



Module: International Finance

Branch: International Trade

Level: Third year Bachelor

Lecture 06: The International Monetary System

1- Definition

The international monetary system can be defined as the institutional framework within which international payments are made, movements of capital are accommodated, and exchange rates among currencies are determined.

2- Evolution of the International Monetary System

The international monetary system went through several distinct stages of evolution. These stages are summarized as follows:

- . Bimetallism: Before 1875.
- . Classical gold standard: 1875–1914.
- . Interwar period: 1915–1944
- . Bretton Woods system: 1945–1972.
- . Flexible exchange rate regime: Since 1973.

a-Bimetallism: Before 1875

Prior to the 1870s, many countries had bimetallism, that is, a double standard in that free coinage was maintained for both gold and silver. In Great Britain, for example, bimetallism was maintained until 1816 (after the conclusion of the Napoleonic Wars) when Parliament passed a law maintaining free coinage of gold only, abolishing the free coinage of silver. In the United States, bimetallism was adopted by the Coinage Act of 1792 and remained a legal standard until 1873, when Congress dropped the silver dollar from the list of coins to be minted. France, on the other hand, introduced and maintained its bimetallism from the French Revolution to 1878. Some other countries such as China, India, Germany, and Holland were on the silver standard. The international monetary system before the 1870s can be characterized as “bimetallism” in the sense that both gold and silver were used as international means of payment and that the exchange rates among currencies were determined by either their gold or silver contents.¹ Around 1870, for example, the exchange rate between the British pound, which was fully on a gold standard, and the French franc, which was officially on a bimetallic standard, was determined by the gold content of the two currencies. On the other hand, the exchange rate between the franc and the German mark, which was on a silver standard, was determined by the silver content of the currencies. The exchange rate between the pound and the mark was determined by their exchange rates against the franc. It is also worth noting that, due to various wars and political upheavals, some major countries such as the United States, Russia, and Austria-Hungary had irredeemable currencies at one time or another during the period 1848–79. One

might say that the international monetary system was less than fully systematic up until the 1870s. Countries that were on the bimetallic standard often experienced the well-known phenomenon referred to as Gresham's law. Since the exchange ratio between the two metals was fixed officially, only the abundant metal was used as money, driving more scarce metal out of circulation. This is Gresham's law, according to which "bad" (abundant) money drives out "good" (scarce) money. For example, when gold from newly discovered mines in California and Australia poured into the market in the 1850s, the value of gold became depressed, causing overvaluation of gold under the French official ratio, which equated a gold franc to a silver franc $15\frac{1}{2}$ times as heavy. As a result, the franc effectively became a gold currency

b-Classical Gold Standard: 1875-1914

Mankind's fondness for gold as a storage of wealth and means of exchange dates back to antiquity and was shared widely by diverse civilizations. Christopher Columbus once said, "Gold constitutes treasure, and he who possesses it has all he needs in this world." The first full-fledged gold standard, however, was not established until 1821 in Great Britain, when notes from the Bank of England were made fully redeemable for gold. As previously mentioned, France was effectively on the gold standard beginning in the 1850s and formally adopted the standard in 1878. The newly emergent German empire, which was to receive a sizable war indemnity from France, converted to the gold standard in 1875, discontinuing free coinage of silver. The United States adopted the gold standard in 1879, Russia and Japan in 1897.

One can say roughly that the international gold standard existed as a historical reality during the period 1875–1914. The majority of countries got off gold in 1914 when World War I broke out. The classical gold standard as an international monetary system thus lasted for about 40 years. During this period, London became the center of the international financial system, reflecting Britain's advanced economy and its preeminent position in international trade. An international gold standard can be said to exist when, in most major countries, (1) gold alone is assured of unrestricted coinage, (2) there is two-way convertibility between gold and national currencies at a stable ratio, and (3) gold may be freely exported or imported. In order to support unrestricted convertibility into gold, banknotes need to be backed by a gold reserve of a minimum stated ratio. In addition, the domestic money stock should rise and fall as gold flows in and out of the country. The above conditions were roughly met between 1875 and 1914. Under the gold standard, the exchange rate between any two currencies will be determined by their gold content. For example, suppose that the pound is pegged to gold at six pounds per ounce, whereas one ounce of gold is worth 12 francs. The exchange rate between the pound and the franc should then be two francs per pound. To the extent that the pound and the franc remain pegged to gold at given prices, the exchange rate between the two currencies will remain stable. There were indeed no significant changes in exchange rates among the currencies of such major countries as Great Britain, France, Germany, and the United States during the entire period. For example, the dollar–sterling exchange rate remained within a narrow range of \$4.84 and \$4.90 per pound. Highly stable exchange rates under the classical gold standard provided an environment that was conducive to international trade and investment. Under the gold standard, misalignment of the exchange rate will be automatically corrected by cross-border flows of gold. In the above example, suppose that one pound is trading for 1.80 francs at the moment. Since the pound is undervalued in the exchange market, people will buy pounds with francs, but not francs with pounds. For people who need francs, it would be cheaper first to buy gold from the Bank of England and ship it to France and sell it for francs. For example, suppose that you need to buy 1,000 francs using pounds. If you buy 1,000 francs in the exchange market, it will cost you £555.56 at the exchange rate of Fr1.80/£. Alternatively, you can buy $83.33 \parallel 1,000/12$ ounces of gold from the Bank of England for £500: $\text{£}500 \parallel (1,000/12) \parallel 6$. Then you could ship it to France and sell it to the Bank of France for 1,000 francs. This way, you can save about £55.56. Since people only want to buy, not sell, pounds at the exchange rate of Fr1.80/£, the pound will eventually appreciate to its fair value, namely, Fr2.0/£. Under

the gold standard, international imbalances of payment will also be corrected automatically. Consider a situation where Great Britain exported more to France than the former imported from the latter. This kind of trade imbalance will not persist under the gold standard. Net export from Great Britain to France will be accompanied by a net flow of gold in the opposite direction. This international flow of gold from France to Great Britain will lead to a lower price level in France and, at the same time, a higher price level in Great Britain. (Recall that under the gold standard, the domestic money stock is supposed to rise or fall as the country experiences an inflow or outflow of gold.) The resultant change in the relative price level, in turn, will slow exports from Great Britain and encourage exports from France. As a result, the initial net export from Great Britain will eventually disappear. This adjustment mechanism is referred

to as the price-specie-flow mechanism, which is attributed to David Hume, a Scottish philosopher.³ Despite its demise a long time ago, the gold standard still has ardent supporters in academic, business, and political circles, which view it as an ultimate hedge against price inflation. Gold has a natural scarcity and no one can increase its quantity at will. Therefore, if gold serves as the sole base for domestic money creation, the money supply cannot get out of control and cause inflation. In addition, if gold is used as the sole international means of payment, then countries' balance of payments will be regulated automatically via the movements of gold.⁴ As a result, no country may have a persistent trade deficit or surplus. The gold standard, however, has a few key shortcomings. First of all, the supply of newly minted gold is so restricted that the growth of world trade and investment can be seriously hampered for the lack of sufficient monetary reserves. The world economy can face deflationary pressures. Second, whenever the government finds it politically necessary to pursue national objectives that are inconsistent with maintaining the gold standard, it can abandon the gold standard. In other words, the international gold standard per se has no mechanism to compel each major country to abide by the rules of the game.⁵ For such reasons, it is not very likely that the classical gold standard will be restored in the foreseeable future

c-Interwar Period: 1915-1944

World War I ended the classical gold standard in August 1914, as major countries such as Great Britain, France, Germany, and Russia suspended redemption of banknotes in gold and imposed embargoes on gold exports. After the war, many countries, especially Germany, Austria, Hungary, Poland, and Russia, suffered hyperinflation. The German experience provides a classic example of hyperinflation: By the end of 1923, the wholesale price index in Germany was more than 1 trillion (!) times as high as the prewar level. Freed from wartime pegging, exchange rates among currencies were fluctuating in the early 1920s. During this period, countries widely used "predatory" depreciations of their currencies as a means of gaining advantages in the world export market. As major countries began to recover from the war and stabilize their economies, they attempted to restore the gold standard. The United States, which replaced Great Britain as the dominant financial power, spearheaded efforts to restore the gold standard. With only mild inflation, the United States was able to lift restrictions on gold exports and return to a gold standard in 1919. In Great Britain, Winston Churchill, the chancellor of the Exchequer, played a key role in restoring the gold standard in 1925. Besides Great Britain, such countries as Switzerland, France, and the Scandinavian countries restored the gold standard by 1928. The international gold standard of the late 1920s, however, was not much more than a facade. Most major countries gave priority to the stabilization of domestic economies and systematically followed a policy of sterilization of gold by matching inflows and outflows of gold respectively with reductions and increases in domestic money and credit. The Federal Reserve of the United States, for example, kept some gold outside the credit base by circulating it as gold certificates. The Bank of England also followed

the policy of keeping the amount of available domestic credit stable by neutralizing the effects of gold flows. In a word, countries lacked the political will to abide by the "rules of the game," and so the

automatic adjustment mechanism of the gold standard was unable to work. Even the facade of the restored gold standard crumbled down in the wake of the Great Depression and the accompanying financial crises. Following the stock market crash and the onset of the Great Depression in 1929, many banks, especially in Austria, Germany, and the United States, suffered sharp declines in their portfolio values, touching off runs on the banks. Against this backdrop, Britain experienced a massive outflow of gold, which resulted from chronic balance-of-payment deficits and lack of confidence in the pound sterling. Despite coordinated international efforts to rescue the pound, British gold reserves continued to fall to the point where it was impossible to maintain the gold standard. In September 1931, the British government suspended gold payments and let the pound float. As Great Britain got off gold, countries such as Canada, Sweden, Austria, and Japan followed suit by the end of 1931. The United States got off gold in April 1933 after experiencing a spate of bank failures and outflows of gold. Lastly, France abandoned the gold standard in 1936 because of the flight from the franc, which, in turn, reflected the economic and political instability following the inception of the socialist Popular Front government led by Leon Blum. Paper standards came into being when the gold standard was abandoned. In sum, the interwar period was characterized by economic nationalism, halfhearted attempts and failure to restore the gold standard, economic and political instabilities, bank failures, and panicky flights of capital across borders. No coherent international monetary system prevailed during this period, with profoundly detrimental effects on international trade and investment. It is during this period that the U.S. dollar emerged as the dominant world currency, gradually replacing the British pound for the role.

d-Bretton Woods System: 1945-1972

In July 1944, representatives of 44 nations gathered at Bretton Woods, New Hampshire, to discuss and design the postwar international monetary system. After lengthy discussions and bargains, representatives succeeded in drafting and signing the Articles of Agreement of the International Monetary Fund (IMF), which constitutes the core of the Bretton Woods system. The agreement was subsequently ratified by the majority of countries to launch the IMF in 1945. The IMF embodied an explicit set of rules about the conduct of international monetary policies and was responsible for enforcing these rules. Delegates also created a sister institution, the International Bank for Reconstruction and Development (IBRD), better known as the World Bank, that was chiefly responsible for financing individual development projects. In designing the Bretton Woods system, representatives were concerned with how to prevent the recurrence of economic nationalism with destructive “beggar-thy-neighbor” policies and how to address the lack of clear rules of the game plaguing the interwar years. The British delegates led by John Maynard Keynes proposed an international clearing union that would create an international reserve asset called “bancor.” Countries would accept payments in bancor to settle international transactions, without limit. They would also be allowed to acquire bancor by using overdraft facilities with the clearing union. On the other hand, the American delegates, headed by Harry Dexter White, proposed a currency pool to which member countries would make contributions and from which they might borrow to tide themselves over during short-term balance-of-payments deficits. Both delegates desired exchange rate stability without restoring an international gold standard. The American proposal was largely incorporated into the Articles of Agreement of the IMF. Under the Bretton Woods system, each country established a par value in relation to the U.S. dollar, which was pegged to gold at \$35 per ounce. Each country was responsible for maintaining its exchange rate within ±1 percent of the adopted par value by buying or selling foreign exchanges as necessary. However, a member country with a “fundamental disequilibrium” may be allowed to make a change in the par value of its currency. Under the Bretton Woods system, the U.S. dollar was the only currency that was fully convertible to gold; other currencies were not directly convertible to gold. Countries held U.S. dollars, as well as gold, for use as an international means of payment. Because of these arrangements, the Bretton Woods system can be described as a dollar-based

gold-exchange standard. A country on the gold-exchange standard holds most of its reserves in the form of currency of a country that is really on the gold standard. Advocates of the gold-exchange system argue that the system economizes on gold because countries can use not only gold but also foreign exchanges as an international means of payment. Foreign exchange reserves offset the deflationary effects of limited addition to the world's monetary gold stock. Another advantage of the gold-exchange system is that individual countries can earn interest on their foreign exchange holdings, whereas gold holdings yield no returns. In addition, countries can save transaction costs associated with transporting gold across countries under the gold-exchange system. An ample supply of international monetary reserves coupled with stable exchange rates provided an environment highly conducive to the growth of international trade and investment throughout the 1950s and 1960s. Professor Robert Triffin warned, however, that the gold-exchange system was programmed to collapse in the long run. To satisfy the growing need for reserves, the United States had to run balance-of-payments deficits continuously, thereby supplying the dollar to the rest of the world. Yet if the United States ran perennial balance of-payments deficits, it would eventually impair the public confidence in the dollar, triggering a run on the dollar. Under the gold-exchange system, the reserve-currency country should run balance-of-payments deficits to supply reserves, but if such deficits are large and persistent, they can lead to a crisis of confidence in the reserve currency itself, causing the downfall of the system. This dilemma, known as the Triffin paradox, was indeed responsible for the eventual collapse of the dollar-based gold exchange system in the early 1970s. The United States began to experience trade deficits with the rest of the world in the late 1950s, and the problem persisted into the 1960s. By the early 1960s the total value of the U.S. gold stock, when valued at \$35 per ounce, fell short of foreign dollar holdings. This naturally created concern about the viability of the dollar-based system. Against this backdrop, President Charles de Gaulle prodded the Bank of France to buy gold from the U.S. Treasury, unloading its dollar holdings. Efforts to remedy the problem centered on (1) a series of dollar defense measures taken by the U.S. government and (2) the creation of a new reserve asset, special drawing rights (SDRs), by the IMF.

In 1963, President John Kennedy imposed the Interest Equalization Tax (IET) on U.S. purchases of foreign securities in order to stem the outflow of dollars. The IET was designed to increase the cost of foreign borrowing in the U.S. bond market. In 1965, the Federal Reserve introduced the U.S. voluntary Foreign Credit Restraint Program (FCRP), which regulated the amount of dollars U.S. banks could lend to U.S. multinational companies engaged in foreign direct investments. In 1968, these regulations became legally binding. Such measures as IET and FCRP lent a strong impetus to the rapid growth of the Eurodollar market, which is a transnational, unregulated fund market. To partially alleviate the pressure on the dollar as the central reserve currency, the IMF created an artificial international reserve called the SDR in 1970. The SDR, which is a basket currency comprising major individual currencies, was allotted to the members of the IMF, who could then use it for transactions among themselves or with the IMF. In addition to gold and foreign exchanges, countries could use the SDR to make international payments. Initially, the SDR was designed to be the weighted average of 16 currencies of those countries whose shares in world exports were more than 1 percent. The percentage share of each currency in the SDR was about the same as the country's share in world exports. In 1981, however, the SDR was greatly simplified to comprise only five major currencies: U.S. dollar, German mark, Japanese yen, British pound, and French franc. As Exhibit 2.2 shows, the weight for each currency is updated periodically, reflecting the relative importance of each country in the world trade of goods and services and the amount of the currencies held as reserves by the members of the IMF. Currently, the SDR is comprised of four major currencies—the U.S. dollar (41.9 percent weight), euro (37.4 percent), British pound (11.3 percent), and Japanese yen (9.4 percent). The SDR is used not only as a reserve asset but also as a denomination currency for international transactions. Since the SDR is a “portfolio” of currencies, its value tends to be

more stable than the value of any individual currency included in the SDR. The portfolio nature of the SDR makes it an attractive denomination currency for international commercial and financial contracts under exchange rate uncertainty. The efforts to support the dollar-based gold-exchange standard, however, turned out to be ineffective in the face of expansionary monetary policy and rising inflation in the United States, which were related to the financing of the Vietnam War and the Great Society program. In the early 1970s, it became clear that the dollar was over-valued, especially relative to the mark and the yen. As a result, the German and Japanese central banks had to make massive interventions in the foreign exchange market to maintain their par values. Given the unwillingness of the United States to control its monetary expansion, the repeated central bank interventions could not solve the underlying disparities. In August 1971, President Richard Nixon suspended the convertibility of the dollar into gold and imposed a 10 percent import surcharge. The foundation of the Bretton Woods system cracked under the strain.

In an attempt to save the Bretton Woods system, 10 major countries, known as the Group of Ten, met at the Smithsonian Institution in Washington, D.C., in December 1971. They reached the Smithsonian Agreement, according to which (1) the price of gold was raised to \$38 per ounce, (2) each of the other countries revalued its currency against the U.S. dollar by up to 10 percent, and (3) the band within which the exchange rates were allowed to move was expanded from 1 percent to 2.25 percent in either direction. The Smithsonian Agreement lasted for little more than a year before it came under attack again. Clearly, the devaluation of the dollar was not sufficient to stabilize the situation. In February 1973, the dollar came under heavy selling pressure, again prompting central banks around the world to buy dollars. The price of gold was further raised from \$38 to \$42 per ounce. By March 1973, European and Japanese currencies were allowed to float, completing the decline and fall of the Bretton Woods system. Since then, the exchange rates among such major currencies as the dollar, the mark (later succeeded by the euro), the pound, and the yen have been fluctuating against each other

e-The flexible Exchange Rate Regime: 1973- Present

The flexible exchange rate regime that followed the demise of the Bretton Woods system was ratified after the fact in January 1976 when the IMF members met in Jamaica and agreed to a new set of rules for the international monetary system. The key elements of the Jamaica Agreement include:

1. Flexible exchange rates were declared acceptable to the IMF members, and central banks were allowed to intervene in the exchange markets to iron out unwarranted volatilities.
2. Gold was officially abandoned (i.e., demonetized) as an international reserve asset. Half of the IMF's gold holdings were returned to the members and the other half were sold, with the proceeds to be used to help poor nations.
3. Non-oil-exporting countries and less-developed countries were given greater access to IMF funds. The IMF continued to provide assistance to countries facing balance-of-payments and exchange rate difficulties. The IMF, however, extended assistance and loans to the member countries on the condition that those countries follow the IMF's macroeconomic policy prescriptions. This "conditionality," which often involves deflationary macroeconomic policies and elimination of various subsidy programs, provoked resentment among the people of developing countries receiving the IMF's balance-of-payments loans. As can be expected, exchange rates have become substantially more volatile since March 1973 than they were under the Bretton Woods system. Following the U.S. presidential election of 1980, the Reagan administration ushered in a period of growing U.S. budget deficits and balance-of-payments deficits. The U.S. dollar, however, experienced a major appreciation throughout the first half of the 1980s because of the large-scale inflows of foreign capital caused by unusually high real interest rates available in the United States. To attract foreign investment to help finance the budget deficit, the United States had to offer high real interest rates. The heavy demand for dollars by foreign investors pushed up the value of the dollar in the exchange market.

The value of the dollar reached its peak in February 1985 and then began a persistent downward drift until it stabilized in 1988. The reversal in the exchange rate trend partially reflected the effect of the record-high U.S. trade deficit, about \$160 billion in 1985, brought about by the soaring dollar. The downward trend was also reinforced by concerted government interventions. In September 1985, the so-called G-5 countries (France, Japan, Germany, the U.K., and the United States) met at the Plaza Hotel in New York and reached what became known as the Plaza Accord. They agreed that it would be desirable for the dollar to depreciate against most major currencies to solve the U.S. trade deficit problem and expressed their willingness to intervene in the exchange market to realize this objective. The slide of the dollar that had begun in February was further precipitated by the Plaza Accord. As the dollar continued its decline, the governments of the major industrial countries began to worry that the dollar may fall too far. To address the problem of exchange rate volatility and other related issues, the G-7 economic summit meeting was convened in Paris in 1987.⁶ The meeting produced the Louvre Accord, according to which:

1. The G-7 countries would cooperate to achieve greater exchange rate stability.
2. The G-7 countries agreed to more closely consult and coordinate their macroeconomic policies.

The Louvre Accord marked the inception of the managed-float system under which the G-7 countries would jointly intervene in the exchange market to correct over- or undervaluation of currencies. Following the Louvre Accord, exchange rates became relatively more stable for a while. During the period 1996–2001, however, the U.S. dollar generally appreciated, reflecting a robust performance of the U.S. economy fueled by the technology boom. During this period, foreigners invested heavily in the United States to participate in the booming U.S. economy and stock markets. This helped the dollar to appreciate. In 2001, however, the U.S. dollar began to depreciate due to a sharp stock market correction, the ballooning trade deficits, and the increased political uncertainty following the September 11 attacks