BALANCE OF PAYMENTS

The Balance of Payments is a set of accounts showing the economic transactions between the residents of one country and the residents of the rest of the world. The accounts summarize the transactions, or flow of payments, over a certain time period, generally one quarter or one year.

The defining principle of the Balance of Payments accounts is the flow of currency.

The accounts are conveniently divided into two sub accounts, the Current Account and the Capital Account. Sometimes, it can be divided into three or four accounts, Current account, Private Capital Account, Official Reserves (official capital account) and the Statistical discrepancy. Due to the double entry bookkeeping, the Balance of Payments account is always zero. In this sense the Balance of Payments is always in equilibrium. However, the component accounts will generally be in imbalance and the interesting economic interpretations center on the sign and magnitudes of the individual sub accounts.

Credit Items, are entries that bring foreign exchange into a country, i.e. are inpayments (+) and include:

Exports of goods and services
Receipt of unilateral gifts from abroad
Sales of US assets to foreigners
Inflows of reserve assets

These transactions are all associated with producing a demand for HK dollars and give rise to positive entries in the HK Balance of Payments.

Debit Items: are entries that take foreign exchange out of a country, i.e. are outpayments (-) and include:

Imports of goods and services
Donation of unilateral gifts to abroad
Purchase of foreign assets
Outflows of reserve assets

These transactions are all associated with producing a supply of HK dollars and give rise to negative entries in the US Balance of Payments.

Current Account

This account records the flows of goods, services and transfers and is generally broken down into three separate accounts:

(1) Merchandise Trade: tangible goods and commodities,
(2) Services: which result from using factors of production, land, labor and capital. The payments for the services of capital, i.e. interest and dividends are the largest items.

(3) Final Transfers consist of Unilateral Transfers and Interest Income on HK assets abroad;
(3a) Unilateral Transfers consist of government aid to foreign countries, gifts to residents of other countries and retirement pensions), while
(3b) "Interest income on HK assets abroad" involves the interest payments to foreigners of their holdings of US government debt.

Part of the Current Account is known as **Net Exports** (X) and is defined as the sum of Merchandise Trade and Services. From the national income accounting identity,

$$Y = C + I + G + X.$$

The size of X as a percentage of GNP, i.e. Y, is often taken as a measure of the degree of "openness" of an economy.

Capital Account

This account details public and private investment and lending activities. The Capital Account is sometimes known as the Private Capital Account. When a nation sells valuable assets such as stocks, bonds, buildings or land to foreigners; this is regarded as a capital inflow since the country is receiving currency for the exports of capital. From an accounting perspective, the Capital Account is the sum of the following components:

(1) Direct Investment, where a US company or resident purchases part of the ownership of a foreign corporation.
(2) Security purchases, i.e. private sector net purchases of equity stock and debt securities.
(3) Bank Claims and Liabilities: loans, deposits abroad, etc.
(4) US government assets abroad other than official reserve assets.

Another statistical breakdown of the Capital Account is in terms of Portfolio Investments, which are transactions of financial assets with a maturity time of more than one year; Short term Investments; which are transactions of securities with a maturity of less than one year and Direct Investments; which are transactions which involve some degree of managerial control.

Net Change in the Official Reserves

This account describes the activity of a nation's central bank in terms of movement of assets to and from other countries central banks. The movement of central bank reserve assets is traditionally in response to the nation's current and capital accounts. Analogously, if the balance of the current and capital accounts is in deficit, then the central bank will have to reduce its holdings of foreign currencies and /or gold. The Net Change in the Official Reserves is sometimes known as the

Official Capital Account, or the Official Settlements Account. The account consists of the following components:

(1) Gold,
(2) Special drawing Rights, i.e.SDRs,
(3) Foreign currency holdings and the
(4) Reserve position in the IMF.

The Statistical Discrepancy is listed by convention in the Capital Account since capital movements are more difficult to measure than movements of goods and services. Until 1976 this entry was known as "errors and omissions", which is perhaps a more accurate description of this account

Recent History of the Balance of Payments Accounts of Hong Kong

The Balance of Payments accounts of Hong King are published quarterly and yearly by the Census and Statistics Department. Table 1 includes the general summaries of the current and capital accounts for the third quarter, 2001.

Interpretation of the BoP Accounts

One view of the Balance of payments is that the capital account accommodates the current account. That is that a current account deficit implies the US is consuming more than it is producing and is borrowing from abroad to finance the current consumption. This view implies that the trade balance drives the exchange rate and capital account. The reasoning was that the exchange rate only existed to allow countries to trade goods and services. Under a system of fixed exchange rates, any trade imbalance at the end of the year, would result in a corresponding capital imbalance which would require movements of reserves (capital). Hence a current account deficit implied that the country is consuming more than it is earning. In order to finance current consumption, capital has to be sold abroad; i.e. borrowing from abroad is being financed by selling capital.→ Trade flow approach: the BOP disequilibrium comes from the trade imbalance.

A more likely paradigm in the 1990s is that capital flows drive trade flows. In today's world is it correct to attribute the US's trade deficit with Japan as being due to the US consuming too much and having to sell its capital to Japan? Another interpretation is that Japan has excess savings and finds the US an attractive country for investment opportunities. The US then buys Japanese goods and recycles those savings back to Japan in the form of a trade deficit. Hence in this paradigm the trade deficit is a sign of economic vigor rather than weakness.→ Monetary approach: the BOP approach results from the monetary disequilibrium.

If trade barriers are removed by Japan, a likely scenario would be for the Japanese economy to become more efficient and competitive. Allowing US firms to compete in Japan would presumably result in lower prices for Japanese consumers and consequently increased Japanese savings, which would then create an even larger capital outflow from Japan and a larger US trade deficit.

It implies that the overall imbalance on the current and capital accounts should not equal the change in the official reserves.

Traditional Approach to Balance of Payment and Exchange Rate

Between 1920s through 1960s when trade is the dominant factor in the balance of payment and exchange rate variability, traditional approach such as Trade flow model, Elasticities model and Absorption model were the reasonable theories for the balance of payment and exchange arte movements

Trade Flow Model

Previously, we discussed the institutional details behind the structure and some basics of foreign exchange market. Now, we will consider the causes of exchange rate movements due to the supply and demand conditions.

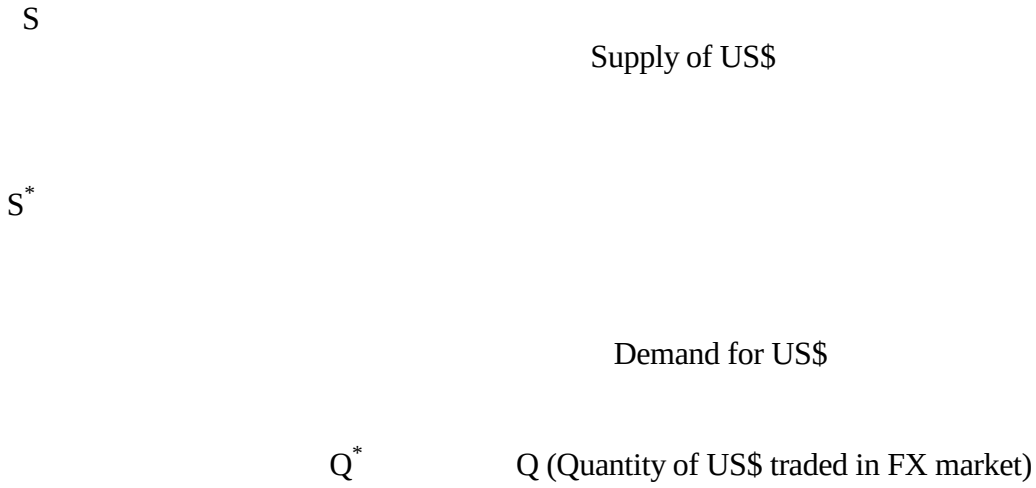
One primary reason to trade currencies is to facilitate the international trade of goods and services. So, in this trade flow model, the supply and demand of foreign currencies are determined only by the trade considerations.

The HK$/US$ bilateral exchange rate represents the price of the HK dollar in terms of US dollar. In order to understand the determinants of the exchange rate, we have to consider the relative demand and supply of HK dollar.

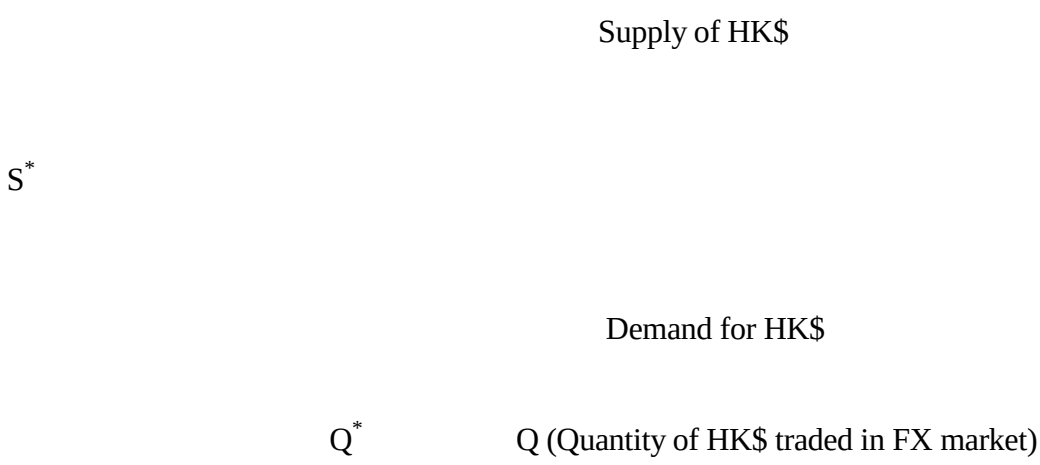
Demand and Supply curve for the exchange rate.
Since the demand and supply for the exchange rate are different from the demand and supply conditions for regular goods, it is not obvious that they will have the usual slopes.

An appreciation of US$ relative to HK$ will make US goods more expensive for HK people so that it will lead to a reduction in the exports from US to HK. Hence, the appreciation of exchange rate (S) will lead to decrease in US$ outpayment and the quantity of US$ traded in the foreign exchange market so that there is a downward sloping demand curve for the exchange rate (S). And, similarly as US$ appreciates, the price in US$ of HK goods becomes cheaper. So, the US people will import more HK goods and spend more US$ to buy HK goods. This will increase the HK inpayment of US$ and produce a positively sloping supply curve.

In terms of US$,



In terms of HK$,



Under the floating exchange rate system,
The HK$ exchange rate would appreciate to a new level if there exists a excess demand for HK$ from the imbalance in the Balance of Payments.
The HK$ exchange rate would depreciate to a new level if there exists a excess supply for HK$ from the imbalance in the Balance of Payments.

Under the fixed exchange rate system which keeps the exchange rate fixed at some level,
If there exits imbalance in Balance of Payment, the central bank should use the official reserves to maintain the exchange rate at the fixed level. Otherwise, the central bank should revaluate the exchange rate.

According to the trade flow model, changes in trade determine the changes to the exchange rate. The

trade flow model analyzes the supply and demand of foreign currencies through looking at the effects of how various macroeconomic and financial variables affect the exchange rate.

In this framework, the following relationships can be expected:

(1) An increase in HK prices will lead to a HK$ depreciation.

(2) An increase in HK income will lead to a HK$ depreciation.

(3) An increase in HK interest rates will lead to a HK$ appreciation.

Income effects on exchange rate: increase in HK real income
An increase in HK real income will lead to an increased demand (imports) for US goods and result in the trade deficit. So, the supply of HK$ will be increased to exchange US$. Hence, HK$ will depreciate against US$.

S(US$/HK$)

S

S'

S_0
S_1

D

Q_0 Q_1 Q (Quantity of HK$ traded in FX market)

Price effects on exchange rates: increase in HK price level
If HK price level is growing faster than that of US, HK goods will be less competitive in US and lead to a reduction in the exports of HK. So, the demand for HK$ will decrease. And, US goods will be cheaper in HK and lead to an increase in imports to HK from US. Thus, there will be an increase in the supply of HK$. Here, both demand and supply conditions will have the effects of depreciating HK$ against US$.

S(US$/HK$)

S

S'

S_0

S_1

D

D'

Q_0 Q_1 Q (Quantity of HK$ traded in FX market)

Interest rate effects on exchange rates: Increase in HK nominal in interest rate
An increase in HK nominal interest rate will make HK bonds more attractive to investors from foreign countries including US. So, there will be an inflows of speculative capital and an <u>increase in demand for HK$</u> from US. Thus, <u>HK$ will appreciate</u>.

S(US$/HK$)

S

S_1
S_0

D'

D

Q_0 Q_1 Q (Quantity of HK$ traded in FX market)

If the trade flow model was the only explanation of the present determinants of the exchange rate, the flow of trade between countries would determine the exchange rate. Historically, before capital movements became so substantial, this trade flow model was a reasonable approximation to reality. But, recently, <u>the monetary theory or asset market approach</u> has become the dominant view of exchange rate determination.

J-curve effect

J-curve effect represents the relationship between the exchange rate and the trade balance. Under the fixed exchange rate system, a government performs a devaluation of the domestic currency in order to respond to a persistent and growing balance of trade deficit.

Devaluation will make the balance of trade worse in the short run as the prices of imported goods increase (pass-through effect), but it will lead to an improvement of the balance of trade in the long run since more substitution will occur in the home market so that the imports will be reduced. This phenomenon is called J-curve effect.

Balance of trade

surplus

Time

deficit

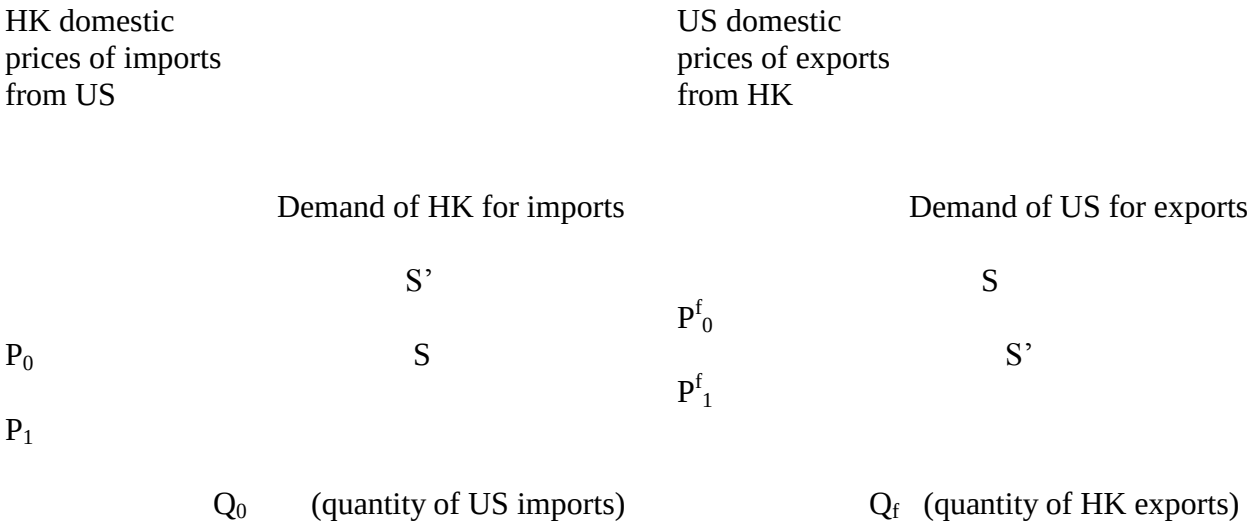
Hong Kong is now operating under a fixed exchange rate system in which HK$ is pegged to US$. So, if HK$ is appreciated relative to US$, HK goods will be more expensive for US people and lead to the decrease in the volume of exports and result in the trade deficit. In order to accommodate the persistent trade deficit, HK monetary authority has to **devalue** HK$ assuming that HK does not have enough foreign reserve to keep the exchange rate. Hence, the cheaper HK$ will increase the exports but reduce the imports. Actually, the volume of imported goods would depend on **the substitutability** of with respect to the domestic goods. If HK people cannot substitute the imported goods with the domestically produced goods, HK should import the same amount as before the devaluation but at the higher prices due to the devaluation of HK$. Thus, in short run, the trade balance will be worse as the prices of the imported goods rise. However, in long run, as the substitution goods are available in the domestic market and the volume of imports decreases, the trade balance would improve.

Pass-Through analysis and elasticity

A currency devaluation results in higher domestic prices of imported goods and service in short run. In other words, the currency devaluation is passed through to the domestic price. This is called **Pass-through effect**. So, the pass-through analysis considers the ability of prices to adjust in the short run.

When a country devalues its currency, as the import prices rise in the country, the demand for

imports should be reduced. And, the lower price of domestic exports to foreign countries would increase the demand for exports. Hence, the devaluation will eventually result in the improvement in the trade balance. However, in the short run, the response of goods to the new price after devaluation is so slow that the quantities of the traded goods do not change much. So, the new prices could contribute to the J-curve effect. The extreme case of **full pass through effect** happens when the domestic demand for imports and the foreign demand for domestic exports are all inelastic.



Even though the above example cannot be realistic, the important contribution of the pass-through analysis is that it indicates how changing goods prices in the short run can affect the balance of trade when the quantity response is quite small.

Monetary Approach to Balance of Payment under the fixed exchange rate system

The traditional theories of the balance of trade had been popular over 30 years. But they were the theories that emphasized trade in real goods and services and did not consider the capital account. After 1970s, as the international capital flows and financial markets became more important, economists recognized the importance of financial assets in the international economy along with the trade. Thus, the monetary approach became the popular model to analyze the balance of payment and the exchange rate determination.

The monetary approach to balance of payment focuses on the monetary aspects of the balance of payments. Thus, any BOP disequiliburium is resulted from the monetary disequiliburium, the difference between money demand and money supply.

Under the fixed exchange rate system, money supply adjusts to money demand through international flows of money by balance of payment imbalances while under flexible exchange rate system, the money demand will be adjusted to the money supply set by the central bank through exchange rate changes.

Increase in money supply

As you know, the money supply is composed of foreign exchange reserves (FX) and domestic credit (DC). Suppose the central bank raise the money supply through the increase in the domestic credit. Assuming the exchange rate and the price level of foreign country are fixed, the increase in the money supply by the domestic credit will make the domestic price increase and cause the domestic people to import more. Thus, it will lead to a balance of payment deficit. Since the exchange rate is fixed, the central bank should use (sell) the foreign exchange reserves to compensate the deficit and prevent a depreciation of the currency. This changes the composition of the money supply since it will have less foreign reserves and more domestic credit to offset the decrease in the foreign reserves. Hence, the increase in money supply or domestic credit generates a balance of payment deficit, and changes in the composition of the money supply.

Increase in money demand

If the real income increases, money demand will also increase. Then people will spend less so as to raise their money holdings. So, the demand for the imports will decrease and result in the balance of payment surplus. In order to maintain the fixed exchange rate of the currency, the central bank must buy foreign reserves.