**Introduction**

In this chapter, we look at the international monetary system and its role in determining exchange rates. The **international monetary system** refers to the institutional arrangements that govern exchange rates.

In Chapter 10, we assumed the foreign exchange market was the primary institution for determining exchange rates and the impersonal market forces of demand and supply determined the relative value of any two currencies (i.e., their exchange rate). Furthermore, we explained that the demand and supply of currencies is influenced by their respective countries’ relative inflation rates and interest rates. When the foreign exchange market determines the relative value of a currency, we say that the country is adhering to a **floating exchange** rate regime. Four of the world’s major trading currencies—the U.S. dollar, the European Union’s euro, the Japanese yen, and the British pound—are all free to float against each other. Thus, their exchange rates are determined by market forces and fluctuate against each other day to day, if not minute to minute. However, the exchange rates of many currencies are not determined by the free play of market forces; other institutional arrangements are adopted.

Many of the world’s developing nations peg their currencies, primarily to the dollar or the euro. A **pegged exchange rate** means the value of the currency is fixed relative to a reference currency, such as the U.S. dollar, and then the exchange rate between that currency and other currencies is determined by the reference currency exchange rate. As noted in the opening case, Egypt pegged the value of its currency to the U.S. dollar until November 2016. Other countries, while not adopting a formal pegged rate, try to hold the value of their currency within some range against an important reference currency such as the U.S. dollar or a “basket” of currencies. This is often referred to as a **managed float system** or a **dirty-float system**. It is a float because, in theory, the value of the currency is determined by market forces, but it is a managed (or dirty) float (as opposed to a clean float) because the central bank of a country will intervene in the foreign exchange market to try to maintain the value of its currency if it depreciates too rapidly against an important reference currency. This has been the policy adopted by the Chinese since July 2005. The value of the Chinese currency, the yuan, has been linked to a basket of other currencies—including the dollar, yen, and euro—and it is allowed to vary in value against individual currencies, but only within limits. Still other countries have operated with **a fixed exchange rate**, in which the values of a set of currencies are fixed against each other at some mutually agreed-on exchange rate. Before the introduction of the euro in 1999, several member states of the European Union operated with fixed exchange rates within the context of the **European Monetary System** (EMS).

This chapter explains how the international monetary system works and points out its implications for international business. To understand how the system works, we must review its evolution. We begin with a discussion of the gold standard and its breakup during the 1930s. Then we discuss the 1944 Bretton Woods conference. The Bretton Woods conference also created two major international institutions that play a role in the international monetary system—the International Monetary Fund (IMF) and the World Bank. The IMF was given the task of maintaining order in the international monetary system; the World Bank’s role was to promote development.

The Bretton Woods system of fixed exchange rates collapsed in 1973. Since then, the world has operated with a mixed system in which some currencies are allowed to float freely, but many are either managed by government intervention or pegged to another currency. Finally, we discuss the implications of all this material for international business. We will see how the exchange rate policy adopted by a government can have an important impact on the outlook for business operations in a given country. We also look at how the policies adopted by the IMF can have an impact on the economic outlook for a country and, accordingly, on the costs and benefits of doing business in that country.

**The Gold Standard**

The gold standard had its origin in the use of gold coins as a medium of exchange, unit of account, and store of value—a practice that dates to ancient times. When international trade was limited in volume, payment for goods purchased from another country was typically made in gold or silver. However, as the volume of international trade expanded in the wake of the Industrial Revolution, a more convenient means of financing international trade was needed. Shipping large quantities of gold and silver around the world to finance international trade seemed impractical. The solution adopted was to arrange for payment in paper currency and for governments to agree to convert the paper currency into gold on demand at a fixed rate.

**MECHANICS OF THE GOLD STANDARD**

Pegging currencies to gold and guaranteeing convertibility is known as the gold standard. By 1880, most of the world’s major trading nations, including Great Britain, Germany, Japan, and the United States, had adopted the gold standard. Given a common gold standard, the value of any currency in units of any other currency (the exchange rate) was easy to determine.

The amount of a currency needed to purchase one ounce of gold was referred to as **the gold par value**.

**STRENGTH OF THE GOLD STANDARD**

The great strength claimed for the gold standard was that it contained a powerful mechanism for achieving **balance-of-trade equilibrium** by all countries. A country is said to be in balance-of-trade equilibrium when the income its residents earn from exports is equal to the money its residents pay to other countries for imports (the current account of its balance of payments is in balance).

Under the gold standard, when Japan has a trade surplus, there is a net flow of gold from the United States to Japan. These gold flows automatically reduce the U.S. money supply and swell Japan’s money supply. As we saw in Chapter 10, there is a close connection between money supply growth and price inflation. An increase in money supply will raise prices in Japan, while a decrease in the U.S. money supply will push U.S. prices downward. The rise in the price of Japanese goods will decrease demand for these goods, while the fall in the price of U.S. goods will increase demand for these goods. Thus, Japan will start to buy more from the United States, and the United States will buy less from Japan, until a balance-of-trade equilibrium is achieved.

**THE PERIOD BETWEEN THE WARS: 1918–1939**

The gold standard worked reasonably well from the 1870s until the start of World War I in 1914, when it was abandoned. During the war, several governments financed part of their massive military expenditures by printing money. This resulted in inflation, and by the war’s end in 1918, price levels were higher everywhere. The United States returned to the gold standard in 1919, Great Britain in 1925, and France in 1928. Great Britain returned to the gold standard by pegging the pound to gold at the prewar gold parity level of £4.25 per ounce, despite substantial inflation between 1914 and 1925. This priced British goods out of foreign markets, which pushed the country into a deep depression. When foreign holders of pounds lost confidence in Great Britain’s commitment to maintaining its currency’s value, they began converting their holdings of pounds into gold. The British government saw that it could not satisfy the demand for gold without seriously depleting its gold reserves, so it suspended convertibility in 1931. The United States followed suit and left the gold standard in 1933 but returned to it in 1934, raising the dollar price of gold from $20.67 per ounce to $35.00 per ounce. Because more dollars were needed to buy an ounce of gold than before, the implication was that the dollar was worth less. This effectively amounted to a devaluation of the dollar relative to other currencies. Thus, before the devaluation, the pound/dollar exchange rate was £1 = $4.87, but after the devaluation it was £1 = $8.24. By reducing the price of U.S. exports and increasing the price of imports, the government was trying to create employment in the United States by boosting output (the U.S. government was basically using the exchange rate as an instrument of trade policy—something it now accuses China of doing). However, a number of other countries adopted a similar tactic, and in the cycle of competitive devaluations that soon emerged, no country could win. The net result was the shattering of any remaining confidence in the system. With countries devaluing their currencies at will, one could no longer be certain how much gold a currency could buy. Instead of holding onto another country’s currency, people often tried to change it into gold immediately, lest the country devalue its currency in the intervening period. This put pressure on the gold reserves of various countries, forcing them to suspend gold convertibility. By the start of World War II in 1939, the gold standard was dead.

**The Bretton Woods System**

In 1944, at the height of World War II, representatives from 44 countries met at Bretton Woods, New Hampshire, to design a new international monetary system. With the collapse of the gold standard and the Great Depression of the 1930s fresh in their minds, these statesmen were determined to build an enduring economic order that would facilitate postwar economic growth. There was consensus that fixed exchange rates were desirable. In addition, the conference participants wanted to avoid the senseless competitive devaluations of the 1930s, and they recognized that the gold standard would not ensure this. The major problem with the gold standard as previously constituted was that no multinational institution could stop countries from engaging in competitive devaluations. The agreement reached at Bretton Woods established two multinational institutions— the International Monetary Fund (IMF) and the World Bank. The task of the IMF would be to maintain order in the international monetary system and that of the World Bank would be to promote general economic development. The Bretton Woods agreement also called for a system of fixed exchange rates that would be policed by the IMF. Under the agreement, all countries were to fix the value of their currency in terms of gold but were not required to exchange their currencies for gold. Only the dollar remained convertible into gold—at a price of $35 per ounce. Each country decided what it wanted its exchange rate to be vis-à-vis the dollar and then calculated the gold par value of the currency based on that selected dollar exchange rate. All participating countries agreed to try to maintain the value of their currencies within 1 percent of the par value by buying or selling currencies (or gold) as needed. For example, if foreign exchange dealers were selling more of a country’s currency than demanded, that country’s government would intervene in the foreign exchange markets, buying its currency in an attempt to increase demand and maintain its gold par value. Another aspect of the Bretton Woods agreement was a commitment not to use devaluation as a weapon of competitive trade policy. However, if a currency became too weak to defend, a devaluation of up to 10 percent would be allowed without any formal approval by the IMF. Larger devaluations required IMF approval.

**THE ROLE OF THE IMF**

The IMF Articles of Agreement were heavily influenced by the worldwide financial

collapse, competitive devaluations, trade wars, high unemployment, hyperinflation in Germany and elsewhere, and general economic disintegration that occurred between the two world wars. The aim of the Bretton Woods agreement, of which the IMF was the main custodian, was to try to avoid a repetition of that chaos through a combination of discipline and flexibility.

**Discipline**

A fixed exchange rate regime imposes discipline in two ways. First, the need to maintain a fixed exchange rate puts a brake on competitive devaluations and brings stability to the world trade environment. Second, a fixed exchange rate regime imposes monetary discipline on countries, thereby curtailing price inflation.

the increase in money supply would lead to price inflation.

The result would be a widening trade deficit in Great Britain, with the country importing more than it exports. To correct this trade imbalance under a fixed exchange rate regime, Great Britain would be required to restrict the rate of growth in its money supply to bring price inflation back under control. Thus, fixed exchange rates are seen as a mechanism for controlling inflation and imposing economic discipline on countries.

**Flexibility**

Although monetary discipline was a central objective of the Bretton Woods agreement, it was recognized that a rigid policy of fixed exchange rates would be too inflexible. It would probably break down just as the gold standard had. In some cases, a country’s attempts to reduce its money supply growth and correct a persistent balance-of-payments deficit could force the country into recession and create high unemployment. The architects of the Bretton Woods agreement wanted to avoid high unemployment, so they built limited flexibility into the system. Two major features of the IMF Articles of Agreement fostered this flexibility: IMF lending facilities and adjustable parities. The IMF stood ready to lend foreign currencies to members to tide them over during short periods of balance-of-payments deficits, when a rapid tightening of monetary or fiscal policy would hurt domestic employment. A pool of gold and currencies contributed by IMF members provided the resources for these lending operations. A persistent balanceof-payments deficit can lead to a depletion of a country’s reserves of foreign currency, forcing it to devalue its currency. By providing deficit-laden countries with short-term foreign currency loans, IMF funds would buy time for countries to bring down their inflation rates and reduce their balance-of-payments deficits. The belief was that such loans would reduce pressures for devaluation and allow for a more orderly and less painful adjustment. Countries were to be allowed to borrow a limited amount from the IMF without adhering to any specific agreements. However, extensive drawings from IMF funds would require a country to agree to increasingly stringent IMF supervision of its macroeconomic policies. Heavy borrowers from the IMF must agree to monetary and fiscal conditions set down by the IMF, which typically included IMF-mandated targets on domestic money supply growth, exchange rate policy, tax policy, government spending, and so on.

Without devaluation, such a country would experience high unemployment and a persistent trade deficit until the domestic price level had fallen far enough to restore a balance-of-payments equilibrium. The belief was that devaluation could help sidestep a painful adjustment process in such circumstances.

**THE ROLE OF THE WORLD BANK**

The official name for the World Bank is the International Bank for Reconstruction and Development (IBRD). When the Bretton Woods participants established the World Bank, the need to reconstruct the war-torn economies of Europe was foremost in their minds. The bank’s initial mission was to help finance the building of Europe’s economy by providing low-interest loans. As it turned out, the World Bank was overshadowed in this role by the Marshall Plan, under which the United States lent money directly to European nations to help them rebuild. So the bank turned its attention to development and began lending money to third-world nations. In the 1950s, the bank concentrated on public-sector projects. Power stations, road building, and other transportation investments were much in favor. During the 1960s, the bank also began to lend heavily in support of agriculture, education, population control, and urban development. The bank lends money under two schemes. Under the IBRD scheme, money is raised through bond sales in the international capital market. Borrowers pay what the bank calls a market rate of interest—the bank’s cost of funds plus a margin for expenses. This “market” rate is lower than commercial banks’ market rate. Under the IBRD scheme, the bank offers low-interest loans to risky customers whose credit rating is often poor, such as the governments of underdeveloped nations. A second scheme is overseen by the **International Development Association (IDA)**, an arm of the bank created in 1960. Resources to fund IDA loans are raised through subscriptions from wealthy members such as the United States, Japan, and Germany. IDA loans go only to the poorest countries. Borrowers have up to 50 years to repay at an interest rate of less than 1 percent a year. The world’s poorest nations receive grants and interest-free loans.

**The Collapse of the Fixed Exchange Rate System**

The system of fixed exchange rates established at Bretton Woods worked well until the late 1960s, when it began to show signs of strain. The system finally collapsed in 1973, and since then, we have had a managed-float system. To understand why the system collapsed, one must appreciate the special role of the U.S. dollar in the system. As the only currency that could be converted into gold and as the currency that served as the reference point for all others, the dollar occupied a central place in the system. Any pressure on the dollar to devalue could wreak havoc with the system, and that is what occurred. Most economists trace the breakup of the fixed exchange rate system to the U.S. macroeconomic policy package of 1965–1968.2 To finance both the Vietnam conflict and his welfare programs, President Lyndon Johnson backed an increase in U.S. government spending that was not financed by an increase in taxes. Instead, it was financed by an increase in the money supply, which led to a rise in price inflation from less than 4 percent in 1966 to close to 9 percent by 1968. At the same time, the rise in government spending had stimulated the economy. With more money in their pockets, people spent more— particularly on imports—and the U.S. trade balance began to deteriorate. The increase in inflation and the worsening of the U.S. foreign trade position gave rise to speculation in the foreign exchange market that the dollar would be devalued. Things came to a head in spring 1971, when U.S. trade figures showed that for the first time since 1945, the United States was importing more than it was exporting. This set off massive purchases of German deutsche marks in the foreign exchange market by speculators who guessed that the mark would be revalued against the dollar.

In the weeks following the decision to float the deutsche mark, the foreign exchange market became increasingly convinced that the dollar would have to be devalued. However, devaluation of the dollar was no easy matter. Under the Bretton Woods provisions, any other country could change its exchange rates against all currencies simply by fixing its dollar rate at a new level. But as the key currency in the system, the dollar could be devalued only if all countries agreed to simultaneously revalue against the dollar.

The Bretton Woods system had an Achilles’ heel: The system could not work if its key currency, the U.S. dollar, was under speculative attack. The Bretton Woods system could work only as long as the U.S. inflation rate remained low and the United States did not run a balance-of-payments deficit. Once these things occurred, the system soon became strained to the breaking point.

**The Floating Exchange Rate Regime**

The floating exchange rate regime that followed the collapse of the fixed exchange rate system was formalized in January 1976, when IMF members met in Jamaica and agreed to the rules for the international monetary system that are in place today.

**THE JAMAICA AGREEMENT**

The Jamaica meeting revised the IMF’s Articles of Agreement to reflect the new reality of floating exchange rates. The main elements of the Jamaica agreement include the following:

**EXCHANGE RATES SINCE 1973**

Since March 1973, exchange rates have become much more volatile and less predictable than they were between 1945 and 1973.3 This volatility has been partly due to a number of unexpected shocks to the world monetary system, including:

The rise in the value of the dollar between 1980 and 1985 occurred when the United States was running a large and growing trade deficit, importing substantially more than it exported. Conventional wisdom would suggest that the increased supply of dollars in the foreign exchange market as a result of the trade deficit should lead to a reduction in the value of the dollar, but as shown in Figure 11.1, it increased in value. Why? A number of favorable factors overcame the unfavorable effect of a trade deficit. Strong economic growth in the United States attracted heavy inflows of capital from foreign investors seeking high returns on capital assets. High real interest rates attracted foreign investors seeking high returns on financial assets. At the same time, political turmoil in other parts of the world, along with relatively slow economic growth in the developed countries of Europe, helped create the view that the United States was a good place to invest. These inflows of capital increased the demand for dollars in the foreign exchange market, which pushed the value of the dollar upward against other currencies.

**Fixed versus Floating Exchange Rates**

The breakdown of the Bretton Woods system has not stopped the debate about the relative merits of fixed versus floating exchange rate regimes. Disappointment with the system of floating rates in recent years has led to renewed debate about the merits of fixed exchange rates. This section reviews the arguments for fixed and floating exchange rate regimes.6 We discuss the case for floating rates before studying why many critics are disappointed with the experience under floating exchange rates and yearn for a system of fixed rates.

**THE CASE FOR FLOATING EXCHANGE RATES**

The case in support of floating exchange rates has three main elements: monetary policy autonomy, automatic trade balance adjustments, and economic recovery following a severe economic crisis.

**Monetary Policy Autonomy**

**Trade Balance Adjustments**

**Crisis Recovery**

**THE CASE FOR FIXED EXCHANGE RATES**

The case for fixed exchange rates rests on arguments about monetary discipline, speculation, uncertainty, and the lack of connection between the trade balance and exchange rates.

**Monetary Discipline**

**Speculation**

**Uncertainty**

**Trade Balance Adjustments and Economic Recovery**

**WHO IS RIGHT?**

Which side is right in the vigorous debate between those who favor a fixed exchange rate and those who favor a floating exchange rate? Economists cannot agree. Business, as a major player on the international trade and investment scene, has a large stake in the resolution of the debate. Would international business be better off under a fixed regime, or are flexible rates better? The evidence is not clear.

**Exchange Rate Regimes in Practice**

Governments around the world pursue a number of different exchange rate policies. These range from a pure “free float” in which the exchange rate is determined by market forces to a pegged system that has some aspects of the pre-1973 Bretton Woods system of fixed exchange rates. Some 21 percent of the IMF’s members allow their currency to float freely.

Another 23 percent intervene in only a limited way (the so-called managed float as practiced by China, among other nations). A further 5 percent of IMF members now have no separate legal tender of their own (this figure excludes the European Union countries that have adopted the euro). These are typically smaller states, mostly in Africa or the Caribbean, that have no domestic currency and have adopted a foreign currency as legal tender within their borders, typically the U.S. dollar or the euro. The remaining countries use more inflexible systems, including a fixed peg arrangement (43 percent) under which they peg their currencies to other currencies, such as the U.S. dollar or the euro, or to a basket of currencies. Other countries have adopted a system under which their exchange rate is allowed to fluctuate against other currencies within a target zone (an adjustable peg system). In this section, we look more closely at the mechanics and implications of exchange rate regimes that rely on a currency peg or target zone.

**PEGGED EXCHANGE RATES**

Under a pegged exchange rate regime, a country will peg the value of its currency to that of a major currency so that, for example, as the U.S. dollar rises in value, its own currency rises too. Pegged exchange rates are popular among many of the world’s smaller nations.

**CURRENCY BOARDS**

A country that introduces a currency board commits itself to converting its domestic currency on demand into another currency at a fixed exchange rate. To make this commitment credible, the currency board holds reserves of foreign currency equal at the fixed exchange rate to at least 100 percent of the domestic currency issued.

**Crisis Management by the IMF**

Many observers initially believed that the collapse of the Bretton Woods system in 1973 would diminish the role of the IMF within the international monetary system. The IMF’s original function was to provide a pool of money from which members could borrow, short term, to adjust their balance-of-payments position and maintain their exchange rate. Some believed the demand for short-term loans would be considerably diminished under a floating exchange rate regime.

Despite these developments, the activities of the IMF have expanded over the past 30 years. By 2017, the IMF had 189 members, more than 40 of which had some kind of IMF program in place.

The IMF’s activities have expanded because periodic financial crises have continued to hit many economies in the post–Bretton Woods era.

**FINANCIAL CRISES IN THE POST–BRETTON WOODS ERA**

A number of broad types of financial crises have occurred over the past 30 years, many of which have required IMF involvement. A currency crisis occurs when a speculative attack on the exchange value of a currency results in a sharp depreciation in the value of the currency or forces authorities to expend large volumes of international currency reserves and sharply increase interest rates to defend the prevailing exchange rate. This happened in Brazil in 2002, and the IMF stepped in to help stabilize the value of the Brazilian currency on foreign exchange markets by lending it foreign currency. A banking crisis refers to a loss of confidence in the banking system that leads to a run on banks, as individuals and companies withdraw their deposits. This is what happened in Iceland in 2008. The experience of Iceland with the IMF is discussed in depth in the next Country Focus feature. A foreign debt crisis is a situation in which a country cannot service its foreign debt obligations, whether private-sector or government debt. This happened to Greece, Ireland, and Portugal in 2010.

**EVALUATING THE IMF’S POLICY PRESCRIPTIONS**

By 2017, the IMF had programs in more than 40 countries that were struggling with economic and/or currency crises. All IMF loan packages come with conditions attached. Until very recently, the IMF has always insisted on a combination of tight macroeconomic policies, including cuts in public spending, higher interest rates, and tight monetary policy.

Inappropriate Policies One criticism is that the IMF’s traditional policy prescriptions represent a “one-size-fits-all” approach to macroeconomic policy that is inappropriate for many countries. In the case of the 1997 Asian crisis, critics argue that the tight macroeconomic policies imposed by the IMF were not well suited to countries that are suffering not from excessive government spending and inflation but from a private-sector debt crisis with deflationary undertones.

**Moral Hazard**

A second criticism of the IMF is that its rescue efforts are exacerbating a problem known to economists as moral hazard. Moral hazard arises when people behave recklessly

because they know they will be saved if things go wrong. Critics point out that many

Japanese and Western banks were far too willing to lend large amounts of capital to overleveraged Asian companies during the boom years of the 1990s. These critics argue that the banks should now be forced to pay the price for their rash lending policies, even if that means some banks must close.

**Lack of Accountability**

Sachs’s solution to this problem is to reform the IMF so it makes greater use of outside experts and its operations are open to greater outside scrutiny.

**Observations**

As with many debates about international economics, it is not clear which side is correct about the appropriateness of IMF policies. There are cases where one can argue that IMF policies had been counterproductive or only had limited success.

Finally, it is notable that in recent years the IMF has started to change its policies. In response to the global financial crisis of 2008–2009, the IMF began to urge countries to adopt policies that included fiscal stimulus and monetary easing—the direct opposite of what the fund traditionally advocated. Some economists in the fund are also now arguing that higher inflation rates might be a good thing, if the consequence is greater growth in aggregate demand, which would help pull nations out of recessionary conditions. The IMF, in other words, is starting to display the very flexibility in policy responses that its critics claim it lacks.