Open and Closed Economies

- A closed economy is one that does not interact with other economies in the world.
- There are no exports, no imports, and no capital flows.

Open and Closed Economies

An open economy is one that interacts freely with other economies around the world.
An Open Economy

- An open economy interacts with other countries in two ways.
  - It buys and sells goods and services in world product markets.
  - It buys and sells capital assets in world financial markets.

The Flow of Goods: Exports, Imports, Net Exports

- **Exports** are domestically produced goods and services that are sold abroad.
- **Imports** are foreign produced goods and services that are sold domestically.
- **Net Exports** are exports minus imports.

The Flow of Goods: Exports, Imports, Net Exports

- A **trade deficit** is a situation in which net exports ($NX$) are negative.
  - **Imports > Exports**
- A **trade surplus** is a situation in which net exports ($NX$) are positive.
  - **Exports > Imports**
- **Balanced trade** refers to when net exports are zero – exports and imports are exactly equal.
The Flow of Capital: Net Foreign Investment

◆ Net foreign investment refers to the purchase of foreign assets by domestic residents minus the purchase of domestic assets by foreigners.
  ◆ A U.S. resident buys stock in the Toyota corporation and a Mexican buys stock in the Ford Motor corporation.

◆ When a U.S. resident buys stock in Telmex, the Mexican phone company, the purchase raises U.S. net foreign investment.
  ◆ When a Japanese residents buys a bond issued by the U.S. government, the purchase reduces the U.S. net foreign investment.
Variables that Influence Net Foreign Investment

- The real interest rates being paid on foreign assets.
- The real interest rates being paid on domestic assets.
- The perceived economic and political risks of holding assets abroad.
- The government policies that affect foreign ownership of domestic assets.

The Equality of Net Exports and Net Foreign Investment

- Net exports (NX) and net foreign investment (NFI) are closely linked.
- For an economy as a whole, NX and NFI must balance each other so that:

  \[ NFI = NX \]

  - This holds true because every transaction that affects one side must also affect the other side by the same amount.

Nominal Exchange Rates

- The nominal exchange rate is the rate at which a person can trade the currency of one country for the currency of another.
Nominal Exchange Rates

- The nominal exchange rate is expressed in two ways:
  - In units of foreign currency per one U.S. dollar.
  - And in units of U.S. dollars per one unit of the foreign currency.

Assume the exchange rate between the Japanese yen and U.S. dollar is 80 yen to one dollar.
- One U.S. dollar trades for eighty yen.
- One yen trades for 1/80 (=0.0125) of a dollar.

If a dollar buys more foreign currency, there is an appreciation of the dollar.
If it buys less there is a depreciation of the dollar.
How Do Changes in Exchange Rates Affect People?

**Businesses**
- Appreciation of the US dollar will hurt US exports and thus US business.
- Depreciation of the US dollar will help US exports and thus US businesses.

**Tourists**
- Appreciation of the US dollar will help US tourists by increasing their purchasing power.
- Depreciation of the US dollar will hurt US tourists by decreasing their purchasing power.

Purchasing-Power Parity

- The purchasing-power parity theory is the simplest and most widely accepted theory explaining the variation of currency exchange rates.

Basic Logic of Purchasing-Power Parity

- The theory of purchasing-power parity is based on a principle called the law of one price.
- According to the law of one price, a good must sell for the same price in all locations.
### Basic Logic of Purchasing-Power Parity

- If the law of one price were not true, unexploited profit opportunities would exist.
- The process of taking advantage of differences in prices in different markets is called *arbitrage*.

### Money, Prices, and the Nominal Exchange Rate During the German Hyperinflation

- **Indexes** (Jan. 1921 = 100)
  - Money supply
  - Price level
  - Exchange rate

### Brief Video on German Hyperinflation

- This video shows how the DM price of bread increased almost daily during the German hyperinflation of the 1920's.