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The International Monetary System and Financial Markets



DO YOU KNOW

1. What exchange rate systems are available today? Why don't nations use the same exchange rate system? For example, why does Cameroon peg its currency (CFA franc) to the French franc whereas Romania allows its currency (leu) to independently float?

2. Why do some currencies fluctuate more than others? Why do some currencies depreciate while others appreciate? How do you determine and predict the foreign exchange rate?

3. What constitutes international financial markets? How do speculators earn profits from international foreign exchange markets? Is this speculation one of the reasons leading to the Asian financial crisis? How do MNEs finance global operations via international capital markets?

OPENING CASE The Mexican Crisis During 1994 and 1995

Mexico experienced a financial crisis during 1994–1995. Mexico's exchange rate regime was modified a number of times but it was consistently aimed at price stabilization. It started as a strict peg to the U.S. dollar in 1988 and shifted to a crawl policy in early 1989. Be-

ginning in 1992, an asymmetrical band was adopted, allowing for gradual depreciation but placing a ceiling on the peso in relation to the dollar. Though steady from mid-1992 to early 1994, the Mexican peso became overvalued. The real effective ex-

change rate appreciated steadily as inflation exceeded the rate of the peso's depreciation. Between 1990 and December 1993, the peso depreciated by about 17 percent in nominal terms. However, consumer price inflation amounted to 56 percent from 1990 to 1993. Thus, the real effective exchange rate rose by nearly 35 percent over that period. The result was an increase in the current-account deficit from \$7.5 billion in 1990 to \$29.4 billion in 1994, which amounted to 7 percent of Mexico's GDP.

The year 1994 was an election year and a period of political mishaps in Mexico. Both the presidential candidate and the secretary-general of the majority party were assassinated. These and other events led to a slowdown in capital inflow and withdrawals of capital that had been invested in short-term government securities (*cetes*). Reserves decreased by \$11 billion in April 1994. The government then issued short-term peso obligations (*tesobonos*) with interest and principal linked to the dollar. The interest rate on these securities was considerably lower than it was on peso securities without a dollar link. Many

Mexican residents shifted out of pesos into dollars, further escalating the peso devaluation. This crisis differs slightly from the one that occurred during the 1980s. In the previous crisis, Mexico fought to keep the peso fixed to the U.S. dollar. In order to discourage investors from withdrawing funds from Mexico to avoid losses when the devaluation eventu-

ally occurred, the Mexican government had to maintain high interest rates. These high rates were the indirect consequence of fixed exchange rates, and they consequently stifled investment and job creation. The problem of high interest rates due to delayed devaluation with fixed exchange rates became known as “the peso problem.” ■

HISTORY OF THE INTERNATIONAL MONETARY SYSTEM

The preceding case shows that a country's currency value is not always stable, and therefore, its exchange rate with other countries' currencies can change. International businesses operate in an uncertain environment in which exchange rates have been increasingly volatile over the past quarter century. Volatile exchange rates increase risk for international companies. To manage foreign exchange risk, management must first understand how the international monetary system works. As the opening case demonstrates, there are many new terms associated with this system (e.g., peg or crawl policies, nominal or real exchange rate). This chapter is designed to explain these concepts and related monetary system and financial markets.

The **international monetary system** refers primarily to the set of policies, institutions, practices, regulations, and mechanisms that determine foreign exchange rates. This system is comprised of currencies from individual countries as well as some composite currency units such as the *European Currency Unit (ECU)* and the *Special Drawing Right (SDR)* as illustrated in Chapter 8. **Foreign exchange** refers to the money of a foreign country, such as foreign currency bank balances, banknotes, checks, and drafts. A **foreign exchange rate** (or simply, exchange rate) is the price of one currency expressed in terms of another currency (or gold). If the government of a country (e.g., Iraq) regulates the rate at which the local currency (e.g., Iraqi dinar) is exchanged for other currencies, the system is classified as a **fixed or managed exchange rate system**. When a country's currency (e.g., Iraqi dinar) is tied or fixed to another country's currency (U.S. dollar), this is called **pegged exchange rate system**. The rate at which the currency is fixed is often referred to as its **par value**. If the government does not interfere in the valuation of its currency, it is classified as **floating or flexible exchange rate system** (e.g., U.S. dollar). The **real exchange rate** is the exchange rate after deducting an inflation factor. The **nominal exchange rate** is the exchange rate before deducting an inflation factor.

Changes in exchange rates may move in one of two directions. Associated with the fixed or managed exchange rate system, **devaluation** of a currency refers to a drop in the foreign exchange value of a currency that is pegged to another currency or gold. In other words, the par value is reduced. The opposite of devaluation is **revaluation**. Associated with the floating exchange rate system, **depreciation** (or weakening, deterioration) means a drop in the foreign exchange value of a floating currency. The opposite of depreciation is **appreciation** (or strengthening), which means a gain in the exchange value of a floating currency. The media often use the terms devaluation and depreciation (or revaluation and appreciation) interchangeably, without distinctions, which is incorrect.

The choice of foreign currencies used by international companies affects their cash flows and even their income levels. For example, firms in countries with soft currencies often use hard foreign currencies in export businesses. A **soft or weak**

currency is one that is anticipated to devalue or depreciate relative to major trading currencies. Conversely, a currency is considered **hard or strong** if it is expected to revalue or appreciate relative to major currencies. In daily life, the term hard currency is also used to denote the fully convertible currency of a major developed country (e.g., the U.S. dollar, the U.K. pound, or the Japanese yen).

A brief review of the history of the international monetary system can help us better understand the present monetary system and also appraise the strengths and weaknesses of different foreign exchange systems.

The Gold Standard Period (1876–1914)

Since the days of the pharaohs (about 3000 B.C.), gold was used as a medium of exchange and a store of value. The gold standard gained acceptance as an international monetary system in the 1870s. Under this system, each country pegged its money to gold. For example, if the German Bank fixed the price of gold at 50 deutsche mark (DM) per ounce of gold, it effectively stood ready to buy and sell gold at this rate. The same applied to the United States if the U.S. Federal Reserve (the Fed) fixed the price of gold at \$20 per ounce. The exchange rate, then, is simply the ratio of the two prices: DM50/\$20 means an exchange rate of DM2.5 per U.S. dollar.

The government of each country using the gold standard agreed to buy or sell gold on demand at its own fixed parity rate. Thus, the value of each individual currency in gold terms and the fixed parities between currencies remained stable. Under this system, it was very important for a country to maintain adequate gold reserves with which to back its currency's value. The gold standard worked adequately until the outbreak of World War I interrupted trade flows and the free movement of gold. As a result, the major trading nations suspended the gold standard.

The Inter-War Years and World War II (1914–1944)

During World War I and the early 1920s, currencies were allowed to fluctuate over fairly wide ranges in terms of both gold and another currency. This created arbitrage opportunities for international speculators. Such fluctuations hampered world trade in the 1920s, thereby contributing to the Great Depression in the 1930s.

The United States returned to a modified gold standard in 1934, when the U.S. dollar was devalued to \$35/ounce of gold from the \$20.67/ounce price in effect prior to World War I. Although the United States returned to the gold standard, gold was traded only with foreign central banks, not with individual citizens. From 1934 to the end of World War II, exchange rates were determined, in theory, by each currency's value in terms of gold. During World War II and its immediate aftermath, however, many of the main trading currencies lost their convertibility into other currencies. The dollar was the only major trading currency that continued to be convertible.

The Bretton Woods System (1944–1973)

This period, commencing a year prior to the end of World War II, was characterized by a fixed exchange system. Under the provisions of the *Bretton Woods Agreement* signed in 1944, the government of each member country pledged to maintain a fixed, or pegged, exchange rate for its currency vis-à-vis the dollar or gold. Because one ounce of gold was set equal to \$35, fixing a currency's gold price was equivalent to setting its exchange rate relative to the dollar. For example, the deutsche

mark was set equal to 1/140 of an ounce of gold, meaning it was worth \$0.25 (\$35/DM140). Participating countries agreed to try to maintain the value of their currencies within a 1 percent band by buying or selling foreign exchange or gold as needed. Devaluation was not to be used as a competitive trade policy, but if a currency became too weak to defend, a devaluation of up to 10 percent was allowed without formal approval by the IMF.

During this period, the U.S. dollar was the main reserve currency held by central banks and was the key to the web of exchange rate values. Unfortunately, the United States ran persistent and growing deficits on its balance of payments. A heavy capital outflow of dollars was required to finance these deficits and to meet the growing demand for dollars from investors and businesses. Eventually the heavy overhang of dollars held abroad resulted in a lack of confidence in the ability of the United States to meet its commitment to convert dollars to gold. On August 15, 1971, the United States responded to a huge trade deficit by making the dollar inconvertible into gold. A 10 percent surcharge was placed on imports, and a program of wage and price controls was introduced. Many of the major currencies were allowed to float against the dollar. The dollar then began a decade of decline.

Under the *Smithsonian Agreement*, which was reached among the world's leading trading nations in Washington, D.C. in December 1971, the United States agreed to devalue the dollar to \$38 per ounce of gold. In return, the other countries present agreed to revalue their own currencies upward in relation to the dollar by specified amounts. Actual revaluation ranged from 7.4 percent by Canada to 16.9 percent by Japan. Furthermore, the allowed floating band around par value was expanded from ± 1 to ± 2.25 percent.

Because of high inflation in the United States, the dollar devaluation remained insufficient to restore stability to the system. By 1973, the dollar was under heavy selling pressure even at its devalued rates. By late February 1973, a fixed-rate system appeared no longer feasible given the speculative flows of currencies. The major foreign exchange markets were actually closed for several weeks in March 1973. When they reopened, most currencies were allowed to float to levels determined by market forces.

The Post-Bretton Woods System: 1973–Present

This period is characterized by a floating exchange rate system. Since March 1973, exchange rates have become much more volatile and less predictable than they were during the “fixed” exchange rate period. The system became increasingly volatile as it approached the oil crisis of the fall of 1973. As mentioned in the preceding chapter, October 1973 marked the beginning of successful efforts by the *Organization of Petroleum Exporting Countries (OPEC)* to raise the price of oil. By 1974, oil prices had quadrupled. Several nations, most notably the United States, tried to offset the effect of higher energy bills by boosting spending. The results were high inflation and vast deficits in the balance of payments, which eventually caused the dollar crisis of 1977–1978.

Although the U.S. dollar strongly rebounded during 1981–1985, largely because of President Reagan's economic policy (high interest rates, foreign capital inflow, and economic expansion), the dollar resumed its long downhill slide. The slide was attributed mainly to changes in U.S. government policy and a slowdown in the U.S. economy. Believing that the dollar had declined enough, the United States, Japan, West Germany, France, Britain, Canada, and Italy—also known as the **Group of Seven** (or G-7)—met in February 1987 and agreed to slow the dollar's fall. This agreement, also known as the **Louvre Accords**, called for the *G-7 nations* to support the falling dollar by pegging exchange rates within a narrow, undisclosed

Exhibit 9–1World currency events
1973–2002

Date	Event	Impact
February 1973	U.S. dollar devalued	Devaluation pressure increases on U.S.\$ forcing devaluation to \$42.22/oz of gold.
February–March 1973	Currency markets in crisis	Fixed exchange rates no longer considered defensible; speculative pressures force closure of international foreign exchange markets for nearly two weeks; markets reopen with floating rates for major industrial currencies.
June 1973	U.S. dollar depreciation	Floating rates continue to drive the new free floating U.S.\$ down by about 10 percent by June.
Fall 1973–1974	OPEC oil embargo	Organization of Petroleum Exporting Countries (OPEC) imposes oil embargo, eventually quadrupling world price of oil; because oil prices are stated in U.S.\$, the U.S.\$ recovers some of its former strength.
January 1976	Jamaica Agreement	IMF meeting in Jamaica results in the “legalization” of the floating exchange rate system already in effect; gold is demonetized as a reserve asset; IMF quotas are increased.
1977–1978	U.S. inflation rate rises	Rising U.S. inflation causes continued depreciation of the U.S.\$.
March 1979	EMS created	European Monetary System (EMS) is created, establishing a cooperative exchange rate system for participating members of the EEC.
Summer 1979	OPEC raises prices	OPEC nations raise oil prices once again.
Fall 1979	Iranian assets frozen	President Carter responds to Iranian hostage crisis by freezing all Iranian assets held in U.S. financial institutions.
Spring 1980	U.S. dollar begins rise	Worldwide inflation and early signs of recession coupled with real interest differential advantages for dollar-denominated assets contribute to rising demand for dollars.
August 1982	Latin American debt crisis	Mexico informs U.S. Treasury that it will be unable to make debt service payments; Brazil and Argentina follow suit; the debt crisis begins.
February 1985	U.S. dollar peaks	U.S. dollar peaks against most major industrial currencies, hitting record highs against the deutsche mark and other European currencies.
September 1985	Plaza Agreement	Group of Five members, meeting at the Plaza Hotel in New York, sign an international cooperative agreement to control the volatility of world currency markets and establish currency target zones.
February 1987	Louvre Accords	Group of Seven members state they will “intensify” economic policy coordination to promote growth and reduce external imbalances.
September 1992	EMS crisis	High German interest rates induce massive capital flows into Germany and deutsche mark-denominated assets, eventually causing the withdrawal of the Italian lira and British pound from the EMS’s Exchange Rate Mechanism (ERM).
July 31, 1993	EMS realignment	EMS adjusts allowable deviation band to +/- 15% for all member currencies (except the Dutch guilder); U.S. dollar continues to weaken against other major currencies; Japanese yen reaches ¥100.25/\$ in August 1993.

continued

Date	Event	Impact
1994	EMI founded	European Monetary Institute, the predecessor to the European Central Bank, is founded in Frankfurt, Germany.
December 1994	Peso collapses	Mexican peso suffers major devaluation as a result of increasing pressure on the managed devaluation policy; peso falls from Ps3.46/\$ to Ps5.50/\$ within days. The peso's collapse results in a fall in most major Latin American exchanges (tequila effect).
August 1995	Yen peaks	Japanese yen reaches an all-time high versus the U.S. dollar of ¥79/\$; yen slowly depreciates over the following two-year period, rising to over ¥130/\$.
June 1997	Asian financial crisis	First afflicting Thailand in June 1997, then quickly spreading to South Korea, Indonesia, Malaysia, the Philippines, and other Southeast and East Asian countries.
August 1998	Financial turmoil in Russia and Latin America	Influenced by the Asian crisis, Russia devaluates the ruble and unilaterally restructures its debts. The situation worsens following the devaluation in Brazil in January 1999.
January 1, 1999	Euro launched	Official launch date for the single European currency, the euro. Participating states' exchange rates will be irrevocably locked; European Monetary Institute will be succeeded by the European Central Bank, establishing a single monetary policy for Europe.
January 1, 2002	Euro coinage	Euro coins and notes are introduced in parallel with home currencies; transition period to last no more than six months.

range. They agreed that exchange rates had been sufficiently realigned and pledged to support stability of exchange rates at or near their current levels. Although the dollar declined further during 1987, it rallied in early 1988, thereby ending for the moment its dramatic volatility during the period 1980–1987. The U.S. dollar fell again in 1990 but then stayed basically flat during 1991–1992. It began falling again in 1993, especially against the Japanese yen and DM.

The turmoil that rocked Asian foreign exchange markets since June 1997 was the third major crisis of the 1990s. Its two predecessors were the crisis in the European Monetary System (EMS) of 1992–1993 and the Mexican peso crisis of 1994–1995 (see opening case). The collapse of the Thai currency, the baht, started the Asian crisis in June 1997. In one month, the baht lost 20 percent of its value against the dollar. The currencies of the Philippines, Malaysia, and Indonesia all weakened as well. Malaysian Prime Minister Mahathir Mohamad blasted “rogue speculators.” Later he called billionaire hedge-fund manager George Soros a “moron” for betting against Asian currencies. In August 1997, Indonesian authorities were forced to allow the national currency, the rupiah, to move freely against other currencies. In December 1997, the IMF put together a \$58.4 billion international bailout for Korea, the largest ever. The Koreans decided to let the won float. Faced with rapidly deteriorating foreign currency reserves, the Russian authorities devalued the ruble in August 1998. The U.S. Federal Reserve responded to fear of a U.S. credit crunch by lowering interest rates three times in quick succession during the course of the fall, including a rare unilateral move by Fed Chairman Alan Greenspan. Other industrialized countries such as Canada, Japan, and most of the European nations also eased monetary policies in September 1998. In October 1998, the world's rich nations, the G-7, endorsed a U.S. plan to allow the IMF to lend to countries before they get into financial difficulties. Exhibit 9–1 lists major events related to the international monetary system during 1973–2002.

Interim Summary

1. The international monetary system has undergone several phases, including the gold standard period (1876–1914), the interwar years and World War II (1914–1944), the Bretton Woods system (1944–1973), and the post-Bretton Woods system (1973–present).
2. The fixed exchange rate system was a staple of the international monetary system prior to March 1973 and the floating exchange rate system was dominant after March 1973.

CONTEMPORARY EXCHANGE RATE SYSTEMS

Fixed-Rate System

Under a **fixed-rate system**, governments (through their central banks) buy or sell their currencies in the foreign exchange market whenever exchange rates deviate from their stated par values. A purely fixed-rate system is employed currently by only a few centrally planned economies such as Cuba and North Korea. In these economies, it is generally mandatory that a local firm's foreign exchange earnings be surrendered to the central bank, which in return pays the firm a corresponding amount in local currency. The central bank often allocates these foreign exchange incomes to state-owned users on the basis of governmental priorities. Exhibit 9–2 presents typical foreign exchange control measures used by governments under fixed or managed foreign exchange systems.

Despite drawbacks such as resource misallocation, distortion of foreign exchange demand and supply, and a drag on company performance, the fixed-rate system may help economies stabilize their economic environment, emphasize priority projects that need foreign exchange, and control foreign exchange reserves. In a broader, international context, fixed rates provide stability in international prices for the conduct of trade, which in turn lessens risks for international companies.

Exhibit 9–2

Frequently used foreign exchange control measures

1. Import restrictions such as license or quota systems
2. Restrictions on remittance of foreign exchange such as profit, dividends, or royalty
3. Surrender of hard-currency export earnings to the central bank
4. Mandatory government approval for using a firm's retained foreign exchange earnings
5. Pre-deposit of foreign exchange expenditure for import business in interest-free accounts with the central bank for a certain period
6. Credit ceilings for foreign firms
7. Restriction or prohibition on offshore deposit or investment of hard currencies
8. Use of multiple exchange rates simultaneously for different items of the balance of payment

Crawling Peg System

The peg system is situated between the fixed-rate and float-rate systems. The **crawling peg** is an automatic system for revising the exchange rate, establishing a par value around which the rate can vary up to a given percentage point. The par value is revised regularly according to a formula determined by the authorities. Once the par value is set, the central bank intervenes whenever the market value approaches a limit point. Suppose, for example, that the par value of the Mexican peso is 3,000 pesos for one dollar, and that it can vary ± 2 percent around this rate, between 3,060 pesos and 2,940 pesos. If the dollar approaches the rate of 3,060 pesos the central bank intervenes by buying pesos and selling dollars. If the dollar approaches 2,940 pesos, the central bank intervenes by selling pesos and buying dollars. If it hovers around a limit point for too long, causing frequent central bank intervention, a new par value closer to this point is established. Suppose the dollar was hovering around 3,060 pesos. The government might then establish the new par value at 3,060 pesos with new limit points at 3,121 and 2,999.

A government can peg its currency to either another single currency (see the Country Box for illustration) or to a “basket” of foreign currencies. Today, 62 of the 167 members of the IMF peg their currency to some other currency. The U.S. dollar is the base for 20 other currencies (e.g., Argentina, Iraq, Panama, Venezuela, Dominica, Hong Kong). The French franc is the base for 14 currencies (all issued by former French colonies in Africa). Similarly, six of the new countries created with the breakup of the Soviet Union peg their currency to the Russian ruble.

Other countries peg their currency to a composite basket of currencies, where the basket consists of a portfolio of currencies of their major trading partners. The base value of such a basket is more stable than any single currency. Under this regime, a country can peg its currency to the standard basket such as the Special Drawing Rights, or SDR (e.g., Libya and Myanmar), or to its own basket, designed to fit the country’s unique trading and investing needs (e.g., Bangladesh, Cyprus,

COUNTRY BOX

Hong Kong

CAN THE HONG KONG DOLLAR RETAIN THE FIXED PEG TO THE U.S. DOLLAR?

Many analysts question whether or not Hong Kong can retain the fixed peg to the U.S. dollar. Several factors are in Hong Kong’s favor. First, in addition to Hong Kong’s foreign exchange reserves of some U.S.\$75 billion, the Chinese government is also prepared to use its U.S.\$140 billion of reserves to defend the HK dollar. China has a vested economic and political interest in preserving Hong Kong’s exchange rate and financial stability. Second, the overall economy of Hong Kong remains strong, as reflected in recurring fiscal and balance-of-payments surpluses, an extremely long foreign debt service ratio (1.3 percent), and an efficiently regulated and supervised banking system. Non-performing loans account for less than 1 percent of advances and capital adequacy ratios are over 13 percent.

The risk is that coming off the peg now would lead to more frequent and intense speculation in the future in both the foreign exchange and equity markets, given the openness of these markets and the lack of exchange controls. A very small economy like Hong Kong, which serves as a regional financial and trading center, needs stability and certainty, which the peg provides. With the manufacturing sector accounting for less than 10 percent of GDP, the benefits of devaluation would be minimal. The peg system was established in 1984 to counter the uncertainty following the U.K.—PRC declaration of 1997 handover.

Source: Adapted from *Accountancy (International Edition)*, First Quarter 1998, anonymous, pp. 27–29.

Czech Republic, Iceland, Jordan, Kuwait, Nepal, Thailand, and Morocco). In the latter approach, the basket normally contains currencies of major trading partners, weighted according to trading relations with the focal country.

The peg system is not a panacea. When pegged rates become overvalued, countries are forced to deplete their foreign exchange reserves to defend the currency peg. With reserves depleted, countries try to manipulate interest rates but are often eventually forced to devalue, repegging at a lower rate or giving up the peg altogether. With a floating rate system, countries can maintain their foreign reserves and thereby maintain a defense against financial panic which often plagues pegged exchange regimes. Foreign creditors understand that the central bank has sufficient reserves to repay short-term debts, thereby eliminating the possibility of a self-fulfilling creditor panic. Also, governments are not forced to break their word when international or domestic events force change in market exchange rates. For example, in April 2002, undergoing economic meltdown and five changes of president in two weeks, Argentina (under the floating regime) declared the world's largest debt default and devalued its peso by more than 70 percent.

Target-Zone Arrangement

Target-zone arrangement is virtually a joint float system cooperatively arranged by a group of nations sharing some common interests and goals. Under a target-zone arrangement, countries adjust their national economic policies to maintain their exchange rates within a specific margin around agreed-upon, fixed central exchange rates. Such an arrangement exists for the major European currencies participating in the European Monetary System (EMS). Members of the European Union have a cooperative agreement to maintain their currencies within a set range against other members of their group. The **EMS** is, in essence, a peg of each country's currency to all the others, as well as a joint float of all member currencies together against non-EMS currencies. The target-zone arrangement helps minimize exchange rate instability and enhance economic stability in the group (zone). Exhibit 9-3 shows EMS's current Euro members and its eastward march.

Let us use the EMS to illustrate this type of arrangement. As part of the EMS, the members established the *ECU* (and later the *euro*), which plays a central role in the functioning of the EMS. Taking effect January 1, 1999, the **euro** is a composite currency for European Union countries (Denmark, the United Kingdom, and Sweden didn't join the euro as of 2002), with foreign exchange rates of the participating national currencies being irrevocably fixed against one another and against the euro. The euro now functions as a unit of account, a means of settlement, a reserve asset for the members of the European Union and a real currency. At the heart of the EMS is an exchange-rate mechanism, which allows each member to determine a mutually agreed central exchange rate for its currency; each rate is denominated in currency units per euro (e.g., DM2.05853 per euro). Central rates establish a grid of cross-exchange rates between currencies. For example, 2.05853 deutsche marks per euro, divided by 6.90403 French francs per euro, equals 0.29816 DM per French francs. Member nations pledged to keep their currencies within a ± 2.25 percent margin around their central cross-exchange rates (Spain has a 6 percent margin).

The **European Central Bank** (ECB), based in Frankfurt and established in June 1998, is the central bank in the euro zone. It is as powerful in Europe as the Federal Reserve is in the United States. This central bank sets interest rates for the euro zone. However, the ECB is not a duplicate of the U.S. Fed. One of the most important differences between the two is their respective mandates. The Fed's goal is to balance the objectives of price stability with those of employment and economic growth. The ECB, on the other hand, has a narrower focus patterned on the

Exhibit 9-3

The Euro's eastward march



Source: The ECB heads for turbulence, *The Economist*, January 29, 2000, page 82.

Bundesbank (Germany's former central bank). It is only responsible for keeping prices stable. In addition, the Fed deals with only one government, whereas the ECB is faced with all member governments each with their own fiscal policies. Finance ministers from the currency-union members hold informal meetings regularly to coordinate fiscal policies.

The target-zone arrangement is not without problems. Owing to the divergence of national policies, the level of economic development, and the trade structure, it is difficult for every member to maintain the central exchange rate for a long period of time. Moreover, when currency speculators attack one of the zone currencies, defense is more costly. In fact, the euro's exchange rate mechanism had to be realigned in 1992, as a result of attacks by speculators against the Nordic currencies (Finland, Sweden, and Norway) as well as the French franc, British pound, and Italian lira, successively.

Managed Float System

The **managed float**, also known as a *dirty float*, is employed by governments to preserve an orderly pattern of exchange rate changes and is designed to eliminate excess volatility. Each central bank sets the nation's exchange rate against a predetermined goal, but allows the rate to vary. In other words, rate change is not automatic but is based on the government's view of an appropriate rate in the context of the country's balance-of-payments position, foreign exchange reserves, and rates quoted outside the official market. Rather than resist the underlying market forces, the authorities occasionally intervene by buying or selling domestic currency



The euro has become a real currency since January 2002.

to smooth the transition from one rate to another. At other times they intervene to moderate or counteract self-correcting cyclical or seasonal market forces. The rationale for the managed float is to improve the economic and financial environment by reducing uncertainty. For instance, government intervention may reduce exporters' uncertainty caused by disruptive exchange rate changes. Currently, about 40 countries (e.g., Brazil, China, Egypt, Hungary, Korea, Israel, Poland, Turkey, Russia) maintain a managed float system. The challenge behind this approach is to define just what is meant by "excess volatility." It is also questionable if governments are more capable than markets in determining what is fundamental and what is temporary and self-correcting.¹

Independent Float System

Approximately 55 countries currently allow full flexibility through an **independent float**, also known as a *clean float*. Under this system, an exchange rate is allowed to adjust freely to the supply and demand of this currency for another. Consequently, there is usually no need for an economy to undergo the painful adjustment process set in motion by a decrease or increase in the money supply. This category contains currencies of both developed (e.g., USA) and developing (e.g., Peru) countries. Central banks of these countries allow exchange rates to be determined by market forces alone. Although some central banks may intervene in the market from time to time, such intervening usually attempts to alleviate speculative pressures on their currency. Further, central banks intervene only as one of

many anonymous participants in the free market in an occasional, non-continuous manner. Exhibit 9–4 shows sample countries and their exchange rate systems.

Advantages and Disadvantages of the Floating System

The float-rate system, whether managed or independent, is the dominant system in the beginning of the twenty-first century, utilized by about 100 countries. The flexible exchange rate system provides a less painful adjustment mechanism to trade imbalances than do fixed exchange rates and prevents a country from having large

Exhibit 9–4
Sample countries using different exchange rate systems

Independent Float	Managed Float	Target Zone	Crawling Peg	Fixed
United States	Singapore	Austria	Argentina	North Korea
Peru	Afghanistan	Belgium	Iraq	Cuba
Philippines	Brazil	France	Panama	
Romania	Australia	Germany	Hong Kong	
South Africa	China	Ireland	Cameroon	
Yemen	Canada	Luxembourg	Chad	
Zambia	India	Netherlands	Togo	
Denmark	Japan	Portugal	Estonia	
Yemen	Israel	Spain	Libya	
Zimbabwe	Korea	Finland	Bangladesh	
Paraguay	Malaysia	Italy	Czech Republic	
Sudan	Poland	Greece	Kuwait	
Tanzania	Russia	United Kingdom	Iceland	

persistent deficits. Unlike the fixed-rate system, which requires a recession to reduce real (inflation-adjusted) income or prices when trade deficits arise, flexible exchange rates will only lower the foreign exchange value of the currency. In a fixed rate system, reducing local currency income (wages) is likely to be painful for political and social reasons even though this reduction (and thus the decline in the value of this nation's currency) can improve trade balance.²

Moreover, flexible exchange rates do not require central banks to hold foreign exchange reserves because there is no need to intervene in the foreign exchange market. This means that the problem of insufficient liquidity (foreign exchange reserves) does not exist with truly flexible rates. Further, flexible exchange rates avoid the need for strict import and export regulations such as tariffs, foreign exchange control, and import restrictions. These regulations are not only costly to enforce but also prone to criticism and even retaliation from trade partner countries.

Finally, floating exchange rates can help ensure the independence of trade policies. For example, if the United States allows rapid growth in the money supply, this will tend to raise U.S. prices and lower interest rates (in the short run), the former causing a deficit or deterioration in the current account and the latter causing a deficit or deterioration in the capital account. If, for example, the Canadian dollar were fixed to the U.S. dollar, the deficit in the United States would most likely mean a surplus in Canada. This would put upward pressure on the Canadian dollar, forcing the Bank of Canada to sell Canadian dollars and hence increase the Canadian money supply. In this case an increase in the U.S. money supply would cause an increase in the Canadian money supply. However, if exchange rates were flexible, the U.S. dollar would simply depreciate against the Canadian dollar.

The role of flexible rates, however, is limited in balancing trade after a certain period of time. A depreciation or devaluation of currency will help the balance of trade if it reduces the relative prices of locally produced goods and services. However, after a short period of time, domestic prices of tradable goods will rise following depreciation or devaluation. This will increase the cost of living, which puts upward pressure on wages.³ For example, if 1 percent depreciation raises production costs by the same percentage point, and if real wages are maintained, then nominal wages must rise by the amount of depreciation or devaluation. If wages rise 1 percent when the currency falls by 1 percent, the effects are offsetting, and changes in exchange rates will be ineffective. In addition, flexible rates could make it more difficult for governments to control inflation and also create less motivation for governments to combat it.⁴ Finally, free float rates may cause more uncertainty, which may in turn hamper the growth and stability of economies vulnerable to international financial and export markets. Under the floating system, international speculators can cause wide swings in the values of different currencies. These swings are the result of the movement of "hot money chasing better returns and the enormous speed of capital flows whose scale dwarfs that of trade flows."⁵

Interim Summary

1. Countries utilize the crawling peg system, target-zone arrangement, managed float system, or independent float system in a rising sequence of flexibility and volatility.
2. Countries select different exchange rate systems because they have different goals, different levels of internationalization, and different capabilities of managing foreign exchange volatility.

DETERMINATION OF FOREIGN EXCHANGE RATES

The determination of a national currency's exchange rate should answer two basic questions: (1) *how is the base rate between this nation's currency and foreign currencies determined?* That is, what is the underlying criterion used to determine the base level (*stocks*) of exchange rate of a currency vis-à-vis others? and (2) *how does a nation's exchange rate change over time (flows)?* That is, what are the conditions under which the exchange rate should change, and how?

Under the gold standard regime (1876–1914), the base level of a currency's exchange rate was determined by the stated value of gold per unit of the currency. Assuming, for example, one deutsche mark is worth 0.02 ounce of gold while one U.S. dollar is worth 0.048 ounce of gold. The gold equivalent then becomes the underlying criterion used in determining the base rate of the deutsche mark against other currencies, such as the U.S. dollar (DM2.4/\$1 in this case).

Under other foreign exchange regimes, however, there is no direct way to value one currency against others in terms of both stocks and flows. Moreover, the present international monetary system is characterized by a mix of free floating, managed floating, pegged or target zone, and fixed exchange rates. No single general theory is available to forecast exchange rates under all conditions. Nevertheless, it is widely agreed that the purchasing power parity principle helps explain both the stocks and the flows of exchange rates. Other principles or approaches to analyze foreign exchange movements include interest rate parity and international Fisher parity. The **purchasing power parity** (PPP) approach emphasizes the role of prices of goods and services in determining exchange rates, whereas the **interest rate parity** focuses on the role of capital movements. Although these two perspectives are insufficient to explain exchange rate changes, they are useful building blocks of foreign exchange determination.

Purchasing Power Parity (PPP)

The purchasing power parity principle suggests that the exchange rate between two currencies should, in the long run, reflect purchasing power differences; that is, the exchange rate should equalize the price of an identical basket of goods and services in the two countries. This principle has absolute and relative perspectives toward purchasing power parity. **Absolute PPP** states that the exchange rate is determined by the relative prices of similar baskets of goods or services. In other words, the ratio of one currency's price of a bundle of goods and services to another currency's price of the same bundle should be the exchange rate between the two. For example, if the identical basket of goods cost ¥1000 in Japan and \$10 in the United States, the PPP-based exchange rate would be ¥100/\$1.

The PPP principle in the absolute, or static, form offers a simple explanation for exchange rate determination. However, it is difficult in practice to compute the price indices. Different baskets of goods are used in different countries, given the different demand structures and consumption behaviors. To avoid this deficiency, **relative PPP** focuses on the relationship between the change in prices of two countries and the change in the exchange rate over the same period. The relative **PPP** suggests that if the exchange rate between two countries starts in equilibrium, any change in the differential rate of inflation between them tends to be offset over the long run by an equal but opposite change in the exchange rate. If the domestic inflation level is rising faster than the foreign inflation level, the exchange rate is depreciating. If the foreign inflation level is rising faster than the domestic inflation level, the exchange rate is appreciating. If the exchange rate does not change in this situation, the country's exports of goods and services will become less competitive

with comparable products produced elsewhere. Imports from abroad will also become more price-competitive than higher-priced domestic products.

The PPP principle offers an economic foundation for determining and adjusting the exchange rates. In the real business world, however, PPP conditions may not always hold. The exchange rates are thus not always determined by the purchasing power parity. Reasons for departures from PPP include:

1. The PPP principle assumes that goods or services can move freely across borders. In practice, however, we see many restrictions on movement of goods and services (e.g., tariff and non-tariff barriers). These barriers affect both the price and quantity of exports and imports.
2. Many of the items that are often included in the commonly used price indexes do not enter into international trade (e.g., land and buildings). These non-traded items can allow departures from PPP to persist.
3. The PPP principle fails to consider cross-border transportation costs which enlarge the PPP deviations.
4. The PPP principle fails to consider the reality that different items have different weights in various nations' price indexes.

Interest Rate Parity (IRP)

The PPP principle focuses only on goods and services and omits the importance of capital flows in the determination of exchange rates. To redress this limitation, the **interest rate parity (IRP)** principle provides an understanding of the way in which interest rates are linked between different countries through capital flows. The IRP principle suggests that the difference in national interest rates for securities of similar risk and maturity should be equal to, but opposite in sign of, the forward rate discount or premium for the foreign currency. A **forward rate** is the rate at which a bank is willing to exchange one currency for another at some specified future date. If this exchange takes place immediately, this rate is called a spot rate. A forward rate discount (premium) measures the percentage by which the forward rate is less (more) than the spot rate at a specific date. The IRP implies that the interest rate differential between two countries will be matched by the forward premium of the exchange rate. This relation holds due to efficient arbitrage in risk-free assets. It can be applied to international investments as well as to international lending. The rationale underlying the IRP is that for investment projects, investors compare the return from the domestic market with the return from the foreign market; the latter is the return from the foreign asset plus the forward premium. For financing projects, borrowers compare the costs from the domestic market with those from the foreign market. Equilibrium will be achieved when interest parity is established.

Consider, for example, the case in which the one-year interest rate in New York is 8.75 percent, and in London 11.75 percent. This seems to suggest that investors will earn an excess return of 3 percent if the funds are invested in the London bond market (or that borrowers will acquire funds more inexpensively in New York). However, if the prevailing current spot rate is \$1.6375/£1 and the one-year forward rate is \$1.5883/£1, then investors who convert their proceeds back to U.S. dollars will have to pay a 3 percent forward discount on the pound sterling in the forward market. We see that the interest rate advantage is offset by the forward discount on the pound. If the investors did not use the forward market, they may suffer a loss greater than 3 percent, because the actual spot rate between dollar and pound a year later may drop more than 3 percent.

Like PPP, IRP also face deviations due to transaction costs and tax factors in financial markets. Political risks can also cause deviations from interest parity between

countries because investors expect to be compensated for the greater risk of investing in a foreign country. The forward market and related terms will be discussed in detail later in this chapter.

The IRP is generally applicable to securities with maturities of one year or less, since forward contracts are not routinely available for periods longer than one year. Similar to the IRP principle but involving securities with maturity that could be longer than one year, the **international Fisher effect** addresses the relationship between the percentage change in the spot exchange rate over time and the differential between comparable interest rates in different national capital markets. Specifically, the international Fisher effect states that the spot exchange rate should change in an equal amount but in the opposite direction to the difference in interest rates between two countries. For example, if a dollar-based investor buys a 10-year yen bond earning 4 percent annual interest, compared with 6 percent interest available on dollars, the investor must be anticipating the yen to appreciate vis-à-vis the dollar by at least 2 percent per year during the 10 years.

Implications for MNEs: Foreign Exchange Forecasting

Because future exchange rates are uncertain, participants in international financial markets can never know for sure what the exchange rate will be one month or one year ahead. As a result, forecasts must be made. Some forecasters believe that for the major floating currencies, foreign exchange markets are “efficient” and forward exchange rates are unbiased predictors of future spot exchange rates. However, empirical studies rejected this hypothesis.⁶ Although referencing to the forward rate (see next section) is still necessary and useful, and can be viewed as a baseline in forecasting a foreign exchange rate, international managers should take into account many economic and noneconomic factors in predicting foreign exchange rates, especially long-term rates (over one year).

Economic fundamentals that influence long-term exchange rates include balance of payments, foreign exchange reserves, relative inflation rates, relative interest rates, and the long-run properties of purchasing power parity. The strength of a focal country’s economy, which is often reflected in its GDP (gross domestic product), GNP (gross national product), national income, investment growth, and export growth, among others, also influences the country’s long-term exchange rates. Because governments differ in the extent to which they exert influence on foreign exchange rates, even under the floating system, managers should be aware of government declarations and agreements regarding exchange rate goals. Noneconomic fundamentals that may affect exchange rates include political or social events, bilateral relations between the two countries, market speculations against the currency, the confidence of market participants, and natural disasters.

In emerging markets with foreign exchange control set by the government, there often exist foreign exchange black (or parallel) markets in which buyers and sellers transact foreign currencies using the market rate, which is generally different from the official rate. Because this “market” rate is often a “shadow” price that reflects the demand and supply equilibrium in the foreign exchange market, it is often used as the reference rate in predicting managerial floating exchange rates. In predicting exchange rates, international managers also look at the country’s foreign exchange rate system. If, for example, a country pegs its currency to that of another major trade partner, then the exchange rate prediction will emphasize the partner country’s currency. To predict a long-term fixed rate, managers also need to see if the government is capable of controlling domestic inflation, in order to generate hard currency reserves to use for intervention, and to run trade surpluses. To predict a long-term floating rate, managers must focus on inflationary fundamentals and PPP as well as indicators for economic health such as growth and stability.

Time-series analysis of prior years, together with anticipated new factors about future changes, is a widely applied technique for predicting foreign exchange rates, particularly short-term trends. The accuracy of these forecasts depends on whether the foreign exchange market is efficient. The more efficient the market, the more likely it is that exchange rates are “random walks” (e.g., with past price behavior providing no clues to the future). The less efficient the foreign exchange market, the higher the probability that forecasters will find a key pattern that holds, at least in the short run. If the pattern is truly consistent, however, others will soon discover it and the market will become efficient again with respect to that information.

Interim Summary

1. The purchasing power parity (PPP) principle holds that the exchange rate between two currencies is determined in the long run by the price of an identical basket of goods and services. The interest rate parity (IRP) principle holds that the interest rate differential between two countries will be matched by the premium of their forward exchange rate.
2. To predict or forecast foreign exchange rates, international managers analyze both economic and noneconomic fundamentals, while making reference to forward or black market exchange rates.

THE BALANCE OF PAYMENTS

The exchange rate system is a necessary tool for international transactions involving different currencies. The national goal of these transactions is to accomplish gains from trade and investment activities, which are recorded in the balance-of-payments account. The **balance of payments** is an accounting statement that summarizes all the economic transactions between residents (individuals, companies, and other organizations) of the home country and those of all other countries. That is, it reports the country's international performance in trading with other nations and the volume of capital flowing in and out of the country. Balance of payments accounting uses the system of **double-entry bookkeeping**, which means that every debit or credit in the account is also represented as a credit or debit somewhere else. In a balance-of-payment sheet, currency inflows are recorded as *credits* (plus sign), whereas outflows are recorded as *debits* (minus sign).

A standard balance of payments includes *current account*, *capital account*, and *official reserves account*. Each category is made of several subcategories. To maintain the balance of the total credit and total debit, the statistical discrepancy is also included in a balance of payments. Statistical discrepancy reflects net *errors and omissions* in collecting data on international transactions. Exhibit 9–5 illustrates the United States' balance of payments sheet for 2000.

Current Account

The **current account** records flows of goods, services, and unilateral transfers (gifts). It includes exports and imports of merchandise (trade balance) and service transactions (also known as invisible items). The service account includes various service income and fees (e.g., interest, dividends, and royalty). Tourism income, financial charges (i.e., banking and insurance), and transportation charges (i.e., shipping and air travel) are part of service income. The investment income account separates

Exhibit 9-5

The U.S. balance of payments, 2000 (in billions of dollars)

CURRENT ACCOUNT		
Goods		
Exports	+772.21	
Imports	<u>-1224.42</u>	
Balance of Merchandise Trade	-452.21	
Services		
Exports	+293.49	
Imports	<u>-217.02</u>	
Balance of Services Trade	+76.47	
Investment Income		
Received	+352.87	
Paid	<u>-367.66</u>	
Balance of Investment Income	-14.79	
Unilateral Transfer (Net)	-54.14	
Balance on Current Account		-444.67
CAPITAL ACCOUNT		
Portfolio		
New Investment/Lending in United States	+736.56	
New U.S. Investment/Lending Abroad	-428.22	
Foreign Direct Investment		
New FDI in United States	+287.66	
New U.S. FDI Abroad	-152.44	
Balance on Capital Account		+443.56
OFFICIAL RESERVES ACCOUNT		
Gold	0	-0.29
SDRs	-0.72	
Reserve in the IMF	+2.31	
Foreign Currencies	-1.88	
ERRORS AND OMISSIONS		<u>+1.40</u>
NET BALANCE		<u><u>0</u></u>

Source: Bureau of Economic Analysis, U.S. Department of Commerce, Washington, D.C. (www.bea.doc.gov).

investment income from service income, and it records income receipts on the country-owned assets abroad and income payments on foreign-owned assets within the country. Unilateral transfers include pensions, remittances, and other transfers for which no specific services are furnished.

Capital Account

The **capital account** records private and public investment or lending activities and is divided into portfolio (short- and long-term) and foreign direct investment. Foreign branches, wholly-owned subsidiaries and joint ventures are typical forms of direct investments. Foreign bonds, notes, or mutual funds are examples of portfolio investment insofar as they confer no management or voting rights on their

owners. The portfolio account includes both short-term (e.g., cash, deposits, and bills) and long-term investments or lending (e.g., securities with a maturity longer than one year, bank loans, and mortgages). Government borrowing and lending are also included in the capital account.

Official Reserves Account

The **official reserves account** records net holdings of the official reserves held by a national government. Reserves include gold, special drawing rights (SDRs), reserve positions in the IMF, and convertible foreign currencies. To most countries, foreign currency is by far the largest component of total international liquidity. Each government normally keeps foreign exchange reserves in the form of foreign treasury bills, short-term and long-term government securities, euros, and the like.

Note that the implications of the balance of payments, especially trade deficits or surplus under current account, may change over time and is subject to interpretation. Today many imports are actually “exported” by the country’s own companies operating in a trading partner country. But, statistically, they are still “imports” recorded in the balance of payments. The United States had, for example, a \$52.67 billion merchandise trade deficit with China, followed by 45.67 with Japan, 37.57 with Canada, and 19.86 with Mexico, as of August 2001. However, a sizable percentage of imports entering the United States were in fact “exported” by American companies (e.g., RCA, HP, Pepsi, GE, Xerox, and Rubbermaid) investing and operating in these partner countries. One-third of China’s total exports (\$249 billion in 2000), for instance, are undertaken by foreign investors in the country. From a wealth creation perspective, these “imports” may be viewed as a plus, rather than minus, sign in the balance of payments.

Interim Summary

1. The balance of payments records economic transactions between one country and the rest of the world. It contains current account, capital account, and official reserves balance.
2. A nation’s trade deficits (such as those in the United States) may be reinterpreted if a large number of MNEs from this nation invest abroad and export back their products.

INTERNATIONAL FOREIGN EXCHANGE MARKETS

The international monetary systems introduced earlier are not the only influence on foreign currency movements. International financial markets also play a crucial role. International monetary systems and international financial markets are inherently linked such that the former impact company decisions or firm operations through the latter. International firms face many opportunities as well as threats arising from the international financial markets, which are determined at least partly by the monetary systems. International financial markets are composed of *international foreign exchange markets* and *international capital markets*. International capital markets further include (a) international money markets, (b) international stock markets, (c) international bond markets, and (d) international loan markets (see Exhibit 9–6).

Exhibit 9-6
International financial
markets

INTERNATIONAL FINANCIAL MARKETS				
International Foreign Exchange Market	International Capital Markets			
	International Money Market	International Stock Market	International Bond Market	International Loan Market

Landscape of the International Foreign Exchange Market

The **foreign exchange market** is where foreign currencies are bought and sold. It is the physical as well as institutional structure through which currencies are exchanged, exchange rates determined, and foreign exchange transactions completed. A **foreign exchange transaction** is an agreement between a buyer and seller for the delivery of a certain amount of one currency at a specified rate in exchange for some other currency. The 1999 survey of foreign exchange markets conducted by the BIS (Bank of International Settlements) illustrated that average daily turnover in the international foreign exchange market was about \$1.5 trillion. The U.S. dollar was the most actively traded currency, reflecting its liquidity, its use as a settlement currency, and its predominance in trade-related transactions. The dollar was involved in over 80 percent of all foreign exchange transactions in 2001. The second and third most traded currencies were the deutsche mark and Japanese yen, respectively.

The global foreign exchange business is concentrated in four centers, which together account for about two-thirds of total reported turnover. These four centers are London, New York, Tokyo, and Singapore. Other important exchange markets are located in Paris, Frankfurt, Hong Kong, Amsterdam, Milan, Zurich, Toronto, Brussels, and Bahrain. A larger share of U.S. dollar turnover and deutsche mark turnover is conducted in London than in either New York or Frankfurt. The foreign exchange market is dominated by dealers, and is becoming increasingly automated and concentrated.

Market Participants and Functions

A market for foreign exchange consists of *individuals, corporations, banks, and brokers* who buy or sell currencies. Currency trading in each country is conducted through the intermediation of foreign-exchange brokers, who match currency bids and offers of banks and also trade directly among themselves internationally. Banks in each country and throughout the world are linked together by telephone, Internet, telex, and a satellite communications network called the **Society for Worldwide International Financial Telecommunications (SWIFT)** based in Brussels, Belgium. Despite the long distance separating market participants, this computer-based communication system makes all significant events virtually instantaneously impacting everywhere in the financial world. This in turn contributes to a worldwide market with narrower spreads for participants.

Although the market is global, the exchange market in each country has its own identity and institutional and regulatory framework. An efficient communication system can substitute for participants' need to convene in a specific location (*bourse*). Indeed, the U.K.–U.S. type of market is based on communication networks, whereas the European approach remains traditional, based on the physical meeting of the

participants, usually at the bourse. Daily meetings take place in some markets such as those in Frankfurt and Paris, where representatives of commercial banks and central banks meet and determine a rate, known as the fixing rate. In those countries, the posted fixing rates serve as a guide for pricing small to medium-sized transactions between banks and their customers. Among major industrial countries, Japan, Germany, France, Italy, and the Scandinavian and the Benelux countries have a daily fixing. The United Kingdom, Switzerland, Canada, and the United States do not.

Foreign exchange is traded in a 24-hour market. As the market in the Far East closes, trading in the Middle Eastern financial centers has been going on for a couple of hours, and trading in Europe is just beginning. As the London market closes, the one in New York opens. A few hours later, the market in San Francisco opens and trades with the East Coast of the United States and the Far East as well. Banks dominate the foreign exchange market, with about 90 percent of foreign-exchange trading constituting interbank trading. Nonbank participants in foreign-exchange trading include commodities dealers, multinational corporations, and nonbank financial institutions.

The foreign-exchange market performs three major functions:

1. It is part of the international payments system and provides a mechanism for exchange or transfer of the national currency of one country into the currency of another country, thereby facilitating international business.
2. It assists in supplying short-term credits through the Eurocurrency market (see next section) and swap arrangements.
3. It provides foreign-exchange instruments for hedging against exchange risk. Although most commercial banks handle actions for their clients, many banks also act as market-makers, with each prepared to deal with other banks at any time. This activity constitutes interbank market, where portfolio positions are adjusted and exchange rates determined.

Foreign-exchange trading expanded sharply under the floating exchange rate system, and the number of banks participating in the market increased significantly as they entered the market to service their corporate clients. Increased hedging by companies of their cash flows and balance sheets was accompanied by the entry of new corporate participants into the market.

Foreign Exchange Rate Quotations

A foreign exchange quotation is the expression of willingness to buy or sell at a set rate. There are several pairs of quotations being used in foreign exchange businesses. Correctly interpreting the meaning of these quotations is important, as they are easy to confuse.

Direct and Indirect

A **direct quote** is a home currency price of a foreign currency unit (e.g., C\$1.489/U.S.\$1 in Canada), whereas an **indirect quote** is a foreign currency price of a home currency unit (U.S.\$0.67182/C\$1 in Canada). Under a direct quote, an increase of the exchange rate (e.g., from C\$1.489 to C\$1.589 per dollar) means depreciation of the home currency (C\$) or appreciation of the foreign currency (U.S.\$). Conversely, under an indirect quote, an increase of the exchange rate (e.g., from U.S.\$0.67182 to U.S.\$0.68182 per Canadian dollar) means the appreciation of the home currency (C\$) or depreciation of the foreign currency (U.S.\$). In most countries, banks use a direct quote.

Exhibit 9-7

Spot and forward quotations between U.S. dollar and deutsche mark (DM)

	American Terms (\$/DM)		European Terms (DM/\$)	
	Bid	Offer	Bid	Offer
Spot	0.6396	0.6400	1.5625	1.5635
Forward-1 month	0.6419	0.6424	1.5567	1.5579
Forward-3 months	0.6466	0.6472	1.5450	1.5466
Forward-6 months	0.6536	0.6543	1.5283	1.5301

Note: 1 euro = DM1.95583 (euro fixed exchange rate)

Bid and Offer

A **bid** is the exchange rate in one currency at which a dealer (usually bank) will buy another currency. An **offer** (also referred to as *ask*) is the exchange rate at which a dealer (usually a bank) will sell the other currency. The difference between the bid and offer prices, also known as the **bid-ask spread**, is the compensation for transaction cost for the dealer. For example, a Canadian bank's quotation for the U.S. dollar (U.S.\$/C\$) may be: 0.6718 (bid) and 0.6748 (offer). For widely traded currencies such as the U.S. dollar, euro, yen, or pound, the spread ranges from 0.05 to 0.08 percent.

Spot and Forward

This pair of quotes is used for foreign exchange transactions between dealers in the interbank market. A **spot rate** is the exchange rate for a transaction that requires almost immediate delivery of foreign exchange (normally before the end of the second business day). A **forward rate** is the exchange rate for a transaction that requires delivery of foreign exchange at specified future date (e.g., 30-day, 90-day, or 180-day). See Exhibit 9-7 for some examples.

Cross Rates

The **cross rate** is the exchange rate between two infrequently traded currencies, calculated through a widely traded third currency. For example, an Argentine importer needs the Hong Kong dollar to pay for a purchase in Hong Kong. The Argentinean peso is not quoted against the Hong Kong dollar. However, both currencies are quoted against the U.S. dollar. Assuming:

Argentinean Peso:	Arg\$0.998/US\$1
Hong Kong Dollar:	HK\$7.798/US\$1
Cross Rates Between Arg\$ and HK\$:	Arg\$0.998/HK\$7.798 = Arg\$0.128/HK\$ or HK\$7.798/Arg\$0.998 = HK\$7.814/Arg\$

Transaction Forms

Spot Transactions

Spot transactions include bank notes transactions for individuals and spot transactions between banks. Bank notes transactions such as currency changes for individuals are exchanged for each other instantaneously over the counter. Spot transactions between banks, however, are normally settled on the second working day after the date on which the transaction is concluded. The interbank foreign exchange market is by far the world's largest financial market. On the *settlement date* (also referred to as value date), most dollar transactions in the world are settled

through the computerized **Clearing House Interbank Payments Systems (CHIPS)** in New York, which provides for calculation of new balances owed by any one bank to another and for payment by 6:00 P.M. the same day in Federal Reserve Bank of New York funds. This system, owned by large New York clearing banks, has more than 150 members, including the U.S. agencies and subsidiaries of many foreign banks. It handles over 150,000 transactions a day, together worth hundreds of billions of dollars. Similar systems also exist in other major foreign exchange centers where currencies other than the U.S. dollar are settled.

When a company (or individual) needs foreign exchange to be paid to a foreign company, it can use either customer drafts or international wire transfers through a bank. The bank sells this company a foreign exchange draft payable to the stated foreign company. For example, if a U.S. business needs to make a Japanese yen payment to a Japanese company, it can buy a yen draft from a U.S. bank, where this draft is drawn against the U.S. bank's yen account at a Japanese bank. A wire transfer is the fastest settlement for international companies, paying foreign exchange to their foreign creditors. Under a wire transfer, the payment instructions are sent via SWIFT or similar electronic means.

Forward Transactions

A **forward transaction** occurs between a bank and a customer (company, broker, or another bank), calling for delivery at a fixed future date, of a specified amount of foreign exchange at the fixed forward exchange rate. This exchange rate is established at the time of agreement, but payment and delivery are not required until maturity. Customers such as international companies may either buy a foreign currency forward from a bank (e.g., in an import business) or sell a foreign currency forward to a bank (e.g., in an export bank). If the initial transaction represents an asset or future ownership claim to foreign currency, this position is described as a **long position**. If the cash market position represents a liability or a future obligation to deliver foreign currency, this position is described as a **short position**. Chapter 14 will describe forward transactions to avoid foreign exchange risks for MNEs.

Swap Transactions

A **swap** is an agreement to buy and sell foreign exchange at prespecified exchange rates where the buying and selling are separated in time. In other words, a **swap transaction** involves the simultaneous purchase and sale of a given amount for two different settlement dates. Both purchase and sale are carried out by the same counter-party. Two common types of swap transactions are spot-forward swaps and forward-forward swaps.

In a **spot-forward swap**, an investor sells forward the foreign currency maturity value of the bill, and simultaneously buys the spot foreign exchange to pay for the bill. Since a known amount of the investor's home currency will be received according to the forward component of the swap, no uncertainty from exchange rates exists. Similarly, those who borrow in foreign currency can buy forward the foreign currency needed for repayment of the foreign currency loan at the same time that they convert the borrowed foreign funds on the spot market.

A **forward-forward swap** involves two forward transactions. For example, a dealer sells Euro1,000,000 forward for dollars for delivery in three months at U.S.\$0.94/Euro, and simultaneously buys Euro1,000,000 forward for delivery in six months at U.S.\$0.94/Euro. The difference between the buying price and the selling price is equivalent to the three-month interest rate differential between the deutsche mark and the U.S. dollar.

The two preceding types of swaps are particularly popular with banks, because it is difficult for them to avoid risk when making a market for many future dates and currencies. For some dates and currencies, a bank may be in a long position, which means that it has agreed to purchase more of the foreign currency than it has agreed to sell. For other dates and currencies, the bank may be in a short position, which means that it has agreed to sell more of these currencies than it has agreed to buy. Swaps help the bank to balance its position and reduce financial risk.

Foreign Exchange Arbitrage

In the foreign exchange market, price information is readily available through computer networks, which makes it easy to compare prices in different markets. As such, exchange rates tend to be equal worldwide but temporary discrepancies do exist. These temporary discrepancies provide profit opportunities for simultaneously buying a currency in one market (at lower price) while selling it in another (at higher price). This activity is known as **arbitrage**. Arbitrage will continue until the exchange rates in different locales are so close that it is not worth the costs incurred in further buying and selling.⁷

For example, suppose Citibank is quoting the German mark/U.S.dollar exchange rate as 1.4445–55 and Dresdner Bank in Frankfurt is quoting 1.4425–35. This means that Citibank will buy dollars for 1.4445 marks and will sell dollars for 1.4455 marks. Dresdner will buy dollars for 1.4425 marks and will sell dollars for 1.4435 marks. This presents an arbitrage opportunity. We could buy \$10 million at Dresdner's ask price of 1.4435 and simultaneously sell \$10 million to Citibank at their bid price of 1.4445 marks. This would earn a profit of DM0.0010 marks per dollar traded, so DM 10,000 would be the total arbitrage profit. If such a profit opportunity exists, the demand to buy dollars from Dresdner will cause it to raise its ask price above 1.4435, while the increased interest in selling dollars to Citibank at its bid price of 1.4445 marks will cause it to lower its bid. In this way, arbitrage activity pushes the prices of different traders to levels where no arbitrage profits are earned.

Arbitrage could also involve three or more currencies. Let us temporarily ignore the bid-ask spread and associated transaction costs. Suppose that in London $\$/\text{£} = 2.00$, while in New York $\$/\text{DM} = 0.40$, then $\text{£}/\text{DM} = 0.40/2.00 = 0.2$. If we observe a market where one of the three exchange rates— $\$/\text{£}$, $\$/\text{DM}$, $\text{£}/\text{DM}$ —is out of line with the other two, there is an arbitrage opportunity. Suppose that in Frankfurt the exchange rate is $\text{£}/\text{DM} = 0.2$, while in New York $\$/\text{DM} = 0.40$, but in London $\$/\text{£} = \1.90 . A trader could start with dollars and use \$1.9 million to buy $\text{£}/1$ million in London since $\$/\text{£} = \1.90 . The pounds then could be used to buy marks at $\text{£}/\text{DM} = 0.2$, so that $\text{£}1,000,000 = \text{DM}5,000,000$. The DM 5 million could then be used in New York to buy dollars at $\$/\text{DM} = \0.40 , so that $\text{DM}5,000,000 = \$2,000,000$. Thus the initial \$1.9 million could be turned into \$2 million with the triangular arbitrage action earning the trader \$100,000.

Black Market and Parallel Market

As a result of government restrictions or legal prohibitions on foreign exchange transactions, illegal markets in foreign exchange exist in many developing countries in response to business or private demand for foreign exchange. These illegal markets are known as **black markets**. Such illegal markets exist openly in some countries (e.g., Brazil and Venezuela), with little government interference. In some other countries however, foreign exchange laws are strictly enforced and lawbreakers receive harsh sentences when caught (e.g., China before 1985).

Often, governments set an official exchange rate that deviates widely from that which the free market would establish. If a government will purchase foreign

exchange only at the official rate, but private citizens are willing to pay the market-determined rate, there will be a steady supply of foreign exchange to the black market. Obviously, government policy creates the black market. The demand arises because of legal restrictions on buying foreign exchange, and the supply exists because government-mandated official exchange rates offer less than the free market rate. Ironically, governments defend the need for foreign exchange restrictions based on conserving scarce foreign exchange for high-priority uses. But such restrictions work to reduce the amount of foreign exchange that flows to the government as traders turn to the black market instead.

When the black market is legalized by the government, this market is referred to as the **parallel market** and operates as an alternative to the official exchange market. In many countries facing economic hardship, the parallel markets allow normal economic activities to continue through a steady supply of foreign exchange. For instance, Guatemala had an artificially low official exchange rate of one quetzale per dollar for more than three decades; however, a black market where the exchange rate fluctuated daily with market conditions was allowed to operate openly in front of the country's main post office. In Mexico, this parallel market thrived during times of crisis when the official peso/dollar exchange rate varied greatly from the market rate. For instance, in August 1982, the Mexican government banned the sale of dollars by Mexican banks. Immediately, the parallel market responded. The official exchange rate was 69.5 pesos per dollar, but the rate on the street ranged from 120 to 150 as the parallel market demand increased with the ban on bank sales. Private currency trades between individuals were legal, so trading flourished at the Mexico City airport and other public places.

Interim Summary

1. A foreign exchange market consists of individuals, corporations, banks, and brokers who buy or sell currencies. Major foreign exchange markets in the world include London, New York, Tokyo, and Singapore. International foreign exchange markets offer spot transactions, forward transactions, and swap transactions.
2. It is possible to earn profits from foreign exchange arbitrage—simultaneously buying a currency in one market at a lower price while selling it in another market at a higher price. This type of activity escalates volatility in international foreign exchange markets.

INTERNATIONAL CAPITAL MARKETS

International Money Markets

International money markets are the markets in which foreign monies are financed or invested (e.g., Hitachi and Matsushita borrowed U.S. dollars from several U.S. banks in Tokyo to finance their worldwide operations). MNEs use international money markets to finance global operations at a lower cost than is possible domestically. They borrow currencies that have low interest rates and are expected to depreciate against their own currency. They incur the risk that the currencies borrowed may appreciate, however, which will increase their cost of financing. Investors, on the other hand, may achieve substantially higher returns in foreign markets than in their domestic markets when investing in currencies that appreciate

against their home currency. However, if these currencies depreciate, the effective yield on the foreign investments will likely be lower than the domestic yield, and may even be negative. Investors attempt to capitalize on potentially high effective yields on foreign money market securities, while reducing the exchange rate risk by diversifying the investments across currencies.

Often, transactions in international money markets are conducted via the Eurocurrency market. The **Eurocurrency market** consists of commercial banks that accept large deposits and provide large loans in foreign currencies (e.g., banks in Zurich lend U.S. dollars or banks in Frankfurt provide loans in Japanese yen). Those banks offering Eurocurrency services are either local banks or foreign bank subsidiaries in a host country. Growing international trade and capital flows as well as cross-border differences in interest rates are the primary reasons for the growth of the Eurocurrency market. In this market, Eurodollar deposits are intensively transacted.

Eurodollars represent U.S. dollar deposits in non-U.S. banks. When interest rate ceilings were imposed on dollar deposits in U.S. banks, corporations with large dollar balances often deposited their funds overseas to receive a higher yield. These deposits were used by local banks to provide loans to other corporations that needed U.S. dollars. Eurodollar deposits are not subject to reserve requirements, so banks can lend out 100 percent of the deposits. For these reasons, the spread between the interest rate paid on large Eurodollar deposits and charged on Eurodollar loans is relatively small. Deposits and loan transactions in Eurodollars are typically \$1 million or more per transaction.

Two popular Eurodollar deposits are *Eurodollar fixed-rate certificate of deposits (CD)* and *Eurodollar floating-rate certificate of deposits*. Investors in fixed-rate Eurodollar CDs receive guaranteed interest but are adversely affected by rising market interest rates. To neutralize this problem, floating-rate Eurodollar CDs provide the rate that is adjusted periodically to the *London Interbank Offer Rate (LIBOR)*—the rate charged on interbank dollar loans. The floating-rate CDs allow the borrower's cost and investor's return to reflect prevailing market interest rates.⁸

International Bond Markets

International bond markets are the markets where government bonds or corporate bonds are issued, bought, or sold in foreign countries (e.g., China International Trust and Investment Corporation, or CITIC, issued its corporate bonds in Japan, Europe, and the United States during the 1980s and 1990s). The growth of international bond markets is attributed to some unique features offered by international bonds that are not offered by domestic bonds (see the Industry Box). The development of international bond markets is partially attributed to tax law differentials across countries. Until 1984, foreign investors who purchased bonds that were placed in the United States paid a 30 percent withholding tax on interest payments. However, various tax treaties between the United States and other countries reduced the withholding tax. Interest payments to non-U.S. investors were exempt from the withholding tax, triggering lower interest rates and allowing U.S. firms to issue bonds at a higher price. The withholding tax on U.S.-placed bonds was eliminated in 1984, causing an even larger increase in the foreign demand for U.S.-placed bonds.

Bonds placed in international bond markets are typically underwritten by a syndicate of investment banking firms. Many underwriters in the *Eurobond* market (i.e., bonds in one foreign currency are issued in the country that uses this currency) are subsidiaries of U.S. banks that have focused their growth on non-U.S. countries, since they were historically banned by the Glass-Steagall Act from underwriting corporate bonds in the United States.⁹ Some recent issuers of bonds in the Eurobond

INDUSTRY BOX

FOREIGN COMPANIES BORROW IN CHEAP U.S. BOND MARKET

Foreign companies are flooding to U.S. debt markets to borrow funds they would have had trouble raising at home. They are attracted by low U.S. interest rates and the fact that American money managers are groping for higher returns and more diversified portfolios. A prime example is triple-B-rated Philips Electronics NV's recent \$500 million offering of so-called Yankee bonds, which are foreign companies' debt sold in the United States. In a two-part underwriting led by Goldman, Sachs & Co., the large Dutch consumer electronics company sold \$250 million in 10-year notes and \$250 million in 20-year bonds. Philips had an investment grade credit rating from Standard & Poor's and it

was able to borrow large sums at long maturities in a public bond

offering. U.S. capital markets (bond, loan, and equity), the world's largest, offer foreign companies a chance to diversify their funding sources and borrow at longer maturities than those usually available in either the Euromarket or their home markets. By contrast, roughly 95 percent of all Eurobonds mature in 10 years or less. In addition, many European companies including Philips, have traditionally relied on bank borrowing for most of their funding.

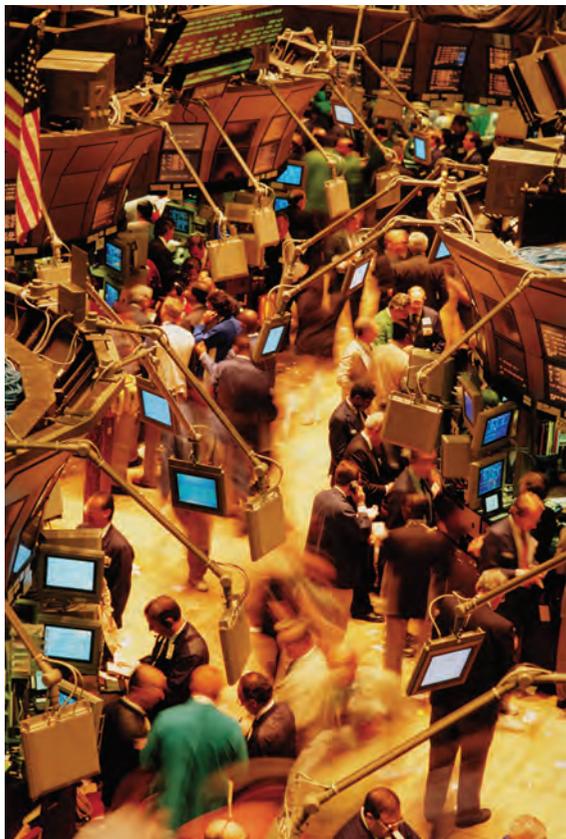
Source: Adapted from Michael R. Sesit, "Foreign companies borrow in cheap, hungry U.S. markets," *Wall Street Journal*, September 14, 1993, C1, C15.

market include DaimlerChrysler Financial, Citicorp, General Motors Acceptance Corp., and the World Bank. DaimlerChrysler Financial Corp. now obtains about one-fourth of its funds from the Eurobond market. Its bonds have been denominated not only in dollars but also in Swiss francs, German marks, and Australian dollars. Citicorp now borrows about half of its funds overseas.

International Stock Markets

International stock (or equity) markets are where company stocks are listed and traded on foreign stock exchanges (e.g., Nokia of Finland issued stock on the New York Stock Exchange, or *NYSE*). Firms in need of financing use foreign stock markets as additional sources of funds. Investors use foreign stock markets to enhance their portfolio performance. This financing source allows MNEs to attract more funds without flooding their home stock market, avoiding a decline in share price. A large number of MNEs also issue stock in foreign markets in order to circumvent regulations, since regulatory provisions differ among markets. Firms may also believe that they can achieve worldwide recognition among consumers if they issue stock in various foreign markets. Further, listing stock on a foreign stock exchange not only enhances the stock's liquidity but also increases the firm's perceived financial standing when the exchange approves the listing application. It can also protect a firm against hostile takeovers because it disperses ownership and makes it more difficult for other firms to gain a controlling interest. For instance, when Daimler-Benz AG announced its listing on the New York Stock Exchange, its share price quickly increased by 30 percent.

The *Euroequity market* (e.g., issuing U.S. dollar-denominated stocks on non-U.S. exchanges) has developed and grown at a rapid pace since the 1980s. The stocks issued in the Euroequity market are specifically designed for distribution among foreign markets. They are underwritten by a group of investment banks and purchased primarily by institutional investors in several countries. Many of the underwriters



The trading floor of the New York Stock Exchange, one of the world's leading stock markets.

are U.S.-based investment banks, such as First Boston (now part of Credit Suisse First Boston, or CSFB), Merrill Lynch, and Salomon Brothers.

The ability of firms to place new shares in foreign markets depends partially on the stock's perceived liquidity in that market. A secondary market for the stock must be established in foreign markets to enhance liquidity, and makes newly issued stocks more attractive. There are some costs of listing on a foreign exchange, such as translating a company's annual financial report from the local currency into the foreign currency, and making financial statements compatible with the accounting standards used in that country.

International Loan Markets

International loan markets involve large commercial banks and other lending institutions providing loans to foreign companies. Unlike international money markets that deal only with foreign money, loan markets are not restricted to foreign currency transactions. As regulations across Europe, Japan, and the United States are standardized, the markets for loans and other financial services are becoming more globalized. As a result, some financial institutions are attempting to achieve greater economies of scale on the services they offer. Even financial institutions that are not planning global expansion are experiencing increased foreign competition in their home markets. U.S. banks have been particularly interested in foreign markets because U.S. regulations restrain banks from spreading across state lines.

Banks from all countries perceive *international lending* as a means of diversification. A portfolio of loans to borrowers across various countries is less susceptible to a recession in the bank's home country. International lending also allows banks to develop relationships with foreign firms, which create a demand for the banks' other services. In addition, a large portion of international lending is to support *international acquisitions*. Commercial banks and investment banks serve not only as advisers but also as financial intermediaries by placing stocks and bonds or by providing loans. One common form of participation has been to provide direct loans for financing acquisitions, especially for *leveraged buyouts (LBOs)* by management or some other group of investors. Since LBOs are financed mostly with debt, they result in a large demand for loanable funds. Many LBOs are supported by debt from an international syndicate of banks. In this way, each bank limits its exposure to any particular borrower. Because the firms engaged in LBOs are often in diversified industries, a problem in any given industry does not create a new lending crisis. In addition, the debt of each individual firm is relatively small, so that most borrowers would not have sufficient bargaining power to reschedule debt payments. For this reason, international bank financing of LBOs is perceived to be less risky than providing loans to governments of developing countries, another group of major borrowers in international loan markets.

Lending to developing countries often requires credit checking. International commercial banks and other lending institutions do so based on analysis by *credit rating agencies* such as *Standard & Poor's* and *Moody's*. Notably, political risk and overall pressures on the balance of payments and macroeconomic conditions are the focus of analysis (see also Chapter 7). Exhibit 9-8 provides an illustrative example.

Exhibit 9-8

Factors used in sovereign rating by Standard & Poor's

Political Risk

1. Form of government and adaptability of political institutions
2. Extent of popular participation
3. Orderliness of leadership succession
4. Degree of consensus on economic policy objectives
5. Integration into global trade and financial system
6. Internal and external security risks

Economic Factors

1. Income and economic structure
2. Economic growth prospects
3. Fiscal flexibility
4. Public debt burden
5. Price stability
6. Balance-of-payments flexibility
7. External debt and liquidity

Issuer Credit Ratings (or ICR) are offered by credit-rating agencies based on the preceding analysis. ICR apply to both *Corporate Credit Service* (company-level) and *Sovereign Credit Ratings* (country-level). Under the Standard and Poor's system, the long-term issuer credit ratings are classified into the following:

- AAA An obligor (debtor) has extremely strong capacity to meet its financial commitments.
- AA An obligor has very strong capacity to meet its financial commitments. It differs from the highest-rated obligor (AAA) only in small degree.
- A An obligor has strong capacity to meet its financial commitments but is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions.
- BBB An obligor has adequate capacity to meet its financial commitments. However, adverse economic conditions are more likely to weaken this capacity.
- BB An obligor is less vulnerable in the near term than other lower-rated obligor. However, it faces major ongoing uncertainties and exposure to adverse business, financial, or economic conditions which could lead to the obligor's inadequate capacity to meet its financial commitments.
- B An obligor is more vulnerable than in the case of BB, but currently has the capacity to meet its financial commitments. Adverse business, financial, or economic conditions will likely impair the obligor's capacity or willingness to meet its financial commitments.
- CCC An obligor is currently vulnerable, and is dependent upon favorable business, financial, and economic conditions to meet its financial commitments.
- CC An obligor is currently highly vulnerable.

The preceding ratings may be modified by the addition of a plus or minus sign to show relative standing within each rating category.

Interim Summary

1. MNEs can finance their global operations from international money markets, bond markets, equity markets, and loan markets. They can borrow money from money markets or loan markets, or issue corporate bonds (bond markets) or stocks (equity markets).

2. Banks and corporations actively participate in Eurocurrency markets (e.g., banks in Amsterdam lend U.S. dollars), Eurobond markets (e.g., issue U.S. dollar bonds in Brussels), and Euroequity markets (e.g., issue U.S. dollar stocks on Singapore Stock Exchange) to benefit interest rate differentials or regulatory differences.

THE ASIAN FINANCIAL CRISIS

The Asian financial crisis shows how a crisis could occur in international financial markets (foreign exchange market, stock market, money market, and loan market) and how this crisis relates to businesses (domestic and foreign), governments, financial institutions, and international financial markets.



First afflicting Thailand in June 1997, the Asian financial crisis quickly spread to South Korea, Indonesia, Malaysia, the Philippines, and other Southeast and East Asian countries. The crisis initially took the form of a financial meltdown, with currencies, stock markets, and property prices tumbling across the region. Economic aftershocks ensued. The crisis was soon to affect markets and economies across the world from Europe to Latin America. The nations of East and Southeast Asia, accustomed to high single or double-digit growth rates, shifted to slow or negative growth. These poor economic conditions prevailed in most of these nations until early 1999. Exhibit 9–9 shows how the Asian financial crisis drastically affected both the foreign exchange rates and stock

markets in five major emerging economies. Explanations concerning the causes of the crisis fall into three broad perspectives,¹⁰ namely: (1) financial, (2) political/institutional, and (3) managerial.

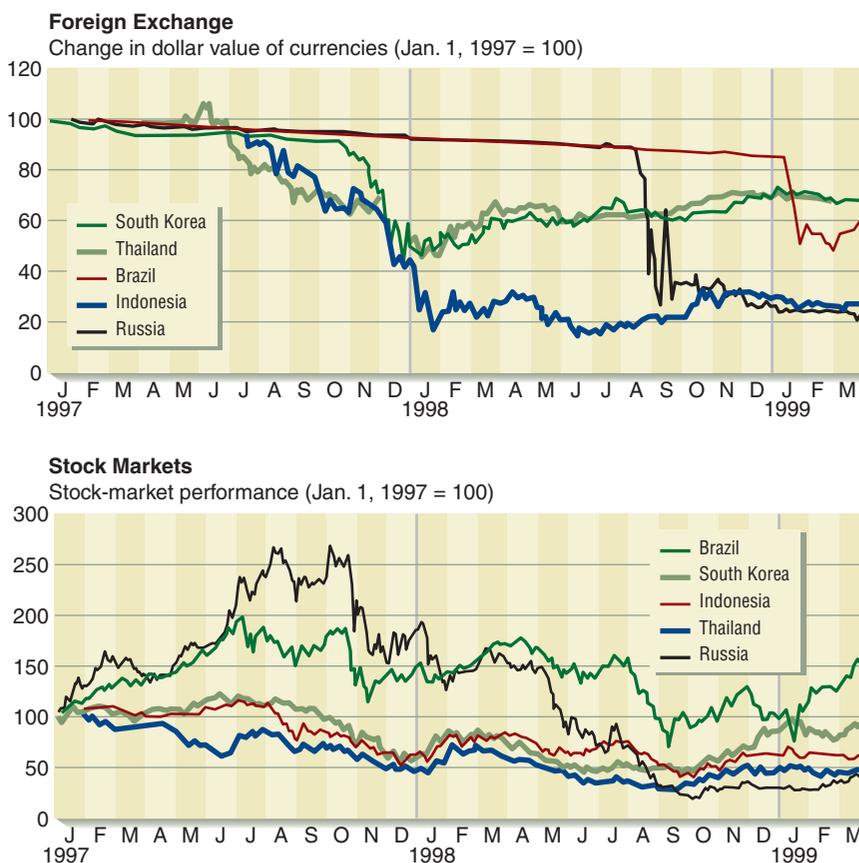
The Financial Perspective

The financial perspective views the Asian financial crisis as resulting primarily from financial-sector weakness and market failure. From a financial perspective, two interrelated factors stand out as having contributed to financial-sector weakness and market failure. The first is the maintenance of pegged exchange rates that came to be viewed as implicit guarantees of exchange, constraining monetary remedies. The second is excessive private-sector short-term and dollar-denominated borrowing. For example, Thailand pegged its currency to the U.S. dollar, prompting dollar-denominated borrowing underpinned by higher interest rates for baht-denominated loans. From 1988 to 1994, international bank loans to Thai borrowers more than doubled. By the end of 1997, Thai foreign debt reached \$89 billion, of which \$81.6 billion was owed by private corporations. About half of the debt carried a maturity date of under a year. In 1997, the value of private sector foreign liabilities was estimated at 25 percent of GDP. Thailand's weakening exports, growing current account deficit, and exploding dollar-denominated short-term private company debt began to weigh on foreign investors and lenders in late 1996. Attacks by currency speculators in the first half of 1997 were followed by loan defaults by several property companies, a downgrade of Thailand's long-term debt, and the unraveling of the Thai stock market. The situation quickly deteriorated and on June 27, 1997, the government floated the baht.¹¹

The financial perspective additionally emphasizes the effects of contagion on the crisis. Contagion fueled the crisis through the dynamics of competitive devaluation and the so-called *wake-up-call* effect. The former pertains to the pressures faced by Asian countries to devalue their currency to match devaluation by

Exhibit 9-9

The effect of the Asian financial crisis on five emerging economies



Source: The Wall Street Journal, April 26, 1999, page R4.

neighboring Asian countries. The latter explains the tendency of most foreign investors to treat all Asian countries as one and pull out investments from a country regardless of its economic or market fundamentals. Undoubtedly, contagion played a major role in accelerating the pace by which the crisis spread from Thailand to South Korea, Indonesia, Malaysia, and throughout Southeast and East Asia.

The Political/Institutional Perspective

Political/institutional-based explanations contend that the causes of the Asian crisis extend much deeper than financial sector weaknesses and market failure, the latter often seen as symptoms rather than causes. The political and institutional perspective points to crony capitalism, irresponsible domestic governance, weak national and political institutions, corruption in the public and private sectors, a misguided and poorly enforced regulatory environment, and other political and institutional-related factors as the principal forces behind the crisis.

The crisis exposed key weaknesses in the political/economic systems and institutions of several Asian countries. The widespread practice of crony capitalism and the incestuous relationship between government, banking, and business in such countries as Indonesia, Malaysia, and Thailand led to an overextension of credit to undeserving companies with close ties to the political and military leadership. In addition, politicians and government bureaucrats have been largely ineffective in responding to the crisis due to conflicting business interests. In the case of Indonesia, for example, the Suharto government backpedaled in implementing the IMF reforms because of their possible adverse impact on the business interests of the ruler's extended family and cronies.

The IMF noted three political and institutional-related considerations as contributing forces to the Asian financial crisis:¹²

1. In financial systems, weak management and poor control of risks, lax enforcement of providential rules and inadequate supervision, and government direct lending practices led to a sharp deterioration in the quality of banks' loan portfolios.
2. Problems of data availability and lack of transparency hindered market participants from maintaining a realistic view of economic fundamentals, and at the same time added to uncertainty.
3. Problems of governance and political uncertainties exacerbated the crisis of confidence, the reluctance of foreign creditors to roll over short-term loans, and the downward pressure on currencies and stock markets.

The Managerial Perspective

The third group of explanations maintains that micro-mismanagement was at the heart of the crisis. Encouraged by a booming economy in the 1990s, many industrial companies in East and Southeast Asia pursued risky overdiversification. To fund their expansion, these companies relied heavily on short-term debt financing. In 1996, the five largest South Korean conglomerates or “chaebols” (i.e., Samsung, Hyundai, Lucky Goldstar, Daewoo, and Sunkyong) controlled over 250 subsidiaries in more than four dozen (mostly unrelated) lines of business. The combined liabilities of the five amounted to about 70 percent of South Korea's gross domestic product in 1996.

Overdiversification and extended leveraging created a vicious cycle for many companies. Firms pursued risky ventures in order to earn larger returns on their investments and service their expensive, short-term debt. When these risky projects failed, they turned to more borrowing to keep their operations afloat. These companies were able to maintain this practice for as long as banks were willing and able to extend credit. When the financial crisis hit, and banks refused or were unable to roll over their loans, many of these industrial companies, particularly the undercapitalized firms, were forced into bankruptcy.

Rising labor costs, falling commodity prices, contracting export markets, and other external pressures compounded the problems faced by industrial companies during the months preceding the financial crisis. Instead of addressing these external pressures by improving productivity, cutting costs, and focusing on the bottom line, the large majority of companies opted for growth and diversification into unrelated businesses. This strategy proved costly when the financial crisis hit and funds dried up. In contrast, firms that remained focused on their core competencies—enhanced productivity, cut costs, and focused on profitability—were able to weather the storm. Most notable among them are South Korea's Pohang Steel Company (POSCO) and Ayala Land Corporation in the Philippines.

Banks and financial institutions extended credit to undeserving companies. When those companies were unable to repay, the banks agreed to roll over the loans and extend them new credit. The financial perspective views the process as a market failure, but hardly explains its roots. The political/institutional perspective blames the decision to overextend credit on such factors as direct government lending, crony capitalism, close relationships between banks and industrial companies, and lack of transparency in financial reporting. The management perspective attributes such overextension of credit to the lack of management sophistication, as well as the absence of the administrative apparatus to conduct proper analysis and oversight. In addition, the management perspective sees a behavioral process of escalation, with banks increasing credit to justify earlier credit decisions.

Interim Summary

1. The Asian financial crisis provides an illustrative case showing how a financial crisis is simultaneously reflected in international foreign exchange markets and international capital markets.
2. The Asian financial crisis derived from political, financial, and managerial reasons. This crisis is a reminder that the growth of an emerging economy requires strong economic fundamentals, an efficient banking sector, transparent political institutions, counter-fluctuation capabilities, and clearly defined business-government relations.

CHAPTER SUMMARY

1. The international monetary system is made up of the policies, institutions, regulations, and mechanisms that determine foreign exchange rates. Most countries today use the peg system, managed float system, target-zone system, or free float system.
2. Each foreign exchange system has its merits and drawbacks. The floating exchange rate is less costly for the government or its central bank to adjust trade imbalances and can facilitate independence of trade policies. It may lead, however, to immense market fluctuations that hamper economic growth and cannot help the country balance trade for a long period.
3. In the long run, the purchasing power parity (PPP) tends to be a proper foundation to determine the foreign exchange rate. In the short run, the demand and supply in the foreign exchange market are crucial in determining changes in the floating rate.
4. The balance of payments summarizes a country's currency inflows and outflows and documents current account, capital account, and official reserves. Official reserves are made of gold, special drawing rights (SDRs), and foreign currencies. Many imports are actually "exported" by a nation's own companies investing abroad, making current account balance statistically less meaningful.
5. International financial markets consist of international foreign exchange markets and international capital markets. International capital markets in turn

comprise money markets, bond markets, equity markets, and loan markets.

6. Foreign exchange markets perform three functions, including international payment, short-term supply of foreign currencies, and hedging against foreign exchange risks. These markets also offer opportunities for foreign exchange arbitrage.
7. International money markets are where foreign capital (such as Eurodollars) is financed or invested. Eurodollars are U.S. dollar deposits in non-U.S. banks. International loan markets deal with loans in any international currency provided by large commercial banks that must assess corporate credit or sovereign credit ranked by credit rating agencies.
8. International stock (or equity) markets are the places where company stocks are listed and traded on foreign stock exchanges. International bond markets are the places where corporate or government bonds are issued and traded in foreign countries. These markets not only provide financing for global operations but can also improve organizational recognition.
9. The Asian financial crisis demonstrates that international foreign exchange markets and capital markets can present risks destabilizing emerging economies that depend on international markets. This crisis also reveals the importance of transparent and efficient institutions (governments, banking sector, and legal systems) that govern financial markets.

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¹¹ *Ibid.*, 209–210.

¹² International Monetary Fund, *World Economic Outlook*, Washington, D.C., May 1998.