

Open Economy Macroeconomics

An **open economy** is defined as one that interacts with other nations through various channels, primarily the **output market** (trading goods and services) and the **financial market** (buying and selling financial assets).

In such an economy, foreign trade influences aggregate demand; **expenditure on imports acts as a leakage** from the circular flow of domestic income, while **exports act as an injection** that increases demand for domestic output.

The price of one currency in terms of another, which facilitates these international transactions, is known as the **foreign exchange rate**.

1. The Balance of Payments (BoP) Account

The **Balance of Payments (BoP)** is a systematic record of all economic transactions between the residents of a country and the rest of the world over a specified period, typically one year.

The BoP consists of two main accounts: the **Current Account** and the **Capital Account**.

A. Components of the Current Account

The Current Account records the trade in goods and services as well as transfer payments.

- **Trade in Goods:** This includes the **export and import of physical items**. The difference between the value of exports and imports of goods is called the **Balance of Trade (BoT)** or Trade Balance.
- **Trade in Services:** This consists of **factor income** (net international earnings on factors like labour, land, and capital) and **non-factor income** (sale of service products like shipping, banking, tourism, and software services).

- **Transfer Payments:** These are "free" receipts that residents receive without providing anything in return, such as **gifts, remittances, and grants**.

B. Components of the Capital Account

The **Capital Account** records all international transactions involving **assets**, which are forms in which wealth can be held (e.g., money, stocks, bonds, and government debt).

- **Investments:** These include **Foreign Direct Investments (FDI)**, where assets are directly controlled, and **Foreign Institutional Investments (FII)** or portfolio investments.
- **External Borrowings:** Examples include external commercial borrowings and short-term debt.
- **External Assistance:** This includes government aid and multilateral or bilateral loans.
- **Recording Rule:** The purchase of a foreign asset is a **debit item** (outflow of foreign exchange), while the sale of a domestic asset to a foreigner is a **credit item** (inflow of foreign exchange).

2. Balance of Payments: Surplus and Deficit

A nation's BoP is in equilibrium when the sum of the current account and capital account equals zero.

- **BoP Surplus:** This occurs when **autonomous receipts exceed autonomous payments** (Receipts > Payments), leading to an increase in the official reserves of foreign exchange.
- **BoP Deficit:** This occurs when **autonomous payments exceed autonomous receipts** (Receipts < Payments). A country must finance a current account deficit either by a capital account surplus (borrowing/selling

assets) or by selling its official foreign exchange reserves.

- **Official Reserve Transactions:** The Central Bank acts as the ultimate financier of BoP imbalances. A decrease in official reserves is termed an **overall BoP deficit**, while an increase is termed an **overall BoP surplus**.



Autonomous vs. Accommodating Transactions

- **Autonomous Transactions:** These are "above the line" items undertaken for their own sake (e.g., profit-making) and are independent of the state of the BoP.
- **Accommodating Transactions:** These are "below the line" items determined by the gap in the BoP. They are carried out to bridge the deficit or surplus resulting from autonomous transactions, such as official reserve movements.

3. Foreign Exchange Rate and Determination

The **foreign exchange rate** is the price of one currency in terms of another. There are three primary regimes for determining these rates.

A. Flexible (Floating) Exchange Rate

In a **flexible exchange rate system**, the rate is determined strictly by the **market forces of demand and supply** without central bank intervention.

- **Demand for Foreign Exchange:** People demand foreign currency to buy foreign goods/services, send gifts abroad, or purchase foreign financial assets. The demand curve slopes downward; a higher exchange rate makes foreign goods more expensive, reducing the quantity demanded.
- **Supply of Foreign Exchange:** Foreign currency flows into a country through exports, inward gifts, or foreigners buying domestic assets. The supply curve slopes upward; a higher exchange rate makes domestic goods cheaper for foreigners, potentially increasing the supply of foreign currency.
- **Equilibrium:** The rate is set where the demand and supply curves intersect.
- **Depreciation vs. Appreciation:** Under this regime, a rise in the exchange rate (making domestic currency cheaper) is called **depreciation**, while a fall in the rate (making domestic currency costlier) is called **appreciation**.

B. Fixed Exchange Rate

In a **fixed exchange rate system**, the government or central bank sets the rate at a specific level and adjusts it only infrequently.

- **Intervention:** If the government sets a rate higher than the market rate, there is an excess supply of foreign currency, which the central bank must buy to maintain the peg. If it sets a rate lower than the market rate, there is excess demand, and the bank must sell from its reserves.
- **Devaluation vs. Revaluation:** A deliberate official action to increase the exchange rate

(making domestic currency cheaper) is called **devaluation**. Decreasing the exchange rate through official action is called **revaluation**.

4. Managed Floating

Currently, the world operates largely under a **managed floating exchange rate system** (also known as "dirty floating").

This is a hybrid system where the exchange rate is primarily determined by market forces, but **central banks intervene** to buy or sell foreign currencies to moderate excessive fluctuations whenever they deem it appropriate.

In this system, official reserve transactions are generally not zero.

5. Merits and Demerits of Exchange Rate Regimes

Fixed Exchange Rate System

- **Merit:** Provides stability and predictability for international trade.
- **Demerit:** Requires the government to maintain **large stocks of foreign exchange reserves**. It is highly **prone to speculative attacks**; if investors doubt the government's ability to maintain the peg, aggressive selling can force a devaluation.

Flexible Exchange Rate System

- **Merit:** The government does not need to hold massive foreign exchange reserves. Movements in the exchange rate **automatically correct BoP surpluses and deficits**. Countries gain **independence in conducting monetary policy**, as they are not obligated to intervene in forex markets.
- **Demerit:** Can lead to high volatility and uncertainty, which may discourage international trade and investment.

6. Long-Run Determination: Purchasing Power Parity (PPP)

The **Purchasing Power Parity (PPP) theory** is used for long-run exchange rate predictions. It suggests that in the absence of trade barriers (tariffs/quotas), exchange rates adjust so that the **same product costs the same** across different countries when measured in a common currency.

Therefore, over the long run, exchange rates between two currencies reflect the **differences in the price levels (inflation)** of the respective countries. For example, if prices in India rise faster than in the US, the rupee should eventually depreciate against the dollar.



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