**Macroeconomics ECO202 Dr. Mary Habib**

**Notes on**

**Chapter 35: Topics in International Economics**

**Part II- International Finance: Exchange Rates**

**& The Balance of Payments**

**I. Exchange Rate Determination**

On the long run, when an exchange rate between two currencies is left to the market (i.e. flexible), it is mostly influenced by the demand for one country’s products relative to the other country’s products. Therefore, in order to understand this, we need to look at those relative demands.

**The Determinants of Import Demand (demand for the foreign country’s products)**

The same factors that affect households’ consumption behavior are likely to affect the demand for imports. Namely, the higher the income, the higher the demand for imports (ceteris paribus). Likewise, tastes and preferences play a role and so do relative prices of the foreign country’s products vis a vis others. For example, the high demand for Chinese goods around the world is due to their relatively cheaper prices.

**The Determinants of Exports (demand for the domestic country’s products)**

This is similar to the above but in the opposite direction. The demand for a country’s exports depends on economic activity in the rest of the world—rest-of-the-world wages and incomes, wealth, interest rates, and so on—as well as on the prices of domestic goods relative to the price of rest-of-the-world goods. If output/income in our trading partners increases, our exports may increase due to the higher demand.

To understand how exchange rates are determined, we can use a simple supply/demand model. Let us do this for the case of the US $ and the Euro. [Note that the figure below uses British sterling pounds and dollars, but it is the same thing.]

**The Demand for Euros (Supply of Dollars)**

1. Firms or governments that import European goods into the United States
2. U.S. citizens traveling in Europe
3. Holders of dollars who want to buy European stocks, bonds, or other financial instruments
4. U.S. companies that want to invest in Europe.
5. Speculators who anticipate a decline in the value of the dollar relative to the Euro. Therefore, they might now buy Euros (supply dollars) in order to take advantage of that.

**The Supply of Euros (Demand for Dollars)**

1. Firms or governments that import U.S. goods into Europe
2. European citizens traveling in the United States
3. Holders of Euros who want to buy US stocks, bonds, or other financial instruments
4. European companies that want to invest in the United States
5. Speculators who anticipate a rise in the value of the dollar relative to the Euro. Therefore, they might now buy dollars (supply Euros) in order to take advantage of that.

The equilibrium exchange rate occurs at the point at which the quantity demanded of a foreign currency equals the quantity of that currency supplied.

**Appreciation of a Currency --** The rise in value of one currency relative to another. If the LL-$ exchange rate is quoted as 1500 LL/$, a decrease in this rate means that the LL has appreciated vis a vis the $ (or the US $ has depreciated vis a vis the LL).

Appreciation of the domestic currency leads to more imports (as they become cheaper) and less exports (as they become more expensive/less competitive).

**Depreciation of a Currency --** The fall in value of one currency relative to another. An increase of the exchange rate to 1510 LL/$ implies a depreciation of the LL.

Depreciation of the domestic currency leads to less imports and more exports (in similar reasoning as the above). Therefore, all else equal, a depreciation leads to a higher NX and therefore to a higher GDP.

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**Two important factors cause the exchange rate to change:**

On the long run: Any increase or decrease in the demand for goods produced in one country leads to a change in its exchange rate. As an example, in the case of Europe and the U.S., an increase in the demand for US products in Europe (perhaps because the Europeans simple like US products or think they are superior or more stylish or whatever) also causes the demand for dollars to increase which leads to an appreciation of the dollar vis a vis the Euro *on the long run*.

On the short run: The most important shifting factor on a daily basis is interest rate changes (REAL OR EXPECTED) on different currencies. For example, if the interest rate on dollar-denominated assets (bank accounts or bonds) increases (or is expected to increase) due, perhaps, to a contractionary monetary policy in the US, then the demand by foreigners for dollars increases (as dollar assets become more attractive). This can be seen as a shift to the right of the dollar demand curve. The dollar then appreciates against other currencies. The expansionary monetary policies practiced in the U.S. over the last two years since the beginning of the crisis is partly to blame for the steep depreciation in the value of the dollar vis a vis other major currencies. More recently (i.e. over the past several months) with the deepening crisis in the EU and the economic recovery in the U.S., the dollar seems to be slowly regaining some of its strength vis a vis the Euro.

**Note to Students:**

**The following text (pps 5-13) is what you must read and understand in order to answer the two bonus questions on the final exam. Other interested students may also wish to skim this material as it contains some important insights on issues of relevance to the Lebanese economy and that are often discussed in academic and political circles.**

**II. BOP Basics**

One of the most important statistical records maintained and published by governments all over the world is the balance of payments (BOP). A country’s BOP is a periodic record of that country’s transactions vis a vis the rest of the world. It is based on data collected by various government and private agencies and maintained and published monthly and quarterly by the central bank (usually). From the BOP policymakers derive information about important issues such as external debt and trade balance. In countries that follow a flexible (market-determined) exchange rate regime, the trade balance and capital inflows and outflows are tightly linked to the exchange rate, as we shall see later in this chapter.

Let us start with a simplified model of a small nation conducting various types of transactions with the outside world.

Credit entries (+) represent receipts (or *inflows*) of foreign exchange. Foreign exchange comes into country from a variety of sources. The following is a summarized list:

1. exports of merchandise or services (→foreign exchange in)
2. inflows to families of nationals working abroad, which is also known as incoming workers’ remittances (→foreign exchange in)
3. income received by nationals for their foreign investments abroad (→foreign exchange in),
4. direct investments inside country by foreign MNCs (→foreign exchange in)
5. sale of domestic financial assets such as bonds, stocks, or bank accounts to foreigners (→foreign exchange in).

Debit entries (-) represent payments (or *outflows)* of foreign exchange. Foreign exchange goes out of country for a variety of reasons. The following is a summarized list:

1. imports of merchandise or services (→foreign exchange out)
2. transfers abroad to families of foreigners working in the domestic economy, which is also known as outgoing workers’ remittances (→foreign exchange out)
3. income paid to foreigners for their domestic investments (→foreign exchange out),
4. direct investments by domestic firms (→foreign exchange out)
5. purchase of foreign financial assets by national residents (→foreign exchange out).

So to summarize, countries receive foreign exchange in return for selling other countries goods, services, and financial assets. Similarly, they pay foreign exchange when they buy from other countries goods, services, and financial assets.

Now that we know what are positive and negative entries, we need to further break things down into short-term transactions and long-term transactions. BOPs are normally divided into three components: the current account, the capital account, and the cash account (also called the official monetary reserve account).

In what follows we go thru each of these three components in some detail. This should be read in conjunction with the table below (which is illustrative only, meant to help you understand where each item goes).

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**Clarification on Table Above and Explanation Below:**

**The classification followed in these notes is the standard classification in use by the IMF prior to 2000. The new classification now observed by the IMF renamed the “capital account” as “financial account” and allotted the term “capital account” to intangible assets such as copyrights and trademarks as well as migrant assets. The Lebanese government and many others around the world now follow this new classification.**

**So as you work on MiniAssignment 6, keep in mind that the new terminology “Financial Account” is the same as the “Capital Account” listed here, and includes the same entries.**

***A. The Current Account: (Abbreviated CA)***

Introductory Remark about CA: All the transactions/items under this account have *no future obligations* or consequences. They are short-term: buying goods and services *now*, paying/receiving investment income *now*. They do not entail any future payments of interests or dividends. They are begun *and* completed in the present time.

***Commodity Exports and Imports*** (also known as Merchandise Flows)*:* This consists of the trade (export and import) of all types of finished goods and raw materials. In a typical BOP table for a developing country, items may be generally categorized as “primary products” or “manufactured products”.

***Services Flows****:* This consists of the trade (export and import) of services like shipping, tourism, royalties, transportation, insurance, consulting, legal services, education, banking, engineering, software design. Make sure you remember that services are produced and consumed instantaneously. Therefore, in order for us to import a service from a foreign country, we must (usually) go there. A prime example is a Lebanese taking a vacation in Turkey. This is an import of a tourism service for Lebanon. Similarly, in order for us to export a service to a foreigner, the foreigner must (usually) come here. A prime example is a person from Qatar seeking medical treatment in Lebanon. This is an export of health services for Lebanon. Finally, each time Lebanese exporters send merchandise abroad on a foreign ship, this is an import of shipping services. Likewise, each time foreign passengers travel on Middle East Airlines, this is an export of transportation service.

Final note on the services item: As you might imagine, service trade is much less precisely measured than that of merchandise trade. Port authorities in most countries have an exact (or near exact) measure of merchandise coming in and going out of countries. However, the same is not true for many services (e.g. tourism). The way government statisticians usually account for these services is by estimation.

For example, to estimate the value of sold tourism services, they may use airport passenger data along with sales reports from a sample of touristic sites, restaurants, hotels, etc and an estimate of the percentage of customers that are foreign.

***Investment Income & Debt-Service Payments****:* These two categories are similar in function. They comprise the receipt and payment of investment income (dividends and interest) on outstanding foreign investments here and domestic investment abroad. Taking Lebanon as an example, this would involve the annual interest and dividend payments made by Lebanese firms and government to foreign investors (outflows/debit/negative), and the annual income received by Lebanese citizens on any foreign stocks and bonds they own (inflows/credit/positive).

In the case of government loans, these payments are called debt service payments. They may be substantial for developing countries (especially highly indebted ones). Debt service is formally defined as the regular repayments made by a loan recipient (borrower) to the loan provider (creditor). [Repayments include both interest and principal installments.]

***Net Remittances and Transfers:*** This is made up of remittances of domestic workers abroad sending money back home (positive), and foreign workers sending money to their home countries (negative). For Lebanon, it is where the remittances of the Lebanese working in Dubai (for example) to their families in Lebanon gets recorded. Note that, for Lebanon, this is very substantial. For the year 2005, the current account deficit was some $6 billion, and the workers’ remittances part was a surplus of approximately $1 billion.

The category also includes the term “transfers” which typically refers to government-to-government grants (part of a larger category that is very significant in international politics known as “foreign aid”).

***B. The Capital Account: (Abbreviated KA)* [Also known as the “Financial Account” according to the IMF new system of classification]**

Introductory Remark about KA: All the transactions/items listed here carry future consequences. Interest or dividends must be paid on them. [In the case of loans to governments, for example, the whole loan must be repaid in the future.] In other words, they are transactions that are done *now* with consequences in the *future*.

The capital account records the inflows and outflows destined for the purchase of *financial* assets (that bear future consequences such as interest and dividends). When foreigners buy the domestic assets of a country, these are recorded as inflows. When citizens of a country buy foreign assets, these are recorded as outflows.

Important note on terminology: Remember that financial assets include stocks, bonds, bank deposits, and currency. A dollar bill in your pocket is a foreign asset for you. Therefore, anytime a Lebanese citizen opens a dollar-denominated account (even if it is in a Lebanese bank), that is considered an *outflow* (from the perspective of BOP recordkeeping). Similarly, anytime a foreigner opens a LL-denominated account, this is a purchase of a domestic asset, so it is an *inflow*.

Keep the above in mind as you proceed to the following.

Typical subheadings under the capital account are:

***Foreign Direct Investment (FDI)****:* Investment that results in ownership position of 10% or more, e.g., Toyota and Honda building factories in the US or India (which will be recorded as inflows of FDI into the US or India). Examples in Lebanon include the French *Geant* and BHV supermarkets establishing subsidiaries (inflows of FDI/positive), and BLOM or Audi Banks establishing branches in Syria and Egypt (outflows of FDI/negative). Of course, this is recorded in the year/period that the investment actually occurs. If the parent company of BHV today sends further funds to expand their subsidiary here in Lebanon, this will appear under this year’s BOP capital account.

***Portfolio Investment****:* Foreign purchases of Lebanese financial securities (stocks and bonds issued by Lebanese firms and government) that do not involve a transfer of control (e.g. a foreigner or Lebanese expatriate purchasing a Solidere stock). Purchases of Lebanese government bonds by foreigners (usually foreign commercial banks) are also recorded here (as an inflow).

***Private Loans****:* Inflows into banks of private foreign deposits (i.e. foreigners establishing bank accounts in Lebanon *in Lebanese currency*). These are recorded as positive (credit). They are labeled “loans” in the table to indicate that they are actually lent by foreign depositors to the domestic banks.

***Resident Capital Outflow:*** This category is the same as the preceding two (portfolio and bank deposits) but in the opposite direction. Here we have *outflows* of domestic capital destined for investment in foreign financial markets. Examples: a) Funds sent by Lebanese nationals to be deposited in Swiss bank accounts. b) A Lebanese buying stocks issued by the giant American chipmaker *Intel*.

***Government and Multilateral Flows:*** This item records public fund flows to and from a nation’s government. For most developing countries it is an inflow of aid (in the form of loans made, or guaranteed, by the IMF, the World Bank, or other nations). For Lebanon, for instance, this is where the loans provided under the Paris III conference would be recorded (*when they arrive*).

Note, however, that the interest payments on these loans appear in the current account and not in the capital account (see above). This is because each interest payment is independent of anything else and *does not* involve consequences, whereas the incoming loan is a “capital account” entry as it does involve a future obligation.

Note how the two types of foreign aid are classified differently. Foreign aid that is in the form of *grants* is classified as “transfers” under “current account”. Nothing has to be done in the future. But foreign aid that is in the form of *loans* to governments (like from the World Bank, the European Union, or another government) is classified under “capital account” as it has to be paid back with annual interest payments.

Side Note on Government Loans (FYI only): In the table above, you will note that this is broken down into “loans” and “amortization”. The first denotes the influx of new loans (that’s why it’s positive). The second term denotes the outflow of loan repayments (that’s why it’s negative). When a government (or anyone else) receives a loan, the principal of the loan must be repaid in annual installments. These are called “amortization payments”.

Another Side Note on Government Loans: The total amount borrowed by the government from foreigners (and yet to be paid) form what is commonly known as “external debt”. It is the accumulated loans owed to foreigners. FYI, Lebanon borrowed huge sums of money to fund its reconstruction of the downtown area and other infrastructure in the early 1990s. A lot of this has already been paid. Later, in the late 1990’s most borrowing by the government was from local commercial banks (in the form of bonds). Currently the external debt portion is small relative to the total public debt owed by the government. External debt could also include loans borrowed by the domestic private sector from foreign banks, but in the case of Lebanon it is mainly loans borrowed by the government from foreign banks or foreign organizations (such as the World Bank or the EU).

When a country runs an overall *current account* *deficit* (which mainly means that its imports exceed its exports), the implication is that the country is a *net borrower*, and must have a capital inflow to finance part of that current account deficit. This would take the form of a *capital account* *surplus* (recall that this occurs when capital and investment inflows exceed capital and investment outflows.). This, incidentally, has been the situation of the U.S. for the most part of the last twenty years. The US has been a net borrower since the early 80’s. This is because the US imports more than it exports (especially with the competition presented by East Asian merchandise). In the case of the US, the capital account surplus has offset the current account deficit.

Alternatively, a country may have a current account surplus (such as Japan, usually, and China, in recent years). Such a country would be a *net lender* to the rest of the world. It would have a capital outflow (or a capital account deficit). In the case of China, for example, the capital outflow has mainly taken the form of Chinese government and corporate purchases of US government bonds (an outflow of capital for China). Usually, large current account deficits imply large capital account surpluses, and vice versa.

***C. The Cash Account***

When a central bank purchases or sells foreign assets, the transaction appears in the country’s cash account.

The cash account is the balancing item.

Why is a balancing account needed?

By definition, the BOP must sum up to zero. This means that the sum CA + KA + Cash Account = 0. In other words, the cash account must offset the sum of CA+KA.

As already mentioned, a country with a CA deficit would normally have a KA surplus, and vice versa. If the two offset each other, then the cash account would be zero (which is unlikely).

Let’s take the case of a typical developing country. The most typical situation is a large CA negative partially offset by a smaller KA positive (in the form of inflows of investments and/or government loans). The difference must be covered by the central bank. In this case, the cash account must provide the remaining positive.

To clarify the table above, note that the cash account records a *negative* when the central bank acquires foreign currencies (foreign assets) and a *positive* when it acquires domestic currency (domestic assets). In the table, the cash account registered a net decrease in official reserves of 25 million (i.e. +25). Why?

The current account in the table had a negative 27, and the capital account a positive 2. So the total on the two accounts together is a negative 25. This has to be offset by a positive 25 in the cash account. You can think of this as the central bank of the country in question acquiring from the public the 25 in domestic currency and exchanging them for 25 in foreign currency (in order to pay the foreigners for the excess imports). Acquiring foreign assets is a negative for a central bank (i.e. it’s a financial outflow) and acquiring domestic assets is a positive (a financial inflow). This is why the 25 is entered under the cash account as a positive because the central bank acquired domestic currency and gave out foreign currency. The entry is labeled “net decrease in official reserves” to signify that there was a decrease in foreign currency reserves.

In general, nations accumulate international cash reserves in any of the following three forms: 1) foreign hard currency when they sell more abroad than they purchase from abroad, 2) gold, and 3) deposits with the International Monetary Fund (IMF), which often acts as a reserve bank for nations.

Here are a couple of examples to illustrate how the above scenario works in practice.

Suppose a Lebanese auto dealer imports some Nissans from Japan and pays the auto company with a check for LL 750,000,000. The Nissan company’s branch here in the Middle East might want to deposit the money in a Lebanese bank account in LL. [By the way, the majority of foreign firms who do business with Lebanon have LL bank accounts here in Lebanon.] This would appear as a positive entry in Lebanon’s BOP under the capital account to offset the negative entry already recorded under the current account (imports). The central bank was not involved in this transaction.

But what if Nissan does not want to be paid in LL (i.e. Nissan does not want to invest in a Lebanese asset)? In this case, the Lebanese importer would be instructed to pay in Yens. To do so, the Lebanese importer must convert LL to Yen and send the Yens to Japan. How will this conversion take place? Even if the importer goes to a local bank to perform the currency switch, it is the *central* bank that will have to take in the LL and give out the Yens in the final analysis. Therefore, the cash account would record this as a positive (central bank *acquiring* LL). This is an inflow (positive entry) under the cash account because it represents purchase of domestic assets (the central bank has “purchased” LL).

What does this imply for the country’s foreign exchange position?

Let’s now consider the aggregate situation (all imports and exports and financial transactions). Suppose the current account records a negative net amount (imports exceed exports: CA deficit), then this must be offset by a positive amount under the capital account. Suppose, as an example, we have a positive net *private and public* inflows (positive KA) but that it is *not* sufficient to offset the CA deficit. Where will the rest come from? The rest will be covered by the central bank. How? The central bank will provide the foreign currency needed to pay the foreign suppliers. Its reserves in foreign currency thus decrease and its reserves in domestic currency increase (in words, the central bank *takes in* the DC and *gives out* the FC). This is a positive entry under cash account. Now the two positive entries under capital and cash account *together* offset the negative CA entry.

Side Note FYI: A central bank in a country with continuous BOP deficits may eventually run out of foreign currency to maintain this balance. Then the country would be forced to borrow additional foreign reserves from the IMF. Another alternative would be for the country to work hard on improving its CA by promoting its exports.

Another Side Note FYI: Part of the pledges that were made in the Paris III donor conference to assist Lebanon were destined for the Central Bank. For example, Saudi Arabia pledged a total of 1.5 billion to be deposited at the central bank to help with BOP shortages. Fortunately, the banking sector in Lebanon has performed so well that a lot of foreign funds have poured into the country lately. Also, FDI has improved in Lebanon, mostly by foreign firms who work in the real estate sector financing the activities of their local branches here. All these are positives under the KA. Therefore, most of the Saudi deposit was not even needed after all.

The above explained how a central bank records a positive under the cash account. When will a central bank record a *negative* under the cash account? When its domestic currency reserves decline (in other words, when it acquires foreign currency from public and private entities in the country in exchange of domestic currency). Countries like Japan and China have recently registered enormous CA surpluses vis a vis the U.S. The *positive* balances under their current accounts must be offset by *negative* entries under their capital and/or cash accounts. This is usually ensured with the willingness of private Japanese and Chinese investors to acquire U.S. assets and/or the central banks of these nations acquiring US assets. [FYI, the majority of U.S. government bonds are now owned by the Chinese government and private investors. In China’s BOP, this is the *negative* capital and cash account entries that offset the positive current account entry.]

Here’s another example: In most of the post-war years, Japan has been a country that sells more to the world than it imports from the world. Generally, Japan runs a positive CA balance. When Japanese private investors purchase US stocks and bonds or maintain Dollar deposits, this is recorded as an outflow under the KA part of Japan’s BOP. If all such outflows are not enough to offset the whole Japanese CA surplus, the Japanese central bank must acquire FC to fill the remaining gap. This is recorded as a negative under cash account (i.e. it’s an outflow).

Important Note: In the case of Lebanon, between the years 2009-2011, a BOP surplus has been recorded. This basically means that while the CA was still negative (deficit), the KA *surplus* exceeded that deficit. Funds flew into the country from all over the world, particularly from the Lebanese in the diaspora (expatriates) and Arab investors. Those have invested in all sorts of Lebanese financial and real assets (direct investment in the tourism, health, and construction sectors; purchases of Lebanese government bonds; bank flows into Lebanese banks, etc.).

**Final Important Note:**

Remember that each currency can only be issued by the central bank of the country of that currency. The *ultimate* source of US dollars is the US Federal Reserve. Likewise, the *only* source of LL is the Lebanese central bank. In most countries, people convert their domestic currency to other currencies *only* when they wish to purchase goods, services, or financial assets from other countries. The high degree of “dollarization” in Lebanon is somewhat unique and is caused by several historical and political factors.