**CHAPTER THREE**

**BALANCE OF PAYMENTS AND NATIONAL INCOME ACCOUNTING**

1. ***Open Economy National Income Accounting***

Any economy is linked to the rest of the world through two broad channels; trade (in goods and services) and finance. The trade linkage means some of a county’s production is exported to foreign countries, while some goods that are consumed or invested at home are produced abroad and imported.

The key macroeconomic difference between open and closed economies is that, in an open economy, a country’s spending in any given year need not equal its output of goods and services. A country can spend more than it produces by borrowing from abroad, or it can spend less than it produces and lend the difference to foreigners.

In an open economy gross domestic product (GDP) differs from that of a closed economy because there is an additional injection- export expenditure which represents foreign expenditure on domestically produced goods. There is also an additional leakage, expenditure on imports which represents domestic expenditure on foreign goods and which raises foreign national income. The identity for an open economy is given by:

[4.1] …………………Y = C + I + G + X – M

where Y is national income, C is domestic consumption, I is domestic investment, G is government expenditure, X is export expenditure and M is import expenditure.

If we deduct taxation T from both hand sides of equation (4.1), we have:

 Y-T = C + I + G + X – M –T

 [4.2] ……………….Yd = C + I + G + X – M –T

If we denote private savings as S=Yd-C we can rearrange equation (4.2) to obtain;

 [4.3]…………….. X-M = (S-I) + (T-G)

Where, (X-M) is Current account balance, *S* *I* Net savings/ dis-savings of the private sector and (*T* *G* Government deficit/surplus

This is an important identity that says a current account deficit has a counterpart in either private dissaving, that is private investment exceeding private saving and/or in a government deficit

*Current Account*: The CA shows the difference between exports and imports of

goods and services (and net unilateral transfers). Note: the trade balance (TB=NX

without unilateral transfers). It is a prime point of interaction between

Countries—the focus of this class. When

EX > IM CA > 0, surplus

EX < IM CA <0, deficit

**3.1.1. The CA and Foreign Indebtness**

A country’s current account balance equals the change in a country’s foreign net wealth.

Why?

􀂃A country with a CA surplus shows that it is earning more from **EX** than **IM**.

􀂃A country with a CA deficit shows that it is earning less from **EX** than **IM**.

The equation is merely an identity and says nothing about causation. Nonetheless, it is often stated that the current account deficit is due to lack of private savings and/or the government budget deficit. However, it is possible that the causation runs the other way, with the current account deficit being responsible for the lack of private savings or budget deficit.

**Income determination in an open economy**

In an open economy, the equilibrium level of national income is determined where the domestic balance is equals to the external balance. The starting point would be equation [4.1]

Y = C + I + G + X – M; and we would make certain additions to this equation.

Domestic consumption is partly autonomous and partly determined by the level of national income. This is denoted algebraically by:

 C =Ca + cY

Import expenditure is also assumed to be partly autonomous and partly a positive function of the level of domestic income:

 M = Ma + mY

Where Ma is autonomous import expenditure and m is the marginal propensity to import, that is the fraction of any increase in income that is spent on imports. In this simple formulation import expenditure is assumed to be a positive linear function of income. There are several justifications for this; on the one hand increased income leads to increased expenditure on imports, and also more domestic production normally requires more imports of intermediate goods.

Government expenditure and exports are assumed to be exogenous; government expenditure being determined independently by political decisions, and exports by foreign expenditure decisions and foreign income.

Substituting consumption and import equations into equation [4.1] we obtain:

 Y = Ca + cY + I + G + X - Ma + mY

Rearranging this equation, we have

[4.4] Y - Ca + cY + I + G = X - Ma + mY

 Y – AD(Y) = NX(Y)

Where AD is aggregate demand which is equals to Ca + cY + I + G and NX is net export defined as X - Ma + mY.

 Equation 4.4 tells us that the economy would be in equilibrium where the domestic balance –i.e. Y – AD is equals to the external balance – i.e. NX. Income (Y) and net export balance associated with this condition are the equilibrium levels of output and trade balance. The equilibrium condition stated in equation [4.4] is depicted on the figure below.



The above figure shows the equilibrium condition in an open economy. The (Y – AD) curve is upward sloping since its slope is given by 1- c which is equals to marginal propensity to save and hence positive; the NX curve is downward sloping with the slope of –m.

At the intersection of the two curves the economy would be in equilibrium as the internal balance is bridged up by the external balance or vice versa. Y\* and NX\* are the equilibrium level of national income and trade balance or net export.

* 1. **Balance Of Payments**

It is often heard that less developed countries suffer from adverse balance of payments (BoPs) and consequently experience chronic foreign exchange gap. Persistent BoPs deficits have forced countries to resort to corrective measures like currency devaluation, imposition of tariffs, exchange controls, contractionary monetary and fiscal policies and exchange controls of various sorts. Even the so-called developed countries have been no exception to this tendency. Policies of import substitution and export promotion to achieve external balance (or balance of payments equilibrium) have led to serious problems of growth and trade for countries of the world.

**3.3.1. Definitions and Concepts of Balance of Payment**

The BoPs is one of the oldest and the most important statistical statements for any country, especially the more open economies. The BoPs accounts are an integral part of the national income accounts for an open economy. They record all transactions between residents of the country concerned and those of other countries. Residents are broadly interpreted as all individuals, businesses, and government agencies. Although a corporation is considered to be a resident of the country in which it is incorporated, its overseas branch or subsidiary is not. Military personnel, government diplomats, tourists, and workers who emigrate temporarily are considered residents of the country in which they hold citizenship.

Over the course of a year, the residents of one country engage in a variety of transactions with residents abroad. These include payments for goods and services, loans, investments and gifts. To analyses the economic importance of these international transactions, it is necessary to classify and aggregate them in to a summary statement. That statement is thus termed as BoPs.

* **The *Balance of Payments*** is a record (summary statement) of the economic transactions (international transaction) between the residents of one country and the residents of all other countries during a particular period of time, usually a calendar year.

Let’s clarify the definition given above for the BoPs.

* As a summary statement, the balance of payments aggregates all merchandise trade in to a few major categories since it is obvious that the literally millions of transactions of the residents of a nation with the rest of the world cannot appear individually in the BoPs. This, for instance, means that the monetary value of Ethiopian exports/imports to/from different trading nations will not be taken individually for each exporter/importer or for each nation. However, all exports of different exporters to different countries will be summarized in a single category. The same is true for all imports made.
* Only the net balance of each type of international capital flow is included. We should not include every amount of capital flow in the balance of payments.
* The BoPs include some transactions in which the residents of foreign nations are not directly involved. For example, when the National Bank sells a portion of its foreign currency holdings to private and government commercial banks, the transaction is summarized in the balance of payments of the country.
* An *international transaction* refers to the exchange of goods, services or assets (for which payment in usually required) between residents of one country and those abroad. However, gifts and certain other transfers (for which no payment is required) are also included in a nation’s balance of payments. The question of who is a resident of a nation also requires some classification
* The balance of payments records flows between countries over a specified period of time. Although some of its component accounts may be recorded for less than a year, the full BoPs usually takes a calendar year. The United States and some other developed countries also keep such a record on a quarterly basis.

The main purpose of the balance of payments is to inform the government of the international position of the nation and to help it in its formulation of monetary, fiscal and commercial policies. Governments also regularly consult the BoPs of important trade partners in making policy decisions. The information contained in a nation’s BoPs is also indispensable to banks, firms, and individuals directly or indirectly involved in international trade and finance.

**3.3.2. The Double – Entry Accounting in BoP’s**

The balance of payments in essentially an application of double–entry bookkeeping, since it records both transactions and the money flows associated with those transactions. This, in other words means that the arrangement of international transactions in to a balance of payments account requires that each transaction can be entered as a **credit or a debit**.

* *A* ***credit transaction*** is one that results in a receipt of a payment from foreigners. Credit transactions are entered with a positive sign in the balance of payments of the country.
* *A* ***debit transaction*** is a transaction that leads to a payment to foreigners. Debit transactions are entered with a negative sign in the balance of payments of the country.

To understand this distinction, we need to assume that transactions take place between, say, Ethiopian residents and foreigners, and that all payments are financed in birr’s.

Given these assumptions, the following transactions are ***credits*** which lead to the receipt of birr from foreigners from the Ethiopian perspective.

* Merchandise (goods and services) exports;
* Transportation and travel receipts;
* Income received from investments abroad;
* Gifts received from foreign residents;
* Aid received from foreign governments;
* Investments in Ethiopia by overseas residents.

On the other side, what types of transactions are debits from Ethiopian view of point, which involve payments to foreigners? They include the following:

* Merchandise (goods and services) imports;
* Transportation and travel expenditures ;
* Income paid on investments of foreigners;
* Gifts to foreign residents!
* Aid given by the Ethiopian government!
* Overseas investment by Ethiopian residents.

Although we speak in terms of credit transaction and debit transactions, every international transaction involves an exchange of assets and, so have both a credit and a debit side. Each credit entry is balanced by a debit entry, and vice versa. The recording of any international transaction, therefore, leads to two offsetting entries. This means that the balance of payments accounts utilize a double–entry bookkeeping system.

Even though the entire Bops by definition must numerically balance, it does not necessarily hold that any single sub-account or sub-accounts of the statement must balance. For instance, merchandise exports may or may not be in balance with merchandise imports. Generally, ***Double-entry accounting assumes*** only that the total of all entries on the ***left-hand side of the statement matches the total of the entries on the right-hand side.***

You have to note, however, that although BoPs has its roots in double – entry bookkeeping, it is rarely presented in that form. To clarify this statement, first, the various transactions (entries or accounts) will be gathered together in one column which gives rise to the balancing of monetary flows under what are considered to be appropriate headings. The net values of the monetary flows are then entered in the corresponding headings in the single column, with their sign reversed. We thus have an account in a single column, which must sum to zero.

**3.3.3. Components of Balance of Payment**

The Bops is broken down into three important sub-components: the **current**

**Account balance (CA)**, the **capital account balance (KA)**, and the financial account balance (FA)

**A. The Current Account**

The current account records exports and imports of goods and services and unilateral transfers.

* The current account of the balance of payments refers to the overall accounting of the monetary value of international flows associated with transactions in goods, services and unilateral transfers.

The goods and services component of the current account shows the monetary value of all of the goods and services a nation exports or imports. Exports, whether of goods or services, are by convention entered as positive items (credit) in the account. Imports accordingly are entered as negative (debit) items. Exports are normally calculated f.o.b (free on board), i.e., costs for transportation, insurance, etc., are not included. However, imports are normally calculated c.i.f. (costs, insurance, and freight), i.e., transportation, insurance costs, etc., are included.

The *goods account* of the current account includes the monetary value of merchandise exports and imports. These items of foreign exchange earnings and spending are called ‘visible’ items and hence form the *visible trade balance* in the Bops. If receipts from exports equal to payments for imports of goods, there would exist a zero balance. If exports exceed imports, there will be a positive visible trade balance which is ***favorable for a country***. On the other hand, when exports fall short of imports, the country under consideration will experience an unfavorable negative trade balance.

The services part of the current account records all the services exported and imported by a country in a year. Their net value is entered in the Bops as *invisible trade balance*. Services are called invisible in the sense that their receipts and payments are not recorded at the port of entry. Except this, there is no meaningful difference between goods and services receipts and payments. Both constitute earnings or spending of foreign exchange as opposed to borrowings and lending of foreign exchange.

Let us now see the important transactions that are best regarded as service transactions. They basically include the following:

* Transportation, banking and insurance receipts and payments from and to foreign countries;
* Tourism, travel services and tourist purchases of goods and services received from foreign visitors to home country and paid out in foreign countries by home citizens;
* Expenses of students studying abroad and receipts from foreign students studying in the home country;
* Expenses of diplomatic and military personnel stationed overseas and receipts from similar personnel from overseas stationed in the home country; and
* Interest, profits dividends and royalties received from foreign countries and paid out to foreign countries.

As we see from the definition of current account, the other component is unilateral transfers. They are also called unrequited receipts, which the residents of a country receive ‘for free’, without having to make any present or future payments in return.

***Unilateral transfers*** refer to transactions that is one – sided, reflecting the movement of goods and services in one direction without corresponding payments in the other direction. Receipts from abroad are entered as positive items whereas payments abroad as negative items. This kind of receipt usually takes one of two forms –private transfers or official transfers.

The first – *private transfers*- refers to gifts made by individuals and non government organizations (NGOs) to foreigners. These might, for instance, include a remittance from an immigrant living in Ethiopia to his relatives in India or a contribution by a U.S resident to a relief fund for Ethiopia.

The second called *official* or *government transfers* – refers to gifts or grants made by one government to foreign residents or foreign governments. In other words, they are payments of pure aid (as opposed to tied aid) by governments in developed countries (perhaps via international agencies) to government in less developed countries (LDCs).

**Table 1- Current *Account Summaries for Two Countries – A and B, 2005,***

 ***Values in ($US billion)***

|  |  |  |
| --- | --- | --- |
|  | **Country A** | **Country B** |
| A: Merchandise Exports  | 151.31 | 269.59 |
| B: Merchandise Imports  | -189.26 | -192.74 |
| C: Visible Trade Balance (A+B)  | 37.96 | 76.85 |
| D: Exports of Services  | 172.01 | 143.91 |
| E: Imports of Services  | -157.79 | 159.53 |
| F: Invisible Trade Balance (D+E) | 14.22 | -15.62 |
| G: Private Transfers ( net )  | -0.49 | -0.99 |
| H: Official Transfers (net)  | -6.93 | -3.30 |
| I: Current Account Balance (C+F+G+H) | -31.16 | 56.94 |

Let us now take a hypothetical example showing the current account of two hypothetical countries which will be useful in constructing the BOPs at the end of this section. Note that the net value of the balances of visible trade, invisible trade and of ***unilateral transfers (***A **unilateral transfer** is a one-way **transfer** of money, goods, or services from one country to another. The prefix "uni" means one. In a **unilateral transfer**, one party is making a **transfer** to the other party. They are not receiving anything back from the other party.) defines the *balance on current account*, as shown in the above table.

**B. The Capital Account**

The other component of the balance of payments is the capital account. Generally, capital transactions in the BoPs include all international purchases or sales of assets. The term asset is broadly defined to include items such as titles to real estate, corporation stocks and bonds government securities, and ordinarily commercial bank deposits.

* The *capital account* records all international transactions that involve a resident of the country concerned changing either his assets with or his liabilities to a resident of another country.

It is often useful to make distinctions between various forms of capital account transactions. The basic distinctions are between private and official, between direct and portfolio investments, and by the term of the investment (i.e., short term or long –term).

1. **Long – Term Capital**

It includes the amount of capital that has moved in to or out of the country in a year. Long term capital may consist of the following categories:

* *Private Direct Investment.* These investments are done by home country citizens and firms in foreign countries (debit) and by foreigners in the home country (credit). This type of capital movement is induced by differences in profit rate between the home country and the rest of the world.
* *Private Portfolio investment.* These are done by home country citizens and firms in foreign securities or stocks or bonds or shares (debit) and by foreigners in home country’s assets (credit). Such an investment is induced by differences in interest rate, dividends or rate of return on capital between the home country’s financial assets and those of foreign nations.
* *Government Loans to Foreign Governments.* These are loans given by home country’s government (debit) and to the home government by foreign governments (credit).
1. **Short Term Capital**

Bank deposits and other short – term payments and receipts fall in to this category. The vast majority of short term capital transactions basically represent bank transfers that finance trade on goods and services.

When citizens /governments receive payments in one or more of the above, it will be a capital inflow and hence entered in the BoPs as positive items (credit). On the other hand, a capital outflow occurs when citizens /governments do the above investments abroad. These will be recorded in the BoPs as negative items (debit). A capital inflow can also be linked to the export of goods and services. Conversely, a capital out flow is similar in effect to the import of goods and services.

Let us now construct a hypothetical capital account for the two countries A and B whose current account was taken earlier. The net value of long-term and short term capital defines *the balance on capital account*.

**Table 2*Capital Account for Countries A and B, 2005 ($ US billion)***

|  |  |  |
| --- | --- | --- |
|  | **Country A** | **Country B** |
| J: Direct investment (net) | 0.23 | -45.22 |
| K: Portfolio investment (net ) | -44.93 | -48.39 |
| L: Long Term capital Balance (J+K)  | -44.70 | -93.61 |
| M: Short – Term capital (net)  | 27.53 | 45.86 |
| N: Capital Account Balance (L+M) | -17.17 | -47.75 |

**C. The Financial Account**

Broadly speaking, the financial account tracks financial flows coming in and

going out of the economy. The importance of financial flows has grown

significantly in the past half-century, from being a relatively unimportant

consideration in the 1960s to becoming a major component of the BoP. The three

major categories included in the financial account are foreign direct investment

(FDI), portfolio investment (PI), and official reserve transactions (ORT).

* **Foreign direct investment**: A **foreign direct investment** (**FDI**) is an [investment](https://en.wikipedia.org/wiki/Investment) in the form of a [controlling ownership](https://en.wikipedia.org/wiki/Controlling_interest) in a [business](https://en.wikipedia.org/wiki/Business) in one country by an entity based in another country. It is thus distinguished from a [foreign portfolio investment](https://en.wikipedia.org/wiki/Foreign_portfolio_investment) by a notion of direct control.

 The origin of the investment does not impact the definition, as an FDI: the investment may be made either "inorganically" by buying a company in the target country or "organically" by expanding the operations of an existing business in that country.

* **Portfolio investment**: **Portfolio investments** are [investments](https://en.wikipedia.org/wiki/Investment) in the form of a group (portfolio) of assets, including [transactions](https://en.wikipedia.org/wiki/Financial_transaction) in [equity](https://en.wikipedia.org/wiki/Equity_%28finance%29), [securities](https://en.wikipedia.org/wiki/Security_%28finance%29), such as [common stock](https://en.wikipedia.org/wiki/Common_stock), and [debt](https://en.wikipedia.org/wiki/Debt) securities, such as [banknotes](https://en.wikipedia.org/wiki/Banknotes), [bonds](https://en.wikipedia.org/wiki/Bond_%28finance%29), and [debentures](https://en.wikipedia.org/wiki/Debentures).

Portfolio investments are [passive investments](https://en.wikipedia.org/wiki/Passive_investment), as they do not entail active [management](https://en.wikipedia.org/wiki/Corporate_management) or control of the issuing company. The foreign investors have a relatively short-term interest in the ownership of these passive investments such as bonds and stocks. Rather, the purpose of the investment is solely financial gain, in contrast to [foreign direct investment](https://en.wikipedia.org/wiki/Foreign_direct_investment) (FDI), which allows an investor to exercise a certain degree of managerial control over a company. For international transactions, equity investments where the owner holds less than 10% of a company's [shares](https://en.wikipedia.org/wiki/Share_%28finance%29) are classified as portfolio investments.These transactions are also referred to as "portfolio flows" and are recorded in the [financial account](https://en.wikipedia.org/wiki/Capital_account) of a country's [balance of payments](https://en.wikipedia.org/wiki/Balance_of_payments).

* **Official reserve transaction:** Official reserve transactions refer to transactions by the central bank that cause changes in its official, reserves of foreign exchange. Such transactions take place when a country withdraws from its stock of foreign exchange reserves to finance deficit in its overall balance of payments (BOP). A country with surplus in its overall BOP leads to rise in foreign exchange reserves.
Official reserve transactions are very important as they help to bring a balance in the country's overall balance of payments. So, such transactions act as accommodating Item in BOP.

**3.4 Balance of payment disequilibrium**

**3.4.1 Balance of Payments Deficits and Surpluses**

The terms ‘*balance of payments deficit*’ and ‘*balance of payments surplus*’ are familiar to the most causal student of economic affairs. They carry with them the suggestion that something is wrong with the national economy, so that some change may be expected in the near future. The terms also often convey some implicit judgment, usually to the effect that a country with a BoPs deficit is in some sense in trouble, while one with a surplus is ‘strong’. This section is devoted to a relative detail of these important concepts.

Before we directly discuss about deficits and surpluses in BoPs, let us make the following distinction between autonomous and accommodating transactions. The distinction is useful to define the concepts of deficit and surpluses in the BoPs.

**Autonomous and Accommodating Transactions**

*Autonomous* or *above the line transactions* are those that take place regardless of the size of other items in the balance of payments. For instance, the export of goods is a trade transaction which takes place because a firm sells goods to a foreign buyer. It is an initiating or an autonomous transaction and its value results in payments by foreigners to the home country, which is entered as a credit item. If Ethiopia receives $10 million from the European Union as aid for the flood- stricken people of 2006, then this amount is entered as credit into Ethiopian BoPs’ account called Unilateral Transfers. When the country borrows $17 million from the World Bank to construct a high way, the sum of $17 million is credited in to the Long – term Capital Account of the country’s BoPs.

*The accommodating* or *below the line transactions*, on the other hand, take place due to balance of payments situation of country. Whereas autonomous transactions are the causes of balance of payments situation, accommodating transactions are the results of the balance of payments situations.

In brief, all credit and debit entries in the current and capital accounts of the BoPs are regarded as autonomous transactions. But, all the credit and debit entries in the changes in reserves (international liquidity) account are to be taken as accommodating transactions. The distinction between autonomous and accommodating transactions therefore lies in the question whether the transaction has caused the BoPs situation or has been caused by the BoPs situation.

Now is the time to define BoPs deficit and surplus. A *deficit* in the BoPs occurs when the autonomous payments (debits) exceed the value of autonomous receipts (credits). A *surplus* results when the autonomous credit receipts exceed the autonomous debit payments. If the two sums, autonomous receipts and payments, are equal, we have equilibrium in the BoPs.

Alternatively, the sum of accommodating transaction entered as credit in the international liquidity account is the measure of a deficit in the BoPs. While a similar debit (negative) entry of that account is the measure of a surplus in the BoPs. If, however, this account shows an entry of a zero sum, then there would be equilibrium in the balance of payments of the country under consideration.

* *A deficit in the BoPs is considered as negative or unfavorable or adverse BoPs for the reporting country. And a surplus is regarded as positive, favorable or active BoPs situation for the country. BoPs equilibrium is considered as the desirable external economic state of affairs for any country.*

You have to note that balance (or imbalance) in the BoPs is different from equilibrium (or disequilibrium) in the BoPs of a country. Strictly speaking, balance is an accounting balance and it must be there all the time for any country. Equilibrium, on the other hand, can be there only when the autonomous credit receipts equal autonomous debit payments. Equilibrium is an economically meaningful concept whereas balance is an accounting or a bookkeeping term. In common speaking, the term BoPs balance is used interchangeably with BoPs equilibrium, but the difference between these two terms must be borne in mind.

* 1. **Exchange Rate Systems and BOPs Adjustments**

For centuries, many countries of the world operated under a largely uniform system of fixed exchange rates for their currencies. But the 1960s and 1970s crisis in the foreign exchange market led to reforms in the international monetary system. This permitted nations to choose the exchange rate system most compatible with their own economic objective. In doing so, a nation must decide whether to allow its currency to be determined by free market forces (floating rate) or to be fixed (pegged) against some standard of value. This section, therefore, treats these two types of exchange rate systems.

The BOPS disequilibria that we saw in the first chapter could be adjusted in different mechanisms and in the two exchange rate systems. The present section also discusses the various ways of bringing balance of payments equilibrium.

* + 1. **Balance of Payments Adjustments**

Under the gold standard, the exchange rate between currencies is fixed and the **BOP adjustment** is effected through the changing price levels between the countries. But under the paper currency standard, the **adjustment** of disequilibrium in **BOP** is bought about by the changes in exchange rates between currencies.

The important objective of this sub-section is to discuss the automatic adjustments of the balance of payments that occur under a fixed exchange rate system. Various approaches to BOPs adjustment will be seen.

**A. Price Adjustments**

The original theory of BOPs adjustment is credited to the Englishman David Hume (1711-1776). His theory stresses the role that adjustments in national prices levels play in promoting BOPs equilibrium.

* **Gold Standard**

The classical gold standard that existed from the late 1800s to the early 1900s was characterized by the following conditions:(1) Each member nation’s money supply consisted of gold or paper money backed by gold; (2) Each member nation defined the official price of gold in terms of its national currency and was prepared to buy and sell gold at that price; and (3) Free import and export of gold was permitted by member nations.

These conditions result in a country’s money supply being directly tied to its balance of payments. A nation with a balance of payments surplus would acquire gold, directly expanding its money supply. Conversely, the money supply of a deficit nation would decline as due to gold out flow. This caused the internal prices to fall in the deficit national and rise in the surplus nation. As a result, the exports of the deficit nation would be encouraged and imports would be discouraged until the deficit in its BOPs was eliminated.

* **Quantity Theory of Money**

The reduction of internal prices in the deficit nation as a result of the gold loss and reduction of its money supply was based on the quantity theory of money. This is explained by *MV= PQ.*

Where M is the nation’s money supply, V is the velocity of the circulating money, P is the general price index and Q is physical output. According to classical, Q and V are constants. Hence, a change in M leads a direct and proportional change in general prices, P.

Thus, as the deficit nation lost gold, its money supply would fall and cause internal prices to fall proportionately. This would encourage exports and discourage imports of the deficit nation. The opposite would take place in the surplus nation. The process would continue until the deficit and surplus were eliminated. Note that the adjustment is automatic. It starts as soon as the BOPs disequilibrium arises and continues to operate until the disequilibrium is entirely eliminated.

However, this classical price adjustment mechanism is a hotly debated issue. It is questioned on many grounds. Its view that full employment always exists has been challenged. It has also been pointed out that, in a modern industrial world, prices and wages are inflexible in a downward direction. Therefore, changes in M will affect not P but rather Q. (A deficit nation’s falling money supply would bring about a fall in output and employment.) Furthermore, the stability and predictability of V have been criticized.

**B. Interest Rate Adjustments**

For simplicity, consider a world of two countries –A and B (A enjoying a surplus and B facing a deficit). The inflow of gold from the deficit to the surplus nation automatically results in an increase in nation A’s money supply and a decline in the money supply of nation B. Given a constant demand for money, the increase in nation A’s money supply would lower domestic interest rates. At the same time, interest rates in nation B would rise. As a result, investors of nation A would find it attractive to send additional funds abroad. Conversely, nation B’s investors would not only be discouraged from sending money overseas, but might find it beneficial to liquidate foreign investment holdings and put the funds in to domestic assets.

This process facilitates the automatic restoration of payments equilibrium in both nations. Because of the induced change in interest rates, stabilizing capital movements automatically flow from the surplus to the deficit nation. This reduces the payment imbalances of both nations. Although this induced short- term capital movement is of a temporary rather than continuous nature, it nevertheless facilitates the automatic BOPs adjustment process.

**C. Income Adjustments** We has seen that the classical BOPs adjustment theory relied primarily on the price adjustment mechanism, while delegating a secondary role to the effects of interest rates on private short term capital movements. The main criticism of the classical theory was that it almost completely neglected the effect of income adjustments. This later theory was developed by Keynes in 1930s.

The Keynesian adjustment theory suggests that, under a system of fixed exchange rates, the influence of income changes in surplus and deficit nations will automatically help restore payments equilibrium. Given a persistent payments imbalance, a surplus nation will experience rising income, and its imports will increase. Conversely, a deficit nation will experience a fall in income resulting in a decline in imports. These effects of income changes on import levels will reverse the disequilibrium in the balance of payments.

**D. Monetary Adjustments**

The monetary approach views disequilibrium in the BOPs primarily as a monetary phenomenon. It emphasizes that disequilibrium reflects an imbalance between the demand and the supply of money. Money acts as both a disturbance and an adjustment to balance of payments. This adjustment in the BOPs is again viewed as an automatic process. Let’s first understand the determinants of the demand for and the supply of money.

As you know, the quantity of nominal money balances demanded is directly related to income and prices. Increases in income and/or prices trigger increases in the value of transactions and an increased need for money to finance the transactions, and vice versa. The quantity of money demanded is inversely related to the interest rate. Whenever money is held rather than used to make an investment, the money holder sacrifices interest that could have been earned. If interest rates are high, people will try to keep as little money on hand as possible, putting the rest into interest earning investments. Conversely, a decline in interest rates increases the quantity of money demanded.

As you also know, a nation’s money supply is a multiple of the monetary base that includes two components. The domestic component refers to credit created by the nation’s monetary authorities. The international component refers to the foreign exchange reserves of a nation, which can be increased or decreased as the result of balance of payments disequilibrium.

Once you know about the determinants of money supply and demand, let me take you to the monetary approach of balance payments adjustment once again. According to it, all payments deficits in BOPs are the result of an excess in the supply of money over the demand for money in the home country. Under a fixed exchange rate system, the excess supply of money results in foreign exchange reserves’ flowing overseas, thus reducing the domestic money supply. Conversely, an excess demand for money in the home country leads to a payments surplus. This brings in the inflow of foreign exchange reserves from abroad, thereby increasing the domestic money supply. Balance in the nation’s payments position is restored when the excess supply, or the excess demand, has fallen enough to restore the equilibrium condition: money supply equals money demand.

**Table 3.1*: Impact of Changes in Money Supply and Demand on BOPs under Fixed Exchange Rates***

|  |  |
| --- | --- |
| **Change🟋** | **Impact on BOPs** |
| Increase in money supply | Deficit |
| Decrease in money supply | Surplus |
| Increase in money demand | Surplus |
| Decrease in money demand | Deficit |

**🟋**Starting from a position at which the nation’s money demand equals money supply and its BOPs is in equilibrium.

The approach suggests that economic policy affects the balance of payments through its impact on the domestic demand for and supply of money. Policies that increase the supply of money relative to the demand will lead to payments deficit, an outflow of foreign exchange reserves, and a reduction in the domestic money supply. Polices that increase the demand for money relative to the supply will trigger a payments surplus, an inflow of foreign exchange reserves, and an increase in the domestic money supply.

The monetary BOPs adjustment mechanism also suggests that non-monetary policies that attempt to influence a nation’s BOPs (like tariffs, quotas, or currency devaluation) are unnecessary. This is because of the fact that payments disequilibria are self-correcting over time. However, in the short – run, such policies may speed up the adjustment process by reducing excesses in the supply of money or the demand for money.

The monetary approach also has policy implications for the growth of the economy. Starting from the point of equilibrium, as the nation’s output and real income expand, so do the number of transactions and the quantity of money demanded. If the government does not increase the domestic component of the money supply commensurate with the increase in the quantity of money demanded, the excess demand will induce an inflow of funds from abroad a payments surplus.

**3.6 The link between saving, investment, and the current account**

**3.6.1. CA and Saving**

Recall from intro macro, in a closed economy, national savings equals investment:

Private investment: Sp = Y – C – T

Public saving: Sg = T – G

Total saving: Sg + Sp = Y – C – T + T – G but, Sg + Sp = S

Therefore; S = Y – C – G = I

In open economy we have;

S = Y – C – G = I + CA

**S – I = CA this is the same as CA = S – I ………1**

From the above **equation (1)** we can say that if saving increase investment decrease and current account increase and vice versa.

**1**. If savings is greater than investment, we must be lending money to the rest of the world

(ROW). The ROW is borrowing money to increase their capital stock.

**2.** If savings is less than investment, we must be borrowing money from the rest of the world

 (ROW). Domestic country is borrowing money to increase our capital stock.

* S > I = CA > 0 implies can loan to others
* S < I = CA < 0 implies must borrow from others