



THE NEW INTERNATIONAL MONEY GAME

Seventh Edition

ROBERT Z. ALIBER



The New International Money Game

Also by Robert Z. Aliber

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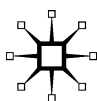
The New International Money Game

Seventh Edition

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Preface and Acknowledgments

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Robert Z. Aliber

List of Abbreviations and Acronyms

ABS	asset-backed securities
ADB	Asian Development Bank
AIG	American International Group
ARMs	adjustable interest rate mortgages
ATM	automatic teller machine
BBC	British Broadcasting Corporation
BIS	Bank for International Settlements
CAP	common agricultural policy
CDO	collateralized debt obligations
CDS	credit default swaps
CIF	cargo insurance and freight
CIR	Committee of Independent Republics
CMO	collateralized mortgage obligations
CPE	centrally planned economy
CPI	consumer price index
CXT	common external tariff
DFI	direct foreign investment (also FDI)
EBRD	European Bank for Reconstruction and Development
EC	European Community
ECB	European Central Bank
ECSC	European Coal and Steel Community
EEC	European Economic Community
EMS	European Monetary System
EMU	(European) Economic and Monetary Union
ENEL	National Corporation for Electric Energy (Italy)
ENI	National Hydrocarbon Corporation (Italy)
ERM	European Exchange Rate Mechanism
EU	European Union
ExImBank	US Export-Import Bank
FDIC	Federal Deposit Insurance Corporation
FOB	free on board
FRY	Former Republic of Yugoslavia
GATT	General Agreement on Trade and Tariffs
GE	General Electric
G-7	Group of Seven countries
G-20	Group of Twenty countries
IADB	Inter-American Development Bank
IBFs	International Banking Facilities
IBRD	International Bank for Reconstruction and Development (World Bank)

IMF	International Monetary Fund
IRI	National Institute for Industrial Reconstruction (Italy)
ITO	International Trade Organization
LIBOR	London Inter-Bank Offer Rate
LIFFE	London International Financial Futures Exchange
LTCM	Long Term Capital Management
MBA	Mexico, Brazil, Argentina
Mercosur	Mercado Comun del Sur (Common Market of the South)
MITI	Ministry for International Trade and Industry (Japan)
MOF	Ministry of Finance (Japan)
NAFTA	North American Free Trade Agreement
NTB	non-tariff barrier
NYSE	New York Stock Exchange
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of Petroleum Exporting Countries
OTC	over-the-counter (market)
P/E	price/earnings ratio
PMI	private mortgage insurance
PIC	petroleum importing country
PIN	personal identification number
RDF	Radio diffusion Française (France)
R&D	research and development
S&L	savings and loan
SAR	Special Administrative Region (of China)
SDR	Special Drawing Right
STO	State Trading Organization
TVA	Tennessee Valley Authority
UNCTAD	United Nations Committee on Trade and Development
USSR	Union of Soviet Socialist Republics
WTO	World Trade Organization
ZPG	zero population growth

Introduction

International finance is frequently viewed as an esoteric subject, understood by only a few speculators in the euro and the Swiss franc and the Japanese yen, and a handful of central bankers. In part, the mystery results from the specialized use of everyday language – ‘gliding parities’ and ‘sliding bands,’ ‘support limits’ and ‘counter-speculation,’ ‘SDRs,’ and ‘derivatives,’ ‘zero coupon bonds,’ and ‘cross-rates’ and ‘tax havens’ and ‘transfer pricing.’ Most of the words are straightforward, but both the meanings and the significance are elusive. The reader is deterred because of the effort required to learn a specialized language.

Once the jargon barrier is surmounted, a second problem appears – ‘recognized experts’ frequently disagree about the most appropriate causal explanation for the same event. Is the US dollar ‘strong’ in the currency market because US imports have declined as the United States entered a recession, or because interest rates on US dollar securities are high or because the US inflation rate has declined below 2 percent or because the US Government has developed a fiscal surplus? Is the US dollar price of gold low because the Russians are selling gold, or because the Chinese have reduced their gold purchases or because the world inflation rate has declined below 2 percent? When the US trade deficit increased to more than \$800 billion in 2006, the experts disagreed whether the increase in the deficit was caused by the increase in US oil import payments or by the decline in the US competitive edge in manufacturing or because of an increase in the foreign purchases of US dollar securities or because the Chinese are reluctant to allow their currency to appreciate significantly in response to the surge in their trade surplus.

The ‘experts’ in both Washington and Beijing disagree on the causal relationship between Chinese purchases of US dollar securities and the US trade deficit.

And even when the experts agree on their analysis, their recommendations about the most appropriate policies to adjust large imbalances often differ. The experts can’t agree on whether the US national interest is better served by continued reliance on the floating currency arrangement adopted in the early 1970s or by returning to a system of adjustable parities similar to the one that prevailed in the 1950s and the 1960s. Indeed, the experts can’t agree on the US national interest in international financial relationships. Some experts in the 1960s proposed that the United States take the initiative in raising the US dollar price of gold to \$70

an ounce or even to \$100 an ounce. Most experts disagreed. Subsequently, market forces led to a surge in the US dollar price of gold. The experts observe – correctly – that national inflation rates were much lower when currencies were pegged to gold in the nineteenth century; these experts prefer low inflation rates and yet very few favor a return to the gold standard. A few experts want to abandon national currencies in favor of a worldwide money, while others want to eliminate the use of the US dollar as an international money, although few have advanced proposals that would achieve this result. Disagreements among experts about the most appropriate policy solutions leave readers puzzled and skeptical about the value of expert advice.

The New International Money Game seeks to break the language barrier. Technical issues are presented in a straightforward manner with minimal use of obscure terms. Metaphor is used to clarify concepts. Explanations are provided for why experts may disagree. No policy advice is offered – instead, the reader is offered the assumptions that are central to major policy issues.

The seven editions of this book span more than 35 years. International financial relationships have changed dramatically during this period, especially the approach toward the organization of the currency market and the monetary roles of gold. In the 1970s the idea that the Germans and the French would be successful in adopting a common currency would have seemed preposterous to many observers.

The first edition was completed in the early 1970s as the Bretton Woods system of adjustable parities for currencies – established in the mid-1940s to avoid a repetition of the ‘beggar-thy-neighbor’ policies of the 1930s – was breaking down. Foreign exchange crises seemed increasingly frequent since the mid-1960s. There was increasing concern about a shortage of gold and of international reserve assets. The US inflation rate had begun to increase in the late 1960s and to levels above those in some European countries. The stability of the US dollar as the centerpiece of international financial relationships was being questioned.

The second edition was completed in the mid-1970s as the international economy was moving from an inflationary boom to a recession that was more severe than any other in the previous 25 years. The decreases and increases in the price of the US dollar in terms of the German mark and the Japanese yen were much larger than anticipated by the proponents of floating exchange rates in the 1960s. The spin at the time was that the traders in the currency market required more time to adjust to the new floating exchange rate arrangement. Once they had this time, the proponents said that changes in currency values would more or less track differences in national inflation rates. A number of banks failed and others incurred significant losses as a result of changes in currency values.

The oil-producing countries earned several hundred billion dollars a year in the mid-1970s as a result of the surge in the oil price. The major international banks seemed threatened by the statements that individual oil exporting countries might withdraw their deposits unless the top executives of the banks became more sympathetic to the interests of these countries.

The key concern at the time of the third edition that appeared in the late 1970s was whether the United States would be able to reduce its inflation

rate, which was then approaching 15 percent a year. Investors rushed to buy gold and silver and other hard assets and collectibles including rare books and antiques in the search for hedges against the decline in wealth as the price level increased. The US dollar price of gold nearly reached \$1000 in January 1980. The German mark and the Japanese yen were appreciating sharply. The central banks in Europe and Japan increased their purchases of US dollars to limit the appreciation of their currencies. The Federal Reserve adopted a sharply contractive monetary policy in the autumn of 1999 to reduce US inflation and to dampen the tendencies toward a stronger German mark and a stronger Japanese yen.

One impact of the much higher interest rates on US dollar securities was that foreign currencies began to depreciate. Another was that the US inflation rate declined sharply – and the oil price fell. The US housing and auto industries were depressed. Magazine articles highlighted the ‘Superdollar.’ US imports increased rapidly relative to US exports, and the United States developed a trade deficit. The US unemployment rate exceeded 10 percent.

The financial tsunami hit in July 1982 when Mexico announced that it did not have the money to pay the interest on its \$90 billion of US dollar indebtedness. Suddenly the market value of the \$800 billion owed by the governments and the government-owned firms in the developing countries declined sharply. Few investors were willing to pay 60 cents or 70 cents of good money for \$1.00 of a Mexican loan or \$1.00 of a Polish loan or \$1.00 of an Argentinean loan. Some of these loans traded at 20–30 cents on the US dollar. The shock that triggered this crisis – a decline in the price of oil from \$36 a barrel to \$29 a barrel – led to the collapse of a small bank located in a shopping center in Oklahoma known as Penn Square. The value of the \$1 billion of oil loans that had been acquired by Continental Illinois Bank in Chicago – the largest bank between the East Coast and the West Coast – was immediately questioned. Depositors – particularly other large banks and large firms – withdrew \$10 billion from Continental Illinois, the first run on a major bank since the Great Depression. The solvency of hundreds of US thrift institutions, particularly savings and loan associations, was threatened as interest rates increased and real estate prices declined. Investors learned that ‘a real estate loan in Houston is an oil loan in drag.’ Eventually the US Government paid \$140 billion to ensure that the owners of deposits in government-insured depositories were made whole.

By the mid-1980s a major US economic recovery was underway. The US inflation rate ranged between 3 and 4 percent – and this rate was declining as the unemployment rate was declining. The dark clouds had moved elsewhere – the annual US fiscal deficit was about as large as the total US Government spending had been a decade earlier. The US trade deficit continued to increase, and the smell of protectionism was stronger than in any period since the early 1930s.

The remarkable US economic expansion that began in 1982 ended in 1989; 20 million more Americans were at work in 1989 than in 1981. However, the US Treasury debt had increased from \$1000 billion to \$3000 billion over the same period. President Reagan had a conservative spiel, and reduced taxes, and yet

adopted a Keynesian pump-priming policy of large fiscal deficits. One of the rationales was that large fiscal deficits would lead to pressures to reduce government spending and the role of the government in the economy.

The United States, once the world's largest creditor country, evolved into the world's largest debtor, a development without any historical precedent. One remarkable feature of this change was that the US Treasury did not borrow in a foreign currency. Moreover, US firms continued to invest abroad; few borrowed in a foreign currency to finance their investments in the United States. The change in the US net international investment position resulted because foreigners – especially Germans and Japanese – became large buyers of US dollar securities and US real assets, including the Rockefeller Center, the Pebble Beach Golf Course in California, the Steamboat Springs ski area in Colorado, and firms including Firestone Tire, Columbia Pictures, Columbia Records, and MGM-Universal.

The US recession of the early 1990s was triggered by the sharp collapse of real estate values, which was especially severe on the East Coast and in the coastal areas of California. Prices of office buildings in New York, Chicago, and Los Angeles and many other large US cities declined by 30–40 percent. Real estate developers went bankrupt. The lenders to these real estate developers, including many of the largest US banks, incurred losses in the tens of billions of dollars. The prices of the stocks of these lenders declined sharply. More US banks failed than at any time since the Great Depression. American business firms went through a remarkable period of restructuring, downsizing, and outsourcing, and this was especially true of firms that once had been the pacesetters in their industries – IBM, General Motors, Eastman Kodak, and Sears.

The collapse of commercial real estate values was a worldwide phenomenon – prices of office buildings in Toronto, Tokyo, London, Paris, and Frankfurt were declining. Economic events in Japan appeared to follow those in the United States – with a lag of 18–24 months. By mid-1992 the stock price indexes in Tokyo had declined to slightly more than one-third of their December 1989 value. Economic activity in Japan slowed, and Japanese exports increased rapidly while the country's imports fell sharply.

One of the remarkable developments since the early 1970s has been the most far-reaching financial revolution since the development of paper money. The number of new financial instruments has surged – futures contracts in currencies, options on futures contracts, foreign currency swaps, interest rate swaps, zero coupon bonds, collateralized mortgage obligations; and the list goes on and on. Home mortgages, credit card loans, student loans with similar attributes are packaged together and placed in a trust, and the trust then issues claims on the income streams in a process known as securitization. The flip is that interest rate coupons attached to traditional bonds are separated from the corpus and each of the coupons becomes a zero coupon bond. The rapid increase in the number of new instruments is traceable to the information revolution and the sharp decline in the costs of storing, manipulating, and transmitting financial data.

Exchanges for trading futures contracts and options on futures contracts have been established in more than 20 countries. Because more and more financial

transactions have occurred in unregulated markets, regulations have been liberalized to reduce the handicap imposed on firms that transact in regulated markets.

One consequence of the decline in the costs of economic distance is that New York, London, Zurich, Frankfurt, Tokyo, Hong Kong, and Singapore have moved much closer to each other. Securities denominated in the euro, the Swiss franc, and the Japanese yen are viewed as closer substitutes for US dollar securities. The buzzword is globalization. Hundreds of mutual funds invest in the emerging markets. Because foreign securities are closer substitutes for US dollar securities, the opportunities to reduce the risk of a portfolio by geographic diversification are more difficult.

Another major development since the earlier editions is the dramatic change in the political landscape. The Berlin Wall is down and the two Germanys are reunified. The Union of Soviet Socialist Republics is passé and transformed into 15 'independent' countries. Poland, Hungary, and their neighbors in what had been Eastern Europe have moved toward much greater reliance on the market – in some cases under the guidance of the same sharp-elbowed fellows that ran the command economies; these countries have moved geographically into Central Europe. (Eastern Europe is probably getting too crowded, with a host of new countries including Estonia, Latvia, Lithuania, and Belarus). Yugoslavia has fractured into seven countries – Slovenia, Croatia, Serbia, FYR Macedonia, Bosnia and Herzegovina, and Montenegro and Kosovo. Czechoslovakia has splintered into the Czech Republic and Slovakia.

The German mark, the French franc, the Italian lira, and the currencies of eight of their neighbors have merged into a common currency, the euro. Initially, 11 of the 15 members of the European Union adopted the euro, and many if not most of the new entrants also are likely to adopt the euro.

China has achieved growth rates that have averaged nearly 10 percent a year for 30 years – a remarkable achievement; China now is one of the three or four major international economic powers. The ratio of China's trade surplus to its GDP has been much larger than that of any other country that has achieved sustained economic growth for an extended period. China's holdings of international reserve assets are larger than those of any other country.

The seventh edition of this book provides one more opportunity to reflect on international monetary developments since the end of the Second World War. The period breaks into two, with the dividing point in 1971; the previous 20 plus years was one of pegged currencies and declines in the reliance on direct controls on international payments and persistent and large and eventually larger US payments deficits – even though the United States had trade surpluses during every year. The subsequent period has been identified with floating exchange rates, although central banks have intervened extensively to limit the changes in the values of their currencies and especially the appreciations.

The move away from a pegged currency system was inevitable once the US inflation rate began to exceed 5 percent a year; a pegged currency arrangement is not feasible if inflation rates are more than 3 or 4 percent a year. The 'date of no

return' for the move away from the adjustable parity arrangement occurred early in 1969, soon after Richard Nixon became US President. If the US Government had been able to induce Japan and Germany to revalue their currencies, the payments imbalances in 1970 and 1971 would have been much smaller, and the money supplies in Germany and Japan would have increased less rapidly. The result would have been a less severe world inflation, and lesser instability in the subsequent decades.

The counterfactual story is that once currencies had adjusted to the differences in national inflation rates, Germany, Japan, and other countries might once again have pegged their currencies to the US dollar while the United States would once again set a parity for the US dollar in gold at a level that would have enabled various central banks to add to their holdings of gold without purchasing the metal from the US Treasury.

The years since the early 1970s have been the most turbulent in monetary history. Increases in the US price level and in the price levels in most other industrial countries were much larger than had ever occurred in peacetime. Fifteen or so years after the move away from parities, central banks adopted 'inflation targeting' or 'price level targeting' as anchors for their monetary policies – in some ways a flexible version of having a parity for the currency.

The range in the variability of currency values has been four to five times larger than the range that would have been predicted on the basis of the difference in national inflation rates. There have been four waves of financial crises; the first involved Mexico, Brazil, Argentina, and ten or so other developing countries in the early 1980s. The second wave centered on Japan in the early 1990s, when most of the financial institutions failed because of the sharp decline in property prices and stock prices. About the same time, the banks in Norway, Finland, and Sweden failed as property prices and stock prices declined sharply. The Asian financial crisis was the third in this series; Thailand, Malaysia, Indonesia, and South Korea were involved – as were Russia, Mexico, Brazil, and Argentina. The United States, Britain, Ireland, Spain, and Iceland were in the fourth wave; property prices have declined sharply in these countries, usually by 30 percent or more.

Each of these waves of crises has followed a wave of credit bubbles; during each of these bubbles the indebtedness of a readily identified group of three, four, or more borrowers increased by 20–30 percent a year for three or more years. Thus the prelude to the developing country debt crisis of the early 1980s was that bank loans to the governments and government-owned firms in Mexico and the other developing countries increased by 30 percent a year for nearly 10 years. The prelude to the financial crisis in Japan in the 1990s was the rapid increase in bank loans for the purchase of real estate in the second half of the 1980s; there was a sharp increase in bank loans for real estate in three of the Nordic countries at about the same time. The prelude to the Asian financial crisis was a surge in the flow of money from the industrial countries to the emerging market countries; the motive for the flow was that the investment bankers had discovered a new 'asset class, emerging market equities.' The prelude to the financial crisis that began in the United States, Britain, Ireland, Spain, and Iceland in 2007 was a surge in bank loans for real estate.

The likelihood is high that the countries involved in each of these waves of bubbles were impacted by the same type of shock – and the initial presumption is that these shocks were external to most of these countries. Moreover, the likelihood that the second wave of bubbles was independent of the first seems low, and similarly the likelihood that the third wave was independent of the second also seems low.

The Asian financial crisis that began in July 1997 with the sharp depreciation of the Thai baht led to great concern about the stability of global financial arrangements. In the mid-1990s Thailand, Malaysia, and their neighbors had been achieving rapid rates of economic growth, captured by the term ‘Four Dragons,’ more or less the next generation sequel to the ‘Four Tigers’ – the city states of Hong Kong and Singapore, and Taiwan and South Korea. The World Bank published *The East Asian Miracle: Economic Growth and Public Policy*. The chatter was that post-millennium years would become known as the ‘Pacific Century.’ Perhaps. But the advent of this century was likely to be delayed by the bankruptcy of many of the firms and most of the banks in these countries.

The debacle in Thailand and South Korea and their neighbors in the last several years of the 1990s is similar to the sharp decline in real estate prices and stock prices in Japan in the first several years of the 1990s. In both cases bank credit for real estate purchases and investment had increased at a rapid rate – at a rate that was much too high to be sustainable.

The depreciation of the currencies of the countries in Southeast Asia that began in the second half of the 1990s led to a sharp change in their external payments position; there was a rapid shift from trade deficits to trade surpluses. The counterpart of this development was that the US trade deficit increased by almost the same amount as the change in the trade balances of Thailand and its neighbors. The increase in the US trade deficit corresponded to the increase in the flow of foreign money to the United States. Most of this money contributed to the surge in US stock prices.

The turbulence in the currency markets and the asset markets since the mid-1970s reflects that variability in cross-border flows of money. The increase in the flow of money to a country has the immediate impact of inducing an appreciation of its currency – unless the currency is pegged. In addition, the increase in the demand for securities available in the country will lead to increases in their prices. In turn, the increases in prices induce adjustments within the country so that its trade deficit increases by an amount that corresponds to the increases in the inflow of foreign funds.

1

A System Is How the Pieces Fit

The years since the early 1970s have been the most tumultuous in monetary history. The world price level in 2008 was more than five times higher than in 1970; never before have price levels increased so rapidly in so many countries. The US dollar price of gold at the end of 2008 was more than 25 times higher than the US\$35 parity in 1970 – and this price had been 25 percent higher in the summer of 2008 than at the end of the year. A barrel of oil nearly reached \$150 in June 2008, more than 50 times higher than at the end of 1970; the oil price had quintupled between 2003 and 2008 and then declined to below \$50 toward the end of the year.

The US financial system had shattered. The two large government-sponsored lenders, Fannie Mae and Freddie Mac, that together carried the credit risk associated with more than 50 percent of US home mortgages, were placed in a US ‘conservatorship’ because they were effectively bankrupt; the individuals and firms that owned both the common stock and the preferred stock in these firms lost all their money. AIG, the largest insurance company in the world, required a massive loan from the US Government. The US investment banking industry collapsed; two of the five largest firms disappeared, one by bankruptcy and the other by a forced merger, while two of the other large investment banking firms sold themselves to large commercial banks. Many of the 20 largest US commercial banks were forced to take capital from the US Treasury.

The British banking system also was in turmoil. Northern Rock, the largest mortgage lender in the country, was taken over by the government. The British Treasury became a two-thirds owner of the Royal Bank of Scotland and a large owner of Lloyds. Similarly, banks in Ireland, Iceland, and even Switzerland received large capital investments from their governments.

This global financial crisis led to a recession in most of the large industrial countries. Japan imported a recession because of a decline in the foreign demand for its autos and electronics and other manufactures. Similarly, Taiwan, South Korea, and Singapore experienced sharp declines in their exports. The growth rate in China declined sharply, and 20 million migrant workers became unemployed.

The global financial crisis that began in the summer of 2007 is the fourth since the early 1980s. The first involved the inability of Mexico, Brazil, Argentina,

and ten or so other developing countries to make the payments on their US dollar-denominated debt in a timely way. Their currencies depreciated sharply and many of the borrowers and banks in these countries became bankrupt; some large US banks that had made extensive loans to these borrowers would have failed if the regulatory authorities had not connived in the fiction that these loans were performing. The second financial crisis was in Japan in the 1990s, when most of the commercial banks and investment banks and insurance companies failed. At about the same time, many of the banks in Finland, Norway, and Sweden failed. The third crisis began in the second half of 1997 when the Thai baht depreciated sharply, which triggered the depreciation of the Malaysian ringgit, the Indonesian rupiah, the Philippine peso, the South Korean won and eventually the Russian ruble in the summer of the 1998, the Brazilian real in January 1999, and the Argentinean peso 2 years later. Once again many of the domestic banks in these countries failed when the currencies depreciated.

Each of these financial crises followed the implosion of a credit bubble, which had involved the rapid growth in the indebtedness of a particular group of borrowers, often at annual rates of 20–30 percent for 3 or 4 or more years. During the 1970s the major international banks increased their loans to the governments and government-owned firms in Mexico and other developing countries at the annual rate of 30 percent; the external indebtedness of these countries increased from \$120 billion at the end of 1972 to \$800 billion 10 years later. During the 1980s and especially during the second half of that decade the real estate loans of the banks headquartered in Tokyo and Osaka increased at the rate of 30 percent a year. Industrial firms invested in real estate because the rates of return from ownership of property were so much higher than the rates of return on investment in manufacturing. The prelude to the Asian financial crisis of the second half of the 1990s was a large inflow of money from mutual funds and pension funds, which led to increases in stock prices and real estate prices. The global financial crisis that began in 2007 followed the sharp increase in real estate prices in the previous 4 or 5 years.

These financial crises have occurred in waves, which generally have involved four or five or more countries usually at about the same time, although the debacles in some of the non-Asian countries in the late 1990s followed the collapse of the Thai baht by more than a year. Similarly, the credit bubbles that preceded these crises also occurred in waves that involved four or five or more countries at the same time. That so many countries were involved in these bubbles and crisis at about the same time suggests that they have had a common origin.

The changes in the values of national currencies in the foreign exchange market since the early 1970s have been much larger than ever before, even after adjusting for differences in national inflation rates. The US dollar price of the euro varied within a range of 80 percent between 1999 and 2008 even though the annual inflation rates in the United States and Europe usually differed by less than 1 percentage point. At the end of June 2008, the US dollar price of the euro approached \$1.58, higher than at any previous time – but by September the US dollar price declined to less than \$1.30. The US dollar price of the British pound was above \$2.00 in June 2008; by the end of the year the price had declined below \$1.50.

Despite the turmoil in the currency markets and the security markets, national income and wealth surged at least until the second half of 2008. Tens of millions of people have moved from poverty to the middle class in China, Brazil, South Korea, Mexico, and other emerging market countries as their economies have become more fully integrated with global markets.

In 1980 the United States was the world's largest international creditor country; its net foreign assets were larger than the combined net foreign assets of all other creditor countries. By 2000, the United States had evolved into the world's largest debtor country, and its net foreign liabilities were larger than the combined net foreign liabilities of all other debtor countries. This dramatic change is the US international investment position has no precedent in the experience of any other country. Moreover, this change did not occur because US goods and services were too expensive; the paradox is the combination of a US trade deficit that has reached 6 percent of US GDP and yet a value for the US dollar that is so low that Europeans and Latin Americans have traveled to New York and other US cities for their Christmas shopping. Tourists find Disneyland in California and Disneyworld in Florida significantly less expensive than their counterparts in Europe and Asia.

US net international indebtedness has been increasing twice as rapidly as US GDP. Mexico and Thailand and numerous other countries also experienced rapid increases in their indebtedness relative to their GDPs in the 1990s; when the inflow of foreign money declined abruptly, their currencies depreciated sharply and most experienced financial crises.

The sharp increase in US stock prices in the late 1990s was a bubble; the market value of US stocks doubled in the 3 years after December 1996 when the Chairman of the Federal Reserve commented on 'irrational exuberance.' Stock prices in Europe increased almost as rapidly as in the United States. The implosion of this bubble in stock prices was followed by a recession but not by a financial crisis.

The likelihood that the surges in national price levels, the large changes in currency values, the waves of asset bubbles, and the massive failures in banking systems are independent and unrelated events is low. A model is needed to link the large variations in the values of national currencies and the episodic surges in the prices of real estate and of stocks in different countries.

Scientists in every field search for models that describe how the basic components of their universe fit together. The pervasive view in astronomy until the fourteenth century was that Venus and Mars rotated around the Earth. Galileo and Copernicus used the data obtained from new and more powerful telescopes to propose a revolutionary model that had the Earth, Venus, Mars, and the other planets rotate in a more or less flat plane around the Sun. Their model integrated the Sun, the planets and their moons, comets and asteroids and also placed the solar system within the constellation of stars.

Einstein integrated the speed of light, matter, and energy. Biologists seek to relate the understanding of the most minute and basic components of life, including genes and chromosomes. Climatologists view patterns of wind, rainfall, temperature, and ocean currents in a comprehensive model.

Those who seek to become the Copernicus of the international financial arrangements must integrate the relationships among the monetary systems of the United States, Britain, Japan, Germany, and France and their neighbors that use the euro, Switzerland and more than 150 other countries each with its own money. The models must highlight the relationships among the changes in the values of the US dollar, the British pound, the Japanese yen, the euro, the Swiss franc, and other currencies with the changes in the rates of growth of money in each country and with the changes in the prices of domestic goods and of real assets and of securities denominated in each currency.

The relationships among the planets in the models developed by Copernicus and Galileo have not changed in the last five centuries; Mars will never replace Venus as the planet closest to the Earth. In contrast, those who deal with international monetary issues recognize that the financial arrangements are in flux; the British pound was the dominant international currency during the nineteenth century before it was displaced by the US dollar at the outset of the First World War. While the US dollar has remained the dominant currency, the supremacy of the US dollar has been challenged by the shift in the US international financial position to the largest international debtor. Gold was at the center of international monetary arrangements in 1900, but at the periphery of these arrangements in 2000.

Similarly, the relationships among both the levels and rates of growth of the GDPs of individual countries change; Japan was at the top of the GDP growth rate hit parade in the 1950s and the 1960s while China was in number one position on this hit parade in the 1980s and the 1990s. Countries often experience relatively high rates of growth during the first two or three decades after they begin to industrialize; subsequently their growth rates slow. Britain was the first country to industrialize during the middle decades of the nineteenth century; Germany and the United States then followed in the last several decades of that century.

Fitting the pieces: central bank monetary policies

From time to time, the descriptive title for international financial arrangements has changed. The 'gold standard' was the applicable name during much of the nineteenth century and until the First World War; its dominant feature was that the central bank in each of the participating countries had a fixed price for gold in terms of its own currency. In the 1920s there was a modest change in the name to the 'gold exchange standard'; its distinguishing feature was that some central banks acquired securities denominated in the British pound and in the US dollar as part of their international reserve assets. From the end of the Second World War to the early 1970s 'the Bretton Woods system' was the descriptor (derived from the village in New Hampshire where the treaty that established the International Monetary Fund (IMF) was signed); one of its key attributes – that currency values would be fixed or at least not allowed to vary significantly – was derived from the gold standard. Its innovative feature was that changes in currency values would be discrete and in accord with the provisions of the IMF Treaty. This system of adjustable parities became obsolete in the early 1970s; the thrust of

the successor arrangement of floating exchange rates was that currency values would change in response to market forces, much like the prices in the markets for stocks, bonds, and commodities. One initial name for the new arrangements was the 'Post-Bretton Woods system.' Many central banks have intervened extensively to limit changes – and especially increases – in the price of their currencies and the term 'Bretton Woods II' has been applied to these arrangements.

Virtually every country except the relatively small ones has its own national money, produced by its national central bank. Iceland, with a population of 300,000, has an independent central bank and its own currency. Panama and Luxembourg have much larger populations than Iceland but do not have a national currency; Panama has used the US dollar as its money for more than 100 years and Luxembourg used the Belgian franc as its money before the adoption of the euro.

Central banks – the Bank of England, the Bank of France, the Federal Reserve, the Bank of Japan, and the Swiss National Bank – were established to enhance financial stability by providing an 'elastic supply of currency.' Each central bank initially had a fixed price for its currency in terms of gold, which was part of a 'marketing plan' to induce individuals to acquire its currency notes. During the last several decades of the nineteenth century the British, French, German, and American monetary systems were linked by flows of gold from one country to others. The theory was that the money supply and the price level in a country would increase in response to the inflow of gold; conversely, the money supply and the price level would decline in response to an outflow of gold. When a national currency was pegged to gold, it was also pegged to every other currency that was also pegged to gold.

Each central bank was supposed to insulate its national economy from the financial problems of individual banks by reducing the likelihood that depositors might rush to get their money from one or several banks at the same time, because of their concern that if the bank closed, they would lose part or all of their money. Since the banks would not have enough money to meet the demands of many depositors at the same time, these rushes for money sometimes caused the result they anticipated.

During the First World War governments borrowed from their banks to get much of the money needed to finance military expenditures. After the war governments imposed additional objectives on their central banks; one was to achieve a low inflation rate and another, at least in some countries, was to achieve a high level of employment.

Since the early 1970s central banks have not been committed to maintain a fixed price for their currencies; instead, many have given greater priority to domestic objectives in managing the growth of their money supplies. One consequence – at least for a while – was greater divergence in national inflation rates.

The unique development at the end of the twentieth century was that 11 of the then 15 member countries of the European Union (EU) adopted the euro – essentially a supranational currency – as the successor to the German mark, the French franc, the Italian lira, and the currencies of eight other countries. The European Central Bank (ECB) is owned by the national central banks and develops a common monetary policy for its members. Britain and several other members

of the EU have retained their national currencies, although Greece subsequently adopted the euro. Most of the countries that are scheduled to join the EU appear likely to adopt the euro, eventually if not immediately.

Fitting the pieces: the market in national currencies

International transactions for the purchase of goods, services, and securities differ from domestic transactions in one unique way – either the buyers or the sellers must transact in a foreign money. When Americans buy new Mercedes and new Volkswagens, they pay US dollars to the dealers, who in turn pay the US subsidiaries of Mercedes and of Volkswagen. These subsidiaries then take most of these dollars to the currency market to buy the euro so they can pay their head offices in Germany.

One of the two basic approaches toward organizing the currency market is that each central bank buys and sells its currency to limit the changes in its price, usually within a narrow or modest range; this practice follows from the gold standard arrangements. The other basic approach is that the price of each national currency increases and decreases in response to changes in demand and supply, much like the prices of pork bellies and of government bonds and of copper and of stocks. The intermediate approach is that central banks buy and sell their currencies to limit changes in their prices – and to achieve some other national objectives.

For most of the 200 years from the advent of the United States as a newly independent country until the early 1970s, the US dollar price of the British pound was pegged because the British pound had a parity for gold of 87 shillings 6 pence per ounce while US dollar had a parity of \$20.67 per ounce. The ratio of the two gold parities was $\$4.86 = 1$ British pound after an adjustment for the small difference in the gold content of British coins and of US coins. The US dollar price of the British pound was not pegged between 1797 and 1821, during and immediately after the Napoleonic Wars. Nor was the US dollar price of the British pound pegged during and after the US Civil War – from 1861 until 1879. The move away from pegged values for currencies reflects the fact that wars have been associated with higher inflation rates and larger differences in national inflation rates.

A system of pegged currency values requires that central banks buy and sell their own currencies to limit the changes in their prices. The securities that central banks acquire after they have sold their currencies in the foreign exchange market are grouped as international reserve assets.

Some central banks began to acquire securities denominated in the British pound and securities denominated in the US dollar at the end of the nineteenth century because they wanted the interest income on these securities. Nevertheless, central bank holdings of gold were the largest component of international reserve assets until the 1960s. Then securities denominated in the US dollar became the largest component. In the 1960s and the 1970s central banks acquired securities denominated in the German mark and in the Japanese yen as international reserve assets, although securities denominated in the US dollar still account for two-thirds of international reserve assets; securities denominated in the euro are the second largest component.

During the nineteenth century, the stability of international financial arrangements resulted from the self-interest of individual countries. In contrast, during the twentieth century national governments signed treaties, agreements, accords, and communiqués that contained commitments about how they would manage their currencies.

One pattern about changes in currency values since the early 1970s is evident from the comparison of changes in the Japanese yen price of the US dollar with the changes in the Swiss franc price of the US dollar. At the end of 1970, the Japanese yen had a parity of 360 while the Swiss franc had a parity of 4.30; the 'cross rate' was 84 Japanese yen for each Swiss franc. At the end of 2008 the Japanese yen price of the US dollar was 111 while the Swiss franc price of the US dollar was 1.11; the Japanese yen price of the Swiss franc was 100. The declines in the price of the US dollar in terms of both the Swiss franc and the Japanese yen have been much larger than the changes in the Japanese yen price of the Swiss franc. The inference is that many of the shocks that have led to changes in the value of the US dollar have centered on the United States.

Inflation rates in the twentieth century were much higher than in the nineteenth century. The American and British price levels at the end of the nineteenth century were not significantly different from those at the end of the eighteenth century, although there had been extended episodes of sharp increases and then decreases of price levels within the century. In contrast, the US price level at the end of the twentieth century was nearly 20 times higher than at the beginning, and the British price level was more than 25 times higher.

Increases in national price levels in the twentieth century occurred in three major episodes; the first was during and immediately after the First World War and the second was during and after the Second World War. The third surge in national price levels occurred in the 1970s and differed from the earlier episodes both because the price increases were larger and because they occurred during peacetime.

During the nineteenth century governments accepted changes in their domestic price levels as a way to maintain parities for their currencies in terms of gold. In contrast, during most of the twentieth century governments – especially the governments of large countries – were reluctant to accept a significant external constraint on the choice of their domestic economic policies.

Financial crises were more severe in the last several decades of the twentieth century than in the earlier period, although the period between the First World War and the Second was also marked by major crises.

The waxing and waning of financial hegemony

Copernicus believed that the orbits of the planets were determined by gravitational pulls and would not change; similarly, he was not concerned that the relative size of the various planets might change. In contrast, one of the dominant features of international financial arrangements is that the economic standing of individual countries and of their currencies changes.

Britain was the dominant economic power during the nineteenth century and London was the primary international banking and financial center; Britain also

was the largest international creditor country. The British pound was the dominant currency; import prices and export prices were quoted in terms of the pound and world trade was financed by credits denominated in the pound. US railroad firms went to London to borrow money to finance their expansion.

The United States supplanted Britain as the dominant economic power during the First World War; US GDP was three times larger than the British GDP. For the next 30 or 40 years – until the 1960s – the United States became an even more ascendant economic power, in part because of the dislocations to production and trade in both Europe and Asia associated with the Second World War. US industrial capacity surged, while wartime damage reduced productive capacity in Britain, Germany, France, and Japan.

At the end of the 1940s it seemed as if the United States would remain the dominant economic power ‘until the end of time.’ US industrial supremacy seemed unchallenged and unchallengeable. The US dollar was the dominant currency, in part because of US industrial leadership and in part because the US commitment to a low inflation rate seemed stronger than that of any other large country.

During the 1950s and the 1960s the United States developed a persistent payments deficit; US holdings of gold declined by more than half and foreign holdings of US dollar securities surged. Despite the decline in US gold holdings, the US international financial position seemed impregnable, in part because the United States was the world’s largest net international creditor country.

In 1971, an event that seemed unthinkable 10 years earlier occurred: the US Treasury stopped selling gold at \$35, and the price of gold began to increase; by the end of the decade the price had nearly reached \$1000. The US dollar depreciated extensively relative to the German mark and the Swiss franc and the Japanese yen through most of the 1970s.

In 1980 the United States began to develop a persistent annual trade deficit and the US net international creditor position began to decline and by the late 1980s the United States had evolved into an international debtor; the United States became the world’s largest international debtor in 2000.

The transformation of the US net international investment position from the world’s largest creditor to the world’s largest debtor occurred because foreign investors and central banks wanted to increase their holdings of US dollar securities. The invisible hand was at work, and the United States developed the trade deficit that was the mirror of the trade surpluses of Japan, China, and many other developing countries.

The plan of the book

The chapters in this book are arranged in two major groups. The first group – Chapters 2 through 13 – focus on macro international topics, including changes in the monetary roles of gold, the costs and benefits of floating exchange rates and of pegged exchange rates, the waves of credit and asset bubbles since the 1970s, and the evolution of the United States from the world’s largest creditor country to the world’s largest debtor. The second group – Chapters 14 through 24 – has a micro focus and centers on specific topics, including the nature and impacts

and causes of globalization, the impacts of differences in national tax rates on the competitive position of firms producing in different countries, and the changes in the structure of the international banking industry. The impacts of the Organization of Petroleum Exporting Countries (OPEC), the cartel of the oil-producing countries, on the supply of petroleum in the long run are analyzed.

The first chapter in Part I (Chapter 3) summarizes the changes in the monetary role of gold in the last 300 years. The changes in international financial arrangements are summarized in Chapter 4. The changes in organization of the foreign exchange market are described in Chapter 5, and the attention is given to why the range of movement in the price of national currencies in the foreign exchange market has been so large relative to the difference in national inflation rates. The unique international roles of the US dollar are reviewed in Chapter 6. The thrust of Chapter 7 is the growth of the offshore banking market, identified by the mismatch between the currency in which a transaction is denominated and the currency of the country where the transaction occurs. The causes of the several inflations of the twentieth century are examined in Chapter 8. The relationships among the various asset price bubbles since the 1980s are reviewed in Chapter 9. The causes of the financial crises are analyzed in Chapter 10. The explanations for the change in the US international investment position from the world's largest creditor to the world's largest debtor are evaluated in Chapter 11. The thrust of Chapter 12 is the factors that determine the rate of growth of national money supplies. One of the major concerns since the breakdown of the Bretton Woods system of adjustable parities has been monetary reform; a major question is how to maintain an open trading system in an increasingly fractious world.

The first chapter in Part II (Chapter 14) analyzes the globalization of markets over the centuries and then provides an overview of subsequent chapters. The thrust of Chapter 15 is on the impacts of national taxation and regulatory regimes on the international competitiveness of firms that produce in different countries. The question addressed in Chapter 16 centers on the impact of the financial crisis on the competitiveness of US banks relative to banks headquartered in various foreign countries. The impact of the production-limiting arrangements by OPEC on the Malthusian specter that the world petroleum supplies will be exhausted is analyzed in Chapter 17. Whether national markets for bonds and stocks are segmented or integrated is evaluated in Chapter 18. The focus of Chapter 19 is the revolution in finance and the surge in the number of new financial instruments – futures and options and swaps and credit default swaps. Whether there is a pattern in the ownership of multinational firms is discussed in Chapter 20. The economic success of Japan in the 1960s, 1970s, and 1980s is summarized in Chapter 21. The transformation of China from a command economy to a market economy is reviewed in Chapter 22. Russia's evolution from a Marxist command economy to a market economy is reviewed in Chapter 23. The final chapter considers the likelihood these international monetary and financial problems will become less severe.

2

The Name of the Game Is Money – But the Disputes Are about Where the Jobs Are

International finance

International finance is a game with two sets of players: one set includes the politicians and bureaucrats and the central bankers in different countries and the other set includes the chief financial officers and treasurers of giant, large, medium-large, medium, medium-small, and small firms and banks and hedge funds, and other financial institutions. The government officials want to win elections and secure a niche in the histories of their countries for enhancing economic well-being and financial stability. The cliché is ‘good jobs at good wages.’ A few aspire to get their portraits on the national currency. And to do so, they want to manage their economies to provide more and better-paying jobs and greater financial security for their voters. These officials want to avoid sharp increases in inflation rates and sharp declines in the prices of their currencies.

The chief financial officers and corporate treasurers want to profit from – or at least avoid losses from – changes in currency values, changes that are inevitable in a world with more than 150 national monies. The traders in the large international banks and in the hedge funds want a lot of variability in the prices of individual currencies; the larger the variability, the greater the scope for trading profits.

Changes in the price of the US dollar

Consider the changes in the Japanese yen price of the US dollar in the last 50 years. Throughout the 1950s and the 1960s the Japanese currency had a ‘fixed price’ of 360 yen per US dollar, which had been set in the late 1940s when Japan was still occupied by US military forces. The productive power of the Japanese economy then was far below that of the early 1940s as a result of destruction of factories and business relationships during the war and the loss of what had been several colonies. In the early 1970s, the Bank of Japan stopped pegging the yen – largely at the insistence of the US Government – and the currency appreciated to 175 yen per dollar by the end of the decade. In contrast, in the early 1980s the yen declined sharply; in the second half of the 1980s the yen again appreciated, and by 1997 had reached 80 yen per dollar – briefly. For much of the period between

1995 and 2008 the yen traded in the range of 110–150 yen per dollar, although at the end of 2008 the yen had again appreciated to 90 yen per dollar.

As the yen appreciated the managers of most Japanese firms and many Japanese politicians were concerned that exports from Japan would be less profitable and decline, while imports would increase because they would be less expensive and they would pose more of a competitive threat to Japanese firms. The Bank of Japan often bought US dollars to limit the appreciation of the yen in the effort to support the competitive position of Japanese firms in global markets.

When the euro first appeared in January 1999 as the successor to the German mark, the French franc, and the currencies of nine other countries, the US dollar price of the euro was \$1.19. Then the euro depreciated for years to \$0.84. Subsequently the euro appreciated and – despite a few jiggles – reached \$1.58 by the end of June 2008 before declining to \$1.40 at the end of 2008.

A lot of money could be made – and was made – by forecasting the changes in the Japanese yen price of the US dollar and the changes in the US dollar price of the euro. Much money was lost by failure to anticipate these changes. Changes in the Japanese yen price of the US dollar were associated with changes in the Japanese trade surplus; as the yen depreciated, Japanese exports would increase relative to its imports. US producers of a wide range of products – textiles, steel, autos, and electronics – complained, especially in Washington, that the Japanese followed unfair trading and currency management practices, and were much more eager to sell to Americans than to buy from them. The view in much of corporate America was that the Japanese Government pursued policies that maintained an artificially low price for the yen, which was a boon for Japanese exporters and costly to US firms that produced similar products.

The inevitability of changes in the values of individual currencies reflects the differences among countries in their inflation rates and structural factors, including rates of population growth and rates of economic growth. As a result, payments by the residents of one country to those of all other countries as a group may differ from their receipts from foreign residents.

Every economic unit has a ‘budget constraint,’ and must keep its payments more or less matched with its receipts; this constraint holds for individuals, families, firms, and governments as well as for regions within a country. West Virginia has a budget constraint and even New York City has one – although New Yorkers learned that lesson slowly in the late 1970s when residents of other cities and states balked at financing the city’s budget deficit. Similarly, every country has a budget constraint; its payments to foreigners cannot exceed its receipts from foreigners for an extended period.

Either governments will adopt measures so that these payments and receipts are more or less equal at the prevailing currency values or these values will change to bring payments and receipts into balance. Often it seems easier for changes in currency values to bring payments and receipts into balance rather than to change monetary policy and fiscal policy to bring payments into balance with receipts.

At the global level, an array of shocks – changes in inflation rates, surges in the oil price, national savings rates, rates of growth of GDP, productivity gains in export industries, import prices, and the rates of return on securities denominated

in the domestic currency – causes payments to foreigners to differ from receipts from them at the prevailing currency values.

Within a domestic economy, there is only one currency; hence adjustments to these shocks cannot occur through changes in currency values. Instead, adjustments occur in the relationships among prices and wages and rates of growth of household income in different regions and through changes in unemployment rates. Now that more than 12 countries have adopted the euro as their money, changes in currency values can no longer occur among them – unless a country leaves the European Union. The shocks across countries usually have been much, much larger than the shocks among the regions within a country, with the result that the adjustments also are likely to be larger. Still, some of the large shocks to countries have been caused by changes in currency values.

The value of the currency, jobs, and inflation

The answer to ‘Is it better to be rich or to be poor?’ seems straightforward; it is always better to be rich because the rich have all the opportunities that the poor have and many more. The answer to ‘Is it better to have a high value or a low value for our country’s currency?’ is more complex.

The higher the value of a country’s currency, the greater its purchasing power in terms of foreign goods and services and securities. But the higher the value of the currency, the weaker the competitive position of domestically produced goods in foreign markets and the stronger the competitive position of foreign goods in the domestic market.

The debate about the appropriate value for a country’s currency is between consumers who benefit from a high value for the currency and producers who benefit from a low value. Some countries, especially those in Asia – initially Japan and Taiwan, then South Korea, and most recently China – have followed export-led growth policies. Each of these countries maintained a low value for its currency; each wanted to increase the number of people employed in firms producing manufactured goods that could be sold abroad. Each wanted to increase its share of the world market for these goods, which meant that each needed relatively low prices for these goods. The increase in market share captured by the firms in one of these countries was inevitably at the expense of the market share of firms in other countries, almost always those that had industrialized in earlier decades.

Within each country an increase in the value of the currency means that consumers are better off because imports are cheaper while the producers – at least those in the tradable goods industries – are worse off because profits and employment are depressed by the higher level of imports.

The management of currency values

The government of each country decides whether to peg its currency to some other currency (much as currencies had been pegged to gold at the end of the nineteenth century) or whether to allow market forces to determine the value of

the currency. A currency floats by default unless a central bank has a parity and adopts measures to limit the deviations of its currency from this parity.

There are numerous variants on these two basic options – if the central bank pegs its currency, it is likely to allow its currency to float within a modest range around the parity. Even in the absence of a parity or peg, a central bank may buy and sell its currency to limit the range of its daily, weekly, and monthly changes – and many sell their currencies to limit the decline in competitiveness that would follow from appreciation.

Currencies were pegged during most of the nineteenth century and until the First World War; the major extended period of floating exchange rates began in the early 1970s. When currencies were pegged, a major question involved the measures that governments would take to reduce payments deficits or, less frequently, payments surpluses – would the adjustment involve market-induced changes in relative prices and relative incomes or would monetary or fiscal policies be changed to reduce these imbalances? A related question was whether the countries with the payments deficits or those with the payments surpluses would take the initiatives toward reducing payments imbalances that were deemed too large.

The authorities in each country generally agreed that if the adjustment to an extended payments imbalance were to involve a change in the parity of a currency, it was preferable that a foreign country take the initiative in effecting this change. The authorities in the countries with the payments surpluses believed that their counterparts in the countries with the payments deficits should take the initiative because they had mismanaged their economies and allowed their price levels to increase. In contrast, the authorities in the countries with the payments deficits believed that the countries with the surpluses were acquiring international reserve assets at too rapid a rate, and thus induced payments deficits in their trading partners.

Bankers – especially foreign exchange traders in the large international banks, multinational firms, and in hedge funds – seek gains from changes in the prices of currencies; the larger the changes in these prices, the larger their trading revenues and profits. The revenues and profits of the banks from foreign exchange trading are much higher when currencies are floating than when they are pegged. (Consider the extreme case – when countries peg their currencies with a very narrow range of movement around their parities, the trading revenues are very small. When Germany and France and their neighbors adopted the euro several thousand individuals that traded their currencies against each other moved to trade some other financial instrument.)

Parities and shocks

The cryptic history of the last 200 years is that during much of the nineteenth century and until the First World War each currency had a fixed price in terms of gold. Inflation rates in different countries were similar. Once the war began, the convertibility of most currencies into gold was suspended as governments used their

banking systems as a source of finance. During the war, inflation rates differed sharply. Most countries found it impossible to return to their prewar parities after the end of the war because their price levels had increased so much more than the US price level.

Most countries again had parities for their currencies from the second half of the 1940s to the early 1970s as a membership commitment to the International Monetary Fund (IMF); each member was obligated to prevent its currency from deviating from its parity, initially by more than one-quarter of 1 percent and then by more than 1 percent. Since the early 1970 most currencies have been floating, sort of, or at least not pegged, although most central banks have intervened extensively to limit the appreciation of their currencies.

The rationale for the establishment of the IMF during the 1940s was the view that much of the financial turmoil in the 1920s and the 1930s resulted from sharp movements in currency values. During the 1950s and especially during the 1960s central bankers were reluctant to change the parities for their currencies even after it had become obvious to many market participants that changes were necessary. One reason – perhaps the dominant reason for the delays – was the belief that the domestic political costs of changing a parity would be high, both when a country devalued and when it revalued its currency.

Thus in the late 1960s and the early 1970s it seemed obvious to many Americans and to a few Japanese that the yen was undervalued – Japan had a very large trade surplus in part because the value for the yen that had been set in the late 1940s when the country's productive capacity was very modest provided a substantial competitive advantage to Japanese firms in foreign markets. The view in Washington was that the Japanese should revalue the yen, perhaps from 360 yen to 300 yen so Japan's imports would increase more rapidly and its exports would grow more slowly. The view in Tokyo was that the Americans should devalue the dollar to offset the adverse impact of the increase in the US price level on the international competitive position of US firms. If the Japanese revalued the yen, Japanese autos would cost more in the United States. These autos would also cost more if the Americans took the initiative and devalued the dollar. In both cases US imports from Japan would increase less rapidly and fewer US workers in autos, steel, and textiles would lose their jobs.

Eventually, the US Government took the initiative and forced a revaluation of the Japanese yen in August 1971 – an event recorded in Japanese monetary history as Nixon Shockku II (Nixon Shockku I was the US opening to China).

Three times in years (1961, 1969, and 1971) the German mark price of the US dollar was reduced, in part because the German Government wanted to dampen inflationary pressures at home and in part to reduce the likelihood that substantial numbers of American troops would be withdrawn from Europe to reduce the US payments deficit. In the 1960s, French President Charles de Gaulle bought \$2 billion of gold from the US Treasury in an attempt to force the US Government to increase the US dollar price of gold. De Gaulle believed that an increase in the US dollar price of gold would benefit those of his domestic supporters that owned gold and restore the prestige of France and its record of monetary stability and

also demonstrate that the US dollar was a weak currency and the United States an untrustworthy ally.

The increase in the US dollar price of gold that General de Gaulle sought occurred after an extended delay; the first increase occurred in December 1971 when the US dollar price of gold was raised to \$38 an ounce (effectively a devaluation of the US dollar by 12 percent) and the second in February 1973 when the US dollar price was increased to \$42. These increases were window-dressing, since the US Treasury would not buy or sell gold at these prices.

Private investors ignored the changes in the US Treasury's gold parity, and bid the price to nearly \$200 in 1974 and then to almost \$1000 in January 1980. De Gaulle appeared prescient. Throughout the 1970s, the 1980s, and the 1990s, the US Treasury continued to value its 250 million ounces of gold at \$42 an ounce, even though the market price was much higher; in the 1990s the gold price was in the range of \$280–\$400 and in the first half of 2008 the price increased to over \$1000.

Pegged currencies and floating currencies

In February 1973, the United States, Germany, Japan, and the other major industrial countries abandoned the Bretton Woods system of adjustable parities, and allowed their currencies to float. During the nineteenth century Britain suspended the convertibility of the pound into gold during the Napoleonic Wars and the Americans suspended convertibility at the beginning of the Civil War. Suspension of convertibility was associated with a significant increase in the domestic price level as the governments borrowed from the banks to get the money to fight a war. These currencies floated as long as the commitment to convert the domestic money into gold at a fixed price remained suspended. The British pound was again pegged to gold several years after the end of the Napoleonic Wars while the US dollar was pegged to gold 14 years after the end of the Civil War.

The unique aspect of the move to the floating exchange rate arrangement in the early 1970s was that this change occurred when the major industrial countries were not at war. Since the early 1970s the prices of the US dollar in terms of the German mark and then after 1999 the euro, the Canadian dollar, the British pound, and the Japanese yen have varied within a wide range. From time to time central banks have intervened to limit changes in the value of their currencies, often to limit the appreciation because of the decline in the competitiveness of domestic goods that would otherwise occur.

Paradoxically, central bank purchases of the US dollar have been much more extensive when currencies have been floating than when they were pegged. Moreover, many countries had much larger imbalances as measured by the ratios of their trade deficits and their trade surpluses to their GDPs.

Devaluations and revaluations

Business fortunes are made on the ability to forecast changes in the prices of national currencies. George Soros earned more than \$1 billion from the