
Revaluation reserve	5,541

Income statement (extract) for the year ended 31 October 2004

	\$
Depreciation – delivery vehicles	7,875
Gain on disposal of small delivery vehicles	(2,183)
Depreciation computers	2,138

Workings

	\$
W1	
Delivery vehicles – cost	29,550
Depreciation for year – 25%	<u>7,388</u>
	22,162
Gain on revaluation	<u>5,541</u>
31 October 2003 Revalue to 125% of balance	<u>27,703</u>
Less five months depreciation	2,886
1 April 2004 Trade in (\$9,000 × 3)	<u>27,000</u>
Gain on disposal	<u>2,183</u>

W2

Computers at cost	\$
Hardware	5,000
Software	950
Adaptation	<u>2,600</u>
Total cost	<u>8,550</u>
Depreciation	<u>2,138</u>

November 2005 Examinations

Intermediate Level

Financial Accounting and Tax Principles (Paper P7)

Question Paper	634
Brief Guide	651
Examiner's Answers	652

The answers published here have been written by the Examiner and should provide a helpful guide for both tutors and students.

Published separately on the CIMA website (www.cimaglobal.com) from the end of February 2006 is a Post Examination Guide for this paper, which provides much valuable and complementary material including indicative mark information.

Financial Management Pillar

Managerial Level Paper

P7 – Financial Accounting and Tax Principles

24 November 2005 – Thursday Afternoon Session

Instructions to candidates

You are allowed three hours to answer this question paper.
You are allowed 20 minutes reading time before the examination begins during which you should read the question paper and, if you wish, make annotations on the question paper. However, you will not be allowed, under any circumstances , to open the answer book and start writing or use your calculator during this reading time.
You are strongly advised to carefully read ALL the question requirements before attempting the question concerned (that is, all parts and/or sub-questions). The requirements for questions in Sections B and C are highlighted in a dotted box.
Answer the ONE compulsory question in Section A. This is comprised of 20 sub-questions on pages 635 to 640.
Answer ALL SIX compulsory sub-questions in Section B on pages 641 to 643.
Answer ONE of the two questions in Section C on pages 644 to 647.
Maths Tables and Formulae are provided on pages 648 to 650.
Write your full examination number, paper number and the examination subject title in the spaces provided on the front of the examination answer book. Also write your contact ID and name in the space provided in the right hand margin and seal to close.
Tick the appropriate boxes on the front of the answer book to indicate which questions you have answered.

SECTION A – 50 MARKS

[the indicative time for answering this Section is 90 minutes]

ANSWER ALL TWENTY SUB-QUESTIONS*Instructions for answering Section A:*

The answers to the twenty sub-questions in Section A should ALL be written in your answer book.

Your answers should be clearly numbered with the sub-question number and then ruled off, so that the markers know which sub-question you are answering. For multiple choice questions, you need only write the sub-question number and the letter of the answer option you have chosen. You do not need to start a new page for each sub-question.

For sub-questions **1.5, 1.6, 1.7, 1.9** and **1.18** you should show your workings as marks are available for the method you use to answer these sub-questions.

**Question One**

1.1 The following measures relate to a non-current asset:

- | | |
|--------------------------|----------|
| (A) Net book value | \$20,000 |
| (B) Net realisable value | \$18,000 |
| (C) Value in use | \$22,000 |
| (D) Replacement cost | \$50,000 |

The recoverable amount of the asset is

- (A) \$18,000
 (B) \$20,000
 (C) \$22,000
 (D) \$50,000

(2 marks)

1.2 Which ONE of the following would be regarded as a related party of BS?

- (A) BX, a customer of BS.
 (B) The president of the BS Board, who is also the chief executive officer of another entity, BU, that supplies goods to BS.
 (C) BQ, a supplier of BS.
 (D) BY, BS's main banker.

(2 marks)

1.3 Which ONE of the following would be regarded as a change of accounting policy under IAS 8 *Accounting policies, changes in accounting estimates and errors*?

- (A) An entity changes its method of depreciation of machinery from straight line to reducing balance.
 (B) An entity has started capitalising borrowing costs for assets under the alternative treatment allowed by IAS 23 *Borrowing costs*. The borrowing costs previously had been charged to income statement.

- (C) An entity changes its method of calculating the provision for warranty claims on its products sold.
- (D) An entity disclosed a contingent liability for a legal claim in the previous year's accounts. In the current year, a provision has been made for the same legal claim. **(2 marks)**

- 1.4 An entity's working capital financing policy is to finance working capital using short-term financing to fund all the fluctuating current assets as well as some of the permanent part of the current assets.

The above policy is an example of

- (A) an aggressive policy.
 (B) a conservative policy.
 (C) a short-term policy.
 (D) a moderate policy. **(2 marks)**

- 1.5 An item of machinery leased under a five year finance lease on 1 October 2003 had a fair value of \$51,900 at date of purchase.

The lease payments were \$12,000 per year, payable in arrears.

If the sum of digits method is used to apportion interest to accounting periods, calculate the finance cost for the year ended 30 September 2005. **(3 marks)**

- 1.6 At 30 September 2005, BY had the following balances, with comparatives:

Balance Sheet extracts:

As at 30 September	2005	2004
	\$000	\$000
Non-current tangible assets Property, plant and equipment	260	180
Equity and reserves Property, plant and equipment revaluation reserve	30	10

The income statement for the year ended 30 September 2005 included:

Gain on disposal of an item of equipment	\$10,000
Depreciation charge for the year	\$40,000

Notes to the accounts:

Equipment disposed of had cost \$90,000. The proceeds received on disposal were \$15,000.

Calculate the property, plant and equipment purchases that BY would show in its cash flow statement for the year ended 30 September 2005, as required by IAS 7 *Cash flow statements*. **(4 marks)**

- 1.7 BC, a small entity, purchased its only non-current tangible asset on 1 October 2003. The asset cost \$900,000, all of which qualified for tax depreciation.

BC's asset qualified for an accelerated first year tax allowance of 50%. The second and subsequent years qualified for tax depreciation at 25% per year on the reducing balance method.

BC's accounting depreciation policy is to depreciate the asset over its useful economic life of five years, assuming a residual value of \$50,000.

Assume that BC pays tax on its income at the rate of 30%.

Calculate BC's deferred tax balance required in the balance sheet as at 30 September 2005 according to IAS 12 *Income taxes*. **(4 marks)**

- 1.8 The setting of International Accounting Standards is carried out by co-operation between a number of committees and boards, which include:

- (i) International Accounting Standards Committee Foundation (IASC Foundation)
- (ii) Standards Advisory Council (SAC)
- (iii) International Financial Reporting Interpretations Committee (IFRIC)

Which of the above reports to, or advises, the International Accounting Standards Board (IASB)?

- | | Reports to: | Advises: | |
|-----|---------------|----------|------------------|
| (A) | (i) and (iii) | (ii) | |
| (B) | (i) and (ii) | (iii) | |
| (C) | (iii) | (i) | |
| (D) | (ii) | (i) | (2 marks) |

- 1.9 Country B has a corporate income tax system that treats capital gains/losses separately from trading profits/losses. Capital gains/losses cannot be offset against trading profits/losses. All losses can be carried forward indefinitely, but cannot be carried back to previous years. Trading profits and capital gains are both taxed at 20%.

BD had no brought forward losses on 1 October 2002. BD's results for 2003 to 2005 were as follows:

	<i>Trading profit/(loss)</i>	<i>Capital gains/(loss)</i>
	<i>\$000</i>	<i>\$000</i>
Year to September 2003	200	(100)
Year to September 2004	(120)	0
Year to September 2005	150	130

Calculate BD's corporate income tax due for each of the years ended 30 September 2003 to 2005. **(3 marks)**

- 1.10 Which ONE of the following would require a provision to be created by BW at its balance sheet date of 31 October 2005?

- (A) The government introduced new laws on data protection which come into force on 1 January 2006. BW's directors have agreed that this will require a large number of staff to be retrained. At 31 October 2005, the directors were waiting on a report they had commissioned that would identify the actual training requirements.
- (B) At the balance sheet date, BW is negotiating with its insurance provider about the amount of an insurance claim that it had filed. On 20 November 2005, the insurance provider agreed to pay \$200,000.
- (C) BW makes refunds to customers for any goods returned within 30 days of sale, and has done so for many years.
- (D) A customer is suing BW for damages alleged to have been caused by BW's product. BW is contesting the claim and, at 31 October 2005, the directors have been advised by BW's legal advisers it is very unlikely to lose the case. **(2 marks)**

1.11 IAS 18 *Revenue recognition* defines when revenue may be recognised on the sale of goods.

List FOUR of the five conditions that IAS 18 requires to be met for income to be recognised. **(4 marks)**

1.12 Country OS has a value added tax (VAT) system where VAT is charged on all goods and services. Registered VAT entities are allowed to recover input VAT paid on their purchases.

VAT operates at different levels in OS:

- Standard rate 10%
- Luxury rate 20%
- Zero rate 0%

During the last VAT period, an entity, BZ, purchased materials and services costing \$100,000, excluding VAT. All materials and services were at standard rate VAT.

BZ converted the materials into two products Z and L; product Z is zero rated and product L is luxury rated for VAT purposes.

During the VAT period, BZ made the following sales, excluding VAT:

	\$
Z	60,000
L	120,000

At the end of the period, BZ paid the net VAT due to the tax authorities.

Assuming BZ had no other VAT-related transactions, how much VAT did BZ pay? **(2 marks)**

1.13 At 1 October 2004, BK had the following balance:

Accrued interest payable \$12,000 credit

During the year ended 30 September 2005, BK charged interest payable of \$41,000 to its income statement. The closing balance on accrued interest payable account at 30 September 2005 was \$15,000 credit.

How much interest paid should BK show on its cash flow statement for the year ended 30 September 2005?

- (A) \$38,000
- (B) \$41,000
- (C) \$44,000
- (D) \$53,000 **(2 marks)**

1.14 If an external auditor does not agree with the directors' treatment of a material item in the accounts, the first action they should take is to

- (A) give a qualified opinion of the financial statements.
- (B) give an unqualified opinion of the financial statements.
- (C) force the directors to change the treatment of the item in the accounts.
- (D) persuade the directors to change the treatment of the item in the accounts. **(2 marks)**

- 1.15** BL started a contract on 1 November 2004. The contract was scheduled to run for two years and has a sales value of \$40 million.

At 31 October 2005, the following details were obtained from BL's records:

	\$m
Costs incurred to date	16
Estimated costs to completion	18
Percentage complete at 31 October 2005	45%

Applying IAS 11 *Construction contracts*, how much revenue and profit should BL recognise in its income statement for the year ended 31 October 2005?

(2 marks)

- 1.16** An entity sells furniture and adds a sales tax to the selling price of all products sold. A customer purchasing furniture from the entity has to pay the cost of the furniture plus the sales tax. The customer therefore bears the cost of the sales tax.

This is referred to as

- (A) formal incidence.
 (B) indirect incidence.
 (C) effective incidence.
 (D) direct incidence.

(2 marks)

- 1.17** BN is a listed entity and has the following balances included on its opening balance sheet:

	\$000
Equity and reserves:	
Equity shares, \$1 shares, fully paid	750
Share premium	250
Retained earnings	500
	<u>1,500</u>

BN reacquired 100,000 of its shares and classified them as "treasury shares". BN still held the treasury shares at the year end.

How should BN classify the treasury shares on its closing balance sheet in accordance with IAS 32 *Financial instruments – disclosure and presentation*?

- (A) As a non-current asset investment.
 (B) As a deduction from equity.
 (C) As a current asset investment.
 (D) As a non-current liability.

(2 marks)

- 1.18** BE has been offering 60 day payment terms to its customers, but now wants to improve its cash flow. BE is proposing to offer a 1.5% discount for payment within 20 days.

Assume a 365 day year and an invoice value of \$1,000.

What is the effective annual interest rate that BE will incur for this action?

(4 marks)

- 1.19** BM has a taxable profit of \$30,000 and receives a tax assessment of \$3,000.
 BV has a taxable profit of \$60,000 and receives a tax assessment of \$7,500.
 BM and BV are resident in the same tax jurisdiction.
 This tax could be said to be
- (A) a progressive tax.
 - (B) a regressive tax.
 - (C) a direct tax.
 - (D) a proportional tax.
- (2 marks)**

- 1.20** IAS 1 *Presentation of financial statements* requires some of the items to be disclosed on the face of the financial statements and others to be disclosed in the notes.
- (i) Depreciation
 - (ii) Revenue
 - (iii) Closing inventory
 - (iv) Finance cost
 - (v) Dividends

Which TWO of the above have to be shown on the face of the income statement, rather than in the notes:

- (A) (i) and (iv)
 - (B) (iii) and (v)
 - (C) (ii) and (iii)
 - (D) (ii) and (iv)
- (2 marks)**

(Total for Section A = 50 marks)

SECTION B – 30 MARKS

[the indicative time for answering this Section is 54 minutes]

ANSWER ALL SIX SUB-QUESTIONS**Question Two**

- (a) *Requirements*
- (i) Explain the difference between tax avoidance and tax evasion. **(2 marks)**
 - (ii) Briefly explain the methods that governments can use to reduce tax avoidance and tax evasion. **(3 marks)**
- (Total for sub-question (a) = 5 marks)**

- (b) BF manufactures a range of domestic appliances. Due to past delays in suppliers providing goods, BF has had to hold an inventory of raw materials, in order that the production could continue to operate smoothly. Due to recent improvements in supplier reliability, BF is re-examining its inventory holding policies and recalculating economic order quantities (EOQ).

- Item “Z” costs BF \$10.00 per unit
- Expected annual production usage is 65,000 units
- Procurement costs (cost of placing and processing one order) are \$25.00
- The cost of holding one unit for one year has been calculated as \$3.00

The supplier of item “Z” has informed BF that if the order was 2,000 units or more at one time, a 2% discount would be given on the price of the goods.

- Requirements*
- (i) Calculate the EOQ for item “Z” before the quantity discount. **(2 marks)**
 - (ii) Advise BF if it should increase the order size of item “Z” so as to qualify for the 2% discount. **(3 marks)**
- (Total for sub-question (b) = 5 marks)**

- (c) BJ is an entity that provides a range of facilities for holidaymakers and travellers. At 1 October 2004 these included:

- a short haul airline operating within Europe; and
- a travel agency specialising in arranging holidays to more exotic destinations, such as Hawaii and Fiji.

BJ's airline operation has made significant losses for the last two years. On 31 January 2005, the directors of BJ decided that, due to a significant increase in competition on short haul flights within Europe, BJ would close all of its airline operations and dispose of its fleet of aircraft. All flights for holiday makers and travellers who had already booked seats would be provided by third party airlines. All operations ceased on 31 May 2005.

On 31 July 2005, BJ sold its fleet of aircraft and associated non-current assets for \$500 million, the carrying value at that date was \$750 million.

At the balance sheet date, BJ were still in negotiation with some employees regarding severance payments. BJ has estimated that in the financial period October 2005 to September 2006, they will agree a settlement of \$20 million compensation.

The closure of the airline operation caused BJ to carry out a major restructuring of the entire entity. The restructuring has been agreed by the directors and active steps have been taken to implement it. The cost of restructuring to be incurred in year 2005/2006 is estimated at \$10 million.

Requirement

Explain how BJ should report the events described above and quantify any amounts required to be included in its financial statements for the year ended 30 September 2005. (Detailed disclosure notes are not required.)

(Total for sub-question (c) = 5 marks)

- (d) The International Accounting Standards Board's (IASB's) *Framework for the preparation and presentation of financial statements* (Framework) identifies four principal qualitative characteristics of financial information.

Requirement

Identify and explain EACH of the FOUR principal qualitative characteristics of financial information listed in the IASB's Framework.

(Total for sub-question (d) = 5 marks)

- (e) BI owns a building which it uses as its offices, warehouse and garage. The land is carried as a separate non-current tangible asset in the balance sheet.

BI has a policy of regularly revaluing its non-current tangible assets. The original cost of the building in October 2002 was \$1,000,000; it was assumed to have a remaining useful life of 20 years at that date, with no residual value. The building was revalued on 30 September 2004 by a professional valuer at \$1,800,000.

BI also owns a brand name which it acquired 1 October 2000 for \$500,000. The brand name is being amortised over 10 years.

The economic climate had deteriorated during 2005, causing BI to carry out an impairment review of its assets at 30 September 2005. BI's building was valued at a market value of \$1,500,000 on 30 September 2005 by an independent valuer. A brand specialist valued BI's brand name at market value of \$200,000 on the same date.

BI's management accountant calculated that the brand name's value in use at 30 September 2005 was \$150,000.

Requirement

Explain how BI should report the events described above and quantify any amounts required to be included in its financial statements for the year ended 30 September 2005.

(Total for sub-question (e) = 5 marks)

- (f) BH purchased a bond with a face value of \$1,000 on 1 June 2003 for \$850. The bond has a coupon rate of 7%. BH intends holding the bond to its maturity on 31 May 2008 when it will repay its face value.

Requirements

- (i) Explain the difference between the coupon rate of a security and its yield to maturity. **(2 marks)**
- (ii) Calculate the bond's yield to maturity. **(3 marks)**

(Total for sub-question (f) = 5 marks)

(Total for Section B = 30 marks)

SECTION C – 20 MARKS

[the indicative time for answering this Section is 36 minutes]

ANSWER ONE QUESTION FROM TWO**Question Three**

BG provides office cleaning services to a range of organisations in its local area. BG operates through a small network of depots that are rented spaces situated in out-of-town industrial developments. BG has a policy to lease all vehicles on operating leases.

The trial balance for BG at 30 September 2005 was as follows:

	\$000	\$000
10% bonds (redeemable 2010)		150
Administrative expenses	239	
Available for sale investments at market value 30 September 2004	205	
Bank & cash	147	
Bond interest paid – half year to 31 March 2005	8	
Cost of cleaning materials consumed	101	
Direct operating expenses (including cleaning staff)	548	
Dividend paid	60	
Equipment and fixtures, cost at 30 September 2005	752	
Equity shares \$1 each, fully paid		200
Income tax	9	
Inventory of cleaning materials at 30 September 2005	37	
Investment income received		11
Provision for deferred tax		50
Provision for depreciation at 30 September 2004:		
Equipment and fixtures		370
Provision for legal claim balance at 30 September 2004		190
Retained earnings at 30 September 2004		226
Revaluation reserve at 30 September 2004		30
Revenue		1,017
Share premium		40
Trade payables		24
Trade receivables	141	
Vehicle operating lease rentals paid	61	
	<u>2,308</u>	<u>2,308</u>

Additional information:

- (i) Available for sale investments are carried in the financial statements at market value. The market value of the available for sale investments at 30 September 2005 was \$225,000. There were no purchases or sales of available for sale investments held during the year.
- (ii) The income tax balance in the trial balance is a result of the underprovision of tax for the year ended 30 September 2004.
- (iii) The taxation due for the year ended 30 September 2005 is estimated at \$64,000 and the deferred tax provision needs to be increased by \$15,000.
- (iv) Equipment and fixtures are depreciated at 20% per annum straight line. Depreciation of equipment and fixtures is considered to be part of direct cost of sales. BG's policy is to charge a full year's depreciation in the year of acquisition and no depreciation in the year of disposal.

- (v) The 10% bonds were issued in 2000.
- (vi) BG paid an interim dividend during the year, but does not propose to pay a final dividend as profit for the year is well below expectations.
- (vii) At 30 September 2004, BG had an outstanding legal claim from a customer alleging that BG had caused a major fire in the customer's premises. BG was advised that it would very probably lose the case, so a provision of \$190,000 was set up at 30 September 2004. During 2005, new evidence was discovered and the case against BG was dropped. As there is no further liability, the directors have decided that the provision is no longer required.

Requirement

Prepare the income statement and a statement of changes in equity for BG for the year to 30 September 2005 and a balance sheet at that date, in a form suitable for presentation to the shareholders and in accordance with the requirements of International Financial Reporting Standards.

Notes to the financial statements are NOT required, but all workings must be clearly shown. All workings should be to the nearest \$000. DO NOT prepare a statement of accounting policies.

(Total for Question Three = 20 marks)



Question Four

BB is a private sector training entity, which provides short courses and various in-house courses for large employers.

BB's forecast financial statements for the year ended 31 December includes the following:

Forecast Balance Sheet at 31 December 2005 (extract)

Current assets	
Trade receivables: In-house training courses	\$34,100
Bank	\$12,460

Forecast Income Statement for the year ended 31 December 2005 (extract)

Revenue: In-house training courses	\$125,000
------------------------------------	-----------

BB is preparing its budgets for the year 1 January 2006 to 31 December 2006, but the cash budget has not yet been completed. The Finance Director is concerned about the cash flow forecast for the first six months and has asked you, a trainee management accountant, to prepare a cash budget for the six months from January to June 2006 from the budgeted information provided.

Budgeted revenue

Short training courses

Short training courses budgeted charge \$100 per person per course.

Short courses are generally one night a week for four weeks commencing on the first of each month, except December and January.

<i>Budgeted short course information:</i>	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>	<i>Jul</i>
Number of courses	0	2	3	3	4	4	4
Forecast students per course	0	10	12	12	14	13	15

BB expects to receive payment in advance of each course. Experience shows that, on average, one third of students pay one month in advance and the rest pay on the first day of the course.

In-house training courses

The exact number and type of in-house training courses is unknown at present but, during 2006, BB is expecting to earn \$130,000 spread evenly throughout the year. Based on previous experience, the following receipts are forecast:

	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>
In-house training course fee receipts (including trade receivables at 31 December 2005)	\$5,000	\$8,000	\$10,000	\$11,000	\$12,000	\$6,000

BB has previously experienced problems of slow payment from some large employers and is monitoring the trade receivables collection period.

Budgeted expenditure

BB employs permanent full-time members of staff to run the entity and provide key lecturing skills. Most of the trainers are part-time tutors at an hourly rate.

<i>Budgeted wages 2006</i>	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>
Part-time tutor wages	\$0	\$2,500	\$4,000	\$4,000	\$5,000	\$6,000

Permanent staff salaries are currently \$4,000 a month. All full-time staff will receive an increase of 5% from 1 March 2006.

BB rents the premises for \$2,500 a year, payable in quarterly instalments in January, April, July and October.

Teaching materials, printing and photocopying average \$150 per short course (paid in the month of the course). The in-house courses cost, on average, \$100 per month.

Budgeted payments in respect of overheads (electricity, telephone and so on) for January and April are \$1,500 and for February, March, May and June are \$600.

Capital expenditure in the first six months of 2006 is planned as follows:

- (i) New furniture for the managing director's office \$5,000 payable in April.
- (ii) BB needs to replace all the IT equipment in one of its computer labs early in 2006. This is currently planned to take place in April, with payment in May 2006. The budgeted cost of the equipment is \$40,000 for 20 top-of-the-range PCs and related equipment.

Other information

BB has negotiated an overdraft facility with the bank for an overdraft up to \$5,000.

Requirements

- (a) Calculate BB's in-house training course trade receivables days outstanding
- (i) according to the forecast at 31 December 2005;
 - (ii) according to the projected figures at 30 June 2006, assuming the revenue and cash flow budgets are implemented. **(5 marks)**
- (b) Prepare BB's cash budget for the first six months of 2006 (January to June). **(10 marks)**
- (c) Advise BB of any actions it can take to make sufficient funds available to purchase the new technology as budgeted in May 2006. **(5 marks)**

(Total for Question Four = 20 marks)

(Total for Section C = 20 marks)

Maths Tables and Formulae

Present value table

Present value of \$1, that is $(1 + r)^{-n}$ where r = interest rate; n = number of periods until payment or receipt.

Periods (n)	Interest rates (r)									
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239
16	0.853	0.728	0.623	0.534	0.458	0.394	0.339	0.292	0.252	0.218
17	0.844	0.714	0.605	0.513	0.436	0.371	0.317	0.270	0.231	0.198
18	0.836	0.700	0.587	0.494	0.416	0.350	0.296	0.250	0.212	0.180
19	0.828	0.686	0.570	0.475	0.396	0.331	0.277	0.232	0.194	0.164
20	0.820	0.673	0.554	0.456	0.377	0.312	0.258	0.215	0.178	0.149

Periods (n)	Interest rates (r)									
	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093
14	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078
15	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.079	0.065
16	0.188	0.163	0.141	0.123	0.107	0.093	0.081	0.071	0.062	0.054
17	0.170	0.146	0.125	0.108	0.093	0.080	0.069	0.060	0.052	0.045
18	0.153	0.130	0.111	0.095	0.081	0.069	0.059	0.051	0.044	0.038
19	0.138	0.116	0.098	0.083	0.070	0.060	0.051	0.043	0.037	0.031
20	0.124	0.104	0.087	0.073	0.061	0.051	0.043	0.037	0.031	0.026

Cumulative present value of \$1 per annum

Receivable or Payable at the end of each year for n years $\frac{1 - (1 + r)^{-n}}{r}$

Periods (n)	Interest rates (r)									
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606
16	14.718	13.578	12.561	11.652	10.838	10.106	9.447	8.851	8.313	7.824
17	15.562	14.292	13.166	12.166	11.274	10.477	9.763	9.122	8.544	8.022
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.372	8.756	8.201
19	17.226	15.679	14.324	13.134	12.085	11.158	10.336	9.604	8.950	8.365
20	18.046	16.351	14.878	13.590	12.462	11.470	10.594	9.818	9.129	8.514

Periods (n)	Interest rates (r)									
	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528
3	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106
4	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589
5	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991
6	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326
7	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605
8	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837
9	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031
10	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192
11	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.486	4.327
12	6.492	6.194	5.918	5.660	5.421	5.197	4.988	4.793	4.611	4.439
13	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533
14	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611
15	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675
16	7.379	6.974	6.604	6.265	5.954	5.668	5.405	5.162	4.938	4.730
17	7.549	7.120	6.729	6.373	6.047	5.749	5.475	5.222	4.990	4.775
18	7.702	7.250	6.840	6.467	6.128	5.818	5.534	5.273	5.033	4.812
19	7.839	7.366	6.938	6.550	6.198	5.877	5.584	5.316	5.070	4.843
20	7.963	7.469	7.025	6.623	6.259	5.929	5.628	5.353	5.101	4.870

FORMULAE

Valuation models

- (i) Future value of S , of a sum X , invested for n periods, compounded at $r\%$ interest:

$$S = X[1 + r]^n$$

- (ii) Present value of \$1 payable or receivable in n years, discounted at $r\%$ per annum:

$$PV = \frac{1}{[1 + r]^n}$$

- (iii) Present value of an annuity of \$1 per annum, receivable or payable for n years, commencing in one year, discounted at $r\%$ per annum:

$$PV = \frac{1}{r} \left[1 - \frac{1}{[1 + r]^n} \right]$$

- (iv) Present value of \$1 per annum, payable or receivable in perpetuity, commencing in one year, discounted at $r\%$ per annum:

$$PV = \frac{1}{r}$$

- (v) Present value of \$1 per annum, receivable or payable, commencing in one year, growing in perpetuity at a constant rate of $g\%$ per annum, discounted at $r\%$ per annum:

$$PV = \frac{1}{r - g}$$

Inventory management

- (i) Economic Order Quantity

$$EOQ = \sqrt{\frac{2C_o D}{C_h}}$$

where: C_o = cost of placing an order

C_h = cost of holding one unit in Inventory for one year

D = annual demand

Cash management

- (i) Optimal sale of securities, Baumol model:

$$\text{Optimal sale} = \sqrt{\frac{2 \times \text{annual cash disbursements} \times \text{cost per sale of securities}}{\text{interest rate}}}$$

- (ii) Spread between upper and lower cash balance limits, Miller-Orr model:

$$\text{Spread} = 3 \left[\frac{\frac{3}{4} \times \text{transaction cost} \times \text{variance of cash flows}}{\text{interest rate}} \right]^{\frac{1}{3}}$$

The Examiner for Financial Accounting and Tax Principles offers to future candidates and to tutors using this booklet for study purposes, the following background and guidance on the questions included in this examination paper.

Section A – Question One – Compulsory

Question one consists of 20 objective test sub-questions, designed to cover a variety of syllabus topics not covered elsewhere in the paper and addressing a selection of learning outcomes in all four sections of the syllabus.

Section B – Question Two – Compulsory

- (a) Tests candidates' ability to explain the difference in principle between tax avoidance and tax evasion and the methods that can be used to reduce them at a national level. Tests learning outcome A (vi).
- (b) Tests candidates' ability to calculate economic order quantities and whether or not a discount offered by a supplier is worth seeking for the entity detailed in the question. Tests learning outcome D (vii).
- (c) Tests candidates' ability to explain the reporting of various events occurring to an entity and how these may be included in its year-end financial statements. Tests learning outcomes C (iii) and (v).
- (d) Tests candidates' ability to identify and explain the four principal qualitative characteristics of financial information listed in the IASB's *Framework*. Tests learning outcome B (iv).
- (e) Tests candidates' ability to explain the reporting of various events occurring to an entity and how these may be included in its year-end financial statements. Tests learning outcomes C (iii) and (v).
- (f) Tests candidates' ability to explain the difference between the coupon rate of a security and its yield to maturity and to calculate the bond's yield to maturity. Tests learning outcome D (viii).

Section C – answer one of two questions

Question Three

Tests candidates' ability to prepare an income statement, balance sheet and a statement of changes in equity in a form suitable for publication, and in accordance with International Financial Reporting Standards, based upon the trial balance of a given entity. Tests learning outcomes A (viii) and C (i).

Question Four

Tests candidates' ability to prepare a cash budget based upon forecast income statement and balance sheets of a given entity, and to advise the entity of actions it might take to have sufficient funds available to make a major purchase of equipment. Tests learning outcomes D (ii) and (iii).

Managerial Level Paper

P7 – Financial Accounting and Tax Principles

Examiner's Answers

Section A**Question One**

- 1.1 C
1.2 B
1.3 B
1.4 A
1.5

	\$
Lease payments (5 × 12) =	60,000
Fair value	<u>51,900</u>
Finance cost	<u>8,100</u>
Sum of digits (5 × 6)/2 = 15	
Year 2 digit = 4	
Finance charge = $8,100 \times \frac{4}{15} =$	2,160

1.6

	<i>\$000</i>
Balance b/fwd	180
Revaluation (30 – 10)	20
Disposal (15 – 10)	(5)
Depreciation	<u>(40)</u>
	155
Balance c/fwd	<u>(260)</u>
Purchases	<u>105</u>

1.7 Accounting depreciation = cost – residual value = \$900,000 – \$50,000 = \$850,000
 \$850,000/5 = \$170,000 per year

	<i>2004/05</i>
	<i>\$000</i>
Cost	900
Depreciation	<u>(340)</u>
Carrying value	<u>560</u>
Tax base	\$000
Cost	900
First year allowance 50% =	<u>450</u>
	450
30 September 2005 25%	<u>112.5</u>
Tax base	<u><u>337.5</u></u>
	<i>2004/05</i>
	<i>\$000</i>
Carrying value	560.0 or 340.0
Tax base	<u>337.5 or 562.5</u>
	<u>222.5 or 222.5</u>
Tax at 30%	<u>66.75</u>
Required deferred tax provision	\$66,750

1.8 C

1.9

	<i>Trading</i> <i>profit/(loss)</i> <i>\$000</i>	<i>Taxable</i> <i>\$000</i>	<i>Capital</i> <i>gain/(loss)</i> <i>\$000</i>	<i>Taxable</i> <i>\$000</i>	<i>Tax</i> <i>\$000</i>
2002/03	200	200	(100)	0	200 × 20% = 40
2003/04	(120)	0	0	0	0
2004/05	150	150 – 120 = 30	130	130 – 100 = 30	30 + 30 = 60 × 20% = 12

1.10 C

1.11 **Examiner’s note:** Any FOUR of the following five conditions would have gained the marks available.

- (i) the significant risks and rewards of ownership of the goods have been transferred to the buyer;
- (ii) the entity selling does not retain any continuing influence or control over the goods;
- (iii) revenue can be measured reliably;
- (iv) it is reasonably certain that the buyer will pay for the goods;
- (v) the costs to the selling entity can be measured reliably.

1.12 Input VAT = 100 × 10% = 10
 Output VAT = (60 × 0%) + (120 × 20%) = 24
 VAT due = 24 – 10 = 14
 VAT paid = **\$14,000**

1.13 A

Workings		<i>\$000</i>
Income statement		41
Add balance b/fwd		<u>12</u>
		53
Less balance c/fwd		<u>15</u>
		<u><u>38</u></u>

1.14 D

1.15

	Total revenue		<i>\$m</i>
	Total cost	16 + 18 =	40
	Profit		<u>34</u>
	Recognise		<u>6</u>
	– Revenue	40 × 45% = £18 million	
	– Profit	6 × 45% = £2.7 million	

1.16 C

1.17 B

1.18 $s = \times (1 + r)^n$
 $1,000 = 985 (1 + r)^{365/40}$
 $1 + r = (1,000/985)^{9.125}$
 $1 + r = 1.148$
 $r = 14.8\%$

1.19 A

1.20 D

(Total for Section A = 50 marks)

Section B

Question Two

- (a) (i) **Tax avoidance** – Tax planning to the extent that the affairs of an entity are legally arranged in such a way as to minimise the tax liability. Although tax avoidance is strictly legal and within the letter of the law, it is usually contrary to the spirit of the law. Many tax avoidance schemes exploit loopholes in the legislation.

Tax evasion – The illegal manipulation of the tax system to avoid paying taxes. Tax evasion is the intentional disregard of the legislation in order to escape paying taxes; it can include falsifying tax returns and claiming fictitious expenses.

- (ii) A traditional response by governments is often to close loopholes by passing more legislation, but this can create additional opportunities for avoidance. More effective methods are:

Reducing opportunity by:

- deducting tax at source whenever possible;
- simplifying the tax structure to minimise opportunities for evasion and false returns.

Increasing the perceived risk by:

- setting up an efficient system of auditing tax returns and payments to maximise revenue from given resources;
- publicising a system of auditing so that it increases the perceived risk of being found out;
- developing good communications with other tax administrations.

Reducing the overall gain by:

- carrying out regular reviews of the penalty structure, with appropriate publicity for increased penalties.

Changing social attitudes towards evasion and avoidance by:

- encouraging, developing and maintaining an honest and customer-friendly tax administration;
- creating a tax system which is perceived as equitable to all parties;
- trying to encourage an increasing commitment of the population to obey the law.

- (b) (i) Using the formula from the formula sheet:

$$\begin{aligned} \text{EOQ} &= \sqrt{\frac{2C_oD}{C_h}} \\ &= \sqrt{\frac{2 \times 25 \times 65,000}{3}} = \sqrt{1,083,333} = 1,040.83 \end{aligned}$$

EOQ for item “Z” is 1,041 units per order

(ii)

<i>Total cost using EOQ</i>			\$
Unit cost	$65,000 \times \$10$	=	650,000
Holding cost	$\$3 \times 1,041/2$	=	1,562
Ordering cost	$\$25 \times 65,000/1,041$	=	<u>1,561</u>
Total cost			<u>653,123</u>
Assume order size = 2,000 units			\$
Unit cost	$65,000 \times \$9.8$	=	637,000
Holding cost	$\$3 \times 2,000/2$	=	3,000
Ordering cost	$\$25 \times 65,000/2,000$	=	<u>813</u>
Revised total cost			<u>640,813</u>

The total cost is \$12,310 less, therefore it is worthwhile for BF to increase the order size and claim the discount.

- (c) **Examiner's Note:** Answers were acceptable from candidates using either IAS 35 (as in the original CIMA text) or IFRS 5 (in the revised CIMA text).

IAS 35 – Classified as discontinuing as it was discontinued in the year and BJ is disposing of an entire operation that represented a separate major line of business and can be separately identified. The initial disclosure event was the decision on 31 January.

Conclusion

The closure of the airline business should be treated as a discontinuing operation and separately disclosed.

IFRS 5 – defines a discontinued operation as a component of an entity that has been disposed of and that represents a separate major line of business. A component of an entity is defined as operations and cash flows that can be clearly distinguished, operationally and for financial reporting purposes, from the rest of the entity. The disposal of the airline business represents a separate major line of business; can be clearly distinguished and it was disposed of during the year.

Conclusion

The closure of the airline business should be treated as a discontinued operation and separately disclosed.

The revenue and profit must be separately disclosed in the income statement.

The \$250 million loss on disposal of the aircraft fleet is material and must be shown on the face of the income statement.

Employee severance payments are committed as a result of a past event (the disposal of the airline), they will have to be paid (they are certain to be paid) but the exact timing and amount are not yet known as they are still being negotiated. IAS 37 *Provisions, contingent liabilities and contingent assets* requires a provision to be made, using the best estimate which is \$20 million.

The costs of restructuring the remaining division, even although that restructuring is required as a result of the decision to close the airline business, should be classified as restructuring costs within continuing activities, as the costs relate to the travel agency business and this is continuing activities (IAS 37). As the restructuring has been publicised and the entity is committed to it the liability of \$10 million should be provided for. The cost should be reported in the income statement under continuing activities.

(d) Understandability

An essential quality of financial information is that it is readily understandable by users. For this purpose, users are assumed to have a reasonable knowledge of business and economic activities and accounting and a willingness to study the information with reasonable diligence. Information on complex issues should be included if relevant and should not be excluded on the ground that it is too difficult for the average user to understand.

Relevance

Information is relevant when it influences the economic decisions of users by helping them to evaluate past, present or future economic events or confirming, or correcting, their past evaluations.

An item can be relevant by virtue of its nature or materiality. Information is material if its omission or misstatement could influence the decision making of users.

Information should be released on a timely basis to be relevant to users.

Reliability

Information is reliable when it is free from material error and bias and can be considered by users to be a faithful representation of the underlying transactions and events.

To be reliable the information must:

- faithfully represent the transactions it is intended to represent;
- be accounted for and presented on the basis of its commercial reality rather than its legal form – substance over form;
- be neutral, free from bias.

Comparability

The ability to identify trends in performance and financial position and compare those both from year to year and against other entities assists users in their assessments and decision making. To achieve comparability users must be able to identify where an entity has changed its policy from one year to the next, and where other entities have used different accounting policies for similar transactions.

(e)

Workings	\$
October 2002 Original cost	1,000,000
Depreciation 2002/03 (1,000,000/20)	<u>(50,000)</u>
	950,000
Depreciation 2003/04	<u>(50,000)</u>
	900,000
Revalued 30 September 2004, gain	<u>900,000</u>
	1,800,000
Depreciation 2004/05 (1,800,000/18)	<u>(100,000)</u>
	1,700,000
Revalued 30 September 2005	<u>1,500,000</u>
Loss on revaluation	<u><u>200,000</u></u>

IAS 16 *Property, plant and equipment* requires the \$200,000 loss on revaluation to be taken to revaluation reserve and shown in the statement of changes in equity. It does not go to the income statement as the building has been previously revalued and the gain is more than the current loss. The buildings will be shown in the balance sheet at \$1,500,000 and be depreciated over the remaining 17 years.

The brand name acquired for \$500,000 five years ago. Net book value at 30 September 2005 is $\$500,000 \times 5/10 = \$250,000$. The brand name's market value is \$200,000 and its value in use is \$150,000.

A non-current asset is valued at the higher of its market value or value in use (IAS 36 *Impairment of assets*). Therefore, the brand names carrying amount should be adjusted to \$200,000 and \$50,000 written off to income statement for the year to 30 September 2005.

- (f) (i) The coupon rate is the interest rate payable on the face, or nominal, value of the debt. BH's bond has a coupon rate of 7% on \$1,000, which equals \$70 interest.

The yield to maturity, or redemption yield, is the effective yield on a redeemable security. It takes into account the actual interest receivable and any gain or loss due to the fact that it was purchased at a price different from the redemption value. BH's yield to maturity takes into account that the \$1,000 bond was purchased for \$850.

- (ii) The yield to maturity can be calculated as the discounted annual rate of return at which the present value of future interest payments and redemption value of the bond at maturity equals the current market value of the bond.

Let $t = 5$ and $r = 9$

$$(\$70 \times 3.890) + (\$1,000 \times 0.650) = 272.3 + 650 = 922.3$$

Let $t = 5$ and $r = 12$

$$(\$70 \times 3.605) + (\$1,000 \times 0.567) = 252.35 + 567 = 819.35$$

$r = 12$ is the closest to 850,

$$12\% - [((819.35 - 850)/(819.35 - 922.3)) \times 3] =$$

$$12\% - [(30.65/102.95) \times 3] =$$

$$12\% - [0.298 \times 3] =$$

$$12\% - 0.894\% = 11.106$$

The yield to maturity is approximately 11.1%

(Total for Section B = 30 marks)

Section C

Question Three

BG Income statement for the year ended 30 September 2005

	<i>\$000</i>	<i>\$000</i>
Revenue		1,017
Cost of sales (W1)		(799)
Gross profit		218
Other income		<u>11</u>
		229
Administrative expenses (W4)	(300)	
Release of provision	<u>190</u>	(110)
Profit from operations		119
Finance cost (W3)		<u>(15)</u>
Profit before tax		104
Income tax expense (W5)		<u>(88)</u>
Profit for the period		<u>16</u>

BG Balance sheet as at 30 September 2005

	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
	<i>At cost/ valuation</i>	<i>Depreciation/ amortisation</i>	<i>Total</i>
<i>Assets</i>			
<i>Non-current tangible assets</i>			
Property, plant and equipment	752	520	232
<i>Non-current financial assets</i>			
Available for sale investments (W6)	<u>225</u>	<u>0</u>	<u>225</u>
			457
<i>Current assets</i>			
Inventories	37		
Trade receivables	141		
Cash and cash equivalents	<u>147</u>		
			<u>325</u>
Total assets			<u>782</u>
<i>Equity and liabilities</i>			
<i>Equity</i>			
Equity shares		200	
Reserves			
Share premium	40		
Retained earnings	182		
Revaluation reserve	<u>50</u>	<u>272</u>	
Total equity			472
<i>Non-current liabilities</i>			
10% loan	150		
Deferred tax (W5)	<u>65</u>		
Total non-current liabilities		215	
<i>Current liabilities</i>			
Trade payables	24		
Tax payable	64		
Interest payable	<u>7</u>		
Total current liabilities		<u>95</u>	
Total liabilities			<u>310</u>
Total equity and liabilities			<u>782</u>

BG Statement of changes in equity for the year ended 30 September 2005

	<i>Equity Shares</i>	<i>Share premium</i>	<i>Retained earnings</i>	<i>Revaluation reserve</i>	<i>Total</i>
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Balance at 1 October 2004	200	40	226	30	496
Non-current investment revaluation				20	20
Profit for period			16		16
Interim dividend			(60)		(60)
Balance at 30 September 2005	<u>200</u>	<u>40</u>	<u>182</u>	<u>50</u>	<u>472</u>

Workings**W1 Cost of sales**

	<i>\$000</i>
Direct cost – TB	548
Add depreciation – equipment & fixtures (W2)	150
Direct materials	<u>101</u>
	<u>799</u>

W2 Depreciation, equipment and fixtures

Trial balance at cost	752	
Depreciation for year 20%	<u>150</u>	to cost of sales
Depreciation b/fwd	370	
Depreciation for year	<u>150</u>	
Depreciation c/fwd	<u>520</u>	to balance sheet

W3 Finance costs

Interest on loan 10% × 150 =	15
------------------------------	----

W4 Administrative expenses

Per trial balance	239
Operating lease	<u>61</u>
	<u>300</u>

W5 Income tax expense

Income statement	
Balance per trial balance	9
Income tax accrued for year	64
Deferred tax charge for year	<u>15</u>
Income statement	<u>88</u>
Balance sheet	
Income tax – current	64
Deferred tax – non-current liability	
Provision for deferred tax, b/fwd	50
Charge for year	<u>15</u>
Provision for deferred tax c/fwd	<u>65</u>

W6 Available for sale investments

Book value	205
Market value	<u>225</u>
Revaluation gain	<u>20</u>

Question Four

(a)

	\$
Trade receivables – in-house training courses	
Forecast balance at 31 December 2005	34,100
Budgeted revenue for half year to 30 June 2006	<u>65,000</u>
	99,100
<i>Less:</i> Budgeted receipts	<u>52,000</u>
Projected balance at 30 June 2006	<u>47,100</u>

Trade receivable days outstanding:

$$\text{At 31 December} \quad \frac{\$34,100}{\$125,000} \times 365 = 100 \text{ days}$$

$$\text{At 30 June} \quad \frac{\$47,100}{\$130,000} \times 365 = 132 \text{ days}$$

(b)

Workings

W1 Short course income

	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>	<i>Jul</i>
No. courses	0	2	3	3	4	4	4
Avg no. persons	0	10	12	12	14	13	15
Total persons	0	20	36	36	56	52	60
	\$	\$	\$	\$	\$	\$	\$
Amount due @ \$100 pp	0	2,000	3,600	3,600	5,600	5,200	6,000
Receipts							
1/3	667	1,200	1,200	1,867	1,733	2,000	
2/3	<u>0</u>	<u>1,333</u>	<u>2,400</u>	<u>2,400</u>	<u>3,733</u>	<u>3,467</u>	
Total	<u>667</u>	<u>2,533</u>	<u>3,600</u>	<u>4,267</u>	<u>5,466</u>	<u>5,467</u>	

BB Cash Budget for six months to June 2006

	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>
Cash inflows	\$	\$	\$	\$	\$	\$
Short courses	667	2,533	3,600	4,267	5,466	5,467
In-house courses	5,000	8,000	10,000	11,000	12,000	6,000
Total cash inflows	<u>5,667</u>	<u>10,533</u>	<u>13,600</u>	<u>15,267</u>	<u>17,466</u>	<u>11,467</u>
Less cash outflows						
Salaried staff	4,000	4,000	4,200	4,200	4,200	4,200
Wages	0	2,500	4,000	4,000	5,000	6,000
Rent	625			625		
Overheads	1,500	600	600	1,500	600	600
Materials – short courses	0	300	450	450	600	600
Materials – in-house courses	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Total outflows (excluding capital expenditure)	6,225	7,500	9,350	10,875	10,500	11,500
MD's furniture				5,000		
IT equipment					40,000	
Net cash flow	(558)	3,033	4,250	(608)	(33,034)	(33)
Balance b/fwd	<u>12,460</u>	<u>11,902</u>	<u>14,935</u>	<u>19,185</u>	<u>18,577</u>	<u>(14,457)</u>
Balance c/fwd	<u>11,902</u>	<u>14,935</u>	<u>19,185</u>	<u>18,577</u>	<u>(14,457)</u>	<u>(14,490)</u>

(b) The cash flow forecast currently shows that there is likely to be an overdraft of nearly \$15,000 if all the capital expenditure takes place as planned. If the bank overdraft facility is utilised, there is still a shortfall of \$10,000.

Actions that could be taken to increase the amount of cash to provide sufficient funds to purchase the new technology as budgeted could involve either raising new cash or re-examining the forecast and implementing actions to improve the current forecast. It must also be borne in mind that sufficient working capital needs to be available to run BB after the new equipment has been purchased.

Actions could include:

- (i) Considering delaying or cancelling the purchase of the MD's furniture, will release \$5,000.
- (ii) Arranging a long-term loan with a bank, or other financial institution, for \$20,000, to provide additional working capital.
- (iii) Issuing new equity to cover the non-current asset purchase and provide additional working capital, a minimum of \$20,000.
- (iv) Negotiating an increase in the overdraft facility from \$5,000 to \$20,000.
- (v) Considering increasing course fees to generate more income.
- (vi) Investigating the possibility of acquiring the IT equipment and furniture by hire purchase or lease.
- (vii) Examining the in-house training courses debt collection procedures and implement action to speed up revenue collection. If the trade receivable days can be reduced from the projected 132 to say 90 days, an extra one-off receipt of \$15,000 would accrue in the period.
- (viii) Checking the accuracy of the forecast opening bank balance and the likelihood of it being significantly different to forecast.
- (ix) Considering enforcing the requirement for all short course participants to pay in advance of the course instead of allowing payment on the first day of the course.

Index

- ACCA, 152–6
- Accelerated tax depreciation, 17, 86, 89
- Accommodation:
 - beneficial living, 40
 - job-related, 40
- Accountancy*, 149–58
- Accounting:
 - accruals basis, 124
 - auditing phase, 138
 - bonus issues, 367–9
 - construction contracts, 307–24
 - deferred taxation, 88–9
 - estimate changes, 215
 - finance leases, 288–96
 - leases, 283–96
 - policies, 165, 166, 182, 210, 211, 213–15, 225
 - rights issue, 369
 - share issues, 361–7
 - significant transactions, 383–91
 - treasury shares, 369–70
 - see also* Standards
- Accounting statements, 163–207
 - cash-flow statements, 237–49
 - published financial statements, 163–87
 - related party disclosures, 389
 - reporting financial performance, 209–27
 - share capital transactions, 357–73
 - see also* Financial statements
- Accounting Technician*, 467
- Accounting treatments:
 - current taxation, 82–3
 - deferred taxation, 88–9
- Accounts:
 - record-keeping needs, 48–9
 - taxation, 81–99, 184
- Accruals basis, accounting, 124, 167
- Accrued interest, deferred taxation, 87
- Accumulated depreciation, 269
- Acid test *see* Quick ratio, concepts
- Actual incidence, concepts, 4
- Actual unit costs, 309–10
- Actuarial methods, 293–4
- Ad valorem* taxes, concepts, 34
- Addresses, audits, 138–42
- Adjusting balance sheet events, 385
- Administration:
 - avoidance issues, 51–3
 - compliance powers, 50–1
 - deadlines, 49–50
 - entry and search powers, 51
 - foreign tax treaties, 51, 59, 65
 - OECD Forum on Tax Administration, 53
 - record-keeping needs, 48–9
 - taxation, 47–58
- Advertising, 19
- Age analysis:
 - payables, 441
 - receivables, 433–4
- Aggregated balances, 312, 316
- Aggressive working-capital policies, concepts, 400
- AICPA *see* American Institute of Certified Public Accountants (AICPA), Guiding Principles of Good Tax Policy . . .
- Alcoholic drinks, excise duties, 38
- Allowable expenses:
 - CT, 22
 - employment income, 39, 41
- Allowable losses, CGT, 23–4, 25
- Allowed alternatives, standards, 113
- Alternative treatments, borrowing costs, 272
- American Institute of Certified Public Accountants (AICPA), Guiding Principles of Good Tax Policy . . . , 3
- Amortisation, 339–40
- Annuities, 19, 39
- Apportionments, VAT, 37
- Appropriate-government-revenue principle, 3
- Assessments:
 - basis of assessment, 39
 - CT, 22
- Assets, 15, 16–18, 20, 85–6, 87, 125, 247–8, 335–55
 - capital allowances, 16, 93
 - deferred taxation, 87, 270
 - definition, 125, 283, 336, 338
 - depreciation, 16–18, 87
 - disposals, 19, 340
 - impairments, 213, 335, 341–4
 - intangible assets, 15, 20, 213, 266, 335–55
 - non-current assets, 87, 263–82
 - offset, 167
 - revaluations, 87, 269–71
 - rollover relief, 20
 - sales gain or loss, 219, 220
 - transfers, 25, 34, 63, 361
 - wasting assets, 19
 - wealth taxes, 38–9
 - see also* Balance sheets; Capital gains . . . ; Current assets . . . ; Depreciation . . . ; Intangible assets . . . ; Non-current assets . . .
- Audit reports, 138–42, 144–6
 - addressee, 138–47
 - content, 138
 - date, 141
 - Enron, 152–6
 - exemptions, 135
 - opening paragraphs, 140
 - scope paragraphs, 140
 - title, 140
- Auditors:
 - addresses, 138, 140, 145
 - duties, 136–7

- Auditors (*Continued*)
 reports, 142–7
 signatures, 142
see also Audit reports; External audits
- Average costs, 310
- Avoidance, taxation, 3, 51–3
- BACS *see* Bankers Automated Clearing Service (BACS)
- Badge of ownership, lease concepts, 285
- Balance sheets, 123, 167–74, 218, 225, 400, 491–4
 additional items, 169
 after the date, 383–5
 cash, 40
 commentary, 171
 current assets, 174
 current liabilities, 174
 current/non-current distinction, 173–4
 deferred taxation, 85–9
 information presentation, 168–72
 Nestlé Group, 170, 171
 published financial statements, 163–87
 reserve disclosures, 173–3
 share capital, 172–3
 specimen, 167–8
 working-capital ratios, 399–414
- Balances, disclosure, 390–1
- Balancing figures, 243
- Bankers Automated Clearing Service (BACS), 432, 440
- Banks, 417, 422, 435, 452, 484
 cash takings, 491
 CDs, 422
 cheques, 432, 440, 491
 deposits, 422
 documentary credits, 419
 overdrafts, 416–17
 term loans, 417
- Bases, taxation, 6
- Basis of assessment, employment income, 39
- Baumol model, cash-management models, 488–9
- Bayer Group, 173, 211
- Benchmark tax regimes, 1–2
- ‘Benchmark’ treatments, 113, 272
- Beneficial living accommodation, 40
- Benefits-in-kind, 40
- Betting, VAT, 37
- Bills of exchange, concepts, 481
- Bonds:
 CGT exemptions, 19
 corporate bonds, 423
 coupon rates, 421
 government bonds, 423
 local authorities, 423
 yield, 420–1
- Bonus issues:
 accounting, 368–9
 process, 367–8
 share capital transactions, 367–9
- Bonuses, 39
- Bookkeeping phase, 138
- Borrowing costs, 272–3, 338
- Branches, international taxation, 63
- Budgets *see* Cash budgets
- Buffer concepts, inventories, 459, 465, 467–71
- Buildings:
 allowable expenditure, 19
 improvement expenses, 19
 leases, 285–6
 rollover relief, 20
 VAT, 35
see also Property . . .
- Business entertainment, 18–19
- Business segments, 223–4
- Business taxation:
 cessation of business, 24
 concepts, 1–8, 13–32, 33–46
 corporate income tax, 13–32, 48–50, 60–3
 general principles, 1–8
 indirect taxes, 4, 6, 33–46
 losses, 23–4, 87–8
see also Companies
- Canons, taxation, 2–3
- Canteen facilities, employment income, 40
- Capital:
 concepts, 127
 OECD Model tax convention, 59–60, 61–5
 tax classifications, 6–8, 15–16
 withdrawals, 18
see also Share capital transactions . . .
- Capital allowances, 16–18
- Capital expenditure, 17–19, 83–4
- Capital gains, 6–8, 14–16, 19–20, 23–4, 48, 62–3, 73
 corporate income tax, 14–20, 48, 63, 81
 record-keeping needs, 48–9
 tax classifications, 6–7, 15–16
 withholding tax, 62
- Capital gains tax (CGT), 15, 19–20, 25
 exemptions, 19–20
 IAS 12 *Income Taxes*, 81–90, 169
 indexation, 20
 losses, 23–4, 25
 record-keeping needs, 48
 reliefs, 20, 23, 24
 shares and securities, 19, 21, 25
- Capital income, concepts, 15–16
- Capital losses, 23–4, 25
- Capital maintenance concepts, 127
- Capital markets, disclosure requirements, 90
- Capitalisation concepts, 272, 337
- Carrying amount, concepts, 264
- Carrying back:
 losses, 23–4
 terminal losses, 24
- Carrying forward, losses, 23–4, 87–8
- Cars:
 fuel for private use, 40
see also Motor vehicles
- Case law, 52–3, 102, 104
 anti-avoidance provisions, 52–3
 tax rules, 8
see also Legislation
- Cases and Schedules, CT, 15
- Cash:
 balance sheets, 491–4
 Baumol model, 488–9
 concepts, 237–62, 287, 420, 431, 440, 483–507
 deficits, 487–8
 definition, 238
 discounts, 430, 431–2, 440
 efficient management, 491
 equivalents concepts, 238, 241
 float, 488
 forecasts, 485–94
 foreign exchange, 484

- holding costs, 458
- income statements, 485–6
- management issues, 483
- Miller-Orr model, 489–91
- opportunity costs, 484, 617
- profit links, 491
- prompt banking, 491
- surpluses, 420, 484
- time value of money, 484
- working capital, 399–402, 483–94
 - see also* Short-term finance
- Cash budgets:
 - accuracy levels, 485
 - concepts, 483–94
 - deviations, 485
 - examples, 484, 490
 - income statements, 485–6
 - preparation, 485–7
- Cash-flow statements, 122, 164, 166–7, 237–62
 - examples, 242–9
 - headings, 239
 - interpretation, 249
 - Nestlé Group accounts, 212, 342, 388
 - non-cash items, 239
 - objective, 238
 - requirements, 242–3
 - worked example, 242–9
- Cash-flows:
 - budgets, 484–5
 - direct method, 239, 240–1, 244–6
 - dividends paid, 249
 - financing activities, 241, 248
 - indirect method, 238, 239, 241, 246–7
 - interest received, 248
 - investment activities, 247–8, 261
 - long-term borrowing proceeds, 248
 - operating activities, 239–41, 245
 - share issue proceeds, 248
 - tangible asset purchase, 247
- Cashback incentives, 287
- Cashbooks, 48
- CDs *see* Certificates of deposit (CDs), short-term investments
- Certainty principle, taxation canons, 2
- Certificates of deposit (CDs), short-term investments, 422
- Cessation of business, 24
- CGT *see* Capital gains tax (CGT)
- CHAPS *see* Clearing House Automated Payments System (CHAPS)
 - donations, 19, 39
 - VAT, 37
- Chattels, CGT exemptions, 19
- Cheques, 432, 440, 488, 491
- Children's wear, VAT, 36
- Classical system, corporate income tax, 21
- Classifications, taxes, 6–8
- Clearing House Automated Payments System (CHAPS), 433, 440
- Close companies:
 - co-ordination, national standard-setting, 112
 - process, 112
 - see also* Companies
- Code law countries, 102
- Collection amounts, taxation, 3, 6
- Commercial paper, short-term investments, 423
- Commissions, 109–10
- Common law, 53, 102
 - see also* Case law
- Communication, 110, 155
- Community trust building, 153
- Companies:
 - branches, 63
 - corporate income tax, 14, 15, 19, 20, 48
 - indirect taxes, 4, 6, 33–46
 - listed companies, 151
 - losses, 23–4, 87–8
 - overseas subsidiaries, 49
 - residence criteria, 60
 - subsidiaries, 25, 49, 63
 - terminal losses, 24
 - VAT registration, 35
 - see also* Business taxation . . . ; Groups of companies . . .
- Comparability, financial information, 125
- Competent jurisdictions, concepts, 4–5
- Completeness, financial information, 125
- Compliance powers, 50–1, 165–6
 - IAS 16, 165–6
 - see also* Enforcement issues
- Components, financial statements, 164–5
- Conceptual framework, 103, 105, 127–8
- Conservative working-capital policies, concepts, 400, 401
- Consolidated accounts, 142, 166, 170
- Consolidation of tax:
 - concepts, 24–5
 - see also* Groups of companies . . .
- Constant cycle systems *see* Periodic reviews, inventories
- Construction contracts, 307–34
 - accounting, 311–12
 - aggregated balances, 312
 - disclosures, 318
 - examples, 322–4
 - expected contract losses, 314–15
 - foreseeable losses, 318
 - general principles, 310
 - illustrations, 319–22
 - inventories, 307, 316
 - payables, 317
 - receivables, 316–17
 - recognisable contract profit, 313
 - sales revenue, 312–13
 - uncertain outcomes, 315
 - VAT, 35
- Consumption taxes, 6, 34–5
 - tax classifications, 6–7
 - see also* Indirect taxes; Sales . . .
- Contingencies:
 - assets, 387
 - disclosures, 390
 - liabilities, 387–8
 - probability, 388
 - problems, 388–9
- Contracts:
 - construction, 307–34
 - losses, 314–15
 - profits, 313–14
- Control issues:
 - corporate residence, 60
 - disclosure, 390

- Control policies, inventories, 459
- Control systems, inventories, 459–61
- Convenience principle, taxation canons, 2–3
- Convergence activities, 110
- Conversion costs, 308
- Corporate bonds, short-term investments, 423
- Corporate governance, 152–7
- Corporate income tax, 13–32, 48, 60, 81–99
 - allowable revenues and expenditures, 16, 19
 - classical system, 21
 - collection options, 49–50
 - concepts, 13–32, 60, 81–99
 - current taxation, 81–9
 - deadlines, 49–50
 - deferred taxation, 14, 81–99
 - dividends, 21–5, 59, 62, 71–2, 82
 - group relief, 23
 - IAS 12 *Income Taxes*, 81–99
 - imputation system, 21
 - income sources, 14–16
 - interest received, 14–15, 87
 - interest-recharacterisation rules, 23
 - losses, 23–4, 87–8
 - OECD Model tax convention, 59–62, 64
 - personal tax system interactions, 21
 - rates, 21
 - record-keeping needs, 48
 - residence criteria, 60
 - retained profits, 22
 - returns, 49–50
 - schedular systems, 14–15
 - see also* Corporation tax (CT)
- Corporate residence, concepts, 60
- Corporate tax base, concepts, 14–20
- Corporation tax (CT), 3–4, 13–32, 48–50
 - assessments, 49–50
 - collection options, 49–50
 - compliance powers, 50–1
 - deadlines, 49–50
 - losses, 23–4, 87–8
 - pay and file system, 49–50
 - rates, 21
 - record-keeping needs, 48–9
 - residence criteria, 60
 - returns, 49–50
 - Schedules and Cases, 15
 - self-assessment (CTSA), 50
 - see also* Corporate income tax
- Cost of sales, ratio analysis, 399–405
- Costs:
 - borrowing, 272–3, 338
 - conversion, 308
 - elements, 265
 - EOQ, 461–3, 467–9, 489
 - holding costs, 458, 461, 462
 - IAS 16, 263
 - intangible assets, 335–45
 - inventories, 307–10, 457–66, 474, 489, 492
 - order costs, 458
 - purchase, 308
- Counterclaims, 388–9
- Coupon rates, 421–2
- Craven v White*, 53
- Creative accounting, 354
- Credit cards, 433, 440
- Credit controls, receivables, 430–1, 433–4
- Credit cycles, receivables, 430–3
- Credit insurance, receivables, 434
- Credit notes, VAT, 48
- Credit tokens, 40
- CT *see* Corporation tax (CT)
- CTSA *see* Corporation tax (CT), self-assessment (CTSA)
- Cultural issues, regulations, 103
- Current assets, 174, 399–400
 - see also* Working capital
- Current liabilities, 174
- Current ratio, concepts, 403
- Current taxation:
 - accounting treatments, 83
 - calculations, 82
 - concepts, 81–99
 - financial statements, 81–98
 - IAS 12 *Income Taxes*, 81–99
- Current/non-current distinction, balance sheets, 173–4
- Deadlines:
 - taxation concepts, 49–50
 - see also* Time limits
- Debentures, 420
 - see also* Bonds
- Debit cards, 433, 440
- Debit notes, VAT, 48
- Debt-collection stages, 433
- Debt yields, concepts, 420
- Deductible expenses, employment income, 39
- Deductions:
 - allowable expenses, 19
 - double taxation treaties, 64
- Default risk, 423
- Deferrals, CGT, 20
- Deferred taxation:
 - accounting treatments, 88–9
 - assets, 87–8
 - balance sheets, 85–9
 - calculations, 83–8
 - concepts, 14, 81–9
 - depreciation, 84–7
 - financial statements, 81–99
 - IAS 12 *Income Taxes*, 81–99
 - income statements, 83–9
 - permanent differences, 83
 - tax base, 87
 - tax losses, 87–8
 - temporary differences, 83–4
 - timing difference approach, 84–5
 - see also* Taxation
- Demand conditions, inventories, 171, 308, 404–405, 459, 506
- Dentists, VAT, 37
- Dependent/independent demands, inventories, 459
- Deposits, banks, 422
- Depreciable amounts, IAS 16, 264
- Depreciation, 16–18, 219, 239, 264, 266–8
 - accelerated tax depreciation, 17, 89
 - accumulated amounts, 269
 - allowable expenditure, 19
 - calculation methods, 16–18, 83–8
 - deferred taxation, 83–4
 - intangible assets, 335, 337
 - international comparisons, 16–17, 63
 - plant & equipment, 263–73
 - property, 263–73
 - useful life review, 264

- Determination, profit, 127
- Development:
 - concepts, 337–8
 - Framework for the Preparation and Presentation of Financial Statements*, 122–3
 - standards, 112
- Direct debits, 432, 440
- Direct taxes:
 - concepts, 3–6, 13–32
 - enterprise's profits and gains, 13–32
 - rates, 5–6
 - record-keeping needs, 48
- Directors:
 - benefits-in-kind, 40
 - external audits, 161–2
 - financial statements, 164
 - management-judgement disclosures, 210–11
 - non-executive directors, 155
 - taxable benefits, 40
- Disagreement classification, 143
- Disallowable expenditure, CT, 18–19, 83
- Disclosures:
 - accounting policy changes, 213–15
 - balances, 390–1
 - borrowing costs, 272–3
 - capital markets, 102
 - construction contracts, 318
 - contingencies, 386
 - control, 390
 - corporate governance, 152–7
 - discontinuing operations, 217–23
 - equipment, 263
 - events after the balance sheet date, 385–6
 - finance leases, 295–6
 - financial statements, 176–7
 - fundamental errors, 215–17
 - IAS 12 *Income Taxes*, 94
 - impairments, 345
 - intangible assets, 340–1
 - inventories, 318
 - lessees, 287–8
 - lessors, 284, 289
 - management judgements, 210–11
 - needs, 90, 103
 - operating activities, 175, 176
 - operating leases, 285
 - ownership factors, 103
 - property, plant and equipment, 263–6
 - R&D, 353
 - related party disclosures, 391
 - revenue, 210–11
 - segment reporting, 223–7
 - share capital transactions, 172–3, 358–9
 - shareholder factors, 102
 - significant accounting transactions, 383–91
 - transactions, 390–1
 - see also* Regulations
- Discontinuing operations, 217–23
 - definition, 218
 - disclosures, 90, 220–3
 - initial disclosure event, 219
 - presentation, 220–3
- Discounts:
 - cash, 431–2, 440
 - invoice discounting, 435, 623
 - quantity discounts, 463–4
- Disposals:
 - assets, 17–19, 340
 - CGT exemptions, 19–20
 - intangible assets, 340
 - part, 18
- Distributable profits, share purchases, 371–3
- Dividends:
 - cash-flows, 241
 - corporate income tax, 21–3, 59, 62, 71–2, 82, 93
 - double taxation, 21, 59–60, 62, 64–5, 74–5
 - events after the balance sheet date, 385
 - financial statements, 82
 - interest, 23
 - revenue, 209
 - tax credits, 21, 65
 - underlying tax, 62
 - withholding tax, 62
 - see also* Shares
- Dixon, Rob, 467
- Doctors, VAT, 37
- Documentary credits, short-term finance, 415
- Donations:
 - charities, 19–20, 39
 - political donations, 19
- Double taxation:
 - dividends, 21–2, 62, 71–2
 - OECD Model tax convention, 64–5
 - relief principles, 64, 65
 - treaties, 62, 64–5
 - see also* Withholding tax
- Drugs, VAT, 37
- Earmarking concepts, 5
- Earnings concepts, 39
 - see also* Employment income; Salaries; Wages
- Earnings per share (EPS), 175
- EBITA, 175–6
- Economic-effects principle, taxation canons, 3
- Economic order quantity (EOQ), 461–3, 467, 468, 489
- Education:
 - scholarships, 40
 - VAT, 37
- Effective incidence, concepts, 4
- Effective subsidiaries, 25
- Efficiency principle, taxation canons, 2–3
- Efficiency ratios, 404–406
- Efficient management, cash, 491
- Electronic funds transfer, 488
- Emile Woolf Auditing, 156
- Emoluments *see* Earnings concepts
- Employers, record-keeping needs, 48–9
- Employment income, 39
 - allowable expenses, 19
 - basis of assessment, 39
 - benefits-in-kind, 40
 - deductible expenses, 39
 - efficiency principle, 2–3
 - record-keeping needs, 48–9
 - social security, 40, 49
 - taxation, 39–41
 - see also* Income tax; Pay-as-you-earn (PAYE)
- Enforcement issues:
 - legislation, 5, 50–3
 - see also* Compliance powers

- Enron, 152–6
- Enterprise's profits and gains, 13–32
 - see also* Companies
- Entertainment expenses, 18–19
- Entry and search powers, officers, 51
- EOQ *see* Economic order quantity (EOQ)
- EPS *see* Earnings per share (EPS)
- Equipment, 263–73
- Equity, 125, 171
 - changes, 178–81
 - statement of changes, 163, 165, 178
 - statement of recognised gains and losses, 181
 - see also* Share capital transactions . . .
- Equity principle, taxation canons, 2–3, 51
- Errors:
 - financial performance, 215–17
 - see also* Fundamental errors, disclosures
- Estimates, 213, 215, 339
 - see also* Forecasts
- Eurocurrency market, 484
- European reaction to IOSCO, 110–11
- European Union (EU), 8, 105
 - tax rules, 8
- Evasion, taxation, 51–3, 59–60
- Events after balance sheet
 - date, 383–5
 - adjusting events, 384
 - disclosures, 385–6
 - going concerns, 385
 - non-adjusting events, 385
 - proposed dividends, 385
- Examination:
 - format, 510–11
 - preparation, 509–631
- Exchangeable vouchers, 40
- Excise duties:
 - concepts, 33, 38
 - record-keeping needs, 48
- Exemptions:
 - CGT, 19–20
 - double taxation treaties, 64–5, 74–5
 - VAT, 36–7
- Expenditure:
 - allowable items, 19
 - concepts, 16–19
 - depreciation, 16–18, 84–7
 - disallowable items, 18–19, 83
- Expenses:
 - allowable expenses, 19, 83
 - disallowable expenses, 18–19, 83
 - disclosures, 90
 - expenses, 39
 - function, 174, 176–7
 - improvements, 18
 - legal, 19
 - living accommodation, 40
 - nature, 176–7
 - offset, 167
 - welfare, 19
 - 'wholly, exclusively and necessarily' incurred, 39
- Export factoring, short-term finance, 418
- Export finance, short-term finance, 417–18
- Exports, VAT, 37
- External audits, 135–62
 - accounting phase, 138
 - bookkeeping phase, 138
 - directors, 155
 - Enron, 152–6
 - exemptions, 156
 - process, 137–8
 - purpose, 135–6
 - qualified reports, 142–7
 - reports, 138–42
- Extraordinary items, 90, 211
- Factoring arrangements:
 - concepts, 417, 418, 434–7
 - definition, 434
- Fair presentation, 165–7
- Fair value:
 - IAS 16, 264
 - IAS 38, 341
 - intangible assets, 339, 341
- Fairness principle, 3
- Faithful representation, 125
- Finance leases:
 - accounting, 286–7
 - actuarial method, 293–4
 - additional disclosures, 295–6
 - in advance/in arrears, 294–5
 - definition, 284
 - disclosures, 295–6
 - implied interest calculation, 289–95
 - lessees, 296
 - straight-line method, 291–2
 - sum-of-digits method, 292–3
 - see also* Leases
- Finance transactions, VAT, 37
- Financial information:
 - comparability, 125
 - materiality, 143–4, 175
 - qualitative characteristics, 124–5
 - relevance, 124
 - reliability, 125
 - understandability, 124
 - see also Framework for the Preparation and Presentation of Financial Statements*
- Financial Management*, 634
- Financial performance, 139, 209–36
 - accounting policy changes, 213–15
 - discontinuing operations, 217–23
 - errors, 213, 215–17
 - fundamental errors, 215
 - net profit or loss, 211
 - reporting, 209–36
 - segment reporting, 223–7
- Financial position, 123
- Financial Services Authority (FSA), 156
- Financial statements:
 - accounting policies, 166, 182, 210–11
 - aggregated balances, 312
 - cash links, 491–4
 - components, 164–5
 - concepts, 14–16, 48–9, 81–99, 121–33, 163, 209, 357
 - current taxation, 81–99
 - deferred taxation, 81–99
 - directors, 164
 - disagreement classification, 143
 - disclosures, 172–3

- dividends, 82
- elements, 125–7, 163
- equity changes, 163–5, 173, 178–81
- IAS 12 *Income Taxes*, 81–99
- note structure, 181–2
- objectives, 123
- preparation, 166
- presentation, 121–8, 360–1
- presentation of share capital transactions, 360–1
- purpose, 164
- record-keeping needs, 48
- regulation needs, 102
- requirements, 164
- responsibility, 164
- share capital transactions, 358
- taxable income, 14–15
- users, 122–3
- working-capital ratios, 399–414
- see also* Accounting statements; Balance sheets;
 - Cash-flows . . . ; *Framework for . . .*;
 - Income . . .
- Financing activities:
 - cash-flows, 241, 248
 - working capital, 401–402
- Finished goods:
 - concepts, 405–408, 458
 - see also* Inventories
- First in first out (FIFO) approach, 309
- First-year allowances (FYA), 17
- Fixed production overheads, 308
- Flat yield *see* Interest, yield concepts
- Float, cash, 488
- Food, VAT, 36
- Forecasts:
 - cash, 483–94
 - see also* Estimates
- Foreign exchange:
 - cash, 484
 - risk, 419
- Foreign income, 51, 59–79
- Foreign tax treaties, 59–60, 64
- Foreseeable losses, construction:
 - contracts, 318
- Forfeiting arrangements, short-term
 - finance, 419
- Formal incidence, concepts, 4
- Foundation, International Accounting
 - Standards Committee, 106–109
- Framework for the Preparation and Presentation of Financial Statements*, 121–33
 - assumptions, 123–4
 - development, 122–3
 - main topics, 123–7
 - purpose, 122
 - scope, 122–3
 - standard-setting process, 128
 - status, 122
 - underlying assumptions, 123–4
 - usefulness, 127–8
- France, 14
- Fraud, 19, 51
- FSA *see* Financial Services Authority (FSA)
- Fuel for private car use, 40
- Fundamental errors, disclosures, 211
- Furniss v Dawson*, 53
- FYA *see* First-year allowances (FYA)
- GAAP *see* Generally accepted accounting practice (GAAP)
- Gain or loss, asset sales, 220
- Gains:
 - enterprise's profits and gains, 13–32
 - see also* Capital gains . . .
- Gaming, VAT, 37
- General principles of business taxation, concepts, 1–8
- Generally accepted accounting practice (GAAP),
 - 14, 105–106, 113–14
 - concepts, 105–106, 113–14
 - IFRSs, 106, 113, 114
- Geographical segments, 223–4
- Germany, 14
- Gifts, CGT exemptions, 19–20
- Going concern basis, 123–4, 167, 385
- Goodwill, 336–7, 341–5
 - see also* Intangible assets
- Government bonds, short-term investments, 423
- Governments:
 - competent jurisdictions, 4–5
 - expenditure, 2
 - revenue, 2
 - tax rules, 6–8
- Groups of companies:
 - concepts, 23, 24–5, 63, 361–2
 - international comparisons, 24–5, 63
 - losses, 23, 24–5, 63
 - MNEs, 5, 103, 104
 - reliefs, 23, 24, 63
 - subsidiaries, 25, 49, 63
 - transfers of assets, 25, 63, 339
- Harmonisation, accounting standards, 103
- Headings, cash-flow statements, 238
- Health services, VAT, 37
- Hire purchase interest, 19
- Holding costs, 458, 461–3
 - cash, 467
 - inventories, 458, 461–3
- Hypothecation concepts, 5
- IASB *see* International Accounting Standards Board (IASB)
- IASC *see* International Accounting Standards
 - Committee (IASC)
- IASs *see* International Accounting Standards (IASs)
- 'Ideal' taxes, 2
- IFAC *see* International Federation of Accountants (IFAC)
- IFRIC *see* International Financial Reporting
 - Interpretations Committee (IFRIC)
- IFRS *see* International Financial Reporting
 - Standards (IFRSs)
 - assets, 167, 213, 217–22
 - concepts, 335–41
 - disclosures, 172–3, 210–11
 - immaterial amounts, 167
 - impairments, 166, 341
 - losses, 236, 341
 - recognition, 341
- Improvement expenses, 18–19
- Imputation system, corporate income tax, 21–2
- In advance/in arrears method, 294
- Incidence concepts, 4
- Income:
 - concepts, 6–8, 15–16
 - double taxation, 21–3, 59–60, 62, 64–5, 74–5
 - OECD Model tax convention, 59–62, 64–75
 - offset, 167

- Income (*Continued*)
 - sources, 6–8, 14–16
 - tax classifications, 6–8, 14–16
 - see also* Corporate income tax . . . ; Employment income
- Income statements:
 - adjustments, 15–17, 83–90
 - cash, 485–6, 492
 - current taxation, 81–90
 - deferred taxation, 83–8
 - IAS 12 *Income Taxes*, 81–90, 169, 634
- Income tax:
 - charges, 89
 - concepts, 39–40, 48, 89
 - corporate income tax, 14–5, 21–2, 48–9, 60–4, 81–90
 - current taxation, 81–3
 - deferred taxation, 14, 81–90
 - double taxation, 21–2, 59–62, 64–5, 74–5
 - efficiency principle, 2–3
 - IAS 12 *Income Taxes*, 81–90
 - OECD Model tax convention, 59–60
 - residence criteria, 59–61
 - tax classifications, 6–8, 15–16
 - see also* Corporate income tax . . . ; Employment income; Pay-as-you-earn (PAYE)
- Incorporation issues, corporate residence, 60–2
- Indexation, CGT, 20
- Indirect taxes:
 - concepts, 4, 33–46
 - excise duties, 33–4, 38, 48
 - property taxes, 38
 - rates, 6, 35–7
 - record-keeping needs, 48
 - see also* Value added tax (VAT)
- Inflation effects, CGT, 20
- Information presentation, 168–72
 - materiality, 175
 - Nestlé Group, 168–71, 210–13
 - notes, 171–2, 181–2
 - published, 101–102, 163–4
 - reporting financial performance, 209–27
 - specimen, 167–71, 174–7
 - working capital ratios, 399–408
- Information presentation:
 - balance sheets, 167–74
 - income statements, 174–7
 - notes, 176–7, 181–2
 - reserve disclosures, 172–3
 - share capital, 172–3
- Inheritance tax, tax classifications, 6–7
- Initial allowances, 17
- Insolvency, concepts, 384, 400, 433
- Insurance:
 - private medical insurance, 40
 - recoverable amounts, 18
 - VAT, 37
- Intangible assets:
 - amortisation, 339–40
 - concepts, 335–45
 - definition, 335
 - depreciation, 328
 - disclosures, 340–1, 345
 - disposals and retirements, 340
 - goodwill, 335–44
 - impairment losses, 338–40
 - initial measurement, 336
 - internal generation, 336–8
 - measurement, 336–49
 - recognition, 336–8, 342–4
 - revaluations, 339–44
 - rollover relief, 20
 - software, 583
 - subsequent measurement, 339
 - write-downs/back, 344
- Interest:
 - allowable expenditure, 16, 19
 - borrowing costs, 272–3
 - cash-flows, 258
 - dividends, 23–4
 - finance leases, 284–96
 - received, 248, 506
 - recharacterisation rules, 23
 - revenue, 220
 - Schedule D, Case III, 15
 - withholding tax, 62
 - yield concepts, 420
- Interest received, corporate income tax, 14–15, 63–4, 81–2
- Internal generation, intangible assets, 336–8
- Internal rate of return (IRR), 421
- International Accounting Standards (IASs):
 - compliance, 198
 - fair presentation, 165–9
 - IAS 1 *Presentation of Financial Statements*, 209, 211, 219, 358
 - IAS 10 *Events After the Balance Sheet Date*, 383–5
 - IAS 11 *Construction Contracts*, 146, 307, 310–24
 - IAS 12 *Income Taxes*, 81–90
 - IAS 14 *Segment Reporting*, 223
 - IAS 16 *Property, Plant and Equipment*, 263
 - IAS 17 *Leases*, 293–4
 - IAS 18 *Revenue Recognition*, 209–11
 - IAS 2 *Inventories*, 307–10
 - IAS 23 *Borrowing Costs*, 215, 272–3
 - IAS 24 *Related Party Disclosures*, 383, 389
 - IAS 32 *Financial Instruments: Disclosure and Presentation*, 357, 360–1
 - IAS 35 *Discontinuing Operations*, 217
 - IAS 36 *Impairment of Assets*, 219, 335, 340–4
 - IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*, 383, 386–7
 - IAS 38 *Intangible Assets*, 266, 335–41
 - IAS 39 *Financial Instruments: Recognition and Measurement*, 357
 - IAS 7 *Cash flow Statements*, 238
 - IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors*, 165, 211
 - USA acceptance, 111
- International Accounting Standards Board (IASB), 101, 106–108, 133, 153, 166
- International Accounting Standards Committee (IASC):
 - Foundation, 106–109
 - Framework for the Preparation and Presentation of Financial Statements*, 121
 - objectives, 109, 111
 - standard-setting processes, 101–14, 138
 - structure, 107
- International comparisons:
 - competent jurisdictions, 4–5
 - depreciation treatments, 16–17, 63, 264, 266

- foreign tax treaties, 59, 62–3, 65
- groups of companies, 24–5, 63
- regulations, 102
- tax bases, 14
- tax systems, 1–3, 8, 14–15
- see also individual countries*
- International Federation of Accountants (IFAC), 109, 138
- International Financial Reporting Interpretations Committee (IFRIC), 107–109, 128, 133
- International Financial Reporting Standards (IFRSs):
 - concepts, 108, 111, 138–9, 145–6, 166
 - GAAP, 101, 105–106, 111, 113, 114
 - IFRS 3 *Business Combinations*, 335, 341, 354
- International Organisation of Securities Commissions (IOSCO):
 - European reaction, 110
 - IASC relationship, 114
 - international reaction, 110–11
 - USA reaction, 110–11
- International taxation:
 - branches, 63
 - concepts, 59–66
 - OECD Forum on Tax Administration, 53
 - OECD Model tax convention, 59–60
 - residence criteria, 60–5
 - subsidiaries, 63
 - withholding tax, 5, 62
- Interpretation, cash-flow statements, 237
- Inventories, 171, 307, 316, 384
 - alternative methods, 310
 - buffer concepts, 468–72
 - changes, 239
 - construction contracts, 146, 310–24
 - control policies, 459–79
 - control systems, 459–61
 - cost benchmarking, 272
 - cost determination, 307
 - definitions, 307–308
 - demand conditions, 459
 - dependent/independent demands, 459
 - disclosures, 358–9
 - EOQ, 461, 467–8
 - JIT, 465–6, 478–80
 - Kanban system, 470
 - lead times, 464–5
 - management issues, 457–6, 467–9, 492
 - measurement, 126–7, 265–6
 - mixed systems, 461
 - overhead allocation, 308–309
 - periodic reviews, 460–1
 - probabilistic demand, 459
 - quantity discounts, 463–4
 - reorder levels, 459–60
 - types, 458
 - unit costs, 332, 459
 - working capital, 399–414, 474–81
- Inventories, 457–66
- Inventory turnover ratio, 404
- Investment activities:
 - cash-flows, 416–18, 619
 - short-term types, 422–4
 - working capital, 399–414, 474–81
- Invoices:
 - discounting, 416, 435, 453–5
 - VAT, 4–8, 35–8
- IOSCO *see* International Organisation of Securities Commissions (IOSCO)
- IRR *see* Internal rate of return (IRR)
- ISA 700 *The Auditor's Report on Financial Statements*, 138–40
- Japan, 465–71
- Job-related accommodation, employment income, 40
- Just-in-time purchasing (JIT), concepts, 465–6, 478–80
- Kanban system, 470
- Land and buildings:
 - leases, 285–6
 - VAT, 4–8, 35–8
- Large item reporting, 212
- Late Payment Act, 433
- Late returns, penalties, 48, 50–1
- Lead times, concepts, 464–5
- Lease term, definition, 284–7
- Leases:
 - accounting, 288–9
 - badge of ownership, 286
 - cashback incentives, 287
 - characteristics, 284–6
 - definition, 284
 - finance, 284–5
 - land and buildings, 285–6
 - operating, 285–9
 - rent-free period, 286
 - VAT, 4–8, 35–8
- Legal expenses, 19
- Legislation:
 - anti-avoidance provisions, 52–3
 - competent jurisdictions, 4–5, 6–8
 - complexity issues, 3
 - compliance powers, 50–1
 - enforcement issues, 4–5, 50–3
 - tax rules, 6–8, 50
 - see also* Case law; *individual Acts*; *Regulations*
- Lessees, 269
- Lessors, 284
- Letters of credit *see* Documentary credits, short-term finance
- Liabilities:
 - contingencies, 388–9
 - offset, 23–5
 - timing, 169
 - see also* Balance sheets; Working capital
- Liquidity needs, working capital, 399–414, 474–81
- Liquidity ratios, concepts, 403–404
- Listed companies, 151
 - see also* Companies
- Living accommodation expenses, 40
- Loan stocks, 420
- Loans, benefits-in-kind, 40
- Local authority bonds, short-term investments, 422–4
- Local authority deposits, short-term investments, 422
- Local governments:
 - competent jurisdictions, 4–5, 8
 - tax rules, 6–8, 50
- Local regulatory bodies, 110–11
- Long-term borrowing proceeds, 248
- Long-term debt, working capital, 201, 399–414, 474–81
- Loopholes, tax avoidance, 52–3

- Losses, 23–6, 314
 - allowable, 19
 - capital losses, 23–4, 25
 - carrying back/forward, 23–4, 87–8
 - concepts, 23–4, 25, 87–8, 219, 314, 318
 - corporate income tax, 14, 48
 - deferred taxation, 83–4
 - groups of companies, 23, 24–5, 63
 - impairment losses, 219, 340
 - offsetting, 23–5
 - subsidiaries, 49, 63
 - terminal losses, 24
 - trading, 23
 - transfers, 81, 391
- Lotteries, VAT, 4–8, 35–8
- Machinery *see* Plant and machinery
- Management Accounting*, 418–19
- Management issues:
 - cash, 483–507
 - corporate residence, 60
 - inventories, 171, 307, 316, 384
 - judgement disclosures, 210–11
 - working capital, 399–414, 474–81
- Marks and Spencer plc, 439
- Material amounts, 167
- Material omissions, 213–16
- Materiality:
 - financial information, 124–5
 - income statements, 16–19, 174–8
 - qualified reports, 142–7
- Materials:
 - concepts, 143–4, 175, 458
 - JIT, 465–6, 478–80
 - working capital cycle, 406–408
- Materials requirement planning (MRP), 470
- Measurement:
 - intangible assets, 335–45
 - inventories, 171, 307, 316, 384
 - property, plant and equipment, 167–71, 263
 - purchased goodwill, 341
- Medical insurance, private, 40
- Medicines, VAT, 4–8, 35–8
- Miller-Orr model, cash-management models, 489–91
- Minimum tax gap principle, 3
- Misstatements, 213–16
- Mixed systems, inventories, 171, 307, 316, 384
- MNEs *see* Multinational enterprises (MNEs)
- Moderate working-capital policies, concepts, 399–414, 474–81
- Monetary value, financial-statement elements, 126
- Money-market accounts, short-term investments, 422
- Motor cars *see* Cars
- Motor vehicles:
 - excise duties, 38, 48
 - hypothecation concepts, 5
 - see also* Cars; Vehicles
- MRP *see* Materials requirement planning (MRP)
- Multi-stage sales taxes, concepts, 34–5
- Multinational enterprises (MNEs):
 - harmonized standards, 103
 - jurisdiction issues, 5
- National standard-setting process co-ordination, 112
- Nestlé Group:
 - balance sheets, 237
 - cash-flow statements, 237
 - consolidated accounts, 142, 166–80
 - income statements, 16–19, 174–8
 - intangible assets, 335–45
 - segmental information, 209, 226
- Net present value (NPV), 571
- Net profit or loss, 211
 - accounting estimate changes, 165, 211, 215
 - definitions, 211
 - extraordinary items, 211
 - ordinary activity, 212
- Neutrality, 3, 125
- ‘No gain, no loss’ prices, 25
- Non-adjusting events, 385
- Non-cash items, 239
- Non-current assets:
 - deferred taxation, 83–4
 - disposal, 19–21, 176, 212, 218–30
 - intangible assets, 335–45
 - profit/losses, 229
 - property, plant and equipment standards, 167–71, 263
 - standards, 263–82, 335–55
- Non-executive directors, 154–7
- Notes:
 - income statements, 16–19, 174–8
 - information presentation, 171–2, 176–7
 - published financial statements, 163–87
 - structure, 181–2, 186
- NPV *see* Net present value (NPV)
- OECD *see* Organisation for Economic Cooperation and Development (OECD)
- Offsets:
 - assets, 125–8, 162–75, 335–45
 - expenses, 335
 - income, 335–45
 - liabilities, 411–28
 - losses, 23–6, 314
 - VAT restrictions, 4–8, 35–8
- Opening paragraphs, reports, 108–109
- Operating activity disclosure, 239–41
- Operating leases, 285
 - definition, 285
 - disclosures, 287–8
- Opportunity costs, cash, 423, 458, 617
- Order costs, 458
- Ordinary activity, definition, 212
- Organisation for Economic Cooperation and Development (OECD):
 - Forum on Tax Administration, 53
 - Model tax convention, 59–60, 64–5
 - tax classifications, 6
- Orr, D., 489–90
- Overdrafts, short-term finance, 415–17
- Overheads, 308–309
- Overseas subsidiaries, 63
- Overtrading dangers, 491
- Own shares, purchases, 252
- Ownership factors, disclosures, 103
- Partial imputation systems, 22
- Partially exempt trades, VAT, 4–8, 35–8
- Patent royalties, corporate income tax, 14–15, 48
- Pay and file system, CT, 49–50
- Pay-as-you-earn (PAYE):
 - concepts, 2–3, 33, 41
 - efficiency principle, 2–3
 - tables, 41
 - see also* Employment income; Income tax

- Payables:
 - age analysis, 433–4, 441
 - cash budgets, 485–6
 - cash discounts, 240, 431–2
 - changes, 239
 - concepts, 317, 405–406, 429–55, 576–7, 618–19
 - construction contracts, 307, 310–24
 - payment cycles, 439–41
 - payment methods, 446
 - turnover ratio, 404–405
 - working capital, 399–414, 474–81
- Payment cycles, payables, 439–41
- Payment methods:
 - payables, 439–41
 - receivables, 433–43
- Payment terms, receivables, 431
- Payments:
 - cash budgets, 485–6
 - deadlines, 49–50
- Penalties:
 - late returns, 48, 50–1
 - record-keeping needs, 48–9
 - tax evasion, 51–3
- Pensions:
 - allowable expenditure, 19, 39
 - benefits-in-kind, 40
 - deferred taxation, 83–4
 - see also* Retirement
- Performance *see* Financial performance
- Periodic reviews, inventories, 171, 307, 316, 384
- Permanent differences, deferred taxation, 83–4
- Permanent establishment, concepts, 64–5, 69–70
- Personal pension schemes, 39
- Personal tax systems:
 - concepts, 21, 39–40
 - corporate income tax, 14, 48
 - employment income, 39, 41
- Places of control and incorporation, corporate residence, 60
- Plant and machinery:
 - allowable expenditure, 19
 - concepts, 127
 - depreciation, 16–18
 - proceeds of sale, 247–8
 - rollover relief, 20
- Points of reference, 113
- Political donations, 19
- Political systems, regulations, 102
- Pooling, 17
- Post balance sheet events, 383–4
- Postal services, VAT, 37
- Precedents, tax rules, 8, 50
- Preparation:
 - cash budgets, 484–8
 - examinations, 509–632
 - financial statements, 121
 - see also* Framework for the Preparation and Presentation of Financial Statements
- Preparing for the examination, 509–632
- Prescriptive standards, 106
- Presentation:
 - discontinuing operations, 217–23
 - fair, 165–6
 - financial statements, 383
 - share capital transactions, 357–82
 - see also* Framework for the Preparation and Presentation of Financial Statements
- Price risk, 423
- Principles-based standards, 101
- Principles of business taxation, concepts, 1–12
- Printed matter, VAT, 36
- Private medical insurance, 40
- Probabilities:
 - contingencies, 388–9
 - inventory demand, 465
- Proceeds of sales, 384
- Professional subscriptions, 39
- Profit and loss accounts:
 - see also* Income statements
- Profit-sharing payments, 39
- Profits:
 - cash links, 491–4
 - construction contracts, 307–34
 - deferred taxation, 14, 83
 - determination, 13
 - enterprise's profits and gains, 13–32
- Progress payments, 311–12
- Progressive taxes, concepts, 5
- Promissory notes:
 - short-term finance, 415–28
 - see also* Bills of exchange
- Property:
 - rollover relief, 20
 - tax classifications, 6, 38–9
 - see also* Buildings; Land and buildings
- Property, plant and equipment:
 - asset revaluations, 269
 - depreciation accounting, 528
 - disclosures, 358–9
 - disposals, 176
 - measurement, 265–6
 - recognition, 265
 - retirements, 268–9
 - subsequent expenditure, 266
 - useful life review, 264
- Proportional taxes, concepts, 5
- Provisions:
 - definition, 384
 - recognition, 386
- Prudence, 125
- Public securities markets, USA, 111
- Published financial statements:
 - balance sheets, 171
 - general requirements, 164–7
 - illustrative question, 182–7
 - income statements, 48
 - notes to, 182
 - regulatory expectations, 105
 - see also* Financial statements
- Purchased goodwill:
 - concepts, 127
 - see also* Intangible assets
- Purchases:
 - books, 48
 - costs, 408
 - own shares, 357
- Qualified reports:
 - external audits, 135–8
 - materiality, 143–4
 - qualifying corporate bonds, 439
 - wording, 144–5
- Qualitative characteristics, financial information, 123–5
- Quantity discounts, inventories, 463–4

- Quick ratio, concepts, 403–404
- Quoted companies, 160
- Quoted securities and shares, 558
- R&D *see* Research and development (R&D)
- Ramsey Ltd v IRC*, 53
- Ratio analysis:
 - current ratio, 403
 - efficiency ratios, 404–406
 - inventory turnover ratio, 404
 - liquidity ratios, 403
 - payables turnover ratio, 405–406
 - quick ratio, 403–404
 - receivables turnover ratio, 405
- Raw materials:
 - concepts, 127
 - JIT, 465–6
 - working capital cycle, 406
 - see also* Inventories
- Receipts, cash budgets, 484–8
- Receivables:
 - age analysis, 433–4
 - cash budgets, 484–8
 - cash discounts, 431–2, 440
 - changes, 239
 - concepts, 127
 - construction contracts, 307–34
 - credit controls, 430–1
 - credit cycles, 430
 - credit insurance, 434
 - debt-collection stages, 446
 - late payments, 41
 - payment methods, 446
 - payment terms, 431
 - turnover ratio, 405
 - working capital, 399–414
- Recharacterisation rules, interest, 13
- Recognisable contract profit, 313–14
- Recognition:
 - impairment losses, 340–1
 - intangible assets, 266
 - provisions, 266
 - revenue, 209–11
 - significant accounting transactions, 383–98
- Record-keeping needs, 47–8
- Recoverable amounts:
 - IAS 16, 263
 - impairment losses, 219
 - insurance, 18
- Redemption yield *see* Yield to maturity, concepts (YTM)
- Redemption, shares, 373
- Reducing balance method, depreciation, 17
- Refunds, VAT, 637
- Registration, VAT, 37
- Regressive taxes, concepts, 37
- Regulation risk, 424
- Regulations:
 - cultural issues, 103
 - determinating factors, 102–103
 - external audits, 135–8
 - financial statements, 81–100
 - framework, 123–5
 - international comparisons, 399
 - local bodies, 110–11
 - published financial statements, 163–208
 - see also* Disclosures; Legislation
- Related party transactions:
 - definitions, 389–90
 - disclosures, 390–1
 - examples, 391
 - exclusions, 390
- Relevance, financial information, 124
- Reliability, financial information, 129
- Reliefs:
 - capital allowances, 16
 - double taxation, 62
 - rollover reliefs, 20
- Relocation costs, employment income, 40
- Rendering of services, revenue, 210
- Rent-free period, 286
- Rent received:
 - corporate income tax, 14–15
 - withholding tax, 62
- Reorder levels, inventories, 408
- Repairs, allowable expenditure, 18–19
- Reportable segments, 224–5
- Reporting:
 - financial performance, 209–36
 - information age, 182
 - value, 219
- Reports, auditors, 144
- Research and development (R&D):
 - allowable expenditure, 19
 - concepts, 127
 - disclosures, 358–9
 - see also* Intangible assets
- Research, concepts, 127
- Reserve disclosures, 210–11
- Residence criteria:
 - concepts, 60
 - corporate residence, 60
 - CT, 22
 - OECD Model tax convention, 64–5
- Residual amounts, IAS 16, 263
- Responsibility, 139–40
- Retained profits, corporate income tax, 21–2
- Retirement:
 - annuity policies, 19
 - see also* Pensions
- Retirements:
 - intangible assets, 335–6
 - property, plant and equipment, 167
- Returns:
 - compliance powers, 50
 - CT, 22
 - deadlines, 49–50
 - debt, 420–2
 - late returns, 50
 - record-keeping needs, 47–8
 - review and query powers, 50
 - risk, 423–4
 - short-term investments, 422–4
 - special reports, 50
- Revaluations:
 - assets, 269
 - deficits, 270
 - surplus, 270
- Revalued non-current assets, deferred taxation, 87
- Revenue:
 - disclosures, 210–11
 - dividends, 210
 - expenditure concepts, 16–19
 - income concepts, 15–16

- interest, 210
- recognition, 209–11
- rendering of services, 210
- royalties, 210
- sale of goods, 210
- Review and query powers, returns, 50
- Rights issues, 369
- Risk, 423–4
 - rules, 1–2
 - social issues, 2, 5, 40
 - tables, 41
 - tax gaps, 6
 - terminology, 3–6
- Risk, concepts, 504
- Rollover relief, CGT, 20
- Roman law, 102, 104
- Round-sum expense allowances, 40
- Rowe, Peter, 445
- Royalties, 73
- Running-out-of-stock costs, 458–9
- Running yield *see* Interest, yield concepts

- Salaries:
 - allowable expenditure, 19
 - see also* Employment income; Wages
- Sale of goods, 209
- Sales:
 - assets, 18–20
 - books, 48
 - cost of sales, 406
 - ratio analysis, 402
 - revenue, 210
 - works of art, 19–20
 - see also* Revenue
- Sales taxes:
 - compliance powers, 50–1
 - concepts, 4, 48–9
 - deadlines, 49–50
 - entry and search powers, 57
 - incidence concepts, 4
 - record-keeping needs, 47–8
 - review and query powers, 50
 - single/multi-stage sales taxes, 34–5
 - tax classifications, 6–7
 - see also* Indirect . . . ; Value added tax (VAT)
- Schedular systems, corporate income tax, 14–15
- Schedule A landed property, 15
- Schedule D:
 - Case I profits, 15
 - Case III interest, 15
 - Case V foreign dividends, 15
 - Case VI chargeable income, 15
- Schedule E employment income *see* Employment income
- Schedules and Cases, CT, 15
- Schering AG, consolidated accounts, 166
- Scholarships, employment income, 39
- Scope:
 - Framework for the Preparation and Presentation of Financial Statements*, 121
 - paragraphs, 146
- SEC *see* Securities and Exchange Commission (SEC)
- Securities, 111
 - Baumol model, 488–9
 - IOSCO, 101, 109–10
 - see also* Bonds; Shares
- Securities and Exchange Commission (SEC), 111
- Security assets, 39

- Segment reporting:
 - accounting policies, 182
 - business segments, 223–6
 - disclosures, 223–7
 - formats, 224
 - geographical segments, 223–4
 - reportable segments, 224–5
 - results, 224
 - segment results, 224
- Self-assessment, corporation tax (CTSA), 50
- Self-constructed assets, concepts, 265
- Self-employed persons, 39
- Selling price less gross profit margin method, 310
- Service rendering, revenue, 210
- Share capital transactions:
 - balance sheets, 171
 - bonus issues, 367–9
 - costs, 272
 - disclosures, 223
 - financial statement presentation, 559
 - information presentation, 132
 - presentation, 132
 - share classes, 358
 - shareholders' interests, 358
 - shares issue, 172
 - treasury shares accounting, 369–70
- Share issues:
 - accounting, 172
 - costs, 366
 - proceeds, 241
 - process, 361–2
- Shareholders:
 - disclosure requirements, 210–11
 - interests, 358
- Shares:
 - classes, 359–60
 - IOSCO, 101, 109–10
 - issues, 263
 - own-share purchases, 252
 - purchase, 252
 - redemption, 357
 - rights issues, 369
 - see also* Dividends; Equity; Securities
- Short-term finance:
 - bills of exchange, 481
 - cash deficits, 487–8
 - cash surpluses, 420
 - concepts, 604
 - debt yields, 420–2
 - documentary credits, 419
 - export finance, 417–19
 - factoring arrangements, 434
 - forfaiting arrangements, 481–2
 - invoice discounting, 623
 - Late Payment Act, 433
 - overdrafts, 416–17
 - sources, 415–28
 - term loans, 417
 - trade credit, 416
 - working capital, 429–56
 - see also* Cash
- Short-term investments:
 - returns, 155
 - treasury bills, 422
 - types, 415–28
 - working capital, 429–56
- Short-term solutions, 128

- SIC *see* Standing Interpretations Committee
- Signatures, auditors, 142
- Significant transactions:
 - accounting treatment, 311–12
 - disclosures, 390–1
 - recognition, 383–98
- Single-stage sales taxes, concepts, 34
- Smith, Adam, 2
- Social issues, 2, 5, 40
- Social security, 40
- Software, intangible assets, 266
- Sources of finance, disclosure requirements, 210–11
- Special reports, 50
- Split rate systems, 22
- Spreadsheets, 485
- Stamp duties, 7
- Standard costs, 310
- Standards:
 - allowed alternatives, 113
 - Board, 101
 - committee structures, 107
 - determinating factors, 102–103
 - development, 112
 - harmonisation contrasts, 103–104
 - national setting process, 111–13
 - non-current asset standards, 87
 - setting processes, 101–20
 - see also* International Accounting Standards; International Financial Reporting Standards
- Standards Advisory Council, 109
- Standing Interpretations Committee (SIC), 108
- Statement of changes in equity, 179–81
- Statement of recognised gains and losses specimen, 164
- Status, *Framework for the Preparation and Presentation of Financial Statements*, 136
- Statutes *see* legislation
- Stock exchanges, local requirements, 105
- Stocks *see* inventories
- Straight-line method, depreciation, 291–2
- Subleases *see also* leases
- Subscriptions, trade, 19
- Subsequent expenditure, property, plant and equipment, 266
- Subsidiaries:
 - international taxation, 59–80
 - losses, 23–4
 - record-keeping needs, 47–8
 - see also* groups . . .
- Substance over form concept, 125
- Sum-of-digits method, leases, 292–3
- Surpluses on disposal of intangible assets, 15

- Tangible asset purchase, 336
- Tax bases:
 - corporate tax base, 14–20
 - deferred taxation, 83
 - international comparisons, 399
- Tax credits:
 - deferred taxation, 83–8
 - dividends, 21, 71
 - double taxation treaties, 64–5
- Tax gaps, concepts, 6
 - tax systems, international comparisons, 2–3
- Taxable income, concepts, 14–15

- Taxable person, concepts, 4
- Taxable supply, VAT, 36
- Taxation:
 - accounts, 86, 92
 - administration, 47–57
 - avoidance, 51
 - canons, 2–3
 - classifications, 6
 - collection amounts, 430
 - compliance powers, 41
 - current taxation, 81–2
 - deadlines, 49–50
 - double taxation, 62
 - employees, 40
 - entry and search powers, 57
 - evasion, 52
 - financial statements, 81–100
 - foreign tax treaties, 59
 - hypothecation concepts, 5
 - incidence concepts, 4
 - international taxation, 59–80
 - OECD Forum on Tax Administration, 53
 - OECD Model tax convention, 59–60
 - payment deadlines, 49–50
 - principles, 1–11
 - rates, 21
 - record-keeping needs, 47–8
 - refunds, 637
 - residence criteria, 60
 - returns, 48–9
 - see also* capital gains . . . ; corporation . . . ; deferred . . . ; income . . . ; value added . . .
- Technical insolvency, concepts, 384
- Temporary differences, deferred taxation, 86
- Term deposits, short-term investments, 422–4
- Term loans, short-term finance, 417
- Terminal losses, 24
- Time limits:
 - taxation, 49–50
 - see also* deadlines
- Time value of money, concepts, 484
- Timeliness, information, 190
- Timing difference approach, deferred taxation, 84–5
- Timing, liabilities, 169
- Titles, audit reports, 144
- Tobacco, excise duties, 38
- Trade credit, short-term finance, 416
- Trade payables *see* payables
- Trade, subscriptions, 19
- Trading income, concepts, 13
- Trading loss relief, CT, 24
- Transaction disclosures, 390–1
- Transfer pricing, 49, 63
- Transfers:
 - assets, 25
 - group assets, 25, 63, 343
 - losses, 24–5, 63
- Transparency principle, 109, 153, 154
- Transport, VAT, 74
- Treasury bills, short-term investments, 422
- Treasury management, concepts, 483
- Treasury shares accounting, 369
- Treaties, 8, 59, 60, 62, 64
- Trial balance example, 184
- True and fair view, 15, 136, 138, 139, 141, 142
- Turnbull Report, 154

- UK:
 - anti-avoidance provisions, 52
 - benchmark tax regimes, 1
 - competent jurisdictions, 4, 5
 - groups of companies, 24–5
 - residence criteria, 60–2
 - Schedules and Cases, 15
 - taxable income, 14, 15, 21, 23, 102
 - see also* individual taxes
- Uncertain outcomes, construction:
 - contracts, 315
- Underlying tax, concepts, 62
- Understandability, 124
- Unit costs, inventories, 459
- Unit taxes, concepts, 34
- Unusual item reporting, 212
- USA:
 - benchmark tax regimes, 1
 - consumption taxes, 34
 - IAS acceptance, 81, 82, 87–90
 - interest-recharacterisation rules, 23
 - public securities markets, 111
 - reaction to IOSCO, 109–10
 - Securities and Exchange Commission, 111
 - subsidiaries, 49, 389
 - tax classifications, 6
 - taxable income, 14–15, 23
- Useful life review, 264
- Users, financial statements, 122, 218, 220
- Value:
 - fair value, 219, 264, 273
 - reporting, 219
- Value added tax (VAT):
 - apportioning, 37
 - compliance powers, 50–1
 - concepts, 4, 34–5
 - deadlines, 49–50
 - entry and search powers, 51
 - exemptions, 36–7
 - invoices, 48
 - liable transactions, 36–7
 - partially exempt trades, 37
 - rates, 6, 35
 - record-keeping needs, 48–9
 - refunds, 36–7
 - registration, 37
 - review and query powers, 50–1
 - zero rates, 35–7
 - see also* Indirect taxes
- Vans:
 - employment income, 39, 41
 - see also* cars
- Variable production overheads, 308
- VAT *see* value added tax
- Vehicles:
 - CGT exemptions, 19
 - see also* cars; motor . . .
- Vouchers, exchangeable, 40
- Wages, 2–3, 19, 39–40
 - allowable expenditure, 19
 - see also* employment income; salaries
- Wasting assets, 19
- Wealth of Nations* (Smith), 2
- Wealth taxes, 38–9
- Welfare expenses, 19
- ‘What if?’ analysis, 491
- ‘Wholly, exclusively and necessarily’ incurred expenses, 39
- Winding-up business payments, 19
- Withholding tax:
 - concepts, 5, 62
 - see also* double taxation
- Wording, qualified reports, 142–7
- Work-in-progress:
 - concepts, 318, 458
 - see also* inventories
- Working capital:
 - aggressive/conservative/moderate policies, 400–1
 - concepts, 399–414, 429–55, 457–82, 483–507
 - definition, 399–400
 - efficiency ratios, 404–406
 - financing activities, 401–402
 - investment activities, 400
 - liquidity needs, 169, 403, 616
 - liquidity ratios, 403
 - long-term debt, 401
 - management issues, 399–400
 - ratios, 402–404
 - see also* Cash; Inventories; Payables; Receivables; Short-term . . .
- Working capital cycle:
 - calculations, 406–407
 - concepts, 406–407
 - examples, 407–408
 - shortening steps, 408
- Works of art, CGT exemptions, 19
- Yield curves, 484
- Yield to maturity, concepts (YTM), 420
- Yields, debt, 420–1
- YTM *see* Yield to maturity, concepts (YTM)
- Zero rates, VAT, 36



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