

ECO 202 Principles of Economics II
Lecture 13: The International Financial System

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- 1 Exchange Rate Systems
- 2 The Current Exchange Rate System
- 3 International Capital Markets
- 4 Appendix: The Gold Standard and the Bretton Woods System

Exchange Rate Systems

Definition

A floating currency is the outcome of a country allowing its currency's exchange rate to be determined by demand and supply.

Allowing the relative values of currencies to be determined by demand and supply is just one type of exchange rate system, or agreement among countries about how exchange rates should be determined.

Definition

A managed floating exchange rate system is a system which the value of most currencies is determined by demand and supply, with occasional government intervention.

Definition

A fixed exchange rate system is one under which countries agree to keep the exchange rates among their currencies fixed for long periods.

From the 19th century until the 1930s, countries' currencies were redeemable for fixed amounts of gold—a system known as the gold standard.

After the Great Depression of the 1930s, most countries abandoned the gold standard. In 1944, a conference in Bretton Woods, NH established the Bretton Woods system:

- The U.S. pledged to buy or sell gold at \$US 35 per ounce.
- Other member countries agreed to a fixed exchange rate between their currency and the U.S. dollar.

The Current Exchange Rate System

The current exchange rate system has three important aspects:

- 1 The U.S. allows the dollar to float against other major currencies.
- 2 Nineteen countries in Europe have adopted a single European currency, the euro.
- 3 Some developing countries have attempted to keep their currencies' exchange rates fixed against the \$US or some other currency.

Each of these aspects has important consequences, and we will examine them in turn.

Canadian-U.S. Dollar and Yen-U.S. Dollar Exchange Rates, 1973-2015



The Bretton Woods system of fixed exchange rates ended in 1973. Since then the value of the \$US (in terms of how many units of foreign currency one U.S. dollar can buy) has floated.

- One U.S. dollar buys about 30 percent more Canadian dollars than it did in 1973.
- But it only buys about 40 percent as many Japanese yen.

What Determines Exchange Rates in the Long Run?

Why has the value of the U.S. dollar fallen so much against the Japanese yen, and yet risen then fallen to about the original level against the Canadian dollar?

In the short run, the two most important influences on exchange rates are:

- Relative interest rates
- Expectations about future values of currencies

But over the long run, it seems reasonable that exchange rates should move to equalize the purchasing powers of different currencies. This is known as the theory of purchasing power parity.

Suppose that candy bars sell for £2 in the United Kingdom and for \$1 in the United States.

If the exchange rate were $£1 = \$1$, then an entrepreneur could:

- Buy a million candy bars in the U.S. for \$1,000,000
- Transport them to the U.K, and sell them for £2,000,000
- Exchange that currency for \$2,000,000: a profit of \$1,000,000, minus the cost of shipping.

If many people did this, there would be an increase in the supply of British pounds offered to purchase U.S. dollars, so we would expect the exchange rate to appreciate.

If it appreciated to $£2 = \$1$, currency would have equal purchasing power in each location, and there would be no more pressure on the exchange rate to change.

What Stops Purchasing Power Parity from Occurring?

- 1 Not all products can be traded internationally (especially services).
- 2 Products and consumer preferences are different across countries; prices are determined by supply but also by demand.
- 3 Countries impose barriers to trade, like tariffs (taxes on imports) and quotas (numerical limits on imports).

The Economist collects the prices of Big Macs in different countries

<https://www.economist.com/content/big-mac-index>.

- In July 2015, the average price of a Big Mac was \$4.79 in the United States.
- Comparing this to the average prices of Big Macs in other countries offers a (lighthearted) test of purchasing power parity:

Country	Big Mac Price	Implied Exchange Rate	Actual Exchange Rate
Mexico	49 pesos	10.23 pesos per dollar	15.74 pesos per dollar
Japan	370 yen	77.24 yen per dollar	123.94 yen per dollar
United Kingdom	2.89 pounds	0.60 pound per dollar	0.64 pound per dollar
Switzerland	6.5 Swiss francs	1.36 Swiss francs per dollar	0.95 Swiss francs per dollar
Indonesia	30,500 rupiahs	6,367 rupiahs per dollar	13,345 rupiahs per dollar
Canada	5.85 Canadian dollars	1.22 Canadian dollars per U.S. dollar	1.29 Canadian dollars per U.S. dollar
China	17 yuan	3.55 yuan per dollar	6.21 yuan per dollar

You should be able to see which currency is overvalued or undervalued.

The Four Determinants of Exchange Rates in the Long Run

- 1 Relative price levels
Prices in Japan have risen slower than prices in the U.S., helping to explain why the Japanese yen has appreciated in value relative to the U.S. dollar.
- 2 Relative rates of productivity growth
Japanese productivity rose faster than U.S. productivity in the 1970s and 1980s, contributing to the depreciation of the U.S. dollar over that time.
- 3 Preferences for domestic or foreign goods
If consumers in Canada increase their demand for U.S. goods, they increase their demand for U.S. dollars, and hence appreciate the value of the \$US.
- 4 Tariffs and quotas
High tariffs or restrictive quotas reduce the demand for foreign goods, and hence cause the domestic currency to appreciate.

How Do Exchange Rates Affect Firms?

An appreciation of the U.S. dollar makes imports cheaper for us to buy but makes our exports more expensive for foreigners.

So importing firms tend to like it when the \$US is valued more highly, and exporting firms tend to prefer it when the \$US is relatively weaker.

But floating exchange rates also add an element of risk to foreign transactions, making it difficult for firms to make long-term plans involving foreign trade.

Markets do exist for buying future currency at current prices, but firms pay a premium for this risk-reduction.

In part to encourage international trade, 12 European countries decided to adopt a common currency-the euro-in 1999.

The exchange rates of their currencies-the French franc, the Spanish peseta, the German mark, etc.-were permanently fixed against one another.

In 2002, the euro currency went into circulation, and the domestic currencies were withdrawn from circulation.

By 2017, 19 out of 28 the European Union nations had adopted the euro as their currency.

A new European Central Bank (ECB) was also established; the ECB became responsible for monetary policy throughout the eurozone.

The Euro Area



With a strong economy, the euro looked like a good idea for all, reducing exchange rate instability and hence encouraging trade within Europe.

But when the financial crisis hit some European countries harder than others, those countries could not use monetary policy to alleviate their hardship. The results for Greece, Spain, and others:

- High unemployment
- Sovereign debt crises
- IMF and EU aid with austerity conditions attached

European countries not using the euro-like the U.K. and Iceland-recovered from the financial crisis much more quickly. They could allow their currencies to depreciate, boosting exports.

Some developing countries have attempted to keep their exchange rates fixed against the \$US or other currencies, an action known as pegging.

The advantages include:

- Easier planning for firms
- A more credible commitment to fighting inflation

The disadvantages include:

- Needing to support an under- or overvalued currency
- Potential for destabilizing speculation if speculators believe the currency will eventually appreciate or depreciate
- Difficulty in pursuing an independent monetary policy

Example: The 1997 Southeast Asia Financial Crisis

In the 1990s, the Thai baht was pegged to the \$US at a rate of 1 baht = \$0.04.

But by 1997, the market equilibrium value of baht was only \$0.03.

This created a persistent surplus of Thai baht on foreign exchange markets. To support the pegged rate, the Bank of Thailand had to buy baht with its U.S. dollar reserves. It also raised Thai interest rates to attract investors, but that further depressed the Thai economy.

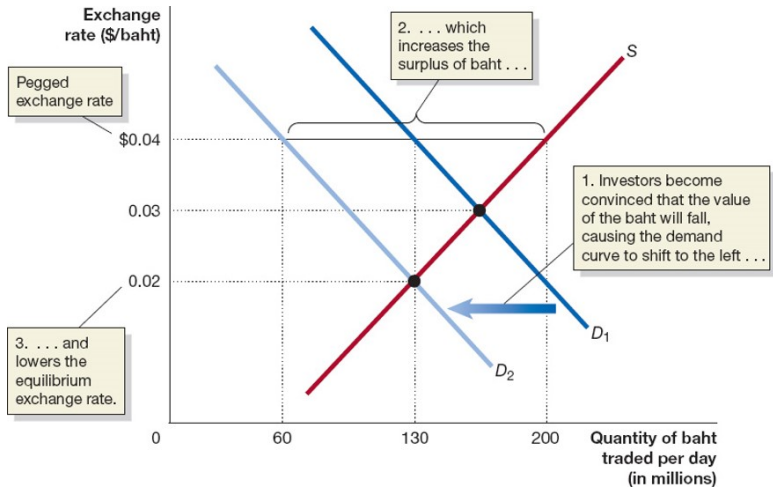
People believed that the Bank of Thailand would not be able to maintain the high value of its currency, so they sold off Thai currency as quickly as possible.

This further depressed the market equilibrium exchange rate, increasing the motivation to sell off Thai currency.

In July 1997, Thailand allowed its currency to float, but now firms had debt denominated in \$US, and with their earnings in Thai baht, they found it even harder to repay their loans.

Many firms went bankrupt, leading to a deep Thai recession.

Destabilizing Speculation Against the Thai Baht



Several other East Asian countries experienced similar speculative attacks on their currencies-including South Korea, Indonesia, and Malaysia-leading them to abandon pegged exchange rates.

Today, many countries have followed this trend, allowing a managed float of their currencies instead.

Some countries maintain pegged exchange rates:

- Several Caribbean countries peg against the \$US
- Several former French colonies in Africa pegged against the French franc and now do against the euro

Most of these countries are small and primarily trade with the country to whose currency they peg.

International Capital Markets

Before 1980, most U.S. corporations raised funds only in U.S. stock and bond markets or from U.S. banks. Similarly, U.S. investors rarely invested in foreign markets.

In the 1980s and 1990s, legal restrictions on capital movement in Europe were lifted, and communication technology improved.

These changes made participating in international capital markets more practical and appealing; both for Americans and for foreigners looking to invest in the U.S.

Appendix: The Gold Standard and the Bretton Woods System