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Research, Standard Setting, and Global Financial Reporting

Mary E. Barth

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Abstract

The objective of this paper is to aid researchers in conducting research relevant to global financial reporting issues, particularly those of interest to financial reporting standard setters. The mission of the International Accounting Standards Board (IASB) is to develop a single set of financial reporting standards that are accepted worldwide. The Financial Accounting Standards Board (FASB) is committed to convergence of its standards with those of the IASB. Thus, global financial reporting issues relate to particular topics on the agendas of the IASB and the FASB. They also relate to globalization of financial reporting itself. This paper discusses research related to both types of issues and explains how that research can aid standard setters in resolving global financial reporting issues as well as contribute to the academic literature. The issues facing global financial reporting standard setters are broad, difficult, and complex. Research can provide input to their resolution. To do so, researchers need to understand not only the issues themselves, but also how to develop research questions and designs that are relevant to the issues, from the perspective of both standard setting and the academic literature.

Contents

1

Introduction

The objective of this paper is to aid researchers in conducting research relevant to global financial reporting issues, particularly those of interest to financial reporting standard setters. The mission of the International Accounting Standards Board (IASB) is to develop a single set of financial reporting standards that are accepted worldwide. The Financial Accounting Standards Board (FASB) is committed to convergence of its standards with those of the IASB. Thus, global financial reporting issues relate to particular topics on the agendas of the IASB and the FASB. They also relate to globalization of financial reporting itself. This paper discusses research related to both types of issues and explains how that research can aid standard setters in resolving global financial reporting issues as well as contribute to the academic literature. The issues facing global financial reporting standard setters are broad, difficult, and complex. Research can provide input to their resolution. To do so, researchers need to understand not only the issues themselves, but also how to develop research questions and designs that are relevant to the issues, from the perspective of both standard setting and the academic literature.

Whether and how research can inform standard-setting issues have long been the subject of debate among academics. Some believe research cannot be relevant to standard-setting issues because accounting standards are public goods; only standard setters, as regulators, can make the necessary social welfare trade-offs. Thus, any particular research study cannot determine what the requirements of any particular standard should be. Others believe that despite standard setting's regulatory role, research can provide insights into standard-setting issues by operationalizing the criteria the standard setters establish for deciding among alternatives when developing standards, such as relevance and reliability. These criteria are specified in the conceptual frameworks of the FASB and IASB, thereby eliminating the need for researchers to specify the unspecified objective function of standard setters. Standard setters are interested in research because they actively seek input from all constituents on all aspects of issues they consider. Research can be particularly helpful to standard setters because it is unbiased, rigorously crafted, and grounded in economic theory.[1]

Conducting research relevant to standard-setting issues requires specifying the standard-setting questions that motivate the research. Research cannot directly answer these motivating questions; most motivating questions remain unanswered for many years, and may never be resolved fully. Rather, research aids in identifying issues, helping standard-setters structure their thinking about a particular issue, and providing evidence that informs the debate about an issue. Thus, although the link between research and standard-setting issues exists, it is indirect. The key to designing and interpreting research relevant to standard-setting issues is to identify and clearly specify the link between the question motivating the research and the research question that the research can address. In making this link, researchers need to be explicit about which standard-setting criteria the research design operationalizes and how it does so. Without specifying this link,

[1] These issues are not unique to accounting; the same issues apply to the ability to link academic research to policy decisions in other fields, such as finance and economics. Also, research relating to standard-setting issues also can be of interest to preparers and users of financial statements. However, this paper focuses on how research can relate to global financial reporting standard-setting issues.

the study might be able to contribute to the academic literature, but it is less likely to contribute to understanding standard-setting issues.[2] Researchers are trained in developing research questions that contribute to the academic literature. Typically, they are not trained to develop research questions from questions motivated by standard-setting issues. Developing research questions from motivating questions is not a trivial task, but is crucial in designing research that contributes to the academic literature and also provides insights relevant to standard-setting issues.

Designing research relevant to standard-setting issues requires taking into consideration the different perspectives of researchers and standard setters. Standard setters seek to implement their conceptual frameworks to determine the form and content of financial statements. Researchers, too, are interested in these issues, but researchers are not as focused on these issues as are standard setters. Rather, researchers often focus on the role of accounting as information, the effects of incentives and discretion on accounting amounts and reporting behavior, and how accounting fits into the firm's overall information environment, which encompasses much more than financial statements. Standard setters, too, are interested in these issues, but perhaps not as much as researchers.

Financial reporting research, particularly capital markets research, is often described as adopting an information perspective or a measurement perspective. Both perspectives are consistent with the conceptual frameworks of the FASB and IASB, and they are not necessarily mutually exclusive. Regarding the information perspective, the frameworks state that the objective of financial reporting is to provide information useful to financial statement users in making economic decisions. However, the information perspective adopted by research often goes

[2] Many research studies inform standard-setting issues without specifying a motivating question. These studies do not specify a motivating question because informing standard-setting issues is not an objective of the studies. For example, findings relating to accruals versus cash flows, the role of analysts, and the market reaction to earnings announcements all reveal inferences about the role of accounting in capital markets, which is fundamental to global financial reporting. However, without specifying the motivating question, the relation to standard-setting issues is likely to be more indirect, less tightly linked to the research design, and not as readily discernable.

beyond information in financial statements. Because financial statements are the part of financial reporting that currently is under the purview of accounting standard setters, their interest in this non-financial statement information is indirect. Standard setters' interest primarily focuses on the role of non-financial information in affecting users' decisions and interpretation of financial statement information. Regarding the measurement perspective, the frameworks' discussions of measurement criteria are not extensive. Thus, when making measurement decisions, standard setters primarily rely on applying the qualitative characteristics of accounting information specified in the frameworks, particularly relevance and reliability. However, measurement decisions comprise the majority of standard setters' activity.

After considering the motivating question and potential differences in perspective, designing research to address standard-setting issues is not unlike designing research to address other issues. The design derives from the research question. In the case of research relevant to standard setting, the research question derives from a question motivated by a standard-setting issue. The conceptual frameworks of the FASB and IASB specify that the objective of financial reporting is to provide information to financial statement users, primarily providers of capital who are external to the firm, such as equity investors, in making economic decisions. Valuation research fits naturally to standard-setting issues because it focuses on the outcomes of investors' investment decisions. However, valuation research is only one type of research that can address standard-setting issues. Others include, among many other designs, research using other capital market metrics, prediction of bond defaults and bankruptcy, event studies, analytical models, and experiments.

The remainder of the paper is organized as follows. Section 2 describes the relation between research and standard-setting issues. It reviews the debate over whether and the extent to which research can inform standard-setting issues; explains why questions motivated by standard-setting issues need to be reframed before they become research questions, and overviews the information and measurement perspectives of financial reporting. Section 3 explains how a variety of research designs can be used to address research questions motivated

by standard-setting issues, including valuation research and event studies.

Section 4 offers five studies as examples of research addressing a specific global standard-setting issue – use of fair value in measuring accounting amounts.[3] The section describes how each study relates to fair value standard-setting issues by identifying motivating questions and developing research questions that relate them, designing the research to address the research questions, and interpreting the findings in light of the questions and designs. These examples illustrate how researchers make research design choices that enable the research to be relevant to standard-setting issues as well as the academic literature. The section focuses on research related to fair value because consideration of fair value as the measurement attribute pervades the topics on the FASB's and IASB's agendas.[4] Also, use of fair value in financial reporting is controversial, which heightens standard setters' interest in research on the topic. The section then provides a broad list of motivating questions relating to fair value, which can be the basis for future research. Section 5 offers further opportunities for future research on specific standard-setting topics by providing motivating questions relating to the major topics on the agendas of the FASB and IASB. It is up to future researchers to use these motivating questions to develop research questions and research designs to generate relevant inferences.

Turning to issues related to the globalization of financial reporting, Section 6 explains how the IASB aims to achieve its mission of developing a single set of high quality accounting standards that are accepted worldwide. The section then offers three studies as examples of research

[3] These examples, and those in Section 6.2, are from my own work. This is because I feel more comfortable interpreting and explaining motivations for my own work rather than the work of others, not because this is the only or most important research addressing these issues. Also, this paper is not intended to be a complete review of all studies addressing standard-setting issues. The cited studies illustrate research questions, research designs, and insights obtained from a larger body of work.

[4] Neither the FASB Statement of Financial Accounting Concepts (SFAC) No. 5 (FASB, 1984) nor the IASB *Framework* (IASB, 2001) lists fair value as an example of a measurement attribute. However, these lists are not all-inclusive, and standards issued by the FASB and IASB since their conceptual frameworks were written and recent discussions relating to the measurement phase of the current joint conceptual framework project make clear that both boards consider fair value to be a measurement attribute.

motivated by issues associated with globalization of financial reporting to illustrate how these motivating questions can lead to research questions and designs that generate relevant inferences. Section 6 also summarizes extant evidence on the relative quality of accounting amounts across global standard-setting regimes and whether global financial reporting is achievable or even desirable. The section closes with opportunities for future research on issues related to globalization of financial reporting by identifying motivating questions that are potentially fruitful avenues for future research.

2

Research and Standard-Setting Issues

2.1 The Debate

The extent to which research can inform standard setting has been the subject of debate among academics for many years. In large part because of the development of the notion of market efficiency, in the late 1960s, capital markets research in finance and accounting became more prevalent. Accountants conducting capital markets research focused on testing the relation between accounting amounts and share prices and returns. In response to this growing trend, researchers began to study the relation between share prices, or returns, and accounting information, i.e., value-relevance research, as a way to address accounting standard-setting issues.

Gonedes and Dopuch (1974) point out that some of these early capital markets-based studies over-interpret inferences relating to standard-setting issues. Gonedes and Dopuch (1974) explain that despite market efficiency, finding a relation between accounting amounts and equity prices or returns is not sufficient to determine desirability or effects of particular standards. This conclusion reflects the fact that accounting standards essentially are a public good and, thus, standard setters

develop standards after making social welfare trade-offs. In particular, some firms might enjoy net benefits from a particular standard while others bear net costs. If so, basing inferences on equity prices of either the net beneficiaries or the firms bearing net costs leads to an incomplete analysis of the standard's effects. If the standard affects benefits or costs for individuals, even analyzing equity prices for all firms is incomplete. For example, if a standard requires a firm to disclose what had been private information, it is possible for the disclosing firm to lose an informational advantage to a competitor firm and for informed investors to lose an informational advantage to uninformed investors. Thus, determining the desirability of accounting standards requires specifying social preferences, i.e., how to measure and weight the net benefits to some capital market participants and the net costs to others, which none of the accounting capital markets-based studies does.

Although Gonedes and Dopuch (1974) raised researchers' awareness of the complications involved in linking capital markets-based research to standard-setting issues, it did not end the debate. More recently, Holthausen and Watts (2001) argue that the value-relevance literature has little to say about standard-setting issues. Also, Holthausen and Watts (2001) observe a growing literature that investigates the empirical relation between stock market values, or changes in values, and particular accounting amounts for the purpose of assessing or providing a basis of assessing those amounts' use or proposed use in an accounting standard. Holthausen and Watts (2001) label as value relevance the group of papers that are at least partially motivated by the desire to provide input into standard-setting debates. The crux of the Holthausen and Watts (2001) argument is that without underlying theories that explain and predict accounting, standard setting, and valuation, value-relevance studies simply report associations. Holthausen and Watts (2001) observe that researchers' assertions that standard setters should consider a significant relation between accounting amounts and share prices, or returns, as a desirable attribute of that accounting amount are insufficient for research to claim relevance to standard-setting issues. Rather, Holthausen and Watts (2001) maintain that

researchers must specify the objective of standard setting and how using the association criterion helps standard setters achieve that objective.

Barth et al. (2001) take a different view of the relevance of the value-relevance literature for standard-setting issues. In contrast to Holthausen and Watts (2001), but consistent with prior literature, Barth et al. (2001) define an accounting amount as value relevant if it has a predicted association with equity market values. Barth et al. (2001) explain that researchers need not specify a complete theory of accounting and standard setting for value-relevance research to be relevant to standard-setting issues. Rather, the FASB and IASB specify in their conceptual frameworks the objective of financial reporting and standard setting, as well as the criteria standard setters use in selecting among accounting alternatives.[1] Thus, researchers can inform standard-setting issues by using valuation models to develop research designs that operationalize these criteria.[2]

The two primary qualitative characteristics of accounting information specified in the FASB's and IASB's conceptual frameworks are relevance and reliability (Statement of Financial Accounting Concepts (SFAC) 2: FASB, 1980, IASB, 2001, IASB, 2006b).[3] Accounting infor-

[1] The FASB's conceptual framework is specified in SFAC 1 through SFAC 7 (FASB, 1978 through 2000). The IASB's conceptual framework is specified in its *Framework for the Preparation and Presentation of Financial Statements* (IASB, 2001). The two frameworks are similar, although not identical. Thus, all references in this paper to concepts in one of the two frameworks apply to concepts in the other, unless specifically noted. The FASB and IASB presently are conducting a joint project to converge, update, and complete their frameworks. See FASB/IASB (2005) for a discussion of the reasons for the conceptual framework project. As part of that project, the two boards have jointly issued a discussion paper that presents their preliminary views on the first two chapters of the joint framework – Objective of Financial Reporting and Qualitative Characteristics of Decision-useful Financial Reporting Information (IASB, 2006b).

[2] Standard setters have in mind a policy decision-making model. Specifying that model in a general equilibrium framework that includes a social welfare function is extremely difficult, if not impossible. Instead, researchers focus on partial equilibrium models based on conditional distributions of variables, with the objective of determining whether the observed conditional distributions are consistent with those implied by the standard setters' unspecified decision-making model. That is, researchers determine whether the research findings are consistent with the criteria specified by standard setters, not the correct standard-setting decision implied by the policy decision-making model.

[3] Many believe that relevance and reliability cannot be achieved simultaneously. However, it is an open question whether this is the case and, if it is, what the trade-offs are. See Section 4.2.

mation is relevant if it is capable of making a difference in the economic decisions of financial statement users. Relevant information has confirmatory value or predictive value. Timeliness – making information available to decision makers before it loses its capacity to influence decisions – is another aspect of relevance. Accounting information is reliable if it is representationally faithful.[4] Representationally faithful means that the information represents what it purports to represent. Verifiability, neutrality, and completeness are dimensions of reliability. Verifiability means different measurers would obtain substantially the same amount; neutrality means the information is free from bias intended to attain a predetermined result or to induce particular behavior; completeness means including all of the information necessary for faithful representation. Reliability does not imply certainty or precision.[5]

In addition to the reasons articulated in Gonedes and Dopuch (1974), a study seemingly related to a standard-setting issue might not contribute to understanding that issue, even though it might contribute to the academic literature, because standard setters and researchers often have different perspectives. Thus, not all aspects of the issue are of interest both to standard setters and to researchers. For research to contribute to the academic literature and standard-setting issues it must adopt a perspective that is of interest to both groups. For example, standard setters are charged with specifying which items are included in financial statements, and how those items are measured and presented. Standard setters seek to implement their conceptual frameworks to determine the form and content of financial statements. Thus, standard setters are interested in questions such as whether a potential inflow or outflow of economic benefits meets the definition of a financial statement element, e.g., an asset or liability, whether a

[4] In the joint IASB and FASB conceptual framework project (see footnote 1) the boards have decided to eliminate the term reliability and replace it with the term representational faithfulness. This is because the boards concluded that the term reliability is widely misunderstood and representational faithfulness more accurately reflects what the term reliability was intended to capture.

[5] Two other qualitative characteristics of financial reporting information are comparability and understandability (IASB, 2006b). Comparability, which includes consistency, is the quality that enables users to identify similarities in and differences between economic phenomena. Consistency refers to using the same accounting policies and procedures over time for a given entity or in a single period across entities. Consistency enhances comparability.

measure of the element is sufficiently reliable, and whether to recognize the element or only disclose it. Researchers, too, are interested in these issues. However, researchers also are interested in the role of accounting as information, the effects of incentives and discretion on accounting amounts and reporting behavior, and how accounting fits into the firm's overall information environment, which encompasses much more than financial statements. Standard setters view these issues as tangential to their primary focus on the form and content of financial statements as specified in the conceptual frameworks.

Nonetheless, as long as researchers develop research designs that operationalize criteria standard setters specify as relevant to standard-setting decisions, the research can inform those decisions. As Barth et al. (2001) observe, value-relevance research is only one type of research potentially relevant to standard setters. As the examples in Sections 4.3 and 6.2 illustrate, there are variety of ways researchers can operationalize relevance and reliability, or the secondary dimensions of these primary criteria that standard setters consider when making standard-setting decisions. Thus, a variety of research designs can yield insights into standard-setting issues.

2.2 Information and Measurement Perspectives

Financial reporting research, particularly capital markets research, is often described as adopting an information or measurement perspective (Beaver, 1998). The information perspective focuses on accounting as providing information to financial statement users about the firm's financial condition and performance. It is consistent with the objective of financial reporting as specified in the IASB and FASB conceptual frameworks (SFAC 1: FASB, 1980, IASB, 2001, IASB, 2006b). The objective is to provide information to investors and other users of financial statements to aid them in making economic decisions relating to the reporting entity. This is the reason the frameworks specify relevance as one of the primary qualitative characteristics of accounting information. Accounting information can be quantitative, i.e., accounting amounts, or qualitative, i.e., narrative disclosures. Questions that typify the information perspective include: Does the accounting information summa-

rize *information* that might be available from other sources? Does the accounting information provide new *information* to investors? Does the accounting information have *information* content?

The measurement perspective focuses on accounting amounts as measures of the firms' resource, claims to those resources, and components of performance, i.e., assets, liabilities, income, and expenses. It also is consistent with the IASB framework and SFAC 2 (FASB, 1980). Unfortunately, the frameworks' discussions of measurement criteria are not extensive. Thus, when making measurement decisions, standard setters primarily rely on applying the qualitative characteristics of accounting information specified in the frameworks (Barth, 2007). In particular, in addition to relevance, the frameworks specify that accounting information should be reliable, i.e., representationally faithful, verifiable, and neutral. These concepts relate to accounting amounts as well as to qualitative accounting information. The measurement perspective also is consistent with SFAC 5 (FASB, 1984), which focuses on accounting amounts. SFAC 5 specifies the criteria standard setters should use in determining which items to recognize in financial statements and how those items should be measured. The criteria are based on relevance, reliability, and the definitions of financial statement elements, i.e., asset, liability, equity, income, or expense.[6] Thus, questions that typify the measurement perspective include: Is the accounting *amount* capable of making a difference to users' decisions? Does the accounting *amount* represent what it purports to represent? Is the accounting *amount* neutral?

Standards issued by the FASB and the IASB apply to financial statements. The financial statements themselves, e.g., the statements of financial position, income, and cash flows, contain amounts. The financial statements also contain note disclosures, which also often are amounts. Thus, standard setters focus considerable attention on the measurement characteristics of accounting amounts included in the

[6] SFAC 5 specifies that an item should be recognized when all four of the following criteria are met: (1) the item meets the definition of a financial statement element as specified in SFAC 6 (FASB, 1985); (2) the item has an attribute, e.g., cost or value, relevant to financial statement users and reliably measurable; (3) the information about the item is relevant to financial statement users; and (4) the information is reliable.

financial statements – primarily recognized amounts, but also disclosed amounts. As a result, many standard-setting issues focus on measurement, which results in the measurement perspective often being appropriate for research aimed at addressing standard-setting issues.

The information and measurement perspectives often blend together. This is because accounting amounts can provide information to financial statement users. For example, consider the question of whether an accounting amount is value relevant, i.e., it has a predicted association with equity market values. It will be value relevant only if it reflects information relevant to investors and is measured with sufficient reliability. As a result, the two perspectives are not direct counterparts of relevance and reliability; both qualitative and quantitative accounting information should be relevant and reliable. However, the measurement perspective applies only to quantitative accounting information. Regardless, focusing on the differences between the information and measurement perspectives can facilitate understanding the characteristics of accounting information and its role in particular circumstances.

2.3 Motivating Questions and Research Questions

Financial reporting standard setters determine the rules under which firms report financial results to investors, creditors, and other external parties. Thus, although research can inform standard-setting debates, it is standard setters, not researchers, who set standards. In doing so, as Gonedes and Dopuch (1974) explain, standard setters take into account an array of factors. Their decisions are not based on the results of a single, or even a large group, of research studies. This is because no single study, or even a large group of studies, can possibly address all of the relevant dimensions of the standard-setting decision.[7] As a result, research does not seek to make policy recommendations regarding the

[7] For example, new or revised accounting standards could result in renegotiations of firms' contracts, such as debt and employment contracts. It is virtually impossible for researchers to determine the wealth transfer implications of such renegotiations. In contrast, as part of their due process procedures, standard setters seek input from all parties. Based on this input, standard setters likely can anticipate the implications of a new or revised standard more accurately than researchers. However, the concept of neutrality in the FASB and IASB frameworks precludes them from biasing financial reporting to the advantage or disadvantage of any particular affected party.

selection of particular standards, or provisions within a standard. Making policy statements directly based on research is usually inappropriate because such statements necessarily depend on social welfare considerations absent from most research studies relevant to standard setters.[8]

Researchers have long recognized that research cannot answer the question: What should the standard be? (e.g., Beaver and Demski, 1974, Jensen, 1983, Beaver, 1998). Rather, research aids in identifying issues, helping standard setters structure their thinking about a particular issue, and providing research evidence that informs the debate about an issue.[9] Thus, although the link between research and standard-setting issues exists, it is indirect. One implication of the indirect link between research and standard setting is that the question motivating the research differs from the question actually addressed by the research.

Motivating questions are the questions to which standard setters would like to have the answer; research questions are the questions to which researchers can provide the answer. If a researcher seeks to conduct research that contributes not only to the academic literature, but also to standard-setting debates, the researcher needs to identify the question motivating the research from a standard-setting perspective. The motivating question is the question that inspires the research,

[8] For example, in SFAC 2 (FASB, 1980) the FASB states that standard setters must do their best to meet the needs of society as a whole in promulgating standards, but it is difficult to calculate the costs and benefits to different users and issuers of the information required by a standard. Because such costs and benefits are difficult to quantify, it is also difficult to document precisely how the FASB factors them into their decisions.

[9] For example, as explained in Section 4.3, Barth et al. (BHS, 2006a) explain why and find that equity returns associated with credit risk changes are mitigated by the debt value effect of credit risk changes, as Merton (1974) predicts. BHS also find that if unrecognized debt value changes were recognized, but unrecognized asset value changes were not, most credit upgrade (downgrade) firms would recognize lower (higher) income. However, the sign income would not change for most firms. For downgrade firms, recognized asset write-downs exceed unrecognized gains from debt value decreases, mitigating concerns about anomalous income effects from recognizing such gains. BHS help identify issues related to fair value accounting for liabilities by focusing on the implications of Merton (1974) for equity value. BHS help structure thinking about the issue by showing that anomalous income effects stem from asset accounting, not from using fair value accounting for liabilities. BHS provide evidence that informs the debate by showing that equity value changes associated with credit risk changes are mitigated by debt for a broad sample of solvent firms, and that anomalous income effects are not pervasive.

even though limitations to data and research methodology preclude the researcher from answering the question directly and fully. The research question is a question that can be answered by the research, but only speaks to the motivating question or addresses one aspect of it. Most motivating questions are unanswerable, or answerable only after aggregating evidence and insight from a large number of research studies and combining that evidence and insight with the preferences and judgment of standard setters.

It takes institutional knowledge about standards and standard-setting issues to identify a motivating question. That knowledge coupled with knowledge of the extant academic literature is necessary to develop research questions that provide evidence on or insights into the motivating question while also contributing to the academic literature. Developing the research question is critical to any study. For studies aimed at informing questions motivated by standard-setting issues, developing the research question is one of the most difficult tasks. This is because the research question must be tailored to the motivating question. Identifying and clearly specifying the link between the motivating question and the research question is the key to designing and interpreting research relevant to standard-setting issues. In making this link, researchers need to be explicit about which standard-setting criteria the research design operationalizes and how it does so.

Without specifying this link the study might be able to contribute to the academic literature, but it likely will not contribute to understanding standard-setting issues. Conversely, specifying a motivating question and the link between it and the research question and design only contributes to the academic literature if the research question is of interest to academics. The role of research is to extend knowledge to enhance our understanding of accounting phenomena – it is not simply to find answers to questions standard setters ask. Contributing both to the academic literature and to understanding standard-setting issues has a large pay off for researchers, standard setters, and the capital markets. The examples in Sections 4.3 and 6.2 illustrate how several extant studies do this.

3

Designing Research to Address Standard-Setting Issues

The key to designing research is to relate the design to the research question. Although standard setters know the motivating question, typically they do not have research backgrounds and are not equipped to develop research questions or research designs. Thus, they generally are not in a position to know what type of research is capable of addressing the motivating question. This is the expertise of researchers. Different questions dictate different designs. Different designs, in turn, result in different interpretations for the findings. A variety of research designs can result in research relevant to standard-setting issues; this section describes several of these, as examples. The designs described here are commonly used designs, but they are not the only designs that can address standard-setting motivating questions.

3.1 Valuation Research

Research designs based on valuation theory are often used to address standard-setting motivating questions.[1] This is because the conceptual

[1] See Barth (2000) for a more complete discussion and Brown and Howieson (1998) for a review of capital markets research and standard setting. Also, see Brown (1994), Barth

frameworks of the FASB and IASB specify that the objective of financial reporting is to provide information to financial statement users, primarily providers of capital who are external to the firm, such as equity investors, in making economic decisions.[2] Equity investors also represent a large class of financial statement users. Thus, much academic financial reporting research motivated by standard-setting issues adopts an equity investor perspective. Equity investors' primary economic decisions are whether to buy, sell, or hold a firm's equity securities, all of which depend on investors' assessments of the value of the firm's equity. As a result, firm valuation is a key input into and output of investors' decisions. Thus, research adopting an investor perspective on financial reporting questions often uses a valuation approach. Also, there is a large academic literature relating to valuation, which provides researchers with a solid foundation upon which to build research designs.

The objective of valuation research is to relate accounting amounts to a measure of firm value to assess the characteristics of accounting amounts and their relation to value. The types of questions such studies address include: How well do accounting amounts measure value? What accounting amounts provide information about value? As Section 2 explains, these questions reflect the measurement and information perspectives, respectively.

Valuation-based research designs require a measure of firm value. A large body of finance and accounting research documents that the stock market is quite efficient in processing publicly available information. Publicly available information comprises a rich information set that includes not only accounting amounts, but also any other information in the public domain that investors perceive as relevant to firm valuation. As Barth et al. (2001) explain, even if the market is not totally efficient in processing the valuation implications of all publicly

et al. (2001), and Kothari (2001) for summaries of accounting research adopting a valuation perspective.

[2] The frameworks' focus on capital providers, such as equity investors, is not meant to suggest that other financial statement users are unimportant. Rather, it is because standard setters believe that serving the needs of equity investors will serve the needs of other users of financial statements. The focus on users external to the entity reflects the fact that internal users can obtain directly the information they require.

available information, equity market value reflects the consensus beliefs of investors. Thus, equity market value can be used to infer investors' consensus assessment of publicly available information. For these reasons, equity market value is the most common value measure used in financial reporting research.[3]

Valuation-based research designs also require a valuation model that links firm value to firm characteristics that investors value. Most valuation models are based on the dividend discount model, where price at time t, P_t, equals the expected value of future dividends, $d_{t+\tau}$.

$$P_t = \left(\sum_{\tau=1}^{\infty} R^{-\tau} \mathrm{E}_t[d_{t+\tau}] \right), \tag{3.1}$$

where E is the expectation operator and R is one plus the discount rate, r. To address accounting research questions, the researcher must link Eq. (3.1) to accounting amounts, which requires positing a link between expected future dividends and accounting amounts.[4]

One way to link accounting amounts to value is to express Eq. (3.1) in terms of permanent earnings, E^*, as in Miller and Modigliani (1966). With this link, Eq. (3.1) becomes

$$P_t = \frac{1}{r} E^*. \tag{3.2}$$

As Miller and Modigliani (1966) note, accounting net income, NI, can be viewed as a proxy for permanent earnings. Under this view, the differences between NI and E^* can be viewed either as measurement error, e.g., if one seeks to estimate r, or as the object of study, e.g.,

[3] Consistent with this, Aboody et al. (2002) find that potential market inefficiency does not affect inferences in studies using share price as the measure of firm value. Also, because prices typically lead accounting in reflecting information, it is possible to use share prices to make inferences when there is no contemporaneous correlation, but there is predictive correlation. This can motivate using price levels or long-window return studies (see section 3.1). Another measure of value is intrinsic value estimated based on valuation models and expected future cash flows, for example, firm value derived from the Ohlson (1995) valuation model and analyst earnings forecasts. See e.g., Barth and Clinch (1998), Lee et al. (1999), and Aboody et al. (2002) as examples of accounting research studies that use this alternative value measure.

[4] Ball and Brown (1968) and Beaver (1968) are the seminal papers linking accounting amounts to share prices. In some studies, e.g., Beaver (1998), the link is explicit; in other studies, e.g., Beaver et al. (1980), the link is implicit.

if one seeks to determine whether a component of earnings is transitory or permanent. The objective of Miller and Modigliani (1966) is the former; the interest of accounting researchers is more often the latter.[5] This is an important difference in perspective that distinguishes economics and finance research from accounting research. Economists and finance researchers use accounting amounts to test economic and finance theories, whereas accountants focus on the characteristics of the accounting amounts themselves vis-à-vis economic constructs.

Another way to link accounting to value is to express price, or market value of equity, MVE, as the sum of the value of the firm's assets, MVA, and the (negative) value of its liabilities, MVL,

$$MVE_t = MVA_t + MVL_t. \tag{3.3}$$

To make this link, researchers can use accounting assets and liabilities, BVA and BVL, as proxies for asset and liability values, MVA and MVL (Landsman, 1986). Differences between BVA and MVA and between BVL and MVL are the objects of study (Barth, 1991, Choi et al., 1997). That is, such a specification can be used to study differences between accounting assets and liabilities and assets and liabilities implicit in market value of equity, i.e., the values of assets and liabilities as assessed by investors.

A third way to link accounting to value is to use the Ohlson (1995) valuation model, which expresses firm value as a function of accounting book value of equity, BVE, and net income, NI.[6] The assumptions in Ohlson (1995) result in specifying a direct relation between accounting amounts and firm value. That is, the accounting amounts, i.e., BVE and NI, are the variables specified by the model – they are not proxies for unobservable economic constructs. Ohlson's (1995) assumptions

[5] Equation (3.2) assumes that the discount rate, r, is a constant. However, r likely varies cross-sectionally and intertemporally. Thus, researchers need to consider effects of differences in r, e.g., attributable to risk and growth (see e.g., Collins and Kothari, 1989, Easton and Zmijewski, 1989, Dhaliwal et al., 1991, Dhaliwal and Reynolds, 1994).

[6] Subsequent research expands the model (see e.g., Feltham and Ohlson, 1995, 1996, Ohlson, 1999) and tests it (see e.g., Barth et al., 1999a, Dechow et al., 1999, Myers, 1999, Hand and Landsman, 2005). This research provides evidence on the validity of the model's assumptions and the insights the model can yield.

yield

$$V_t = BVE_t + \sum_{\tau=1}^{\infty} R^{-\tau} \mathrm{E}_t[x^a_{t+\tau}], \tag{3.4}$$

where V_t is firm value, and x^a is abnormal earnings, which equals $NI_t - r\ BVE_{t-1}$. Adding the information dynamics Ohlson (1995) specifies yields

$$V_t = (1-k)BVE_t + k(\varphi NI_t - d_t) + \alpha_2 \nu_t, \tag{3.5}$$

where ν is other information and φ is a function of r. k is a function of r and the persistence of abnormal earnings, which determines the relative importance of BVE and NI in valuation. For example, BVE is likely more value relevant than NI as a firm approaches bankruptcy or liquidation (Barth et al., 1998a) in that the coefficient on NI increases and that on BVE decreases. Also, firms with patterns of increasing earnings likely have higher earnings persistence than other firms, resulting in a larger coefficient on NI (Barth et al., 1999c). k also can depend on the measurement attributes of BVE and NI. For example, if all assets, including intangible assets, were recognized at fair value, NI is simply gains and losses and $\nu = 0$ then $k = 0$ because, in this setting, the persistence of abnormal earnings equals zero. If BVE is measured at historical cost and NI captures the excess of value-in-use over entry value for the firm's assets, then k is closer to one.

In terms of standard setting conceptual framework criteria, in a valuation context it is natural to operationalize relevance in terms of equity market values, or changes in them. This is because, as noted above, the frameworks make clear that equity investors are the primary focus of financial reporting, and share prices reflect equity investors' consensus beliefs. However, failure to detect a significant relation between accounting information and equity value could be attributable to lack of relevance or lack of reliability, or both. For accounting information to have a significant relation with equity market values it must be relevant to investors and sufficiently reliable to be reflected in their valuation decisions. Thus, it is difficult to distinguish

relevance and reliability in a valuation context. However, some valuation studies assume relevance and interpret failure to find a significant association between equity value and the accounting amount as lack of reliability (e.g., Barth et al., 1998b).

Some research designs specify the valuation Eqs. (3.2)–(3.4) in first-difference form, which are referred to as difference specifications. Levels and difference specifications each have econometric advantages and disadvantages. For example, intertemporally constant correlated omitted variables can be eliminated by using a first-difference specification. However, if the omitted variable or any of the model parameters vary intertemporally, then first-differencing can exacerbate econometric problems (Landsman and Magliolo, 1988).[7]

Levels and difference specifications also address different research questions. For example, levels specifications are helpful in determining what is reflected in firm value, whereas difference specifications are helpful in determining what is reflected in changes in firm value over a particular period of time. Therefore, difference specifications are appropriate if the research question relates to timeliness of accounting information, where timeliness can be captured in terms of a specified period of time (Barth et al., 2001).[8] Thus, selecting which type of specification to estimate depends on the research question.

The accounting amounts in Eqs. (3.2)–(3.4) are net income and book values of equity, assets, and liabilities. These are key summary measures from the income statement and statement of financial position. However, financial statements include many other accounting amounts, which are components of these summary measures. Even though each component receives equal weight in the summary measure, different components – various revenues, expenses, assets, and

[7] Bernard (1987), Barth and Kallapur (1996), and Barth and Clinch (2007), among others, discuss potential econometric effects of estimating cross-sectional level equations, including effects associated with cross-sectional correlation of residuals, scale differences across firms, and deflation.

[8] However, as the conceptual frameworks make clear, timeliness is a broad concept and is an ancillary aspect of relevance (SFAC 2: FASB, 1980). It does not relate to specific time periods. Rather, accounting information is timely if it is available when it is needed or becomes available sufficiently close to the event that it has value for future action. Thus if, for example, the information has predictive value for cash flows five years subsequent to when the information was generated, it is timely for five years.

liabilities – have different economic characteristics and, potentially, different measurement attributes. Thus, they have different characteristics vis-à-vis any particular valuation model (see, e.g., Barth et al., 1992, 1996). Valuation-based research can be used to determine how the valuation implications of earnings and book value components differ.

Valuation models can be used to structure tests to provide evidence on questions from both the measurement and information perspectives. Tests based on the measurement perspective typically require specific predictions for coefficient values. That is, one would expect accounting amounts with particular measurement characteristics to be associated with particular valuation coefficients in a particular way that is determined by the selected valuation model. Specifying and conducting such precise tests can be difficult and often requires adding structure to the design through, e.g., additional modeling assumptions (e.g., Barth, 1991, Barth et al., 1992, Choi et al., 1997). Tests based on the information perspective can be similar to those from a measurement perspective. For example, determining whether an accounting amount is value relevant can reflect the information perspective as well as the measurement perspective, although the predictions tested likely differ.[9] The information perspective might result in a prediction that the coefficient on the accounting amount differs from zero, whereas the measurement perspective might result in a prediction that the coefficient equals a specific value. However, testing whether the coefficient differs from zero also can be interpreted as a less demanding test from the measurement perspective.

3.2 Event Studies

Another common research approach is to conduct an event study. Event studies test whether there is a stock price reaction, typically over a few days, to a news release such as an earnings announcement or a regulatory decision. Thus, an event study provides evidence on whether

[9] As explained in Section 2, value relevant means the accounting amount is significantly associated, in the predicted way, with some measure of value, e.g., share prices. If the amount significantly increases the power of the estimating equation to explain equity value, then it must be relevant and measured with at least some reliability. If it is not reliably measured, there would be no relation with equity value. See Barth et al. (2001).

accounting information provides new information to investors, which is a test of whether it has information content. However, accounting information can have information content without generating a short window price reaction if the information can be detected in stock prices or returns over longer windows. Also, even though information from other sources can preempt some accounting information, accounting information may provide information these sources use and can provide information with which to validate that other information. For example, analyst earnings forecasts may preempt information in earnings announcements. However, analysts might use past earnings in developing their forecasts and realized earnings can provide information about the credibility of past analyst forecasts. Thus, information content, as reflected in event-period returns, is a strong test for accounting amounts; finding information content is powerful evidence of accounting playing a role in changing investors' beliefs. An event study design permits extreme tests of timeliness of accounting information because it is based on price changes, or returns, typically over short time periods. Timeliness can be relevant to standard-setting issues because, as noted in Section 2.1, timeliness is an aspect of relevance.[10] Thus, an event study design addresses a research question different from the question a valuation approach addresses.

Although event studies can provide insights into the role of accounting information in capital markets, requiring that an accounting amount provide new information to the market is a tougher criterion than that required by the IASB and FASB conceptual frameworks. First, providing new information is not a necessary condition for accounting amounts to be relevant. As explained in Section 2.1, accounting information is relevant if it is capable of making a difference in decisions of financial statement users – it need not actually make a difference. Second, requiring an accounting amount to provide

[10] As footnote 8 explains, timeliness need not be limited to a few days. Some research questions address timeliness within a year (see e.g., Aboody et al., 1999). Because of this, event studies are another example of where the information and measurement perspectives can blend together. In particular, it is unclear how short an event window is necessary before the design relates only to the information perspective and not the measurement perspective, or vice versa.

new information to the market does not reflect the structure of financial statements. For example, it would be odd for the income statement to exclude a component of earnings solely because investors could predict it and, therefore, it is not new information. Third, requiring an item to be new information ignores the measurement perspective embodied in SFAC 5. Fourth, some accounting amounts are relevant because they have predictive value. Thus, investors likely will attempt to obtain information from other sources to predict the amounts, thereby preempting the ability of the accounting amounts to convey new information to the market. Fifth, equity market values can reflect investors' assessments of information signals, such as stock splits, which are not part of the accounting system. Finally, event studies can detect wealth transfers that may not be relevant to standard-setting decisions based on the concept of neutrality in financial reporting, i.e., that standards should not advantage or disadvantage any particular group. Moreover, a short-window market reaction could reflect uncertainty about such wealth transfers, thereby muting the reaction to the accounting information.

There is an extensive event study literature in financial reporting, primarily focused on understanding the information reflected in announcements of earnings, revenues, and analyst and management forecasts of earnings. This is because to implement an event study design, the researcher must identify the event date and specify the unexpected portion of the accounting information and other conditioning variables. Earnings, revenues, and analyst and management forecasts of earnings are routinely announced by firms in press releases. However, these design implementation requirements can be daunting for research questions focused on accounting amounts other than earnings and revenues. Event studies often are impracticable for these amounts because they are not announced, making it difficult to identify the event date. It also is difficult to specify expectations for these other accounting amounts.

The design implementation requirements can be less daunting for other standard-setting motivating questions, which lend themselves to research questions for which an event study design is appropriate. For example Dechow et al. (1996) investigate the economic consequences

of accounting for stock-based compensation by examining the market reaction to events that changed the likelihood that the FASB would issue a standard requiring recognition of the expense. Armstrong et al. (2007) assess the perceptions of equity investors regarding the net benefit of increased globalization of accounting standards by examining the market reaction to events that changed the likelihood that International Financial Reporting Standards would be adopted for publicly listed firms in Europe.

3.3 Other Research Approaches

Many research approaches can be used to address standard-setting issues, and the discussion in this subsection is not all-inclusive. The objective of this subsection is to illustrate some of the alternatives. Research approaches that can be used to address standard-setting issues are limited only by the creativity of the researcher in crafting designs that link research questions to motivating questions.

Some designs use capital market metrics, other than equity market value, such as trading volume, cost of capital estimates, and bond ratings. These studies help to provide insights into the role of accounting in capital markets. Beaver (1968) is the seminal paper in this literature and shows that accounting information changes investors beliefs by showing that trading volume increases at earnings announcement dates. Barron (1995) and Bamber et al. (1997) are other examples of the trading volume literature. Botosan (1997), Botosan and Plumlee (2002), and Barth et al. (2006b), among others, empirically link accounting quality and financial statement transparency to firms' cost of capital (see Section 6.2.1). Beaver (1966), Altman (1968), and Burgstahler et al. (1989), among others, investigate the relation between financial statement variables, bond ratings, and prediction of financial distress. This financial distress prediction research focuses on providers of debt capital, rather than equity capital.[11]

[11] Watts (2003a, 2003b) view research on conservatism as related to standard-setting issues because conservative accounting is useful for contracts, e.g., debt contracts. However, conservatism is not a qualitative characteristic of accounting information in the IASB and FASB conceptual frameworks. This is because parties to contracts can modify accounting information for use in contract calculations. Consistent with this, Guay and Verrecchia

Another research approach that can be used to address standard-setting issues is analytical modeling. Often times, analytical models can address questions that are not addressable using empirical designs. For example, Diamond and Verrecchia (1991) develop a model to link disclosure with liquidity and cost of capital.[12] Barth et al. (2003) develop a model to address the market effects of recognition versus disclosure. Although understanding these effects is important to standard setting, implementing an empirical research design to study them is difficult.[13] Barth et al. (1999b) develop a model to address questions related to globalization of accounting standards. The model can yield insights into the forces that affect the effects of globalization, even though globalization has not yet occurred (see Section 6.2.3).

Using experiments is another way to address questions that are not addressable using empirical designs. For example, Hirst and Hopkins (1998) use experiments to investigate how comprehensive income reporting affects analysts' judgments. Hodder et al. (2006) use experiments to investigate how different presentations in the statement of cash flows affect financial statement users' ability to predict future cash flows. Tarca et al. (2006) conduct experiments to investigate how different presentations of components of comprehensive income affect users' ability to understand the information presented.

(2006) show that the demands of these parties, including debt holders, do not affect the equilibrium level of conservatism in financial reports.

[12] See also Verrecchia (2001) for a review of the analytical modeling disclosure literature.

[13] Bernard and Schipper (1994) explain why it is difficult to address this question empirically. In sum, it is rare to identify a setting in which only recognition and disclosure vary, and not what is recognized or disclosed. However, there is some empirical evidence that when lease accounting changed to require capitalization, firms changed to using lease agreements that qualify as operating leases (Imhoff and Thomas, 1988). Based on an analytical model, Barth et al. (1999b) find that recognition versus disclosure can matter. The relevance of the item in question, its measurement reliability, and investors' private information acquisition incentives interact to affect how well share prices reflect information about firm value. An insight from this study is that recognizing an amount that is unreliably measured can increase informativeness of price in some situations.

4

Fair Value Accounting

This section offers five studies as examples of research addressing a specific global standard-setting issue – use of fair value. These examples illustrate how each study identifies motivating questions and develops research questions linked to them, adopts a research design appropriate for addressing the research questions, and interprets the findings in light of the questions and designs. The section focuses on research related to fair value because the FASB's and IASB's consideration of specifying fair value as the measurement attribute pervades the topics on their agendas. The use of fair value also is controversial, which heightens standard setters' interest in research on the topic and enhances the research's potential to contribute to standard-setting debates.

4.1 Pervasiveness of Fair Values

The use of fair value as the measurement attribute in accounting is increasing (see Barth, 2006 for a discussion). Many view this increase as an inevitable outcome of the increased complexity of business activities combined with the objective of financial reporting, which is to provide information to financial statement users to aid them in making

economic decisions. However, any increased use of fair values is highly controversial. In an attempt to clarify the meaning of fair value and, thereby, enhance the consistency of its application, the FASB issued a standard on fair value measurement, Statement of Financial Accounting Standards (SFAS) No. 157 (FASB, 2006). SFAS 157 includes the following definition of fair value.[1]

> Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

In almost every standard-setting project of the FASB and IASB, the boards consider fair value as a possible measurement attribute. These projects include, for example, business combinations, revenue recognition, insurance contracts, financial instruments, liabilities and equity, and the conceptual framework. Regarding business combinations, the acquisition method of accounting for business combinations requires measuring at fair value the assets acquired and liabilities assumed by the acquirer in the acquisition. Regarding revenue recognition, adopting an asset and liability approach to revenue recognition requires measuring an entity's remaining performance obligation; fair value is a candidate for the measurement attribute of that obligation. Regarding insurance contracts, the IASB has tentatively concluded that liabilities for insurance contracts should be measured at current exit value, which is similar to, if not the same as, fair value. Regarding financial instruments, both the IASB and the FASB have concluded that fair value is the most relevant measurement attribute for financial instruments and have embarked on a path to resolve the issues remaining before they require fair value measurement. Regarding liabilities and equity, distinguishing liabilities and equity could involve bifurcating hybrid financial instruments into their liability and equity components and

[1] The IASB's definition is similar. It is "the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction" (International Accounting Standard (IAS) 39 *Financial Instruments: Recognition and Measurement*, paragraph 9, IASB 2004b). The two boards are in the process of converging the two definitions.

fair value measurement is the likely attribute for measuring the bifurcated amounts. Finally, regarding the conceptual framework, the IASB and FASB will consider whether the framework should specify a single measurement attribute and, if so, whether that attribute should be fair value.

There is a large and growing academic literature addressing issues related to using fair value to measure accounting amounts. This literature provides a base on which to build future research. See Barth (2000), Barth et al. (2001), and Landsman (2005, 2007) for reviews of the fair value literature. These studies are motivated by standard-setting questions associated with using fair value as a measurement attribute. However, none of the motivating questions has been answered completely. Thus, they remain as possible motivating questions for future research.

4.2 Motivating Questions

The motivating questions relating to using fair value as a measurement attribute in financial reporting include the following:

(1) Are fair values helpful to financial statement users? The objective of financial reporting is to provide financial statement users with information to aid them in making economic decisions. Do fair values do this better than amounts based on other measurement attributes?
(2) Is fair value the appropriate measurement attribute for all assets and liabilities? If not, is it the appropriate measurement attribute for some? If so, which ones and why?[2]
(3) Would value-in-use or entry value be a more appropriate attribute than an exit value-based fair value? In the imperfect and incomplete world in which we live, these are not identical amounts (Barth and Landsman, 1995).
(4) Can we measure fair value reliably? Critics of using fair value in financial reports assert that fair values often are

[2] The staff of the Canadian Accounting Standards Board analyzes the characteristics of alternative measurement attributes and concludes that fair value should be the measurement attribute for initial recognition for all assets and liabilities (IASB, 2006a). However, their conclusion remains open to debate.

not reliably measurable and, thus, are not suitable for use in financial statements.

(5) How much reliability is enough? Is there some absolute scale? Or, is the appropriate benchmark the reliability of other presently recognized amounts?

(6) What are the different sources of unreliability? Can these be mitigated?

(7) Does recognition versus disclosure matter? That is, if fair value measures are too unreliable to recognize in financial statements, is disclosure a viable alternative?

(8) What are costs and benefits of relevance and reliability? Many believe relevance and reliability are not simultaneously achievable and, therefore, must be traded off. How should standard setters think about trading off relevance and reliability, if such a trade-off is necessary?[3]

(9) Many assert using fair value increases earnings volatility because fair value changes with changing economic conditions more so than does an historical cost-based amount. Are these concerns about earnings volatility legitimate?[4]

(10) Is the resulting volatility economic volatility, or accounting-induced volatility? Presumably, the former is appropriate to include in financial statements and the latter is not. Is this presumption valid?

(11) What information do investors need about fair value measures? Is the fair value measure itself sufficient? Or, do

[3] Taken together, the fair value literature provides rather substantial evidence that recognized and disclosed fair values of financial instruments and other types of assets are relevant to investors and reliable enough to be reflected in share prices. Studies showing this, in addition to those discussed below include, e.g., Landsman (1986), Barth (1991), Amir (1993), Barth (1994), Bernard et al. (1995), Petroni and Wahlen (1995), Beatty et al. (1996), Eccher et al. (1996), Nelson (1996), Venkatachalam (1996), Choi et al. (1997), Easton and Eddey (1997), Schrand (1997), Barth and Clinch (1998), and Wong (2000). The evidence indicates that the estimates are not totally unreliable, but generally does not attempt to determine whether the degree of reliability is comparable with other amounts included in financial statements.

[4] Barth et al. (1995) show that fair values increase earnings volatility, but the market acts as if this increased volatility does not reflect increased economic earnings volatility.

investors need information about other moments of the distribution of fair value estimates? If so, which ones and why?

(12) Do investors need information about the assumptions incorporated into fair value estimates? Under what circumstances do investors need this information and why do they need it?

(13) What are the implications of incorporating more expectations about the future in financial statements today? Fair values reflect estimates of the future. To the extent estimates of the future are reflected in today's asset and liability measures, those future effects are recognized in today's financial statements. This leaves the effects of fewer future conditions to be recognized in the future.

(14) Should the asset and liability definitions be changed to allow recognition of more expectations of the future in today's financial statements, e.g., relating to more intangible assets, or less?

(15) Are financial statements the best source of fair value estimates? Is determining fair value the comparative advantage of accountants? If investors need this information, should they obtain it from other sources?

(16) How will greater use of fair value in financial statements affect investor or management behavior?[5] Are these effects simply a natural consequence of providing neutral and transparent information, or do they reflect a lack of neutrality in fair value? If the latter, what is the cause of the lack of neutrality?

(17) Many assert that using fair value increases the ability for managers to exercise discretion in accounting amounts. Is there more room for discretion in determining fair value than there is in determining other financial statement amounts? If so, which ones? Is there too much room for management discretion when determining fair value?[6]

[5] The research related to this motivating question is limited. See, e.g., Beatty (1995, 2005, 2007), Hodder et al. (2002), and Bens and Monahan (2005).

[6] Research consistently shows that although the estimates reflect discretion, and are somewhat less relevant and reliable as a result, discretion does not completely eliminate the

(18) What are effects of any increased management discretion in determining fair values?
(19) What are the valuation and other implications of measuring different financial statement amounts using different measurement attributes, e.g., using impaired historical cost for some assets and liabilities and using fair value for others? Do these implications relate to the ability to determine financial position and performance in one period, or to comparing changes in financial position and performance over time?
(20) How costly would it be to require two sets of financial statements – one based on fair value and one based on historical cost? Relevant costs include those associated with continued development and maintenance of historical cost-based financial reporting standards as well as those associated with preparing and analyzing the two sets of financial statements.[7]

Even though some research addresses some of these motivating questions, the questions remain open and, thus, are fruitful avenues for future research. The debate about using fair value likely will continue for many years and have a profound impact on financial reporting.

4.3 Examples of Research on Fair Value

This section describes five studies as examples of research studies that address motivating questions relating to fair value. The examples illustrate how questions motivated by standard-setting issues translate into research questions that provide insights into the motivating question and contribute to the academic literature. Developing research questions from motivating questions is perhaps the most difficult task in

estimates' relevance and reliability. See, for example, Brown et al. (1992), Whittred and Chan (1992), Cotter (1999), Muller (1999), Lin and Peasnell (2000), and Beaver and Venkatachalam (2003).

[7] In the measurement phase of the current joint FASB and IASB conceptual framework project, the staff has identified 12 measurement bases currently used in financial statements. Most of these are based on historical cost. However, only cash in the domestic currency and held-to-maturity investments are recognized at historical cost. Most other measurements based on historical cost include allocation, amortization, and impairment, which are based on current values.

conducting research relevant to standard-setting issues. Each of these studies relates to a different motivating question and, thus, addresses a different research question and uses a different research design. Therefore, the examples also illustrate how different research designs can yield standard-setting insights.

4.3.1 Example 1: SFAS 107 fair value disclosures

The first example is Barth et al. (BBL, 1996), which studies the value relevance of disclosures of financial instrument fair values in accordance with SFAS 107, *Disclosures about Fair Values of Financial Instruments* (FASB, 1991). SFAS 107 was one of the first to focus on fair value measures of financial instruments. Many were skeptical that fair values would be useful to investors, in large part because of the concern that the disclosed fair values would be based on potentially unreliable estimates. Financial institutions were particularly affected by this new disclosure requirement because most of their assets and liabilities are financial instruments. For banks, the concern about estimation reliability was particularly acute for fair value of loan assets. These assets are large for banks and there are no ready markets on which to base estimates of fair value.

The motivating questions for BBL derive from these concerns. The first is: Are SFAS 107 disclosures useful to financial statement users incremental to items already in financial statements? The question asks whether the SFAS 107 disclosures are useful because SFAC 1 (FASB, 1978) states that the objective of financial reporting is to provide information useful to financial statement users in making economic decisions. The question asks whether the disclosures are useful incremental to items already in financial statements because if there is no incremental usefulness, there is no reason to add these disclosure requirements to the set of extant requirements. The second motivating question is: Are fair values, especially loans, too noisy to disclose? The question asks about noise in the estimates because of the concerns about estimate reliability. It focuses particularly on loan assets because BBL addresses these questions using a sample of banks, and banks expressed particular concern regarding the estimability of loan fair values.

As explained above, designing research that directly and completely answers these motivating questions is likely impossible. However, it is possible to develop a research question and related design that provides insights into particular dimensions of the questions. The research question that BBL addresses is: Do SFAS 107 fair values provide significant explanatory power for bank share prices beyond book values? This research question links to the motivating questions because finding that the disclosed fair values have a significant relation to share prices, incremental to book values, indicates that the fair value disclosures are relevant to investors and sufficiently reliably measured to be reflected in their investment decisions. This research question operationalizes the notion of usefulness to investors by determining whether there is an association between the disclosures and share prices, which are the result of investors' buy, hold, and sell decisions. It operationalizes the notion of incremental to items already in financial statements by determining whether fair values explain share prices incremental to book values. It operationalizes the notion of noise in fair value estimates by determining whether the relation to share prices is statistically significant.

Note that answering this research question does not completely answer the motivating questions. First, the disclosures might not be useful to investors because the information they reflect could be redundant to information otherwise available to investors.[8] Second, the disclosures could be redundant to financial statement information other than book values and, thus, not provide incremental information. Third, the research question leads to a design that is unable to determine the level of reliability of the disclosed amounts.

The research design in BBL follows from the research question. In particular, BBL tests for significant incremental explanatory power in a regression of the difference between market value of equity and book value of equity on the differences between the fair values of financial

[8] For an item to be relevant, the FASB's conceptual framework only requires that an item is capable of making a difference to a user's decision, not that it makes a difference (SFAC 2: FASB, 1980). Thus, the FASB considers an item relevant, and thus useful, to investors even if it is redundant to information the investors obtain from sources other than financial statements.

instruments disclosed in accordance with SFAS 107 (SFAS 107 fair values) and their corresponding book values. SFAS 107 applies to most assets and liabilities of banks because most of their assets and liabilities are financial. Thus, to ensure high power tests, BBL use a sample of banks. Tailoring the design to banks, BBL investigate five categories of assets and liabilities – securities, loan assets, customer deposit liabilities, long-term debt, and items not recognized in the statement of financial position, which are commonly referred to as "off-balance sheet items."

In this type of research design, the selection of conditioning variables is crucial in determining the inferences one can draw. BBL include two sets of conditioning variables. The first set includes items that are specifically excluded from the scope of SFAS 107, either because they represent non-financial assets or liabilities or because the accounting for them is covered by another standard. These include the core deposit intangible asset, net pension liabilities, and non-financial assets and liabilities. Omitting the items in this set could result in a correlated omitted variables problem, which results in incorrect inferences if the omitted variables are correlated with the differences between fair values and book values of the SFAS 107 assets and liabilities.

The second set of conditioning variables includes items that are competitors to fair value. These include the amount of non-performing loans, and interest sensitive assets and liabilities. Estimating the relation with and without these competitor variables provides additional insights into whether the differences between the disclosed fair values and book values are reliable in that they are representationally faithful, i.e., they represent what they purport to represent. Representational faithfulness is a key element of reliability. If the disclosed fair values are reliable measures of fair value, one would expect these competitor variables and the fair values to reflect common information. The competitor variables are the book values of non-performing loans and interest sensitive assets and liabilities. Thus, including this second set of variables also relaxes the restriction that the coefficient on book value of equity equals one, which is implicit in constructing the dependent variable as market value of equity minus book value of equity.

BBL find that differences between SFAS 107 fair values and book values are significant in explaining the difference between market and book values of equity. This finding applies to securities, deposit liabilities, long-term debt, and, importantly, loan assets. It does not apply to off-balance sheet items.[9] Consistent with the competitor conditioning variables and the disclosed fair values reflecting common information, BBL also find that including the set of competitor conditioning variables reduces the incremental explanatory power of the fair values. However, including the competitor variables does not eliminate the significance of the fair values' incremental explanatory power. This finding indicates that fair values reflect information in share prices over and above that reflected in the competitor variables. Taken together, with the exception of off-balance sheet items, these findings suggest that fair values disclosed in accordance with SFAS 107 are relevant and reliable as reflected in share prices.

BBL provide other evidence related to the motivating questions, although less direct. In particular, BBL provide evidence that: (1) The core deposit intangible is priced as an asset in that proxies for it are significantly and positively related to share prices. (2) Management exercises discretion in estimating fair values in that the pricing multiples on loan fair values are predictably lower for banks with lower regulatory capital. However, management discretion in estimating loan fair values does not completely eliminate their value relevance. (3) Disclosures relating to fair values may provide information to investors. (4) Disaggregation of accounting amounts can be important to investors.

4.3.2 Example 2: Components of corporate debt

The second example is Barth et al. (BLR, 1998c), which addresses issues related to accounting for hybrid financial instruments, specifically convertible debt. Hybrid instruments are financial instruments that have features that reflect some combination of assets, liabilities, and

[9] One reason for this is that in many firms' disclosures it is not possible to determine whether the disclosed amount is an asset or liability. In part because of this, SFAS 119 (FASB, 1994) requires firms to state clearly the sign of the disclosed amounts relating to off-balance sheet items.

equity. At present, US accounting standards typically classify hybrid instruments as assets, liabilities, or equity depending on their dominant characteristic or form of the contract. The standard-setting question is whether these instruments should be disaggregated into their asset, liability, and equity components. The FASB refers to this as a fundamental components approach. Thus, the motivating questions in BLR are: Should financial statements reflect components of hybrid instruments? Can we estimate the components reliably? Would amounts recognized using a components approach be enough different from currently recognized amounts to warrant the time and effort involved in separating them?

The research questions BLR develop to provide insights into the motivating questions are: (1) Are option pricing-based estimates of corporate bond components relevant? (2) Are the estimates reliable? (3) How large are the financial statement effects? As with BBL, these research questions do not directly answer the motivating questions. However, answers to these research questions provide insights relevant to standard setters as they attempt to answer the motivating questions. Regarding the first question, if the components are not relevant there is little need to develop a standard to recognize the components separately. Regarding the second question, if the estimates of component values are not reliable perhaps they should not be recognized separately. Regarding the third question, if the financial statement effects are not large, separately recognizing the components is unlikely to be relevant.

These research questions lead to a series of research design issues. First, a financial instrument with multiple components must be selected for study; BLR use corporate debt with multiple features. Finance theory (e.g., Black and Scholes, 1973) makes clear that there are two fundamental components for financial instruments – riskless debt and equity. BLR focus instead on components related to institutional features of corporate debt because of the paper's goal to address a standard-setting issue. Standard setters are not considering expressing all financial instruments as their riskless debt and equity components, but they are considering whether to account separately for institutional features of hybrid instruments.

The first institutional feature of corporate debt is straight debt, which requires the firm to pay the bondholder specified amounts at specified times. The second is a conversion feature, which gives the bondholder the right to convert the debt to common stock in specified circumstances for a specified price or conversion rate. The third is a call feature, which gives the firm the right to call the debt in specified circumstances for a specified price. The fourth is a put feature, which gives the bondholder the right to put the debt to the firm in specified circumstances for a specified price. The final component is a sinking fund feature, which requires the firm to set aside funds or to repurchase some of the debt in specified circumstances. Using the definitions in the conceptual framework, the straight debt, put, and sinking fund features have characteristics of liabilities, the call feature has characteristics of assets, and the conversion feature has characteristics of equity. Thus, the question is whether to recognize these components according to their respective characteristics, or according to the characteristics of the combined instrument, taken as a whole.[10]

Second, the values of these components need to be estimated. BLR implement a binomial option pricing model, based on those used in prior research but modified to apply to debt with all of the features listed above and for firms with multiple debt issues. See Barth et al. (2000) for details on the option pricing model implementation. BLR's sample comprises all firms with available data that have debt with at least one feature in addition to straight debt. Using such a broad sample enhances the generalizability of the results and also helps ensure that the analysis includes as many as possible of the different types of debt that firms issue.

Implementing this model provides not only estimates of total bond value and component values, but also insights into how the component values interrelate. For example, it is well-understood that a conversion feature increases the value of the debt from the bondholder's perspective, and the presence of a call feature decreases the value of the debt.

[10] From the perspective of financial reporting, the classification in question is among assets, liabilities, and equity. However, from the perspective of the FASB's currently active liabilities and equity project, the classification in question is between liabilities and equity, with asset components netted against liability components.

However, these two features interact when present in the same debt instrument. This is because the presence of the call feature decreases the value of the conversion feature – the call feature gives the firm the right to call the debt when the bondholder otherwise would prefer to hold the debt – and the presence of the conversion feature increases the value of the call feature – the conversion feature gives the bondholder the right to convert the debt to equity when the firm otherwise would prefer the bondholder to hold the debt. Figure 4.1 illustrates this value interrelationship, which becomes important when the objective is to classify and account separately for the components. Allocating the joint value, which is $8.76 in Figure 4.1, to one or the other components is arbitrary, just as it is arbitrary to allocate joint correlation to one or another of two correlated variables.

The next research design issue is how to operationalize relevance and reliability in the context of the research question, and considering available metrics. Recall that relevance means that the information is capable of making a difference to the economic decisions of financial statement users. Thus, to address the relevance of separately accounting for the components of corporate debt, BLR provide evidence on (1) the magnitude of the component values, (2) the extent to which key financial statement amounts are affected by recognizing the components separately, and (3) the magnitude of the effect of component interdependence on individual component values. Recall that

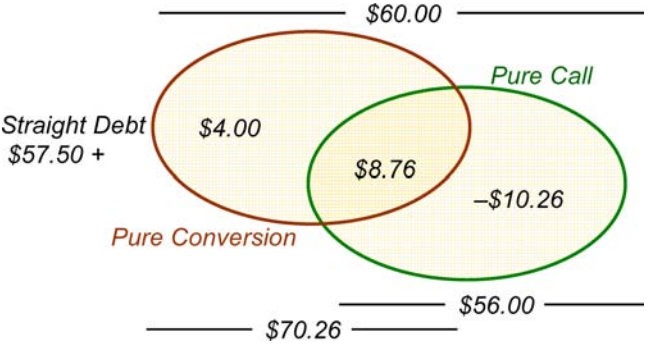

Fig. 4.1 Example of values of debt components for callable, convertible debt. Source: Barth et al. (2000)

reliability encompasses representational faithfulness, i.e., the extent to which the amount represents what it purports to represent, and verifiability, i.e., the extent to which different measurers would arrive at the same amount. Thus, to address reliability, BLR (1) compare observed total bond market values to the estimates obtained from the model, (2) compare the equity volatility estimated by the model to historical market equity volatility, and (3) provide evidence on the sensitivity of the total bond value and component value estimates to an alternative estimation procedure.

Regarding relevance, BLR find that component values are large portions of total bond value and that financial statement amounts and ratios differ substantially depending on how the components are classified. These amounts and ratios differ substantially when changing both from historical cost to fair value when classifying total bond value as debt, and from fair value for total bond value to accounting for and separately classifying bond components. BLR also find that component values differ substantially depending on estimation order, which indicates that the effect of component value interdependence described in Figure 4.1 is large. Taken together, these findings suggest that debt component values are relevant. Because the assignment of the joint value to any particular component is ad hoc, these findings suggest that disclosure of the joint value amount might be useful to financial statement users.[11]

Regarding reliability, BLR find that total bond market and estimated values do not differ significantly, although this could be attributable to the fact that total bond market value is one input into the option pricing model. However, BLR find that market and estimated equity volatilities differ significantly. Also, as noted above, BLR find that component values are quite sensitive to estimation order. Taken together, these findings suggest that total bond and component values may lack reliability. Although whether the lack of reliability is

[11] IAS 32 (IASB, 2004a) requires firms to classify as equity the conversion feature of convertible debt. IAS 32 specifies that the amount classified as equity is determined by measuring the conversion feature last, consistent with equity being measured as a residual. Thus, under IAS 32, any joint value is assigned to the liability component.

enough to cause standard setters concern is beyond the scope of the research.

4.3.3 Example 3: Asset revaluations

Turning to tangible assets, Aboody et al. (ABK99, 1999) investigate the characteristics of revaluations of fixed assets recognized in accordance with U.K. accounting standards. Asset revaluations result in fixed assets being recognized in financial statements at amounts that exceed depreciated historical cost. US standards do not permit such asset revaluations. The motivating questions ABK99 investigate are: (1) Are asset revaluation amounts reliable estimates of changes in asset fair values? (2) Do managers exercise their discretion so as to render the fair value estimates unreliable? These questions motivate the study because reliability of fair value estimates is a recurring concern. Some believe that the concern is greater for non-financial assets, such as fixed assets, than it is for financial assets largely because often non-financial assets are unique and, thus, there are no active markets in which they trade. The lack of market values increases the risk not only of unintentional estimation error, but also of the exercise of opportunistic managerial discretion in determining the amounts.

These motivating questions lead to the following research question: Do asset revaluations explain changes in future operating performance? Fixed assets have value to a firm because they contribute to the generation of operating cash flows. Thus, if asset revaluation amounts are reliable estimates of changes in the fair value of the asset, then one should observe a significant positive relation between asset revaluation amounts and future operating performance. Because the revaluation amounts reflect effects of management discretion, finding a significant positive relation between revaluation amounts and changes in future operating performance also provides insight into the second motivating question. To provide more direct evidence on the second motivating question, ABK99 test whether the relation between asset revaluations and future performance is weaker for firms with incentives to exercise discretion.

To address the research question, ABK99 use a sample of U.K. firms with upward asset revaluations between 1983 and 1995. ABK99 test whether revaluation increments are significant in explaining changes in realized future performance incremental to past changes in performance, the market-to-book ratio, and total assets. The study uses two performance measures, operating cash flows and operating income, both realized one, two, and three years subsequent to the revaluation year. ABK99 also test whether asset revaluation balances (increments) are significantly incrementally associated with share prices (returns) to provide comparison with prior research. The returns tests also provide evidence on the timeliness of asset revaluations; under U.K. accounting standards, the timing of asset revaluations was discretionary. To provide additional evidence on the effects of managerial discretion, ABK99 also permit the relations to vary with the debt-to-equity ratio, assuming debt covenants provide incentives for firms to manage recognized asset amounts.

ABK99 find consistent evidence that asset revaluations are significantly associated with changes in future operating performance, using both performance measures one, two, and three years ahead. These findings suggest that asset revaluations are reliable estimates of fixed-asset fair values, as reflected in changes in future performance. ABK99 also find that revaluation balances are significantly associated with share prices, and revaluation increments are significantly associated with returns. These findings suggest that changes in estimated fixed-asset values are relevant to investors and reflect timely changes in asset values. Finally, ABK99 find that the relation between asset revaluations and future performance is less positive for higher debt-to-equity firms. These findings are consistent with management exercising discretion in determining revaluation amounts, but the effects of discretion not being large enough to eliminate the amounts' combined relevance and reliability.

4.3.4 Example 4: Stock-based compensation

Accounting for stock-based compensation is one of the most controversial topics that the FASB and IASB have tackled in recent history.

The controversy touches on many aspects of the accounting, which the Basis for Conclusions to International Financial Reporting Standard (IFRS) No. 2 (IASB, 2004c) discusses. One aspect that troubled not only the opponents to expensing stock-based compensation but also the FASB and the IASB, is whether the amount of compensation could be estimated reliably. As is typical in accounting, firms were to measure the value of the services received from their employees in exchange for stock-based compensation at the value of the instruments given to the employees in exchange for those services. Employee stock options present estimation challenges because the typical terms and conditions of employee stock options are not captured in extant valuation methods.[12] Also, there are no external benchmarks against which to assess the reliability of the estimates. Moreover, unlike other accounting estimates, because stock options are equity instruments, the estimates are not updated between grant date and settlement date. Thus, the first motivating question for Aboody et al. (ABK06, 2006) is: Does stock-based compensation expense reliably measure employee services? As with other studies addressing estimate reliability, the second motivating question is: Does management discretion render fair value estimates unreliable?

These motivating questions lead to the following research question: Do firms understate SFAS 123 expense by understating option value estimates? To address this question, ABK06 test whether management incentives and opportunity for discretion predictably explain the difference between disclosed option value and researcher-estimated option value. The notion behind this research design is that researcher-estimated option values do not include the effects of management discretion. Thus, finding that incentives and opportunity for discretion explain differences between disclosed option values, which are estimated

[12] The option value that SFAS 123(Revised) (FASB, 2004) requires is not fair value. It is a modified grant date value because it does not include the valuation effects of non market conditions, including vesting conditions based on service. For pragmatic reasons, SFAS 123(Revised) requires the effects of such conditions to be captured by the number of options, rather than to be included in the option value itself. However, option values have many characteristics in common with fair value. See Landsman et al. (2006a) for a comparison of four approaches to accounting for stock-based compensation.

by management, and researcher-estimated option values, which are not, is evidence of management discretion in the disclosed amounts.

Implementing this research design requires estimating option values. ABK06 follow the guidelines in SFAS 123 and estimate option values using as inputs, expected option life and historical volatility, historical dividend yield, and the risk-free interest rate all over the term of expected option life. These are the four key option pricing model inputs. Expected option life is the most challenging to estimate, given available information. Thus, to estimate expected option life, ABK06 implement an instrumental variables approach. In particular, the researcher-estimated expected option life is the predicted value from a regression of disclosed expected option life on (i) option vesting period, (ii) number of options cancelled during the year deflated by the sum of options outstanding at the end of the year and options cancelled during the year, (iii) number of options exercised during the year deflated by the sum of options outstanding at the end of the year and options exercised during the year, and (iv) percent of options granted to the top five executives, and on industry and indicator variables. Each of these variables should explain expected option life in the absence of managerial discretion. ABK06 consider the joint effect of discretion in all four inputs, as well as in each input separately.

Implementing the research design also requires proxies for incentives and opportunity for firms to manage disclosed option values and, thus, stock-based compensation expense. ABK06 identify two incentives and one opportunity. The first incentive is perceived firm profitability. SFAS 123 expense is not recognized – it is only disclosed. However, prior research (e.g., Aboody, 1996, Aboody et al., 2004) finds evidence consistent with financial statement users viewing SFAS 123 expense as an expense of the firm. Because SFAS 123 expense depends on estimated option values, which are the object of study, ABK06 use the number of options granted as a proxy for magnitude of SFAS 123 expense. The second incentive is perceived excessiveness of executive pay. This incentive is based on extant literature that finds that although managers make financial reporting and disclosure decisions that increase their compensation (e.g. Healy, 1985, Aboody and Kasznik, 2000), they also attempt to minimize investors' perception of its magnitude. ABK06's

proxy for perceived excessiveness of executive pay is the residual from an estimated model of Chief Executive Officer pay based on the executive compensation literature (e.g., Smith and Watts, 1992, Cyert et al., 1997, Yermack, 1998, Baker, 1999, Core et al., 1999). The opportunity to manage option values and, thus, stock-based compensation expense, stems from weak corporate governance. ABK06's proxy for governance is based on a measure compiled by the Investor Responsibility Research Center derived from 23 corporate governance provisions that measure shareholders' rights.

ABK06 find that firms understate option value estimates and, thus, stock-based compensation expense disclosed in accordance with SFAS 123. As predicted, the understatement is increasing in proxies for the magnitude of the expense, is greater for firms with weaker corporate governance, and, to a lesser extent, is increasing in the excessiveness of executive pay. The findings are strongest for the expected option life and expected stock price volatility input assumptions, consistent with firms' greater latitude in determining these inputs. ABK06 find weaker evidence of understatement associated with the expected dividend yield assumption, and none for the interest rate assumption, consistent with these inputs being less amenable to discretion. Taken together, the findings raise some concern that the exercise of management discretion adversely affects the overall reliability of SFAS 123 expense.[13]

4.3.5 Example 5: Fair values for liabilities

Fair value measurement of liabilities, particularly long-term debt, is a controversy currently facing standard setters. Although many believe that measuring liabilities at fair value is consistent with measuring assets at fair value, others are concerned about the prospect of recognizing changes in debt value. The particular concern relates to recognizing changes in debt value associated with changes in the firm's own credit risk. Although the fair value of any particular liability would reflect

[13] Aboody et al. (2004) show that this lack of reliability is insufficient to render the amounts valuation irrelevant. In particular, SFAS 123 expense is significantly negatively related to share prices and returns, consistent with the amount being reliable enough to be reflected in investors' valuation assessments.

only the credit risk for that liability – for example, secured debt has less credit risk than unsecured debt – changes in the firm's credit risk affects, at least to some extent, the credit risk of almost all its liabilities. The root of the concern is the anomalous outcome that troubled firms could report positive net income during periods in which they experience increases in credit risk and decreases in equity value. This situation could occur if decreases in asset values are not recognized concurrently with decreases in debt values – for example, if the asset value decrease is associated with an unrecognized intangible asset.

This concern leads Barth et al. (BHS, 2006a) to address two motivating questions. The first is whether changes in a liability's credit risk noticeably affect equity value for most firms. Changes in credit risk reflect both changes in asset value and changes in unsystematic asset risk. This motivating question arises because some are unconvinced that changes in the fair value of liabilities arising from changes in credit risk result in income or expense. The Merton (1974) model demonstrates that they do because changes in credit risk result in changes in debt values that affect equity values even for firms not in default on their debt. However, the Merton (1974) model also demonstrates that the effect is smaller the further the firm is from default, which raises the possibility that the effect could be negligible for most firms, and there is little empirical evidence. The second motivating question is whether net income would be misleading if changes in debt value associated with changes in credit risk were recognized, in that firms could report positive (negative) net income for periods in which their financial condition deteriorates (improves). This question is the heart of the financial reporting concern about considering own credit risk in the fair value of liabilities.

These motivating questions lead to two research questions. The first question is whether the effect on equity returns of credit risk changes differs depending on the amount of debt in the firm's capital structure. In particular, is the equity value effect of changes in credit risk mitigated by debt? The second is whether and by how much would net income differ from that currently reported if fair values of debt were recognized?

To address the first research question, BHS focus on estimating the relation between annual equity returns and change in credit risk interacted with leverage, after controlling for change in credit risk, leverage, earnings, and change in earnings, and permitting the relations between equity returns and earnings to differ for loss firms. Following Barth et al. (1998a), Larcker et al. (2005), and Ashbaugh et al. (2006), BHS's proxy for credit risk is the sum of financial statement ratios and other accounting variables times their predicted coefficients from a regression of credit ratings on the variables for a sample of firms with credit ratings. The proxy for change in credit risk is the annual change in this proxy for credit risk. Prior research establishes that the first order effect on equity value of a decrease in credit risk is positive. Thus, because lower credit risk is associated with higher values of the credit risk variable, the coefficient on change in credit risk should be positive. BHS's key test of Merton's (1974) prediction is that the second order effect is negative – that is, the effect on equity value of a decrease in credit risk is less positive when the firm has more debt. Thus, the coefficient on the change in credit risk interacted with debt should be negative. It is this second order effect that causes the concern about anomalous income effects from recognizing changes in debt values associated with changes in credit risk.

As predicted, BHS find that equity returns are less negative (positive) when credit risk increases (decreases) for firms with more debt. This finding holds for almost all credit risk levels and is robust to several additional specifications. These findings indicate that the effect of credit risk changes is mitigated by debt. That is, as predicted by Merton (1974), because of the presence of debt, equityholders gain (lose) when credit risk increases (decreases). Thus, recognizing income when credit risk increases is not anomalous – equityholders have experienced a gain.

To address the second research question – how would income differ from that currently reported if fair values of debt were recognized – BHS invert the Merton (1974) model to obtain estimates of asset and liability values. This permits BHS to restate income to reflect changes in liability values. Internal validity checks indicate that the estimates

are sensible, and support the conjecture that decreases in asset values arise primarily from unrecognized intangible assets.

Restating firms' net income to reflect all changes in asset and liability fair values reveals, unsurprisingly, that firms with credit risk increases would have lower income than that currently reported and firms with credit risk decreases would have higher income than that currently reported. Restating firms' net income to reflect only changes in debt values reveals, also unsurprisingly, that firms with credit risk increases would have higher income and firms with credit risk decreases would have lower income, both relative to income currently reported. Relating directly to the concern about firms with credit risk increases recognizing positive income, the findings reveal that recognizing debt value changes would result in approximately 10% more firms with credit risk increases reporting positive rather than negative income. However, attempts to compare recognized asset write-downs and debt value decreases in years in which the firm's credit risk increases reveal that for most firms the net effect of decreases in recognized asset value and increases in debt value is negative. These findings call into question concerns about anomalous income effects. Although the concerns are not unwarranted, recognizing debt value decreases while writing down recognized assets would rarely result in an increase in income instead of a decrease.

5

Opportunities for Future Research on Standard-Setting Issues

The agendas of the FASB and IASB include a long list of vexing financial reporting issues. For each agenda item, the discussion below identifies motivating questions. It is the task of future researchers to craft research questions that provide insights into these motivating questions. In addition to fair values, the active agendas include consolidations (including special purpose entities), revenue, liabilities and equity, leases, insurance contracts, financial statement presentation, conceptual framework, and small and medium-sized entities. This section identifies some of the motivating questions for each of these topics.

5.1 Consolidations

Regarding consolidations, including special purpose entities, the motivating questions include:

(1) Should consolidation be based on control or on some other criteria? If it should be based on some other criteria, what are they? For example, is exposure to risks and rewards itself an appropriate criterion, or it is an indicator of control?

(2) What are features of control? Presently, entities controlled by the reporting entity are included in consolidated financial statements. Should control refer to control over an entity's equity? Or, should it refer to control over the entity's operating and financing decisions? Or, should it refer to control over the entity's assets and liabilities? Are these different? In all circumstances? If not, why? If so, how?
(3) What are features of equity? This question is relevant in consolidations if control over equity is relevant in determining which entities to include in a consolidated group. It also is relevant in determining whether a non-controlling interest in a controlled entity is equity of the consolidated group.
(4) How should different risks be aggregated and measured? Which risks? These questions are potentially relevant for determining whether an entity controls a so-called special purpose entity that has no equity.[1]

5.2 Revenue

Motivating questions relating to revenue include:

(1) What is revenue? Are all credits to income revenue, or only a subset of them? If only a subset, how should the subset be defined and why is it important to distinguish this subset from other credits?
(2) Is extinguishment of performance obligations the best way to determine whether revenue has been earned? Is it a better way than identifying the culmination of an earnings process? At what point are performance obligations extinguished, continuously, based on critical events, or based on some combination of time and critical events?
(3) What is the best measurement attribute for recognizing performance obligations, fair value or customer consideration?

[1] These issues are also relevant to accounting for asset securitizations. See Landsman et al. (2006b).

(4) If fair value is the appropriate measurement attribute, can we measure reliably components of multiple elements arrangements? That is, when a customer purchases a bundle of goods and services, e.g., a computer with software, a warranty, and a commitment for software upgrades for a specified period of time, can we reliably measure each component of the bundle so that we can recognize each element of revenue when it is earned?
(5) What does reliable measurement mean in this context? Should there be a reliability threshold for revenue that is different from the threshold for other accounting measurements?
(6) How do we incorporate into performance obligations an appropriate risk margin? Is such a margin reliably measurable?
(7) What should be the criteria for recognizing revenue gross rather than net? Should this determination be based on a notion of operating activities versus other activities? If so, how should we identify operating activities?

5.3 Liabilities and Equity

Motivating questions relating to liabilities and equity include:

(1) How should we define liabilities and equity? What are the characteristics of equity that distinguish it from liabilities?
(2) Should equity be defined as the residual of assets minus liabilities or should it be defined separately? If it should be defined separately, what should that definition be?
(3) If equity is defined separately, should liabilities be the residual category or should they also be defined separately?
(4) If equity and liabilities should be defined separately, how should the definitions ensure that all instruments are included in one or other definition?
(5) Is this necessary? That is, should there be more than three financial statement elements – assets, liabilities, and equity –

in the statement of financial position? If so, what should the additional elements be? Why?

(6) Should we separately account for liability and equity components of hybrid instruments? If so, can we reliably measure the components?

(7) What are the implications of the interrelations between and among components for initial and subsequent measurement of the components?

(8) Should we retain a sharp distinction between debt and equity? If so, what is the distinction?

(9) Should we define equity narrowly as being only existing common shareholders? If so, what are the implications for the income statement and net income? The present financial statement elements definitions result in net income being the net of changes in assets and liabilities other than changes from transactions with equityholders in their capacity as equityholders. Thus, a narrower definition of equity, or a broader definition of liabilities, would result in changes in more items being recognized in income.

5.4 Leases

Motivating questions relating to leases include the following:

(1) Should lease accounting attempt to determine whether the lease is, effectively, a purchase of the underlying asset with financing? Or, should it attempt to recognize all of the contractual rights and obligations embodied in the lease? Which approach provides more useful information?

(2) If a contractual rights and obligations approach is adopted, is there a set of circumstances in which all those rights and obligations should be considered together rather than separately? If so, what are those circumstances?

(3) Should equal and offsetting rights and obligations from executory contracts be recognized?

(4) Should assets and liabilities associated with a single lease contract be presented gross or net in the statements of financial position and income? Why?
(5) Should lease assets and liabilities be measured at fair value? If not, what measurement attribute should be used and why?
(6) Are there provisions in lease contracts that effectively give the lessor an equity interest in the lessee? An example might be leases of retail space under which the lease payment is based on the profits of the retail store. If so, which lease terms convey equity interests?
(7) How should lessors recognize revenue from lease contracts?

5.5 Insurance Contracts

Motivating questions relating to insurance contracts include several that are now familiar.

(1) Should insurance liabilities be measured at fair value? At initial recognition? Subsequently? What, if any, conditional payments by the policyholder should be included in the determination of fair value?
(2) How should insurers recognize revenue from insurance contracts?
(3) Are there provisions in insurance contracts that effectively give the insured an equity interest in some or all of the insurer? An example might be an insurance contract under which the insured participates in the profitability of a particular block of business or the insurer as a whole.

5.6 Financial Statement Presentation

Motivating questions relating to financial statement presentation include:

(1) What is the purpose of the income statement? How does an income statement in a fair value world differ from an income

statement in an historical cost world? Which provides more useful information?

(2) How does the information the income statement provides complement information in the statements of financial position and cash flows?
(3) What criteria should we use to disaggregate items in each of the financial statements?
(4) Would it be helpful to financial statement users to distinguish an entity's operating, financing, and investing activities? If so, should this be done in all financial statements? How should we define each category?
(5) Should we require a single statement of comprehensive income? Does it matter whether we present all items of income and expense in a single statement?
(6) Is there a component of comprehensive income that should be identified as net income? If so, how should it be defined? Presently, some items of income and expense are recognized in other comprehensive income – outside of net income – but there is no consistent basis for determining which items should receive that treatment.
(7) If some items of income and expense are recognized outside of net income, should they be recycled into net income at some point in the future? If so, why and when?

5.7 Conceptual Framework

Motivating questions relating to the conceptual framework are broad and lie at the heart of financial reporting. They include:

(1) What should be the objective of financial reporting?
(2) Is there only one objective – to provide decision-useful information to financial statement users, primarily external providers of capital? Or, are there other objectives? If there are others, what are they and how would they result in different standard-setting decisions?
(3) What are the desirable qualitative characteristics of accounting information? Should relevance and reliability, or faithful

representation, be the two primary characteristics? If not, which other characteristics are as important and why?

(4) Do relevance and reliability conflict? If so, in what circumstances and how should the conflict be resolved?

(5) How should we define assets and liabilities? Are all expected future cash flows eligible for inclusion in financial statements? If not, where should we draw the line? Presently, the line is drawn based on a determination of whether the expected cash flows result from a past transaction or event. Is this appropriate? If not, why?

(6) Should financial statements incorporate the effects of uncertainty inherent in business activity? Should they incorporate the effects of uncertainty inherent in accounting measurements? If so, how should they do this? Should there be an additional financial statement, or is information about uncertainty better presented in the notes?

(7) Should all assets and liabilities be recognized, or should there be additional criteria imposed? If all assets and liabilities should not be recognized, what should be the criteria for recognition beyond meeting the asset and liability definitions?

(8) What should be the criteria for derecognition of assets and liabilities? Should the criteria mirror those for recognition? Or, should derecognition criteria be different? That is, in financial reporting does the sequence in which a particular financial position was arrived at, i.e., its history, matter? If so, in what circumstances and why?

(9) Should the framework identify a single measurement attribute for all assets and liabilities? In all circumstances? If so, which attribute should it be? If not, which measurement attributes should be candidates for use in financial statements? What should be the criteria for determining when each is used and why?

(10) What should be the unit of account for assets and liabilities? For example, should it matter whether an entity has a single asset or liability of a particular type or a portfolio of

them? If it should matter, how and why? Should the unit of account ever include both assets and liabilities? If so, when and why?

(11) What should be the boundaries of the reporting entity?

(12) Is control the appropriate criterion for determining what assets and liabilities to include in an entity's financial statements? What about entities under common control? Are they entities? If so, what should the boundaries be?

(13) If the entities are commonly controlled by a natural person, should all of the person's assets and liabilities be included or only business assets and liabilities? If only business assets and liabilities, how should business be defined?

(14) What is the role of disclosures in the notes to financial statements? What information besides recognized amounts do users need to understand and to complement recognized amounts?

(15) Does recognition versus disclosure matter? If so, in what circumstances, and why? A naïve interpretation of efficient markets theory suggests it does not matter. Yet, firms are often willing to disclose items they are not willing to recognize. Stock-based compensation expense is a prominent example. Why?

(16) Do recognized and disclosed amounts differ in reliability? If so, why? Is it because standard setters choose to disclose less reliably measured items? How do auditing, contracting, shareholder litigation, and investor fixation on recognized net income affect the characteristics of disclosed versus recognized amounts?

(17) Does a change from disclosure to recognition affect the structure of transactions?

(18) Does recognition versus disclosure affect investors' private information acquisition and, thus, informativeness of price?

(19) Are some disclosures harmful? If so, which ones and why?

(20) What is line between financial statement disclosure and other disclosures? That is, what should be the boundaries of financial reporting?

5.8 Small and Medium-Sized Entities

Regarding small and medium-sized entities (SME), the motivating questions include the following:

(1) Should financial reporting for SMEs be based on the same conceptual framework as that on which financial reporting for other entities is based? If not, why and how should the conceptual frameworks differ?
(2) What are the needs of users of SME financial statements? Do they differ from those of users of other entities' financial statements?
(3) If the needs differ, how do they differ? Do the differences dictate different disclosures for SMEs? Do they dictate different recognition and measurement?
(4) Do SMEs face different costs and benefits relating to financial reporting? The conceptual framework indicates that standard-setting decisions involve assessing the relative costs and benefits when making standard-setting decisions.
(5) If the costs and benefits differ for SMEs, do the differences dictate different disclosure, recognition, or measurement for SMEs? If so, which ones should differ?
(6) At present, SMEs are defined as entities with no public accountability. Publicly accountable entities are those that publicly trade equity or debt instruments, or hold public funds, such as banks and insurers. Is this definition of SME appropriate? Or, is there a different class of entities whose financial reporting should be considered separately from other entities?

These motivating questions underlie some of the most difficult and pervasive issues facing financial reporting today. Even though the topics on the active agendas of the IASB and FASB change over time, most of the motivating questions listed above remain unanswered even after the standard setters issue a standard on the topic. In virtually all cases, because unanswered questions remain the topics eventually reappear on the agendas in the hopes of resolving at least some of

those open questions. Also, as explained in Section 2, research cannot fully answer motivating questions, it only can provide input to standard setters' deliberations about them. In addition, as knowledge is created, models, data, and techniques improve, making it feasible to address questions that previously were infeasible to address with research. Thus, the motivating questions above likely will remain fruitful for motivating research for a long time to come.

6

Globalization of Financial Reporting

6.1 Role of Global Accounting Standards

For financial reporting information to play an important role in the capital markets, not only must it possess the qualitative characteristics identified by the conceptual frameworks of FASB and IASB, but also it must be used by firms in a comparable way. The conceptual frameworks identify comparability as the quality of accounting information that enables users to compare information across firms.[1] Given the increasingly global markets for capital, the desire for comparable information leads naturally to the mission of the IASB, which is:

> To develop, in the public interest, a single set of high quality global accounting standards that are accepted worldwide.

The IASB's vision is that achieving its mission will help improve the functioning of global capital markets by standardizing the language of

[1] Comparability also enables users to compare financial reporting information across time for a given firm. This aspect of comparability is not of primary interest in the globalization debate.

business. Without global standards, there is virtually no hope that economically similar transactions, events, and conditions will be reflected similarly in financial statements around the world, and that economically dissimilar transactions, events, and conditions will be reflected differently. The hope is that achieving the mission will decrease the costs of preparing and interpreting financial statements, and decrease the cost of capital because investors will face less information risk.

As one would expect, the primary demand for global standards derives from investors in global capital markets and global firms. This is where the benefits are likely to be the greatest. Cross-border financing and operations creates demand for common standards, common standards reduce costs of issuing and understanding financial statements, and common standards reduce risk that the information is misunderstood. However, there also is demand from local capital markets and national standard setters. Some countries have no national standards and some countries' standards are incomplete. Setting comprehensive, high quality standards requires substantial resources – resources that could be deployed in other productive ways.

The IASB's approach to achieving its mission, first and foremost, is to follow its conceptual framework. As is the FASB's framework, the IASB's framework is aimed at outside providers of capital. That is, the targeted users of financial statements are current and prospective equity and debt capital providers who are not in a position to demand from the firm information that they need to make their capital allocation decisions. Although not identical, the IASB's conceptual framework is similar to those of the US and all other major standard setters around the world that have such frameworks. As noted above, among other things, the framework sets out the objective for financial reporting, the qualitative characteristics of financial reporting information, such as relevance and reliability, and the definitions of financial statement elements, i.e., assets, liabilities, income, and expenses. This framework guides standard-setting decisions.

The IASB also aims to develop principles-based standards. Principles-based standards clearly state the principles that drive the standards' requirements. The principles are the link between the standard's requirements and the conceptual framework; they specify how

the concepts in the framework apply to the topic of the particular standard. It is important to note that principles-based standards are not intended to afford firms more flexibility than rules-based standards.[2] To the contrary, principles-based standards should make it more difficult to circumvent the spirit of the standard. When the IASB states a principle, it indicates that the entity *shall* do whatever the principle says. Thus, the principles are requirements, not guidelines.

One implication of principles-based standards is that there should be few exceptions to the principles. Exceptions beget rules and complexity, and often result in decreased comparability. When a standard makes an exception from a principle for a particular type of transaction, event, or condition, the standard needs to define the transaction, event, or condition type and needs to specify the accounting requirements for it. Making exceptions for particular types of transactions, events, or conditions often results in substantially different accounting treatments for economically similar items. The different accounting treatment is the objective of the exception. However, standards often specify exceptions in terms of specific bright-line rules. Thus, transactions, events, or conditions on one side of the bright line apply one set of accounting requirements and those on the other side apply another set.

The IASB also promotes global consistency in application and enforcement of its standards. To facilitate consistent application, the IASB attempts to write standards clearly. Although consistency in application and enforcement are not direct responsibilities of the IASB, the IASB recognizes that both are crucial for achieving its overall mission of global financial reporting. A single set of standards does not achieve this mission if they can be applied or enforced differently because they are ambiguous.

To achieve its mission of a single set of standards that are accepted worldwide, the IASB follows a two-pronged approach. The first is to promote adoption of IASB standards by countries and firms around the world. Many countries have adopted international

[2] The debate about principles-based standards often characterizes IASB standards as being principles-based and FASB standards as being rules-based. Although FASB standards have more specific rules, they are based on the conceptual framework. Thus, in many cases principles versus rules is a matter of degree and style.

standards.[3] There are several reasons for this, including the desire to avoid the costs of maintaining a national standard-setting organization and the desire to use global standards. The second is to converge standards with those of national standard setters. Several countries, most notably the US, Japan, and China, have elected to pursue convergence; convergence with the US is a key focus of the IASB's convergence efforts. The close relationship between the IASB and the FASB began when the two boards agreed to agree in the October 2002 so-called Norwalk Agreement. At the present time, the two boards jointly conduct jointly all major projects.[4]

One factor that motivates convergence with the US is the potential for the Securities and Exchange Commission (SEC) to remove its requirement for foreign listed firms using international standards to reconcile their financial results from those based on international standards to those based on US standards. To achieve this, the SEC staff developed a roadmap of the steps necessary for the staff to recommend to the SEC, by 2009, elimination of the reconciliation requirement (Nicolaisen, 2005). The roadmap identifies milestones the IASB and FASB must achieve on major projects. It also outlines steps the SEC staff will follow to satisfy itself that firms are applying the standards as they are intended to be applied and consistently around the world.

It is clear from the rate of progress of the adoption of and convergence to international accounting standards that the face of international accounting is changing rapidly. Globalization is well underway. Standards are being set more by formal standard-setting bodies that want to be a part of the global effort and many traditionally held views are transitioning to a global view, focused on information needs of investors. Such fundamental change causes friction, but along with the heat, there is hope of light. Thus, it is time to rethink what accountants mean by international. In a global world, everything

[3] See IASPlus.com for a list of countries requiring or permitting the use of IFRS.

[4] In their joint projects, the boards share staff resources and make project decisions using the same staff analyses at about the same time. They are also committed to issuing standards that are the same not only in substance, but also in words. This decision reflects the concern that if the words in the two boards' standards differ, readers will assume that the meanings differ.

is international. Cross-country differences are less and less the focus. Yet, not all financial reporting is global and not all firms have global operations or investors. We need to understand whether and, if so, why differences in accounting should exist for these firms.

These events suggest that it is time to rethink international accounting research. What are the relevant questions in this newly forming world? How can researchers contribute? The focus likely will be to provide an international perspective on global issues. This is subtly, but importantly, different from providing an international perspective on domestic issues. Much international accounting research has focused on cross-country differences in accounting treatments, addressing questions such as whether different accounting treatments of the same event or transaction provide the same information to the market, and whether one or another accounting treatment is "better," however defined. It also has focused on institutional and legal differences, addressing questions such as how different institutional and legal features affect financial reporting. With the globalization of financial reporting, the focus is on global investors, global capital markets, and the similarities across countries, not the differences. There is much common ground. However, we need to determine whether there are unique institutional features that should affect financial reporting. For example, whether global investors' needs vary depending on where the investors or the investees are located.

International financial reporting research can contribute to global standard-setting issues in at least four ways. First, it can provide international perspective on global issues. Second, it can study questions that are only addressable internationally. Third, it can exploit different institutional settings around the world to gain deeper understanding of global financial reporting issues. Fourth, it can identify important country- or region-specific features that global standard setters need to consider when developing global standards.

6.2 Examples of Research on Globalization of Financial Reporting

Extant research provides insights relevant to the globalization of financial reporting. Some insights directly relate to globalization itself, and

some apply more generally but are important to the assumptions underlying the presumed desirability of global accounting standards. This section describes three studies that relate to these issues. The first addresses the general question of whether more transparent financial statements are associated with lower cost of capital. That there is a relation between financial statement transparency and cost of capital is a fundamental assumption underpinning the global acceptance of international accounting standards. The second addresses the question of whether financial statements based on international accounting standards are of higher quality than those based on non-US domestic standards. The third addresses the question of what are the market effects of globalizing accounting standards. As with the examples relating to fair value in Section 4.2, these studies are examples of research relevant to global financial reporting that address different motivating questions and, thus, different research questions. As a consequence, they employ different research designs, and highlight the fact that a variety of research evidence can be relevant to financial reporting standard-setting issues.

6.2.1 Example 1: Cost of capital and financial statement transparency

A fundamental assumption underlying the desire to achieve the IASB's mission is that higher quality financial reporting will result in lower cost of capital. Thus, the motivating question in Barth et al. (BKL, 2006b) is: Do firms with more transparent financial statements have lower cost of capital? This question motivates several studies, which BKL cite, but clear, direct evidence is elusive.[5] The research question BKL address to provide insights into the motivating question is: Does greater financial statement transparency, measured based on the explanatory power of earnings and change in earnings for returns, result in lower expected cost of capital and lower future realized abnormal returns?

Addressing this research question requires developing a measure of financial statement transparency. BKL's transparency measure is

[5] These include, e.g., Amihud and Mendelson (1986), Botosan (1997), Botosan and Plumlee (2002), Easley and O'Hara (2004), and Francis et al. (2004).

based on the extent to which earnings and change in earnings covary contemporaneously with stock returns. Underlying this design choice is the premise that earnings and equity book value provide investors with information about the economic value of the firm. However, because timeliness is an important dimension of transparency, BKL focus on stock returns rather than stock prices. Focusing on stock returns results in using earnings and change in earnings as the explanatory variables. Even though earnings and change in earnings do not reflect fully the richness of information in financial statements, BKL interpret their explanatory power for returns as reflecting financial statement transparency. This is because the explanatory power depends on the information contained in individual line items on the statements of financial position and income, as well as financial statement notes, that investors use when assessing the relation between these two summary measures and changes in firm value.

The BKL transparency measure is the sum of the adjusted R^2 from two estimations of the relation between returns and earnings and change in earnings. The first is from estimating the relation industry-by-industry, which reflects industry commonality. The second is from estimating the relation by portfolio based on quartile of residuals from the industry-by-industry estimation, which reflects industry-neutral commonality. Both are estimated year-by-year. This approach yields a transparency measure that reflects differences across firms as well as across years.

BKL use the three-factor Fama–French model plus momentum to estimate expected equity cost of capital and to calculate realized future abnormal returns. The findings indicate that financial statement transparency is significantly negatively related to expected equity cost of capital and significantly negatively related to future realized abnormal returns. The expected equity cost of capital findings indicate that financial statement transparency is systematically related to the three Fama–French factors and momentum. However, the subsequent returns findings indicate that financial statement transparency captures dimensions of cost of capital that these factors do not. Taken together, the findings indicate that greater financial statement transparency is associated with lower cost of capital.

6.2.2 Example 2: Quality of international accounting standards

Relating directly to international accounting standards, the motivating question in Barth et al. (BLL, 2007) is: Are financial statements based on application of International Accounting Standards (IAS) higher quality than those prepared based on application of non-US domestic standards? Because there is no generally accepted definition of quality of accounting amounts, BLL address the following research question to provide insights into the motivating question: Do IAS-based financial statements evidence less earnings management, more timely loss recognition, and more value relevance than those based on non-US domestic standards? Prior research links earnings management, timely loss recognition, and value relevance to accounting quality. BLL adopt the approach in that prior literature to compare the characteristics of net income and book value of equity based on IAS to those based on domestic standards, matched by firm on country and year, and financial statements of firms using IAS before and after they adopt IAS. The sample comprises firms from 23 countries that adopt IAS between 1994 and 2003, and a matched sample of firms that had not adopted IAS by the end of the sample period. The study does not address the cost of adopting or implementing the standards.

Regarding earnings management, following Lang et al. (2003) and Lang et al. (2006), BLL consider three measures of income smoothing: variability of change in net income, variability of the ratio of change in net income to change in cash flows, and correlation of accruals and cash flows. BLL also consider the frequency of small positive net income as another earnings management measure. Regarding timely loss recognition, BLL consider the frequency of large negative net income and the value relevance of bad news. Regarding value relevance, BLL consider the adjusted R^2 from a regression of price on net income and book value of equity, scaled by lagged price, and the adjusted R^2 from a regression of earnings on returns, split between good and bad news.

The findings are quite consistent across all of the measures in indicating that financial statements based on application of IAS evidence less earnings management, more timely loss recognition, and more value

relevance than those based on application of non-US domestic standards. The findings apply both for IAS firms compared with non-IAS firms after the IAS firms adopt IAS, and for IAS firms after adopting IAS compared with themselves before adopting IAS. Regarding the difference between IAS firms and non-IAS firms, additional findings show that differences between IAS firms and non-IAS firms before the IAS firms adopt IAS do not explain differences post-adoption. Taken together, the findings indicate that financial statement amounts based on application of IAS are of higher quality, as reflected in the quality measures tested, than are those based on application of non-US domestic standards.

6.2.3 Example 3: Market effects of global convergence

Relating directly to possible market effects of global convergence, Barth et al. (1999b) seek to provide insights into the following motivating question: Would global convergence of accounting standards result in beneficial capital market effects? Because the question is unanswerable in the current world in which accounting standards are not converged, the study is based on an analytical model. The research question the study addresses is: In a model that captures salient features of global trading, does global convergence result in increased informativeness of share prices and trading volume, and lower cost of capital?

The research design requires developing a model of global investing with opportunity for accounting convergence, identifying capital market metrics of interest, conducting comparative static analyses, and determining how convergence affects the metrics. In the study, convergence means making domestic standards closer to foreign standards. The capital market metrics that are the focus of the analysis are the informativeness of share prices with respect to firm value or accounting information, trading volume, and cost of capital.

The objective in developing the model is to capture the features of the real world that are pertinent to the issue of globalization of accounting standards in a way that enables identification of the underlying economic factors that affect the equilibrium, and that is tractable. The

model in Barth et al. (1999b) includes the following features: (1) Global investors have incentives to invest in firms from different countries; (2) Accounting reports provide value-relevant information, but with varying quality; (3) Accounting reports differ when based on domestic and foreign standards; (4) Globalization of standards can result in higher or lower quality accounting reports; (5) Investors understand domestic accounting standards and it is costly to learn foreign standards. The more globalization, the lower the cost; (6) Some investors learn foreign accounting; expertise provides them an informational advantage; and (7) Investors unfamiliar with foreign accounting can infer from market prices some of the experts' information.

The findings reveal that market performance depends on two, sometimes opposing, forces. The first is the direct accounting effect, whereby higher quality financial reports improve market performance. The second is the expertise acquisition effect, whereby the quality of accounting and extent of convergence affect investors' incentives to learn foreign accounting, in turn affecting market performance. The findings also reveal that the interaction of these two forces can result in increased market performance when convergence increases the quality of domestic standards, and vice versa. This finding is as one would expect and holds for all market performance metrics. It suggests that converged high quality standards can have capital market benefits. Perhaps surprisingly, however, the findings also reveal that convergence that decreases accounting quality can increase market performance, and vice versa. This finding holds, for example, when the fraction of global investors from the converging country is small, and learning foreign accounting is low cost. These findings suggest that globalization, per se, can be beneficial for small countries, even if they adopt lower quality accounting.

6.3 Evidence on Global Financial Reporting

There are two main dimensions relating to global financial reporting that research addresses. The first is the relative quality of accounting amounts across standard-setting regimes. The second is whether global financial reporting is achievable or even desirable.

6.3.1 Comparisons of quality across regimes

Leuz et al. (2003) find that the quality of US standards-based accounting amounts exceeds that of domestic standards-based accounting amounts. Also, several studies examine the characteristics of particular differences in accounting between countries, often using the items reconciling cross-listed firms' domestic standards-based amounts to US standards-based amounts reported on Form 20-F. However, collectively, the evidence from this literature indicates that not every aspect of US standards is associated with more value-relevant accounting amounts than non-US standards (e.g., Hall et al., 1992, Amir et al., 1993, Niskanen et al., 1993, Bandyopadhyay et al., 1994, Harris et al., 1994, Barth and Clinch, 1996). That is, particular reconciling items are value relevant incremental to those based on US standards, and vice versa.

Relating to the comparison of IAS-based accounting amounts and domestic standards-based accounting amounts, the collective evidence indicates that the quality of IAS-based accounting amounts also equals or exceeds that of domestic standards-based accounting amounts (see e.g., Ashbaugh and Pincus, 2001, Eccher and Healy, 2003, Hung and Subramanyam, 2004, Tendeloo and Vanstraelen, 2005, and Barth et al., 2007).

These two sets of findings leave open the question of whether IAS-based accounting amounts are of higher quality than US standards-based amounts. Leuz (2003) compares measures of information asymmetry for a sample of German firms that trade on Germany's New Market. Leuz (2003) finds little evidence of differences in bid/ask spreads and trading volume for firms that apply US standards relative to those that apply IAS. However, also for a sample of German firms, Bartov et al. (2005) document earnings response coefficients are highest for firms applying US standards, followed by those applying IAS, and followed by those applying German standards. For a larger sample of firms that apply IAS from 24 countries and a matched sample of US firms that apply US standards, Barth et al. (BLLW, 2006c) compare IAS-based and US standards-based accounting amounts using the accounting quality measures in Barth et al. (2007) described in Section 6.2.2. BLLW find consistent evidence that accounting

amounts based on US standards are of higher quality than those based on IAS.

The SEC requires non-US firms that cross-list securities in the US to reconcile net income and book value of equity reported in their financial statements based on non-US standards to those based on US standards. Taking advantage of this disclosure requirement, Harris and Muller (1999) provide evidence that US standards-based reconciled amounts for 31 firms applying IAS are value relevant incremental to IAS-based accounting amounts. However, this finding might not generalize because the sample firms may make US standards-consistent choices under IAS to minimize reconciling items (Lang et al., 2006). Using a larger sample of non-cross-listed non-US firms applying IAS and cross-listed non-US firms reconciling net income and book value of equity to US standards-based amounts, BLLW find no clear pattern of the IAS-based amounts being of higher quality than the reconciled US standards-based amounts, or vice versa. This finding is plausible despite the BLLW finding that US standards-based accounting amounts are of higher quality than IAS-based accounting amounts because Lang et al. (2006) find that the quality of reconciled US standards-based accounting amounts provided by cross-listed firms is lower than that for US firms.

It is inherently difficult to rank sets of accounting standards because typically each set does not simply provide incremental information. Rather, typically, each provides different information or the same information with a different emphasis, e.g., a focus on the income statement rather than a focus on the statement of financial position. However, taken together, the findings in these studies generally indicate that accounting amounts based on US standards comprehensively applied are higher quality than those based on IAS, and accounting amounts based on IAS are higher quality than those based on non-US domestic standards. They also indicate that accounting amounts based on US standards are higher quality than reconciled amounts based on US standards, and the quality of accounting amounts based on IAS is indistinguishable from reconciled amounts based on US standards.

6.3.2 Achievability and desirability of global financial reporting

Research indicates that measuring the extent of global convergence is difficult, but the evidence suggests that convergence is increasing (Archer et al., 1995, Tarca, 1998, Land and Lang, 2002). However, research also tells us that achieving the goal of global financial reporting is not straightforward. It requires coordinated efforts on the part of several types of players in the capital markets. Although global use of a single set of global standards is a necessary condition for global consistency in financial reporting, it is not a sufficient condition. There is a need for globally consistent interpretation and application of the standards, as well as consistent regulatory enforcement of them. These activities are not the explicit responsibilities of the IASB, although it is committed to promote them. They are the responsibilities of firms, auditors, and regulators.[6]

There is a growing body of research addressing these issues. Deepening our understanding of the issues and the factors that contribute to or mitigate them should aid in either resolving them or crafting better standards in light of them. For example, research tells us that the informativeness of financial statements is linked to the legal system, shareholder protection, and the conformity of financial statement and tax reporting (Ball et al., 2000, Hung, 2001). Although globalization is occurring along many of these dimensions, complementing the activities of the IASB, cultures change slowly, not by fiat. It also tells us, as one would expect, that financial reporting quality depends on incentives of managers and auditors (Ball et al., 2003), which vary around the world depending on, for example, the country-specific institutional and legal environment. We also know that, as in the US, corporate governance plays key role in determining the quality and, thus, consistency of financial reporting (Ashbaugh and Warfield, 2003).

Regarding the role of standards themselves, research tells us that standards cannot address all situations in all countries and often lag

[6] See Stevenson (2006) for a discussion of efforts by the Big Four accounting firms to help achieve global consistency in interpretation and application of international financial reporting standards. See, also, Schipper (2005).

practice (Ball et al., 2000, Ball et al., 2003). Moreover, when local infrastructure is lacking, global standards that are arguably designed for larger global economies and firms might not be optimal (Eccher and Healy, 2003). For example, the extent of conservatism, and whether net income or book value of equity is more value relevant can be explained by historical precedent and whether the country has an investor or creditor capital base (Joos, 1999). However, research tells us that improved disclosure and financial statement transparency can reduce cost of capital and that firms committing to IAS or US standards exhibit lower bid-ask spreads and higher share turnover than firms committed to German standards (Leuz and Verrecchia, 2000).

Research also tells us that even the application of US standards can vary depending on the setting. For example, Bradshaw and Miller (BM, 2006) investigate non-US firms that voluntarily adopt US standards. BM find some evidence of less compliance with US standards by non-US firms relative to US firms. BM also find that regulatory oversight and capital market incentives affect the level of compliance with US standards. Consistent with BM, Lang et al. (2006) find that the reconciled amounts based on US standards are not of comparable quality to those based on US standards reported by US firms. This evidence also is consistent with the country's economic environment affecting reported accounting amounts.

It is possible, however, that the observed differences in standards do not derive from fundamental differences destined to impede globalization. The model in Nagar and Petacchi (2005) shows that even fundamentally similar economic environments can result in different standard-setting equilibria. Nagar and Petacchi (2005) find multiple equilibria, with no equilibrium clearly dominating the others. However, the model also shows that the equilibrium of a particular country can become the same as the equilibrium of another country with a relatively small shock to the environment. These findings suggest that to the extent that the diversity in accounting standards we observe is not attributable to differences in economic environments, it might not be too difficult to converge the standards.

6.4 Opportunities for Future Research on Global Financial Reporting Issues

Research has begun to provide insights into the benefits and costs of global financial reporting. However, there are many motivating questions awaiting further research.

(1) Will global financial reporting reduce firms' cost of capital? Some theory (e.g. Easley and O'Hara, 2004) suggests that it can, by reducing undiversifiable information risk. Other theory (e.g., Hughes et al., 2006) raises doubts about whether information risk is reflected in cost of capital by showing that such risk can be diversified away in large economies, unless the information risk has a component that applies to all firms, perhaps such as that associated with a mandated accounting standard. However, direct empirical evidence is lacking.
(2) Would global financial reporting facilitate the allocation of capital? Would it facilitate cross-border trading? Does it reduce home bias in investing? Achieving capital market benefits such as these justifies globalization in the minds of many.
(3) Are global standards higher quality than domestic standards? As noted in Section 6.3.1, research has begun to provide evidence on this question. However, the standards are only one ingredient in the determination of accounting amounts, and the standards are continually evolving. Moreover, quality is an elusive concept.
(4) Are there reasons to have different financial reporting standards in different parts of the world, or for different types of firms? If so, what parts or types, and why?
(5) What will be the effects of global financial reporting on local capital markets? Are these effects desirable?
(6) Why do we not observe all countries adopting global standards?
(7) What are the costs of adopting global financial reporting standards? How do these costs relate to the potential benefits?

(8) If a country adopts global financial reporting as a goal, why would it retain rights to change the standards for application by firms in its jurisdiction?[7]

The answers to the motivating questions above can help determine whether global financial reporting is desirable. However, as Section 6.2 describes, some extant research identifies impediments to globalization of financial reporting, which calls into question whether the goal, even if desirable, can be achieved. However, extant research does not offer insights into the following motivating questions:

(1) Which are the most important institutional impediments?
(2) Should the impediments be removed? If so, why and how? What are the costs and benefits of removing them?
(3) Are the identified impediments simply transition problems that will diminish as globalization increases, or are they systemic problems that will remain without intervention? If the latter, to what extent can global financial reporting be achieved?
(4) Is it possible to write globally applicable financial reporting standards? The IASB believes that it is, by writing principles-based standards that seek to faithfully represent the underlying economics. This approach recognizes that institutional and legal environments differ across countries, but enables those differences to be reflected through application of the principles, not through detailed rules that apply in all settings.[8]

[7] Dye and Sunder (2001) advocate competition among standard setters and offers a mechanism to determine which set of standards should be used. It does not fundamentally question whether a single set of standards is optimal.

[8] For example, the IASB framework defines an asset to be expected future inflows of economic benefits controlled by the firm as a result of past transactions and events. Therefore, if a firm is in country X that has legally enforceable contracts, the firm could have an asset associated with a contract. However, if the firm is in country Y where contracts are not enforceable, then the firm does not have an asset associated with the contract. The standard need not say that firms in country X can recognize contractual assets and those in country Y cannot. Instead, firms in both countries need to determine whether, in their environments, they have rights that meet the definition of an asset in the IASB framework. However, questions remain as to how standard setters should make decisions to facilitate global financial reporting.

(5) Should standard setters develop principles-based standards? If so, what specific characteristics should those standards have? The principles-versus-rules debate is active globally.
(6) Do principles-based standards result in higher quality financial reporting than rules-based standards? Do rules-based standards result in more comparability?
(7) How will firms exercise judgment when applying principles in standards? What incentives affect this judgment? How do they affect it?
(8) Would more pervasive use of principles-based standards, relative to rules-based standards, change the role of the auditor? If so, how and why?
(9) How should relevance, reliability, and the other qualitative characteristics of accounting information enter standard setters' calculus? That is, how should standard setters make the required trade-offs between the qualitative characteristics of financial reporting information? This question arises domestically, as noted in Section 5. Does a global perspective reveal additional forces that need to be considered?
(10) Can global consistency in interpretation, application, and enforcement of standards be achieved? How?
(11) Should the interpretation, application, and enforcement of standards be the responsibility of securities regulators? How important is a uniform approach to enforcement?
(12) What is the role of global auditing firms in achieving global consistency? What is the role of educators? What is the role of voluntary action by firms?
(13) What are the effects that each of these various players has? How do the effects interact?
(14) What are the incentives for these players to assist in achieving – or to subvert – global consistency?
(15) What would be the effects of requirements for more timely reporting, more disclosures, more auditor oversight, or more enforcement? There is a perception, largely fueled by the Sarbanes–Oxley Act, that the US's more stringent approach to these issues will spread outside of the US.

(16) Will any of these effects change incentives for market participants? Which incentives, and how will they change?

(17) Can we predict the responses to these changed incentives? Are there potential unintended consequences that can be identified ex ante and, thus, avoided?

(18) What role does the local information environment play in achieving global financial reporting? Financial reporting occurs in an information environment that includes more sources of information than firms' financial reports, and the richness of the information environment can affect the interpretation of the reports and their information content.

(19) How do analysts facilitate interpretation of financial reports? Do the activities and incentives of analysts differ around the world? If so, how?

(20) Do these differences in analyst incentives have an effect on achieving consistency in financial reporting and interpretation of financial reports? If so, how and why? There is a large literature aimed at understanding these questions in the US, but less aimed at non-US environments.[9]

(21) What is the information role of the news media, press releases, and conference calls outside of the US? How does it compare with that in the US? Again, there is research related to these questions in the US, but how these information sources operate in other countries is less well-understood.[10]

(22) What is the role of debt rating agencies, creditors, and market microstructure outside of the US? All of these potentially affect how accounting information is processed and understood by the capital market.

(23) What are the role and effects of political influences on the standard-setting process? It is well-understood that standard setters do not operate in a vacuum and react to input from their constituents. Less is known about the influences and their effects.

[9] See Brown and Rozeff (1978) and Schipper (1991) for reviews of the US analyst literature.

[10] For conference call research in the US see, e.g., Tasker (1998), Frankel et al. (1999), Bowen et al. (2002), Bushee et al. (2003), and Kimbrough (2005).

(24) What political forces are at work and how do they operate?
(25) Do political forces influence the selection of standard-setting board members and staff? If so, how, and what are the implications?
(26) What effect do political forces have on the standard-setting process and the resulting standards? There is evidence that they can influence the outcomes of the process, for example by legal overrides of standards such as the European Commission's override of several paragraphs of IAS 39 (IASB, 2004b). However, less is known about the implications of these overrides.
(27) Do political influences provide desirable tension that improves the standards and process, or do they provide undesirable outcomes? Why?
(28) Do political influences from different countries offset or reinforce each other? How, and what are the implications for global financial reporting?

7

Concluding Remarks

The aim of this paper is to aid researchers in conducting global financial reporting research that is relevant to accounting standard-setting issues. The financial reporting issues facing standard setters are broad, difficult, and complex, and research can provide input into their resolution. To do so, researchers need to understand not only the issues themselves, but also how to develop research questions and designs that are relevant to the issues.

The paper describes the relation between research and standard-setting issues. It reviews the debate over whether and the extent to which research can inform standard-setting issues, explains how questions motivated by standard-setting issues need to be reframed to become research questions, and overviews the information and measurement perspectives of financial reporting. It also explains how a variety of research designs can be used to address research questions motivated by standard-setting issues, including valuation research and event studies, among others.

Relating to specific standard-setting issues, the paper identifies the possibility of using fair value as the measurement attribute in financial reporting as a topic that pervades many of the items on the FASB's and

IASB's agendas. It provides motivating questions relating to fair value and offers five examples of research that address research questions motivated by fair value standard-setting issues. These examples illustrate how research questions relate to some of these motivating questions. By providing motivating questions relating to the major topics on the agendas of the FASB and IASB, the paper identifies opportunities for future research.

Relating to globalization of financial reporting, the paper explains how the IASB aims to achieve its mission to develop a single set of high quality accounting standards that are accepted worldwide. It offers three examples of research motivated by globalization issues relevant to standard setting to illustrate how research questions that generate relevant inferences can derive from the motivating questions. The paper also summarizes extant evidence on two aspects of the globalization of financial reporting. The first relates to the relative quality of accounting amounts across standard-setting regimes. The second relates to whether global financial reporting is achievable or even desirable. The paper closes with opportunities for future research on issues relating to the globalization of financial reporting by identifying motivating questions that are potentially fruitful avenues for future research.

The list of questions that can motivate research relevant to standard-setting issues is long. There are many challenging issues worthy of research input. It is up to future researchers to use these motivating questions to develop research questions and research designs to generate relevant inferences. Global financial reporting will benefit from the knowledge created by that research.

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