1 Introduction

Someday you guys are going to need to tell me how we ended up with a system like this . . . we're not doing something right if we're stuck with these miserable choices.[1]

Ever since the financial crisis of 2008, doubts have been raised about the future of capitalism. Certainly, seven years of doubtful recovery from the recession of 2007 and then another recession in 2012 in several European countries generated pessimism about the ability of capitalist economies to deal effectively with the persistent instability of the global financial system. At the heart of this pessimistic outlook is a deeper concern over the perils of international finance, compounded by confusion over the proliferation of exotic financial products marketed by hedge funds, venture capitalists, and assorted niche firms that make up the "shadow banking" community. No wonder new studies appear almost daily that try to explain to the wider public, as well as overwhelmed policy makers, what went wrong and what should be done now and in the future to avoid a repeat disaster. As President Bush remarked to his top economic policy makers, Henry Paulson, US Secretary of the Treasury, and Ben Bernanke, chairman of the Federal Reserve System of the US, at the height of the crisis in September 2008, "Someday you guys are going to need to tell me how we ended up with a system like this . . . we're not doing something right if we're stuck with these miserable choices."

This book joins a long list of historical works designed precisely to explain to former President Bush (and the rest of us) just how we ended up "stuck with these miserable choices." Most studies to date provide detailed indictments of the apparent perpetrators of the crisis,

[1] President George W. Bush to Ben Bernanke, chairman of the Federal Reserve System, and Henry Paulson, Secretary of the Treasury, as reported by James B. Stewart, "Eight Days: The Battle to Save the American Financial System," *The New Yorker*, September 21, 2009, p. 72.

beginning with the prime movers – variously profligate politicians, indifferent regulators, or opportunistic financiers – then move on to the propagators of the crisis – rampant greed, ignorance, or indifference of the general public. Few note the international elements; most prefer to focus outrage on the villains near at hand or, most persuasively, on the US with its complex financial system and overwhelming wealth at the center of the international financial system since the Second World War. Even fewer try to suggest ways to resolve the crisis internationally, preferring instead to deal with the domestic issues of concern to their national audience. Most end with a depressing conclusion that there will be a crisis next time, perhaps sooner than later and probably worse if policy makers or the public do not take the lessons of history or the prescriptions of the author to heart.[2]

In contrast to those works, the present one takes both an international view and a very long historical background. This author tried to instill the various lessons of financial history in an increasing number of international graduate students at the London School of Economics during the years the crisis was unfolding, 2006–2010. Chastened by the experience of repeatedly mis-forecasting the next episode, I resolved to take both a broader and deeper perspective on the financial innovations that accompany economic expansion and then, all too often, lead to financial crises with disruptive effects. To encourage the youth of the world that their future promises better times than their parents are living through at present, I emphasize the benefits of financial innovations throughout history that have increased trade, enabled technical progress, and improved standards of living in general. Historians as well as contemporary observers often overlook the real benefits of financial innovations while dazzled by the extraordinary fortunes created for a favored few. Before the general benefits of financial innovations can be realized in the real economy, however (and they have been realized repeatedly and especially over the past three centuries), some method of coordination among the various elements of a financial system must be found. Effective and mutually beneficial coordination among banks, capital markets, and governments while dealing with a financial innovation occurring somewhere in the economy turns out to be hard for all concerned.

[2] Useful overviews of the literature are Kindleberger and Aliber 2011, Chapter 1; Neal 2011b; Lo 2012.

Often enough, the problems of coordination overcome the financial system and some kind of crisis ensues. More interesting, and the reason to write this book, is that solutions are found occasionally. When solutions are found, good things happen for the entire economy, at least until the next financial innovation disrupts the system. Other histories of finance devote much effort to cataloguing various crises of the past and identifying common elements among their respective causes and consequences (e.g. Reinhart and Rogoff 2009). Very little, however, has been done to identify effective solutions to crises and to determine their common elements to see if a similar solution could be found to the current crisis. Solutions, when they do occur, seem to take a very long time to unfold; or to depend on some exogenous shock such as a major war; or to simply abandon the particular financial innovation that is blamed for the crisis. A closer look at particular successful recoveries, however, may reveal common strategies that can be applied generally, due allowance being made for the changing historical contexts of financial crises. That is the ultimate goal of this book. The years of global prosperity prior to 2008 generated billions of stakeholders in the benefits of global capitalism and international trade. The ultimate purpose of this work is to help meet their desire to find solutions to the financial crisis, workable solutions that will both preserve the gains already achieved and also mitigate the dangers of future crises.

How to keep up with developments in international finance

The elements of the international financial system that led up to the global crisis of 2007–2012 are well documented in the official publications of international organizations such as the International Monetary Fund (IMF), the Bank for International Settlements (BIS), and the Organisation for Economic Cooperation and Development (OECD). The different perspectives they offer are instructive, not just for understanding the complexity of the financial crisis but also for revealing the divergent interests at play in resolving that crisis. The IMF, while acting as an international bank and lender of last resort in many cases since it was established in 1944, tends to reflect the views of the finance ministers from the 188 member states. The BIS, established earlier than the IMF in 1930, but with a much smaller membership (60 central banks in 2012) provides a separate forum for central bankers to discuss common issues and organize concerted responses to particular matters of international concern. Monetary and financial conditions are the main concern of central banks in the modern world, all of them jointly responsible for issuing the fiat currencies that currently make up the world's money supply. The OECD, created in 1960 to continue the work of the Organisation for European Economic Cooperation (OEEC), which began coordinating Marshall Plan expenditures in 1949, monitors the overall economic conditions for each of its 34 member countries as of 2012, but these are the richest and most open economies in the world, accounting for most of the global output and trade. One can expect differing viewpoints from the fiscal authorities (expressed in the IMF's semi-annual *World Economic Outlook (WEO),* the central bankers (given by the annual reports of the BIS (BIS *Annual Report*), and the governments of the major players in the global economy, whose overall appraisals of both domestic and international economic issues appear in the semi-annual *OECD Economic Outlook*.

The IMF *Global Financial Stability Report* (*GFSR*) of the IMF's Department of International Capital Markets, issued semi-annually since March 2002 and supplemented quarterly with updates, is especially useful for the topics covered in this book. The *GFSR* takes an international perspective on capital markets, summarizing the state of both bond and equity markets among member countries with graphic displays of the current state of the four risk elements and two conditions that the IMF believes affect the overall stability of the financial system. The risk elements consist of macroeconomic risks, emerging market risks, credit risks, and market and liquidity risks; the conditions affecting stability are the investing public's appetite for risk and monetary and financial conditions as set by central banks and regulators. While the *GFSR* for April 2012 claimed that risk conditions had moderated since their previous two reports in January 2012 and September 2011, monetary and financial conditions were unchanged but the public's "appetite for risk" had risen (meaning stock market indexes globally had risen). Provided that central banks maintained ease of monetary and financial conditions, something they had been doing to an unprecedented extent since 2008, the global economy could slowly recover. Later events in May and June, however, forced the IMF to reduce their forecasts of economic growth for the coming year, especially for Europe, although they maintained their optimism for 2014 if policy makers held to their course.

The June 2012 BIS report explained in detail, however, why central banks had reached the limit of their resources and it was now up to fiscal authorities around the world to come to the rescue. How? Mainly by tightening their budgets, whether by reducing subsidies or increasing taxes, and by introducing "structural reforms" in their regulation of labor, capital, and product markets. The deregulations implied by the phrase "structural reforms" are supposed to unleash pent-up energies that will generate rapid economic growth. Critics of the central banks point out that implementing any of their recommendations comes at a political price, which explains why they have not been implemented even after thirty years of exhortation by central bankers the world over. If forced to do more to facilitate realization of the global public's appetite for risk, the central banks would have to implement and expand new policies of massive investments in long-term securities, so-called "quantitative easing" (QE). According to BIS economists, the emerging problem with quantitative easing, when combined with financial liberalization, is that such "financial elasticity" creates extended buildups of balance sheets, both domestically and on international capital accounts. When these bloated capital account positions are readjusted, longer and more severe recessions occur in the real economy (Borio 2014; Borio, James, and Shin 2014).

The consensus of the finance ministers of the world then was that central bankers should do more to bring the global economy out of the crisis, but central bankers agreed that finance ministers should take up the burden as their tool kits had been exhausted. No wonder widespread pessimism continued unabated. While both the IMF and the BIS draw on the expertise of a large staff and a bevy of well-paid consultants and so provide excellent analyses of the ongoing crisis backed up with official statistics, both are obsessed with the idea that policy makers should maintain stability in the financial system, whether by preventing financial excesses or by cleaning up the mess left when a financial bubble collapses. The idea of promoting economic growth presumably lies in the domain of other experts charged with determining taxes and subsidies. The implicit assumption is that finance is simply the handmaiden of industry, not a prime mover, even if long-run investment in durable capital is necessary for technical progress to take root and continue. Nevertheless, the two organizations nicely convey the conventional wisdom of the economics profession within the government bureaucracies of the member countries.

The conventional wisdom is faithfully transmitted to the public by media such as *The Financial Times* and *The Economist* magazine. (*The Wall Street Journal* typically elects to discredit the bureaucracies in general, both domestic and international.) At the root of the ongoing crisis, according to the conventional wisdom, is the continued imbalance of trade patterns and consequent pressures among the major economies of the world to finance these imbalances, leading in turn to excessive financial elasticity.

How we got to this mess: the conventional wisdom

Villain #1 is the US, which persisted in running large current account deficits even after the end of the Bretton Woods System in 1971–1973, which was designed to help the rest of the world recover from the economic losses of the Second World War by providing a market in the US for their exports. The intent of the Bretton Woods system, which was overseen by the IMF and the World Bank, was to stabilize macroeconomic conditions in the member countries. It did this first by encouraging countries to remove quantitative restrictions on trade in goods and services, substituting instead transparent and reliable tariff barriers, which in turn were subject to reciprocal reductions by trading partners. Further, countries committed to fixed exchange rates with the US dollar in pricing both their exports and imports, making the tariff barriers to be surmounted by foreign suppliers fixed and clear as well. In compensation for opening their economies to foreign suppliers and displacing less efficient domestic producers, member state governments could control their money supply and protect domestic finance from foreign capital movements. They could subsidize firms and workers who were displaced by foreign competition until they could find alternative niches to fill in the growing economy.

In terms later made popular among international macroeconomists, governments signing on to the Bretton Woods System committed to fixed exchange rates and monetary sovereignty while giving up access to international capital markets. This was one way to solve the "trilemma" of not being able to pursue all three goals simultaneously. The Bretton Woods solution contrasted with the nineteenth-century solution of the classical gold standard, which committed countries to fixed exchange rates and open capital markets while giving up monetary sovereignty. From the perspective of trade imbalances that obsess the IMF analysts, however, the classical gold standard worked well as long as the British economy exported capital on a large scale. Economic historians now agree that the Bretton Woods System also worked fine as long as the US economy exported capital on a large scale, something it had done only briefly, from 1924 through 1928 in the period between the First and Second World, and again during the Bretton Woods era, 1944–1973.

The original treaty was signed at the Bretton Woods resort in New Hampshire in June 1944 after Allied victory in the Second World War seemed assured with the success of the D-Day invasion earlier that month. While the Bretton Woods system lasted formally from 1944 until its formal abandonment in 1973 after failed attempts to reach agreement on realignment of fixed exchange rates among the member countries, its effective term of operation was from 1958, when the European Payments Union (EPU) was wound up and the western European countries made their currencies convertible with each other and the US dollar for current account dealings, until August 15, 1971. On that date, the US government unilaterally pulled the rug out from under the system by refusing to redeem US dollars held by foreign central banks into gold at the agreed rate of $35 per ounce of gold. This action, a unilateral abrogation of the basic terms of a long-standing international treaty, adhered to by 125 countries at the time, could be considered from some perspectives an act of war, or at least an act that would lead to severe sanctions or reprisals by the other countries. For our purposes, however, it was just a very dramatic example of "financial innovation," this time by a government rather than by private banks or by market operators.

Moreover, it is an excellent example of a crisis created by a financial innovation, as the effects were immediate, international, and required adjustments by bankers, market operators, and regulators. These systemic effects were overshadowed by the oil shocks that were to follow in 1973 and 1978, but those shocks in turn were set off by the effect of the sharp fall in the international value of the US dollar that followed the end of the Bretton Woods Agreement to keep the dollar pegged at $35 per ounce of pure gold. The oil shocks of the 1970s were not the first or the last time that it became obvious that disruptions in finance could lead to serious and prolonged disruptions in the real economy. Only later, and only among a few academic specialists, did it seem that the creation of the Bretton Woods System was also a financial innovation, and one that helped create and sustain the prosperity of the real economy for the leading members of the IMF. The connection between the gradual implementation of the full Bretton Woods System and the "golden age of growth" during the period 1950 to 1973 was too obvious to miss, even as it has become increasingly impossible to reconstitute the virtuous cycle of increasing trade, increasing prosperity, and steady, high rates of economic growth that occurred for many countries (Bordo and Eichengreen 1993).

With the breakup of the Bretton Woods System came an extended period of experimentation with new financial innovations, catalogued under the general rubric of financial disintermediation for the US, but extending into Europe and then beyond, affecting even Communist China and eventually the Soviet Union. For economic historians and especially for financial historians, the world is still adjusting to the end of the Bretton Woods System, still seeking a new system of coordination among the operating elements of a financial system itself in order to generate growth in the real economy on a continuing basis with benefits widely distributed. In that unfolding perspective, the subprime crisis that began in the US in 2007, culminated in September 2008, and then reappeared in 2010 with the sovereign debt crisis within the European Union, represents the persistent failure to date to create an effective financial system that encompasses all trading nations (the IMF now has 188 members) and facilitates economic growth for all.

A post-Bretton Woods System, or Bretton Woods II?

The economists of the IMF have tried to work out a post-Bretton Woods System that would allow the free movement of capital internationally. They first argued that countries should try to maintain fixed, or at least tightly bounded exchange rates, thereby limiting their monetary sovereignty. The hope was that investments by the advanced economies in the less-developed (or "developing") countries within the IMF would generate sufficient economic growth that national politicians would be willing to forgo control over the national currency, having sufficient largesse from the accumulation of foreign capital at their disposal. Indeed, the experience of the European common currency, creating the euro as a new currency at fixed conversion rates with the legacy currencies of the member countries, created exactly this benefit for all concerned. Capital importing countries, mainly the southern and western periphery (Greece, Italy, Spain, Portugal, and Ireland) prospered from the employment opportunities created by foreign capital while capital exporting countries, mainly the northern periphery (Germany, Finland, Netherlands, Austria) prospered from their strong exports.

The problem that bedeviled this possible solution was that governments in developing countries had to issue debt denominated in the currencies of their creditors, which meant in US dollars, German *Deutsche Marks*, or Japanese yen. This created the so-called "original sin" problem of having to keep the borrowing country's exchange rate fixed to the currency of the creditor country, as any devaluation would make the debt burden worse. That is exactly what happened during the 1980s, especially for Latin American countries that had borrowed heavily from US banks, often with their encouragement, which were seeking higher interest rates abroad. Eventually, starting with the Latin America countries, governments did decide to issue bonds in their own currency, but also making provisions for redemption among the various creditors in case of delays in interest payments or outright default, the so-called "collective action clauses."

At this point, IMF consensus changed in recognition of the political reality that national governments would always fall back on control of the domestic money supply in case of financial difficulty. Hence, the new framework for post-Bretton Woods arrangements to resolve the trilemma would be (1) allow free international movement of capital, (2) maintain monetary sovereignty, but (3) permit flexible exchange rates. Meanwhile, the euro-zone solution seemed ever more appealing as the capital importing countries were able to issue government debt in euros and, with the support of the European Central Bank (ECB), pay interest rates as low as those paid by the German government on its bonds. So the EU part of the developed world remained convinced that their resolution of the trilemma was still best for them, namely to forsake monetary sovereignty within the European Union in favor of open capital markets and fixed exchange rates within the European System of Central Banks (ESCB), but with flexible exchange rates of the euro with the rest of the world.

The "Asian tigers," by contrast, having suffered the problems of issuing debt in foreign currencies and then confronting adverse exchange rates that increased their debt burdens to unsustainable levels in 1998, moved to their version of the original Bretton Woods System. This was to allow some movement of capital inward, but keep tight control on the export of capital; fix exchange rates on current account for trading purposes with the US dollar, or possibly a basket of widely used foreign currencies including the euro and yen; and keep monetary sovereignty. The China solution basically replicates the way West Germany and then Japan exploited the original Bretton Woods System during their golden ages of growth, in effect creating a second Bretton Woods System, BWII (Dooley *et al*. 2003, 2009). China's efforts have been imitated to greater or lesser degrees by other countries in Asia and Latin America. Each has experienced its own growth miracle as a consequence, according to this analysis. The key is to maintain export-led growth for long enough to raise productivity and living standards in the exporting country up to the levels of the leading economies. To do this, however, requires another country or set of countries to maintain import deficits during the growth spurt of the country catching up. The US, with its increasingly open economy after the Second World War, managed to provide this service for Japan and Germany during Bretton Woods I and then for Korea and China during Bretton Woods II.

Global imbalances: how sustainable are they?

Sustaining this global imbalance, which dominates the thinking of the IMF and *The Financial Times*, requires China to finance its continued export surpluses to the US by investing in US assets. Given the reluctance of the US authorities to allow Chinese control over productive assets in the US, China's export surpluses are invested in US government debt, just as Germany and Japan's export surpluses in the 1960s were largely invested in US government debt. But, just as the German and Japanese export-led growth miracles ended with the end of the Bretton Woods System in 1973, economists predict that the Chinese experience, begun in 1978, will end eventually, but when and with what repercussions no economist dares predict. (The authors of the Bretton Woods II argument, however, make a convincing case that it did not end with the financial crisis of 2008. That had separate causes, and requires distinct solutions, which we deal with in the final Chapter 14.)

Seeking some kind of international agreement comparable to the Bretton Woods treaty that established the IMF in the first place is