

# Chapter 3

## Exchange-Rate Systems, Past to Present

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### Chapter Outline

- Exchange Rate Systems
- The Gold Standard
- The Bretton Woods System
- The Flexible Exchange Rate System
- Other Forms of Exchange Arrangements Today
- Fixed or Floating Exchange Rates?
- Chapter Summary
- Questions and Problems
- Online Application
- Selected References and Further Reading

### Teaching Tips

Part 1, Chapter 3: Issues to discuss or research on the Web:

1. A country's monetary order is a set of laws and regulations that establishes the framework within which individuals conduct and settle transactions. This institutional framework governs the value of a nation's currency. A nation must decide whether it wants a commodity money, commodity-backed money, or fiat money. Commodity money is a tangible good (gold or silver) used for payment. Commodity-backed money is a monetary unit whose value relates to a specific commodity like silver or gold. Fiat money is a monetary unit not backed by any commodity but rather by people's belief and faith in it as a medium of exchange. An exchange rate system is a set of rules governing the value of a nation's currency relative to other foreign currencies.
2. One type of exchange rate system is the gold standard (1837 to 1930s), where a nation will fix an official price of gold in terms of the nation's currency. Convertibility in this case is the ability to exchange currency for a commodity or other currency at a given rate of exchange. Money stock changes are dependent on the mining and production of gold, which is controlled by a few countries. If the supply of gold grows at a constant rate, this can promote the stability of a nation's money stock and the stability of economic activity, prices, and exchange rates. However, if a country wants to grow faster than gold production, and therefore the growth in money supply, there will have to be a change in parity. The collapse of the gold standard during the depression was driven by the desire of countries to stimulate economic recovery and create higher employment rather than maintain the exchange value of their currency. In 1944 the Bretton Woods Agreement established a dollar standard exchange rate system in which nations pegged the value of their currencies to the U.S. dollar which was fixed to gold at \$35 per troy ounce. The dollar was the primary reserve currency, and the United States would freely buy and sell gold at the official price.

3. In 1967 the British pound devalued by 14.3 percent and selling pressure rose for the U.S. dollar, supporting devaluation. In May 1971, the German Bundesbank bought large amounts of U.S. dollars to prevent the deutsche mark from appreciating and then abandoned official exchange operations to maintain parity. On August 15, 1971, President Nixon announced suspension of the convertibility of the U.S. dollar into gold or other reserve assets. The Group of Ten major industrial countries met in mid-December 1971 at the Smithsonian Institution and established a new exchange rate system with the European currencies floating within a 2.25 percent band. In early 1973, the U.S. dollar was devalued by 10 percent, and the European nations decided to maintain parity relative to it (primarily relative to the German mark). Thus a flexible exchange rate system was established. This floating rate system allowed countries to focus monetary policies on domestic objectives. On February 7, 1992, eleven European nations signed the Maastricht Treaty which established a firm date when European national currencies would be replaced by a single currency, the euro, and in 1998 a European Central Bank was launched.
4. Today the world primarily has a flexible exchange rate system. However, there are also other types of exchange systems: independent float—21 percent of IMF members; managed float—24 percent; crawling peg or band—5 percent; pegged with bands—2 percent; conventional peg—36 percent; currency board—7 percent; and no separate legal tender—5 percent.
5. Several countries use the U.S. dollar currency as their legal tender—dollarization. Some proponents argue that it helps achieve economic stability, while critics argue that the cost is the loss of discretionary monetary policy. A currency board or independent currency authority is an independent monetary agency that links the growth of the money stock to the foreign exchange holdings of the currency board by issuing domestic money in exchange for foreign currency at a fixed rate. When the monetary authority buys or sells foreign reserves, it changes the amount of domestic money in circulation. A currency board cannot engage in discretionary monetary policy.
6. A pegged-exchange rate arrangement with bands allows greater flexibility than a currency board or a conventional peg. In a currency basket-peg a currency is pegged to a weighted average of several foreign currencies. A weighted average of a basket of currencies is likely to be less variable than a single currency exchange rate. Currencies are usually those of countries that are major trading partners or those that have capital transactions with the country. The most common argument for a pegged exchange rate is that reducing exchange-rate volatility and uncertainty may yield gains in economic efficiency. When economic conditions are different between the nations that have a pegged exchange rate there is pressure on the exchange rates to move in different directions. The solution to release the stress may be to allow the parity value to continuously change and this is called a crawling peg.
7. Even more important than a country choosing between a fixed or floating exchange rate system is that a nation's policymakers conduct sound economic policy, which creates a stable economic environment for growth and prosperity.

## **Suggested Answers to End of Chapter Questions**

1.
  - a. Conventional Peg
  - b. Crawling Peg
  - c. Float or flexible exchange rate
  - d. Currency Basket Peg
  - e. Currency Board or Independent Currency Authority

- f. Dollarization
  - g. Managed Peg or Dirty Float
2. The IMF provides financial assistance to nations experiencing balance-of-payments problems and tries to encourage global growth through macroeconomic surveillance and promoting monetary cooperation and effective exchange rate arrangements.
  3. The value of the Canadian dollar (CAD) to gold is  $\text{CAD}1.38 \times \text{USD}50 = \text{CAD}69$ . The value of the British pound relative to gold is  $\text{USD}50/\text{USD}1.50 = \text{£}33.33$ .
  4. The exchange rate between the Canadian dollar and the pound is  $1.50 \times 1.38 = 2.07$  (CAD/£). Alternatively, this exchange rate can be computed by dividing CAD69 per unit of gold by £33.33 per unit of gold for  $\text{CAD}69/\text{£}33.33 = 2.07$  CAD/£.
  5. The basket can be written as  $P1 = \$0.50 \text{ USD} + \text{€}0.50$ . The euro component can be converted to its dollar-equivalent value of  $\text{€}0.50 \times 1.10 (\$/\text{€}) = \$0.55$ . The basket is now  $P1 = \$0.50 + \$0.55 = \$1.05$ . The exchange rate between the peso and the dollar is  $(1/1.05) = 0.9524$  (P/\$). The exchange rate between the peso and the euro is  $0.9524 (\text{P}/\$) \times 1.10 (\$/\text{€}) = 1.0476$  (P/€).
  6. Using the equation in the answer above,  $P1 = \$0.50 + \$0.55 = \$1.05$ , the dollar component is  $0.50/1.05 = 0.476$  or a weight of 47.6 percent and the euro component is  $0.55/1.05 = 0.524$  or a weight of 52.4 percent.
  7. The main difference was that the dollar was not convertible into gold. Without an anchor for the dollar, the system was not viewed as being credible in that economic policies were not likely to be conducted in a manner consistent with a pegged-exchange-rate regime.
  8. The principle responsibility of a currency board is to maintain a rigid pegged-exchange-rate arrangement and to issue domestic currency notes in accordance with changes in its foreign exchange reserves. A currency board is different from a typical central bank in that it cannot buy domestic debt instruments, regulate reserve requirements, or serve as a lender of last resort to banks.
  9. The Louvre Accord was a type of exchange-rate regime in that the major currencies were allowed to float relative to each other but only within a certain band. Central banks would intervene in the foreign exchange market when the exchange rate approached the upper or lower band.
  10. Based on the material presented in Chapter 2, inflation differentials could be considered a guide to setting the rate of crawl. Suppose, for example, the home country is the country pegging its currency to that of a foreign country, and the home country has an annual rate of inflation of 4 percent while the foreign nation's rate of inflation is 2 percent. In this case the home currency should be allowed to depreciate an amount each trading day which, over the course of a year, compounds to 2 percent.
  11. The chief difference is that the nation still maintains its own sovereign currency and a monetary institution, the currency authority.