CHAPTER 10
INTERNATIONAL MONETARY SYSTEM

LEARNING OBJECTIVES:
1. Explain how exchange rates influence the activities of domestic and international companies.
2. Identify the factors that help determine exchange rates and their impact on business.
3. Describe the primary methods of forecasting exchange rates.
4. Discuss the evolution of the current international monetary system, and explain how it operates.

CHAPTER OUTLINE:

Introduction
How Exchange Rates Influence Business Activities
   Desire for Stability and Predictability
What Factors Determine Exchange Rates?
   Law of One Price
   Big Mac
   Currencies
   Purchasing Power Parity
   Role of Inflation
      Impact of Money-Supply Decisions
      Impact of Unemployment and Interest Rates
      How Exchange Rates Adjust to Inflation
   Role of Interest Rates
      Fisher Effect
   Evaluating Purchasing Power Parity
      Impact of Added Costs
      Impact of Trade Barriers
      Impact of Business Confidence and Psychology
Forecasting Exchange Rates
   Efficient Market View
   Inefficient Market View
   Forecasting Techniques
      Fundamental Analysis
      Technical Analysis
   Difficulties of Forecasting
Evolution of the International Monetary System
   Early Years: The Gold Standard
      Par Value
      Advantages of the Gold Standard
      Collapse of the Gold Standard
   Bretton Woods Agreement
      Fixed Exchange Rates
      Built-In Flexibility
      World Bank
      International Monetary Fund
         Special Drawing Right (SDR)
   Collapse of the Bretton Woods Agreement
      Smithsonian Agreement
Final Days
A Managed Float System Emerges
Jamaica Agreement
Later Accords
Today’s Exchange-Rate Arrangements
Pegged Exchange-Rate Arrangement
Currency Board
European Monetary System
How the System Worked
Recent Financial Crises
Developing Nations’ Debt Crisis
Mexico’s Peso Crisis
Southeast Asia’s Currency Crisis
Russia’s Ruble Crisis
Argentina’s Peso Crisis
Future of the International Monetary System
Bottom Line for Business
Impact on Business Strategy
Forecasting Earnings and Cash Flows

A comprehensive set of specially designed PowerPoint slides (designated ‘PPT’ below) is available for use with Chapter 10. These slides and the lecture outline below form a completely integrated package that simplifies the teaching of this chapter’s material.

**Lecture Outline**

1. **INTRODUCTION**
   This chapter explores factors that determine exchange rates and various international attempts to manage them. It also presents different methods of forecasting exchange rates, and the functioning of the international monetary system.

2. **HOW EXCHANGE RATES INFLUENCE BUSINESS ACTIVITIES (PPT #3-7)**
   • Exchange rates affect demand for products. When a country’s currency is *weak*, the price of its exports declines, making the exports more appealing on world markets.
   • *Devaluation* is the intentional lowering of the value of a currency by the nation’s government. Gives domestic producers an edge on world markets, but also reduces citizens’ buying power.
   • *Revaluation* is the intentional raising of the value of a nation’s currency. Increases the price of exports and reduces the price of imports.
   • Exchange rates affect profits earned abroad when repatriated by the parent company *into the home currency*. Translating subsidiary earnings from a weak *host* country currency into a strong *home* currency reduces earnings, and vice versa.

A. **Desire for Stability and Predictability**
   1. Stability makes for accurate financial planning and cash flow forecasts.
   2. Predictability reduces odds that a company will be caught off-guard by unexpected rate changes. Reduces the need for costly insurance (currency hedging) against possible adverse exchange rates.
3. WHAT FACTORS DETERMINE EXCHANGE RATES?
To understand what determines rates, must know: (1) the law of one price, and (2) purchasing power parity. Each tells the level at which an exchange rate should be.

A. Law of One Price (PPT #8-9)
1. Exchange rates do not guarantee or stabilize the buying power of a currency; purchasing power fluctuates.
2. *Law of one price* says an identical product must have an identical price in all countries when expressed in the same currency. Product must be identical in quality/content and be entirely produced within each country.
4. If price were not identical in each country, an arbitrage opportunity would arise. Traders would buy in the low-priced market and sell in the high-priced market, buying drives up the price in one market and drives down the price in the other.
5. *The Economist* publishes its “Big MacCurrencies” index using the law of one price to determine the exchange rate between the U.S. dollar and other currencies. Fair predictor of the “direction” rates should move.

B. Purchasing Power Parity (PPT #10-13)
PPP is the relative ability of two countries’ currencies to buy the same “basket” of goods in those two countries. Tells how much of currency “A” a person in nation “A” needs to buy the same amount of products that someone in nation “B” can buy with currency “B.”
- Considers *price levels* in adjusting the relative values of the two currencies.
- Economic forces will push a market exchange rate toward that calculated by PPP or an arbitrage opportunity arises.
- Holds for internationally traded products not restricted by trade barriers and entailing few or no transportation costs.
1. Role of Inflation
   Inflation erodes purchasing power. If money is injected into an economy not producing greater output, a greater amount of money is spent on a static amount of products. Demand soon outstrips supply and prices rise.
   a. Impact of Money-Supply Decisions
      i. Governments manage the supply of and demand for currency with policies that influence the money supply.
      ii. *Monetary policy* refers to activities that directly affect a nation’s interest rates or money supply. Governments buy or sell government securities on the open market to influence the money supply.
      iii. *Fiscal policy* involves using taxes and government spending to influence the money supply indirectly. Governments can increase or lower taxes, or increase or decrease government spending.
   b. Impact of Unemployment and Interest Rates
      i. Threat of a company moving abroad for lower wages holds down wages at home. Companies then need not raise prices to pay higher wages, which lowering inflationary pressures.
      ii. Low unemployment puts upward pressure on wages. To maintain profit margins with higher labor costs,
producers pass the cost of higher wages on to consumers in higher prices, causing inflationary pressure.

iii. Low interest rates encourage consumers and businesses to borrow and spend, causing inflationary pressure.

c. How Exchange Rates Adjust to Inflation

i. Exchange rates adjust to different rates of inflation across countries, which is necessary to maintain purchasing power parity between nations.

ii. For example, if inflation in Mexico is higher than in the US, the exchange rate adjusts to reflect that a dollar will buy more pesos due to higher inflation in Mexico.

iii. US goods become more expensive for Mexican firms, and Mexican goods become cheaper for US companies.

2. Role of Interest Rates

Interest rate a bank quotes a borrower is the nominal interest rate.

a. Fisher Effect

i. The Fisher effect is the principle that the nominal interest rate is the sum of the real interest rate and the expected rate of inflation over a specific period.

ii. The real rate of interest should be the same in all countries because of arbitrage.

iii. The international Fisher effect is the principle that a difference in nominal interest rates supported by two countries’ currencies will cause an equal but opposite change in their spot exchange rates.

iv. Because real interest rates are theoretically equal across countries, any difference in interest rates in two countries is due to inflation.

3. Evaluating Purchasing Power Parity

PPP is better at predicting long-term exchange rates than short-term rates. Short-term forecasts, however, are most beneficial to managers.

a. Added Costs

PPP assumes no transportation costs, and thus overstates the threat of arbitrage. The presence of transport costs can allow unequal prices between markets to persist, causing PPP to fail.

b. Trade Barriers

PPP assumes no trade barriers. But a high tariff or outright ban on a product can impair price leveling, causing PPP to fail to predict exchange rates accurately.

c. Business Confidence and Psychology

PPP overlooks business confidence and human psychology. Yet nations try to maintain confidence of investors, businesspeople, and consumers in their economies and currencies.

4. FORECASTING EXCHANGE RATES (PPT #14)

A. Efficient Market View

1. In an efficient market, prices of financial instruments quickly reflect new public information made available to traders. The efficient market view says prices of financial instruments reflect all publicly available information at any given time.
2. Forward exchange rates are accurate forecasts of future rates, and reflect market expectations about the future values of two currencies.
3. Forward exchange rates are the best possible predictors of exchange rates and worthless to seek out information that may affect future rates.

B. Inefficient Market View
1. The inefficient market view says prices of financial instruments do not reflect all publicly available information. Proponents believe that companies can search for information to improve forecasting.
2. This view is more compelling considering private information (e.g., If a currency trader holds privileged information, the trader can act on this information to make a profit).

C. Forecasting Techniques
1. Fundamental Analysis
   Fundamental analysis employs statistical models based on fundamental economic indicators to forecast exchange rates. Economic variables in these models include inflation, interest rates, the money supply, tax rates, government spending, the balance-of-payments situation, and government intervention in foreign exchange markets.
2. Technical Analysis
   Technical analysis employs past trends in currency prices and other factors to forecast exchange rates. Using statistical models and past data trends, analysts estimate the conditions prevailing during changes in exchange rates and estimate the timing, magnitude, and direction of future changes.

D. Difficulties of Forecasting
   Beyond problems with data used, failings can be traced to human error (e.g., People might miscalculate the importance of certain economic events, placing too much emphasis on some elements and ignoring others).

5. EVOLUTION OF THE INTERNATIONAL MONETARY SYSTEM

A. Early Years: The Gold Standard (PPT #15)
   • Gold was internationally accepted for paying for goods and services. Pros: its limited supply caused high demand and it can be traded, stored, and melted into coins or bars making a good medium of exchange. Cons: its weight made transport expensive, and if a ship sank the gold was lost.
   • Gold standard was an international monetary system in which nations linked the value of their paper currencies to a specific value of gold. The gold standard operated from the early 1700s until 1939.
   1. Par Value
      a. The value of a currency expressed in terms of gold. All nations fixing their currencies to gold also indirectly linked their currencies to one another. Thus the gold standard was a fixed exchange rate system—one in which the exchange rate for converting one currency into another is fixed by international governmental agreement.
      b. The US dollar was fixed at $20.67/oz of gold, the British pound at £ 4.2474/oz.; exchange rate was $4.87/£ ($20.67 ÷ £ 4.2474).
2. Advantages of the Gold Standard
   a. **Reduced the risk in exchange rates** because it locked exchange rates between currencies. Fixed exchange rates reduced the risks and costs of trade and grew as a result.
   b. **Imposed strict monetary policies** that required nations to convert paper currency into gold if demanded by holders of the currency. This forced nations to keep adequate gold reserves on hand. A nation could not let paper currency to grow faster than the value of its gold reserves, which controlled inflation.
   c. **Helped correct a nation’s trade imbalance.**
      i. If a nation imports more than it exports, gold flowed out to pay for imports. The government must decrease the supply of paper currency in the domestic economy because it could not have paper currency in excess of gold reserves. As the money supply falls, so do prices of goods and services because fewer dollars are chasing the same supply of goods and services. Falling prices make its exports cheaper on world markets and exports rise until the nation’s international trade is in balance.
      ii. In the case of a trade surplus, the inflow of gold supports an increase in the supply of paper currency. This increases the demand for and cost of goods and services; exports fall in reaction to their higher prices until trade is in balance.

3. Collapse of the Gold Standard
   a. Gold standard was violated when nations in the First World War financed the war by printing paper currency. This caused rapid inflation and caused nations to abandon the gold standard.
   b. Britain returned to the gold standard in the early 1930’s at the same par value that existed before the war. The United States returned to the gold standard at a new, lower par value that reflected the inflation of previous years.
   c. The U.S. decision in 1934 to devalue its currency and Britain's decision not to do so lowered the price of U.S. exports and increased the price of British goods imported. It now took $8.24 to buy a pound ($35.00 ÷ £4.2474).
   d. Countries retaliated against one another through “competitive devaluations” to improve their own trade balances. Faith in the gold standard vanished, as it was no longer an accurate indicator of a currency’s true value.

B. Bretton Woods Agreement (PPT #16)
   1944 accord among nations to create a new international monetary system based on the value of the U.S. dollar. Designed to balance strict discipline of the gold standard with flexibility to manage temporary domestic monetary difficulties.
   1. Fixed Exchange Rates
      a. Incorporated fixed exchange rates by tying the value of the U.S. dollar directly to gold, and the value of other currencies to the value of the dollar.
      b. Fixed U.S. dollar par value at $35/oz of gold; other currencies had par values against the U.S. dollar, not gold.
c. Members were to keep their currencies from deviating more than 1.0 percent above or below their par values. Extended the right to exchange gold for dollars only to national governments.

2. Built-In Flexibility
   a. Ruled out competitive currency devaluation but allowed large devaluation under extreme circumstances called fundamental disequilibrium—an economic condition in which a trade deficit causes a permanent negative shift in the balance of payments.
   b. Devaluation in such situations was to reflect a permanent economic change in a country, not temporary misalignments.

3. World Bank
   Created the World Bank (IBRD) to fund national economic development.
   a. World Bank’s immediate purpose was to finance European reconstruction after the Second World War. It later shifted its focus to the general financial needs of developing countries.
   b. World Bank finances economic development projects in Africa, South America, and Southeast Asia, and offers funds to countries unable to obtain capital for projects considered too risky. It often undertakes projects to develop transportation networks, power facilities, and agricultural and educational programs.

4. International Monetary Fund
   Established the International Monetary Fund (IMF) to regulate fixed exchange rates and enforce the rules of the international monetary system. Purposes of the IMF are to:
   - Promote international monetary cooperation.
   - Facilitate expansion and balanced growth of international trade.
   - Promote exchange stability with orderly exchange arrangements, and avoid competitive exchange devaluation.
   - Make resources temporarily available to members.
   - Shorten the duration and lessen the degree of disequilibrium in the international balance of payments of member nations.

5. Collapse of the Bretton Woods Agreement
   Bretton Woods faltered in the 1960s because of a U.S. trade and budget deficits. Nations holding U.S. dollars doubted the U.S. government had gold reserves to redeem all its currency held outside the U.S. Demand for gold in exchange for dollars caused a large global sell-off of dollars.
   a. Smithsonian Agreement
      In August 1971, the U.S. government held less than one fourth of the amount of gold needed to redeem all U.S. dollars in circulation. The Smithsonian Agreement was designed to restructure and strengthen the international monetary system. The Agreement: (1) lowered the value of the dollar in terms of gold to $38/oz. of gold, (2) required that other countries increase the value of their currencies against the dollar, and (3) increased the 1% floatation band to 2.25 percent.
   b. Final Days
      Many nations abandoned the system in 1972 and 1973, and currency values floated freely against the dollar.

C. A Managed Float System Emerges (PPT #17)
The new system of floating exchange rates was to be a temporary solution. Instead of the emergence of a new international monetary system, there emerged several efforts to manage exchange rates.

1. Jamaica Agreement
   1976 accord among IMF members to formalize the existing system of floating exchange rates. Three main provisions included: (1) Endorsement of a managed float system of exchange rates; (2) Elimination of gold as the primary reserve asset of the IMF; and (3) Expansion of the IMF to act as a “lender of last resort” for nations with balance-of-payments difficulties.

2. Later Accords
   Between 1980 and 1985 the U.S. dollar rose against other currencies, pushing up prices of U.S. exports and adding to a U.S. trade deficit.
   a. The Plaza Accord (1985) was an agreement among the largest industrialized economies known as the G5 (Britain, France, Germany, Japan, and the United States) to act together in forcing down the value of the U.S. dollar.
   b. The Louvre Accord (1987) was an agreement among the G7 nations (the G5 plus Italy and Canada) that affirmed the dollar was appropriately valued and that they would intervene in currency markets to maintain its current market value.

D. Today’s Exchange-Rate Arrangements (PPT #18)
Remains a managed float system, but some nations maintain more stable exchange rates by tying their currencies to other currencies

1. Pegged Exchange-Rate Arrangement
   a. Pegged exchange rate arrangements “peg” a country’s currency to a more stable and widely used currency in international trade.
   b. Many small countries peg their currencies to the dollar, euro, the special drawing right of the IMF, or other individual currency. Others peg their currencies to “baskets” of currencies.

2. Currency Board
   a. A currency board is a monetary regime based on a commitment to exchange domestic currency for a specified foreign currency at a fixed exchange rate. The government is legally bound to hold an amount of foreign currency equal to the amount of domestic currency; this helps cap inflation.
   b. The currency board’s survival depends on sound budget policies.

E. European Monetary System
Following the collapse of Bretton Woods, European Union (EU) nations looked for a system that could stabilize currencies and reduce exchange-rate risk. In 1979, they created the European monetary system (EMS) to stabilize exchange rates. The system ceased to exist in 1999 when the EU adopted a single currency.

1. How The System Worked
   a. The exchange rate mechanism (ERM) limited the fluctuations of European Union members’ currencies within a specified trading range (or target zone).
   b. The EMS was successful; currency realignments were infrequent and inflation was controlled. Problems arose in 1992 and the
EMS was revised in 1993 to allow currencies to fluctuate in a wider band from the midpoint of the target zone.

F. Recent Financial Crises (PPT #19)
Despite nations’ best efforts to head off financial crises within the international monetary system, the world has seen several wrenching crises.

1. Developing Nations’ Debt Crisis
   a. By the early 1980s developing countries (especially in Latin America) had amassed huge debts payable to large international commercial banks, the IMF, and the World Bank. To prevent a meltdown of the entire financial system, international agencies revised repayment schedules.
   b. In 1989, the Brady Plan called for large-scale reduction of poor nations’ debt, exchange of high-interest loans for low-interest loans, and debt instruments tradable on world financial markets.

2. Mexico’s Peso Crisis
   a. Rebellion and political assassination shook investors’ faith in Mexico’s financial system in 1993-1994. Mexico’s government responded slowly to the flight of portfolio investment capital.
   b. In late 1994, the Mexican peso was devalued, forcing a large loss of purchasing power on ordinary Mexican people. The IMF and private commercial banks in the United States provided about $50 billion in loans to shore up Mexico’s economy.
   c. Mexico repaid the loans ahead of schedule and once again has a sizable reserve of foreign exchange.

3. Southeast Asia’s Currency Crisis
   a. On July 11, 1997, the speculators sold off Thailand’s baht on world currency markets; the baht plunged and every other economy in the region was in a slump.
   c. The shock waves of Asia’s crisis could be felt throughout the global economy. Indonesia, South Korea, and Thailand needed IMF and World Bank funding. As incentives to begin economic restructuring, IMF loan packages came with strings attached.
   d. Crisis likely caused by a combination of: (1) Asian style capitalism (lax regulation, loans to friends and relatives, lack of financial transparency); (2) currency speculators and panicking investors; and (3) persistent current account deficits.

4. Russia’s Ruble Crisis
   a. Russia’s problems in the 1990s included: (1) spillover from the Southeast Asia crisis; (2) depressed oil prices; (3) falling hard currency reserves; (4) unworkable tax system; and (4) inflation.
   b. In 1996 as currency traders dumped the ruble, the Russian government attempted to defend the ruble on currency markets. The government received a $10 billion aid package from the IMF and promised to reduce debt, collect taxes, cease printing sums of currency, and peg its currency to the dollar.
   c. Things improved for a while, but then in mid-1998 the government found itself once again trying to defend the ruble. By late 1998, the IMF had lent Russia more than $22 billion.

5. Argentina’s Peso Crisis
a. By late 2001, Argentina had been in recession for nearly 4 years. Argentina’s goods remained expensive because its currency was linked to a strong U.S. dollar through a currency board.

b. The country finally defaulted on its $155 billion of public debt in early 2002, the largest default by any country ever.

c. The government scrapped its currency board that linked the peso to the U.S. dollar and the peso quickly lost about 70 percent of its value on currency markets.

d. In April 2002, the IMF was reviewing Argentina’s reforms before it would release more cash. The IMF wanted reductions in government spending and was concerned about separate currencies issued by provincial governments.

e. The IMF decided to lend Argentina no new money; only what it is due for repayment in order to avoid bad loans.

f. Talks between the government and its creditors drag on and Argentina has become a cash economy.

G. Future of the International Monetary System

1. Recurring crises are raising calls for a new system designed to meet the challenges of a global economy.

2. Revision of the IMF and its policy prescriptions are likely; transparency on the part of the IMF is being increased to instill greater accountability. The IMF is increasing its surveillance of members’ macroeconomic policies and abilities in the area of financial sector analysis.

3. Ways must be found to integrate international financial markets to manage risks. The private sector must become involved in the prevention and resolution of financial crises.

6. BOTTOM LINE FOR BUSINESS

Recent financial crises underscore the need for managers to fully understand the complexities of the international financial system. Chapters 9 and 10 discussed the international financial markets and international monetary system. Understanding this material improves managers’ knowledge of financial risks in international business. But this knowledge must be paired with vigilance of financial market conditions to manage businesses in the global economy effectively.