

The Great Recession in Historical Context

Peter Temin

MIT

John Maynard Keynes wrote in the depths of the Great Depression that “[p]ractical men, who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist.” This acute observation is applicable to our current Great Recession as well. In fact, the newly discredited ideas are not all that different from the old, suggesting that Keynes may have overestimated people’s ability to learn from their mistakes.

I pursue the parallels between these two watersheds in recent economic history along three paths: the causes of the crises and their relation to economic theory; the spread of the crises on a global scale; and, finally, recovery—at least as far as we can see it at this point. As Karl Marx famously said, history repeats itself “the first time as tragedy, the second as farce,” a criticism that befits our current condition.¹

Both of these dramatic and costly economic crises emerged from the interaction of economic imbalances in the world economy and the ruling ideology of financial decision-makers who confronted these imbalances. World War I, a paroxysm of violence that brought the long economic expansion of the nineteenth century to a sudden end, provided the climate of imbalance that led to the Depression. Britain, the workshop of the prewar world, was exhausted by the struggle. America, the rising economic behemoth, was unprepared to take responsibility for its new role in the international economy.

Germany, having unsuccessfully challenged the Allied Powers, refused to acknowledge its defeat.

Patterns in the international movement of capital reveal this imbalance. During the postwar decade, one of the most important reasons for growing discrepancies in capital flows was the ruling economic theory of the gold standard. In the eighteenth century, philosopher, historian, and economist David Hume explained how currencies valued in gold remain stable relative to each other. If, for instance, a shock to one country decreased its exports, the result would be an outflow of gold, which would lower prices in the exporting country. Lower prices would encourage exports and decrease imports, leading to an inflow of gold. Prices would rise again, re-creating the previous equilibrium. This argument is known among economists as the price-specie-flow mechanism.

Hume's contribution is still useful today, although we are now aware of the many assumptions that underlie the mechanism's proper functioning. In particular, the theory presupposes that prices are fully flexible and determined in competitive markets. These assumptions express a view of the economy—often attributed to Adam Smith—that has become characteristic of economic models in the years since Hume's writing. This view is taught in introductory economics classes; it is the starting point for many journal articles; and it is referred to as a perfectly competitive market. When conditions cross the line between descriptive and normative, however, they are transformed from description—which may or may not be accurate—to prescription—which in turn affects public policy.

The gold standard was characterized by the free flow of gold between individuals and countries, the maintenance of fixed values of national currencies in terms of gold and

therefore each other, and the absence of an international coordinating organization. Together these arrangements implied that there was an asymmetry between countries experiencing balance-of-payments deficits and surpluses. There was a penalty for running out of reserves (and being unable to maintain the fixed value of the currency), but no penalty (aside from foregone interest) for accumulating gold. The adjustment mechanism for deficit countries was deflation rather than devaluation, that is, a change in domestic prices instead of a change in the exchange rate.²

This last point—the choice of deflation over devaluation—can be seen clearly in contemporary views at the nadir of the Depression. Lionel Robbins argued that “a greater flexibility of wage rates would considerably reduce unemployment.” He applied this view to the Depression: “If it had not been for the prevalence of the view that wage rates must at all costs be maintained in order to maintain the purchasing power of the consumer, the violence of the present depression and the magnitude of the unemployment which has accompanied it would have been considerably less.” Robbins had the wit to acknowledge that this was a hard saying and insist that all prices, not just wages, needed to be flexible. These caveats did not moderate his prescription; they simply exposed the depth of his conviction that internal deflation was the only way to deal with a fall in demand (Robbins 1934, p. 186).

The ideology that determined specific actions can be seen as a policy regime that dictated a stable reaction to external events. This regime was well known to contemporary observers. Both policy-makers and people affected by their actions operated within this regime. When they thought of alternative actions, they thought of alternatives within this regime, that is, within the gold standard. Alternatives outside the

regime were not taken seriously, whether by policymakers when proposed or by investors and consumers when undertaken. They were interpreted as aberrations from the stable gold-standard regime. Eichengreen and I identified this policy regime as a *gold-standard mentality* (Eichengreen and Temin, 2000).

The conditions for the price-specie-flow mechanism may have been fulfilled in the eighteenth century, but they were not accurate in the 1920s postwar world. In contrast to Hume's assumption of a fixed link between gold flows and prices, central bankers thought themselves responsible for inflation and deflation. Business firms had become larger, and many product markets were no longer fully competitive. As the size of production units, whether mines or factories, became larger, the ability of labor markets to be optimally competitive also diminished. Large employers yielded little bargaining power to workers to negotiate wages and working conditions. If a factory, for example, was the only large employer in town, the options for workers were even more limited and the market power of the employer more obvious. Workers formed unions to countervail the market power of employers, and wage bargaining and strikes supplanted the individual wage negotiations implicit in Hume's and Smith's analyses.

Nevertheless, after World War I, policy-makers could think of no better way to reorganize the international economy than to restore the gold standard—that is, to fix one price (the exchange rate) while assuming all others were flexible. Freezing exchange rates in this fashion reduced countries' ability to adapt to new conditions; this defect, however, was deemed preferable to the anticipated chaos of alternative arrangements. When England attempted to reduce prices to sustain the value of sterling, a general strike

resulted, revealing both the inaccuracy of the standard's underlying assumptions and the strength of the economic policies based on those assumptions.

In this context, the United States took over the position of leading international lender and exported massive amounts of capital to Germany in the 1920s. The loans ostensibly were meant to help Germany maintain the gold value of its currency, but they enabled Weimar Germany to both pay reparations owed to the victors in World War I and enjoy a consumption boom. Higher prices after the war also put strain on gold currencies, and while England and Germany struggled as a result, economists in the United States proclaimed the advent of a new economy in which stability and prosperity would continue indefinitely. Hindsight suggests that these conditions were not sustainable; rather than celebrating the promised strength and vitality of a new economy, countries should have been concentrating on how to avoid a rough landing from the high-flying results of the previous shocks.

Within a few years, the asymmetry of the gold standard had made its maintenance impossible. I illustrate this evolution in Figure 1, which shows world gold reserves for several interwar dates, divided into those of the four major industrial countries and a residual. The height of the bars show that total reserves rose continuously from 1927 to 1935. The bottom (black) bars show that US gold reserves jumped dramatically after 1933. The next (speckled) bars show that France's gold reserves rose continuously from 1927 to 1933 and then declined. The UK and Germany never had reserves anywhere as large, and German gold reserves in any case vanished in 1931. The disparity of gold reserves and their scarcity in the UK and Germany drove the economic fortunes of these countries. France was as important as the US in creating the reserve scarcities in the UK

and Germany around 1930; the postwar undervaluation of the franc brought more gold into France than into the far larger US (Irwin 2010).

Economic troubles appeared in Germany and the United States in the late 1920s. The former's consumption growth produced a boom in municipal expenditures that began to fizzle; in the latter, both housing and stock market booms eventually crashed. As recession spread to other countries, international trade decreased, but prices could not fall rapidly enough to equilibrate markets in the fashion Hume described. Prices were sticky, and rather than deflation, a lack of foreign reserves led to unemployment. When countries found their exports falling, the processes of deflation and depression chased a moving target.

A similar international imbalance developed after the end of the Cold War. Previously the new world lender, the United States traded roles and became the new world borrower. China, a "loser" in the Cold War, became the United States' primary lender. Just as the inflow of capital had fueled expansion in Weimar Germany, the inflow of capital from China financed a consumption boom in the United States that developed into a housing boom.

This global imbalance was apparent, and economists feared that a crisis would ensue. Because the United States no longer adhered to the gold standard, the value of the dollar could change freely from day to day. The question was whether there would be a smooth decline in the value of the dollar, in the fashion of the price-specie-flow mechanism, or an abrupt fall (Blanchard, et al., 2005; Edwards, 2005). These concerns were misplaced; even though the international imbalance created crisis conditions, short-run booms and busts in the interwar years precipitated economic calamity. One such

boom was the surge in housing expenditures in the 1920s. The housing market was only a minor player in the drama of the Great Depression, but it had a starring role in our current crisis.

The housing boom flourished in recent years, nourished by the availability of Chinese capital and the ruling economic theory of the Washington Consensus. This term, coined in 1989, referred to a set of economic policies that ranged from stable exchange rates and responsible fiscal policies to deregulation and privatization (Williamson, 1990). It was an adaptation of the gold standard to current conditions, stipulating stable—instead of fixed—exchange rates to avoid the rigidities of the gold standard that proved to be harmful in the 1930s. Other requirements marked a departure from the era of large government that followed the Great Depression and World War II. The terms of the Consensus favored diminished government influence so as not to impede the progress of private finance and industry; competition would ensure continued growth and prosperity. Like the gold standard, the Washington Consensus was based on the Enlightenment ideas of David Hume and Adam Smith and promulgated as a way to organize the postwar world. It was the economic component of the new world order that the first President Bush was looking for.

More explicitly than the gold standard mentality, the Washington Consensus spelled out the conditions needed to maintain stable exchange rates. It acknowledged that most economies in the later twentieth century did not resemble the eighteenth-century conditions analyzed by Hume and Smith but argued that policies designed to re-create these earlier conditions would lead to economic growth and prosperity. Using familiar theories of competition and flexible prices, the underlying theory showed how the

competitive process of allocating resources in individual markets would generate stable conditions for society as a whole.

Banks and associated businesses in the United States extended the underlying reasoning to the creation of new assets known collectively as structured finance. The Washington Consensus allowed firms to reduce risk, and innovative securities provided a means of allocating risk to those investors who wanted to take it on. Just as banks can hold fractional reserves on the assumption that people draw on their deposits randomly and independently, the creators of new securities reasoned that homeowners default on mortgages randomly and independently. Collateralized debt obligations (CDOs) allowed financial institutions to benefit from the fact that only a few homeowners default in any given time, so that most mortgages are safe. Combining mortgages into “tranches,” banks could separate the safe part of mortgages from the risky parts without knowing which mortgages would be defaulted—just as banks do not know which deposits will be withdrawn but can safely assume that only a fraction will be withdrawn at any given time.

Based on the ability to sell mortgages to be securitized, mortgage brokers expanded, encouraged homeownership, and promoted the ownership society championed by the second President Bush. Banks and other financial intermediaries holding securitized assets took on more and more leverage, which was justified by their calculations that the risks of many of these assets were vanishingly small. But when the resulting housing boom burst and many mortgages failed, the assumption that defaults occurred randomly and independently turned out to be false. CDOs were much more risky than they had appeared to be, and the separation of risky and safe assets proved to

be invalid (Coval, et al., 2009). Investors refused to buy the CDOs, and credit markets seized up. Countries that had adopted the policies of the Washington Consensus found themselves mired in a worldwide financial crisis.

The Great Depression and the Great Recession were both caused by policies derived from nostalgia for the world of the Enlightenment. Drawing on theories from the eighteenth century, hard-headed policy-makers either assumed or tried to re-create the idealized conditions described by Hume and Smith. These policy-makers ignored both the growth of economies of scale in modern economies and the work of behavioral economists that has shown that people do not behave as *homo economicus*. Their efforts produced the new economy of the 1920s and the Goldilocks economy of recent decades that turned into booms and busts. Was it inevitable that these economic expansions would end badly? According to the late economist Hyman Minsky, people become more complacent with prosperity and more willing to take on risks they often know are highly suspect (Minsky, 1982). More recently, Reinhart and Rogoff (2009) analyzed historical evidence and reached a similar conclusion: booms typically precede financial crises, just as pride goes before a fall.

More formally, people in both expansions miscalculated the risks they faced. Their models were based on shocks to individual countries or homeowners and did not allow for collective actions. The gold standard model explained how to deal with a shock to an individual country, implicitly assuming that other countries would be immune to whatever disturbance affected the distressed country. The interaction between the country in crisis and other countries would lead back to stability; a collective shock to many economies was not considered. Similarly, the model behind the Washington Consensus

considered individual risks. Structured financial obligations were valued as if the underlying risk of mortgage foreclosure was the result of random and independent shocks to individual homeowners. As with the gold standard, no consideration was given to collective shocks; housing prices were expected to continually rise. It was assumed that homeowners experienced financial difficulty and defaulted on their mortgages randomly. The randomness of defaults enabled financial designers to reduce the risk to any security by diversification, that is, combining many mortgages the same way a bank combines many bank deposits. When the housing boom ended and housing prices fell, however, many homeowners began to default, and the risk that was supposed to be protected for by diversification was now present in securities previously thought to be almost risk free. Investors could not discern safer assets from those more at risk, and the prices of all structured finance fell. Prices of some securities fell rapidly because there were no buyers for them. Thus, financial markets froze in September 2008.

The second step of this comparative analysis is to evaluate the spread of each crisis. In the early 1930s, countries pursued a moving target as their economies contracted to deal with what appeared to be budget and current-account deficits. Consequently, a series of currency crises in Summer and Fall 1931 turned a bad recession into the Great Depression. The German mark collapsed when the chancellor put domestic politics ahead of sensible finance (Ferguson and Temin, 2003). The English pound gave up the gold standard after a subsequent speculative attack. And the US Federal Reserve (Fed) raised its discount rate dramatically in October 1931 to preserve the value of the

dollar; thus the Fed kicked the American economy when it was down and drove it further into depression.

Many countries continued to maintain deflationary policies in the early 1930s as they tried to hold on to the gold standard or, in the case of Germany, follow their prescriptions even after abandoning the gold standard. Some countries followed England off gold and created room for expansive policies, which were neither large nor expansive enough to stimulate recovery in countries that remained in thrall to gold. It has become common to attribute the continued economic decline to banking crises, but banks failed only in countries that adhered to the gold standard (Grossman, 1994). As long as countries set policies to maintain the value of their currency, their banks were at risk; bank failures were a damaging outcome of the depression, not its cause. Governments and central bankers—not commercial banks—led the way into depression in country after country.

Policies were perverse because they were formulated to preserve the gold standard, not to stabilize output and employment. Central bankers thought that maintenance of the gold standard would in time restore employment, while attempts to increase employment directly would fail. The collapse of output and prices and the loss of savings as banks closed in the early 1930s were precisely what the gold standard promised to prevent. Reconciling outcomes with expectations consequently required interpreting these exceptional events in unexceptional terms. Where the crisis was most severe, blame was laid on the authorities' failure to embrace the gold-standard *mentality*. The Federal Reserve and the Bank of England, it was alleged, had succumbed to the lure of managed money. Having refused to obey the rules of gold standard, they had

committed abuses of credit, sterilized international gold flows and prevented them from exerting their normal stabilizing influence on credit conditions. This in turn prevented prices and costs from adjusting.

This was the view that prevailed in Washington DC and in the regional branches of the Federal Reserve System. As unemployment spiraled upward, the Federal Reserve Bank of Dallas wrote the New York Fed that its directors were not “inclined to countenance much interference with economic trends through artificial methods.” Treasury Secretary Mellon famously advised President Hoover that the only way to restore the economy to a sustainable footing was to “liquidate labor, liquidate stocks, liquidate the farmers, liquidate real estate . . . purge the rottenness out of the system (Hoover, 1951-52, pp. 3, 30).”

This process is illustrated clearly in the United States’ experience. Banks continued to fail as the government clung to the gold standard. For instance, in early 1933, the Reconstruction Finance Corporation refused to help a prominent Michigan bank holding company for reasons that are not clear (anticipating the failure of Lehman Brothers in 2008). States declared bank holidays, and the New York Federal Reserve Bank lost gold as investors speculated against the dollar. Franklin Delano Roosevelt took office in early March 1933; he immediately instituted what he called a federal bank holiday to protect the banking system from complete collapse (Wigmore, 1985, pp. 433-47).

Today banks and other private financial institutions are at the center of the financial panic that initiated the Great Recession. They had accumulated large portfolios of mortgage-backed assets, in which mortgages were combined and then separated—at

least in theory—into securities of differing risks. When the housing boom ended in 2006 and 2007, homeowners began to default on mortgages at an increasing rate. These defaults were not the random defaults assumed in the construction of mortgage-based securities, and investors could no longer distinguish between the various assets. Efficiency-promoting securities were transformed into toxic assets as it became progressively harder to sell them. High leverage, initially a way to multiply earnings, became a company hazard as the price of assets fell.

Apparent in American and European financial markets by the summer of 2007 were the deleterious effects of the inability to sell these toxic assets. Pressure continued during the fall, and the Fed lowered its discount rate by more than a percentage point between September 2007 and January 2008. (The National Bureau of Economic Research later concluded that a recession had started in December 2007.) Fed Chairman Bernanke, Treasury Secretary Paulson, and President of the New York Fed Geithner rescued the New York investment house Bear Stearns at the point of collapse with Fed funds and purchase by another investment house in March 2008. They took over the two quasi-governmental mortgage brokers, Fannie Mae and Freddie Mac, in August. Even at this late date, the Fed and other public figures argued that the pressure was largely limited to the housing sector and that the measures taken up to that point were sufficient to maintain financial health.

Bernanke and Paulson asserted after the fact that they tried in the summer of 2008 to get Congress to take action to forestall a crisis. This effort proved futile for several reasons. For one, the financial leaders were making reassuring statements to the public at the same time they were appealing to Congress, a mixed message that did not lend

persuasiveness to the arguments they presented. Congress was not convinced that the financial system was on the verge of a meltdown and was reluctant to act outside of an emergency. This reluctance may illustrate a general problem: it is hard to prepare for a hypothetical crisis without evidence that a crisis is indeed about to emerge. Certainly, if palliative action forestalls the putative crisis, people ask what all the pressure was about. Congress is a large and unwieldy body; its complexities also precluded preventive action during the summer.

In September, another investment house, Lehman Brothers, found itself unable to borrow. It tried selling assets to pay its obligations but could not sell its toxic assets and fell short of its needs. Creditors wanted to be paid and investors wanted to sell Lehman Brothers stock. Though an investment rather than a commercial bank, Lehman was in a process that resembled nothing so much as an old-fashioned banking panic. Investors were cashing in stocks instead of deposits, but the stock price threatened to hit zero in short order. Bernanke, Paulson, and Geithner did not wish to repeat their rescue of Bear Stearns and therefore allowed the firm to fail on September 15, 2008. After the fact, none of these articulate policy-makers was able to tell a coherent story about why they had not avoided bankruptcy for the firm. The event reprised the government confusion that led Michigan banks to fail in early 1933, precipitating Roosevelt's bank holiday.

The financial triumvirate had tried to find a buyer for Lehman Brothers, as they had done for Bear Stearns, but was unable to do so. They apparently reverted to the gold standard mentality as expressed in the free-market ideology of the Washington Consensus: Lehman Brothers had taken large risks and now had to pay the penalty for losing too many bets. But hard on the heels of Lehman Brothers's failure came American

International Group (AIG). Although it was not an investment bank, this multinational insurance company also had taken too many bets on what were now toxic assets and was about to collapse. The epidemic had escaped the mortgage market and infected the whole financial system. Nearly a year earlier, the global financial system had entered into what a member of the Fed's Board of Governors called an "adverse feedback loop (Mishkin 2007)." One failure induced another; a worldwide financial panic ensued.

Paulson, Bernanke, and Geithner threw in the towel and nationalized AIG. Their commitment to the free market had lasted one day; Congressman Barney Frank (D-Mass.) suggested we call it Free Market Day (Wessel, 2009, p. 26)! But while the sale of Bear Stearns had calmed the financial markets, the nationalization of AIG—arriving on the heels of Lehman Brothers's bankruptcy—only confused the market. The government had restated its ideals and then abandoned them in the twinkling of an eye. Investors could not predict what would come next (Ferguson and Johnson, 2009).

Barely functioning credit markets seized up completely. No one knew what the government policy was or if anyone was insured; no one wanted to purchase toxic assets. Economic activity and international trade came to a sudden halt. The brief reassertion of faith in the free market in 2008 was as counterproductive as fidelity to the gold standard had been in 1931. In both cases, the United States dragged the world down with it—doing so faster the second time than it had fifty years earlier (Romer, 2009).

Fortunately, we are now in a Great Recession, not a repeat of the Great Depression. Ten percent unemployment and unemployment insurance compares favorably to 20 percent unemployment without a safety net. The primary reason for this

divergence is the vagary of the American political cycle. Voters had to wait three years after the Great Depression began and a full year after the Fed turned a recession into a depression to vote on public policy; voters in 2008 had this opportunity just months after the financial crisis began. The similarity between now and then is that it took a new group of leaders to change policy. The Obama administration has many holdovers—for example, Obama reappointed Bernanke as Fed Chairman—but there is no doubt that the theories underlying policy have changed since the last administration. An important difference between the past and current economic calamities is that because the present crisis is only a recession—not a depression—Obama does not have the opportunity for reform that Roosevelt did.

Roosevelt opened most banks quickly after their holiday; he took the United States off gold a month later. He introduced the National Industrial Recovery Act (NIRA) and the Agricultural Adjustment Act (AAA), pillars of the New Deal, shortly thereafter. These actions signaled a clear new direction in government policy, that is, a new policy regime. Investment rose and consumption began to recover; the long economic decline had ended (Temin and Wigmore, 1990).

The continuation of high unemployment in the 1930s is commonly blamed on the high wages created by the NIRA and the subsequent growth of unions. This argument is inaccurate for several reasons. Economic growth progressed rapidly during Roosevelt's first term and may not have been able to occur any faster because of bottlenecks in the supply of raw materials and production. Faster growth, even if possible, likely would have led to inflation despite high unemployment (Romer, 1999). In fact, the recovery was so fast that both the Fed and the government decided to reverse policy and rein in

demand through both monetary and fiscal policies. The result was the recession of 1937, which increased unemployment and delayed the return to full employment for several more years. It was policy, not gains in labor, that extended the Depression's length.

The growth of unions was only one result of the New Deal reforms. Not all of these reforms were consistent with each other, and not all of them lasted more than a few years. However, the enduring parts of the New Deal changed the economy in many ways. Labor and tax reforms preserved a stable income distribution in the economic expansion that followed World War II. Creation of the Food and Drug Administration helped expand the pharmaceutical industry that extended life for many people. Social Security improved the quality of life for many older people.

Reforms to the financial system produced a half-century free from financial crises (Reinhard and Rogoff, 2009). The Federal Deposit Insurance Corporation (FDIC) gave most people faith in the safety of their bank accounts. Deposit insurance was complemented by bank regulation to substitute for critical investors and depositors. The Glass-Steagall Act separated commercial and investment banks. The Federal Reserve System was restructured to empower its central office; the Security Exchange Commission (SEC) was created to regulate financial investments. Banking became a boring industry, and more people invested safely in the stock market. There was little excitement in the financial markets, and the economy grew rapidly and consistently after the war.

Nothing lasts forever, and prosperity generated a desire for more independent financial dealings. Economic turmoil in the 1970s hastened the transition, and the Washington Consensus arose in the 1980s. The Glass-Steagall Act was repealed, and the

SEC's regulation relaxed. Americans urged the rest of the world to follow suit and deregulate both domestic and foreign capital movements. The distribution of income widened, the size of the financial sector rose, and a string of small-scale (at least to the United States) financial crises ensued.

This foreshadowing of our current problems was not seen as such at the time; even the failures of Long Term Capital Markets (LTCM) in 1998 and Enron in 2001 did not raise concerns. Most of the crises, like the Asian crises of 1997 (which spread to Russia, bringing down LTCM), were seen as problems of less developed countries, not mature economies like the United States. Economists and politicians alike pushed for less regulation at home and deregulation abroad. In particular, they sought to deregulate the international flow of capital and hailed the Washington Consensus as the way forward for all countries, developing and developed. Like Irving Fisher, a great economist of the early twentieth century who predicted continued prosperity just before the Great Depression, they too readily believed in the reigning economic model (Fisher, 1929).

Contemporary analogues of the gold standard—the euro and the dollar-renminbi peg—are not identical to the interwar gold standard, but the parallels are there. Adopting the euro, unlike adopting the gold standard, was an absolute rather than a contingent commitment. Countries could leave the gold standard during wars without angering investors, but countries cannot temporarily abandon the euro in times of crisis. No provision was made in the Maastricht Treaty or the subsequent Lisbon Treaty for a participating country to withdraw.³ Procedures by which a member state using the euro might reintroduce its own national currency were not even alluded to, much less detailed.

This reflected a political logic; European leaders wanted their new monetary union to appear solid, progressive and irreversible. This approach also had an economic logic. Escape clauses providing for exit might become destabilizing if investors began to bet on their activation. If the decision to reintroduce the national currency and convert all the financial assets and liabilities of residents into that unit was not done instantly, a period of extreme financial instability would follow as investors withdrew their money from the domestic banking and financial system, creating “the mother of all financial crises (Eichengreen 2010).” Since the expectations engendered by an escape clause could become self-fulfilling, it was better not to lift the lid on this Pandora’s Box.

The euro area did not simply follow the gold standard; it also followed the Bretton Woods System implemented after the Second World War. The importance of this interlude here is not the Bretton Woods System itself, but rather the war-time negotiations that led to it. Keynes in particular had come to realize the pernicious influence of the gold standard as it operated in the interwar years. He acknowledged that deflating in response to a loss of reserves was not only harmful for the country itself but also had the external effect of depressing economic activity in other countries—leading to the race to the bottom seen in the Great Depression (Vines 2003).

Keynes sought to avoid a similar outcome in the post-war world. He wanted to avoid the conditions shown in Figure 1 where asymmetries in the operation of the international system imparted a chronic deflationary bias. He therefore proposed a clearing union that would oversee the distribution of international reserves. The essence of his plan was that surplus countries would be obligated to curtail their imbalances in more or less the same way that deficit countries were obliged to curtail theirs under the

gold standard. These plans did not come to fruition because of the conflict of interest between the US and Britain as expressed in the conflict between Keynes and Harry Dexter White. Keynes did not want Britain to be forced into the continued austerity of the interwar years; White did not want to give the UK a free ride after the war. White, harking back to the gold standard, advocated using monetary restraints to keep excessively expansive countries in line; Keynes implied that fiscal policy would work better in a setting of low interest rates—anticipating a fateful gap in the architecture of the euro area. The issues were not resolved, and they were largely forgotten by the 1990s (Skidelsky 2000; Vines 2003).

Even Bernanke, chairman of the Federal Reserve and student of the Great Depression, did not see chaos ahead during most of 2008. Bernanke, to his credit, realized what was happening by the start of 2009. He resolved not to let the Fed duplicate its mistakes of the early 1930s, standing by as banks failed and supporting the gold standard instead of the domestic economy. He pulled all the strings—some of them on the outer edge of his authority—to loosen monetary policy and encourage economic activity. It was a bravura performance, but monetary policy had lost its effectiveness as banks ran for cover even after the financial panic subsided. The banks used the Fed’s services to rebuild their depleted reserves as the value of toxic assets went to zero, and they loaned only to the safest of customers (Koo, 2008).

Obama, even before he took office, urged Congress to pass a stimulus bill—to create a fiscal expansion in addition to the hobbled monetary expansion. Republican congressmen insisted he divert part of the stimulus to tax cuts, which went into savings as individuals—like banks—tried to build up their depleted reserves, limiting the size of the

stimulus. This fidelity to the Washington Consensus reduced Obama's ability to moderate the recession's effects on ordinary people.

Expansive monetary and fiscal policies were effective enough to preclude a repetition of the Great Depression, and support for reforms on the order of the New Deal ebbed. Obama had campaigned on a program of bipartisan cooperation, and although he tried to bring Republicans along with his policies, they had not abandoned their belief in the Washington Consensus. Banks, moreover—newly prosperous from the government bailouts—resisted increased regulation. The Dodd-Frank bill was weakened by this resistance which has now moved underground in the writing of regulations to implement the bill.

The euro area differed from the gold standard in that it talked the talk, but didn't walk the walk, of international cooperation. There was awareness that fiscal and financial policies were a matter of common concern, and that coordinated adjustments in which countries in chronic surplus expanded while countries in chronic deficit did the opposite, were desirable. But the area's various mechanisms for coordination, the Stability and Growth Pact, the Excessive Deficit Procedure, and the Broad Economic Policy Guidelines, were honored mainly in the breach. Like the Pope, the European Commission has no army to enforce its decisions. While national politicians spoke the language of cooperation, they were mainly concerned with the reaction of their domestic constituents when taking actual decisions. In Southern Europe, deficit spending and government debts were allowed to grow all out of control. In Central Europe, there was nothing to prevent the pursuit of a chronic deflationary bias. For a time, this preference in one region for deficits combined with a preference in the other for surpluses, seemed like

a happy symbiosis – just as it had in the second half of the 1920s. But this did not mean that it was any more sustainable than 80 years before.

Europe lacks, in addition to mechanisms for adequately coordinating national macroeconomic policies, an emergency financing facility to provide adjustment assistance to countries in exceptional financial difficulty. In 1931, when the international system began coming apart, there was an unsuccessful attempt to arrange an international loan for Austria through the BIS. When in 2010 it became necessary to arrange an emergency loan for Greece, there was no analogous organization suitable for arranging a loan for a euro area country. Some suggested that this responsibility should be assigned to the International Monetary Fund. Others objected that the Greek tragedy was Europe's internal affair; bringing in the IMF would be a little bit like having the Fund bail out California. Unable to decide, Europe in the end had it both ways, which did little to reassure the markets. More generally, this approach ran up against the difficulty that no mechanism exists for extending a loan; a formula for contributions has to be agreed on, and the resulting package of financial aid has to be ratified by the whole set of national parliaments. Ireland needed help more recently than Greece, and aid of about the same size was generated without involving the IMF. Waiting for the next euro country to find itself in trouble is a reminiscent of atmosphere in the summer and fall of 1931 as investors speculated on the aftermath of the German currency crisis of July.

The other important exchange rate in this recent period, the dollar-renminbi peg, is best thought of as a central element of the ideology of Chinese development policy. China's policy is not unlike that of other late-developing Asian economies that aim to grow by moving workers from low-productivity agriculture to high-productivity

manufacturing industry, the output of which is sold to consumers in high-income countries. They limit consumer spending and financial liberalization so that a high fraction of GDP can be ploughed into investment in fixed capacity and infrastructure and augment domestic savings by attracting foreign direct investment. The fixed peg to the dollar, maintained rigidly until June 2005 and then put back in place in response to the financial crisis in 2008 after three years during which the renminbi was allowed to appreciate slowly against the dollar, was part and parcel with these goals. The multiple roles of the peg in China's development strategy were to facilitate the export of manufactures, ease the decisions of foreign companies contemplating investment in China, and enlarge the earnings of Chinese enterprises that were the main source of the savings (retained earnings) ploughed into capacity expansion. Insofar as other Asian countries were concerned with their competitiveness vis-à-vis China, the renminbi's peg to the dollar became a broader pan-regional and international dollar standard.

As in Europe in recent years and in the 1920s, there was some awareness that policies in each of the countries linked together by this regime had implications for the other participants but little willingness to act on that awareness. In 2006 the IMF engaged in a Multilateral Consultation Initiative involving the US, China and three other large economies with the goal of encouraging them to take those cross-border implications into account and undertake mutually beneficial policy adjustments, but to no avail. The US and China met annually in a bilateral Economic and Strategic Dialogue, but this did not result in significant changes in bilateral currency policy. The IMF conducts multilateral surveillance exercises in conjunction with its World Economic Outlook exercise twice a year, in the process of which it gives public (and, presumably,

private) advice on mutually beneficial policy adjustments. But the only adjustments of significance that are evident involve the controversial signs of Chinese inflation.

The point of this discussion is not to let deficit countries—Germany in the context of the gold standard, Greece in the context of the euro, the United States in the case of global imbalances—off the hook. All three were reluctant, for political and other reasons, to acknowledge that they faced budget constraints. They lived beyond their means, running budget and current-account deficits and financing them by borrowing abroad, Germany mainly from the United States in 1925-28, Greece mainly from its European partners in 2002-08, and the United States mainly from China and the oil-exporting economies of the Middle East.

In all three cases, borrowing was facilitated by the facade of stability created by pegged exchange rates. The perception that currency risk had been eliminated encouraged finance to flow from capital-abundant economies where interest rates were low to capital-scarce economies where they were high. Deficits were financed more freely, encouraging governments to run them, until markets were disturbed by financial upheavals that raised doubts about the solvency of sovereign borrowers. This of course is just the problem of a capital-flow bonanza followed by a sudden stop familiar from the literature on nineteenth and twentieth century emerging markets (Fishlow, 1985; Calvo, et al., 1993). The only surprising thing is that parochial advanced-country observers and policy makers, whether in the 1920s or more recently, did not understand that the problem also applied to them. Reinhart and Rogoff (2009) argued as the crisis grew that banking panics happened indiscriminately in developed and less developed countries.

One possibility (ignoring political realities), is for countries on the receiving end to exercise more restraint: to eliminate excessive budget deficits and, realizing that good times don't last forever, to borrow less abroad while capital is still flowing. There is now a discussion whether the US Fed erred by keeping interest rates below levels consistent with the Taylor Rule in 2003-05 and whether it should have moved quicker to take away the punch bowl when housing and asset market bubbles were building. There is discussion of whether excessive budget deficits following the Bush tax cuts of 2001-03, passing an unfunded prescription drug plan, and fighting two expensive wars caused an excessive build-up of debts and deficits, most of which were funded by selling the securities of the US Treasury and the quasi-governmental agencies Freddie Mac and Fannie Mae to China. There is now acrimonious debate in the US whether the Fed and the Administration should exit from recent policies of monetary and fiscal stimulus sooner rather than later to prevent dependence on foreign capital from resuming and avoid the reappearance of global imbalances.

In Europe, there similarly is discussion whether the Stability and Growth Pact can be tightened and new rules can be promulgated to prevent countries from living beyond their means. There is a discussion whether Europe needs to create an emergency financial mechanism (a "European Monetary Fund") to regularize the provision of financial assistance to temporarily illiquid governments and take an orderly approach to restructuring the debts of any which are insolvent.

But there is another side of this coin: the policies of the surplus countries. In the late 1920s and early 1930s the difficulties of Germany and other Central European countries were greatly aggravated by the policies of gold and foreign exchange

sterilization undertaken by the US and France. With these countries in balance of payments surplus, someone else had to be in deficit. With their refusal to expand once the Depression struck, someone else had to contract. With their refusal to extend emergency financial assistance, the extent of the contraction to which the deficit countries were subjected became almost unimaginable. In the end, the political consequences were disastrous.

Now, when the surplus countries are Germany and China, we see a similar process begin to unfold. Greece trades with its European neighbours, notably with Germany, which is in strong surplus. With Germany's reluctance to raise spending, a cash-strapped Greece has no alternative but to deflate. Whether it can cut government spending by ten per cent of GDP and the wages of civil servants and other domestic costs also by ten per cent in short order is to be seen; an adjustment of this order of magnitude has never been made except in conjunction with other policy. Greece's problem now, like Germany's in the early 1930s, is that cutting costs only makes the burden of indebtedness heavier. This is why even US President Hoover, not exactly a progressive economic thinker, was ultimately forced to recognize the need for a German debt moratorium, and why internal devaluation, the only form of devaluation available to Greece, will require restructuring its debts—which is likely to be cheaper and easier sooner rather than later. Just as the Hoover Moratorium required a change in policy on the part of the US, a Greek restructuring will require a volte face by the European Union and the IMF.

Similarly, in the absence of a willingness of China and other countries shadowing the dollar to move faster to boost domestic spending and allow their currencies to rise, the only way for the United States to grow employment faster is by cutting costs to make its

exports more competitive. President Obama's stated goal of doubling US exports within five years is designed to map this route to full employment. But without an adjustment in the real exchange rate delivered by more spending and either nominal currency appreciation or inflation in Asia, this will have to be done by cutting costs or miraculously raising productivity, something that is likely to be wishful thinking.

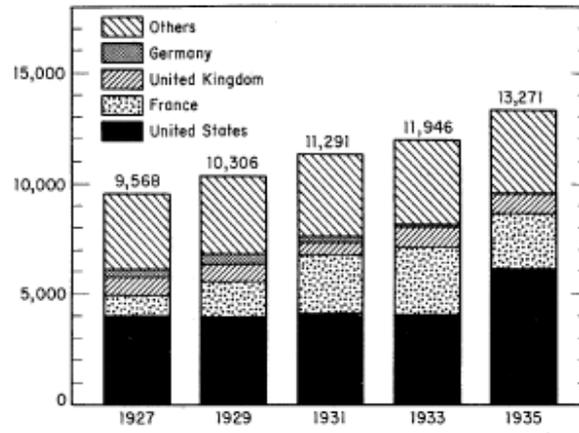
The point is that an exchange rate system is a system in which countries on both sides of the exchange rate relationship have a responsibility for contributing to its stability and smooth operation. The actions of surplus as well as deficit countries have systemic implications. Their actions matter for the stability and smooth operation of the international system; they cannot realistically assign all responsibility for adjustment to their deficit counterparts. Keynes drew this lesson from the experience of the Great Depression. It was why he wanted taxes and sanctions on chronic surplus countries in the clearing union proposal that he developed during World War II. Sixty-plus years later, we seem to have forgotten his point.

There are two lessons to be drawn from this comparison. The first is that open economies are prone to collapse every once in a while. Favorable conditions—the New Deal and a vigorous postwar expansion—can eliminate “great” economic contractions for a generation or so, but American exuberance in particular appears to chafe under these conditions. As the memory of past economic difficulties fades, economic and political pressure for change rises to the fore. International economic imbalances are condoned until they have to be corrected, often painfully. The gold standard and the euro share the attributes of the young lady described by Henry Wadsworth Longfellow (American, 1807-82):

There was a little girl, who had a little curl
Right in the middle of her forehead,
And when she was good, she was very, very good,
But when she was bad she was horrid.

The second lesson is that there are strong pressures for unregulated capitalism that abate only in the face of sharp economic downturns like the Great Depression. We avoided another Great Depression by luck—the American election cycle—and skill. Marx was correct when he argued that tragic history repeats itself as farce: we now have the oxymoronic Great Recession after all the fears of Great Depression II. Keynes was right, too; discredited economic theories—and the gold standard mentality—continue to dominate the actions of even “practical” men and women (Krugman, 2009a, 2009b).

Figure 1



Source: Eichengreen, 1992, p. 192.

References

- Blanchard, Olivier, Francesco Giavazzi, and Filipa Sa, "International Investors, the U.S. Current Account, and the Dollar," *Brookings Papers on Economic Activity*, 2005, 1-49.
- Calvo, Guillermo, Leo Leiderman and Carmen Reinhart, "Capital Inflows and Real Exchange Rate Appreciation in Latin America," *IMF Staff Papers* 40, 1 (1993), 108-151.
- Coval, Joshua, Jakob Jurek, and Erik Stafford, "The Economics of Structured Finance," *Journal of Economic Perspectives*, 23 (Winter 2009), 3-25.
- Dam, Kenneth W., *The Rules of the Game: Reform and Evolution in the International Monetary System* (Chicago: University of Chicago Press, 1982).
- Edwards, Sebastian, "Is the U.S. Current Account Deficit Sustainable? If Not, How Costly Is Adjustment Likely to Be?" *Brookings Papers on Economic Activity*, 2005, 211-71.
- Eichengreen, Barry, *Golden Fetters: The Gold Standard and the Great Depression, 1919-1939* (New York: Oxford University Press, 1992).
- Eichengreen, Barry, "The Breakup of the Euro Area," in Alberto Alesina and Francesco Giavazzi (eds), *Europe and the Euro* (Chicago, University of Chicago Press, 2010), pp.11-56.
- Eichengreen, Barry, and Jeffrey Sachs, "Exchange Rates and Economic Recovery in the 1930s," *Journal of Economic History*, 45, 4 (December 1985), 925-46.

Eichengreen, Barry, and Peter Temin, "The Gold Standard and the Great Depression,"

Contemporary European History, 9, 2 (July 2000), 183-207.

Eichengreen, Barry, and Peter Temin, "Fetters of Gold and Paper (with Barry

Eichengreen)," *Oxford Review of Economic Policy*, 26 (3) pp. 370-84 (October 2010).

Ferguson, Thomas, and Robert Johnson, "Too Big to Bail: The 'Paulson Put,'

Presidential Politics, and the Global Financial Meltdown," parts 1 and 2,

International Journal of Political Economy 38 (Spring 2009): 3–34 and 38

(Summer 2009): 5–45.

Ferguson, Thomas, and Peter Temin, "Made in Germany: The German Currency Crisis of

1931," *Research in Economic History* 21 (2003): 1–53.

Fisher, Irving, "Fisher Sees Stocks Permanently High," *The New York Times*, October 16,

1929.

Fishlow, Albert, 'Lessons from the Past: Capital Markets during the 19th Century and the

Interwar Years," *International Organization*.39, 3 (1985), 383-439.

Grossman, Richard S., "The Shoe That Didn't Drop: Explaining Banking Stability

During the Great Depression," *Journal of Economic History* 54 (September

1994): 654–682.

Hoover, Herbert, *The Memoirs of Herbert Hoover: The Great Depression, 1929-1941* 3

Vols. (New York: Macmillan, 1951-52).

Irwin, Douglas, A., "Did France Cause the Great Depression? National Bureau of

Economic Research Working Paper 16350 (September 2010).

- Keynes, John Maynard, *The General Theory of Employment, Income and Money* (New York: Harcourt, Brace, 1936.)
- Koo, Richard C., *The Holy Grail of Macroeconomics: Lessons from Japan's Great Recession* (Singapore: John Wiley, 2008).
- Krugman, Paul, "How Did Economists Get It So Wrong?" *The New York Times*, September 6, 2009a.
- Krugman, Paul, "Misguided Monetary Mentalities," *The New York Times*, October 12, 2009b.
- Marx, Karl, *The Eighteenth Brumaire of Louis Bonaparte* (New York, 1852).
- Minsky, Hyman P., *Can "It" Happen Again? Essays on Instability and Finance* (Armonk, N.Y.: M. E. Sharpe, 1982).
- Mishkin, Frederic S., Speech at the Risk USA Conference, New York, November 5, 2007, <http://www.federalreserve.gov/newsevents/speech/mishkin20071105a.htm>.
- Reinhart, Carmen M., and Kenneth S. Rogoff, *This Time Is Different: Eight Centuries of Financial Folly* (Princeton, N.J.: Princeton University Press, 2009).
- Robbins, Lionel, *The Great Depression* (London: Macmillan, 1934).
- Romer, Christina D., "Why Did Prices Rise in the 1930s?" *Journal of Economic History* 59 (March 1999): 167–199.
- Romer, Christina D., "Back from the Brink," Speech to the Federal Reserve Bank of Chicago, September 24, 2009, http://www.whitehouse.gov/assets/documents/Back_from_the_Brink2.pdf.
- Skidelsky, Robert, *John Maynard Keynes, 1937-1946: Fighting for Britain* (London: Macmillan, 2000).

- Temin, Peter, *Lessons from the Great Depression* (Cambridge, MA: MIT Press, 1989).
- Temin, Peter, “The Great Recession and the Great Depression,” *Daedalus* 139 (4) (Fall 2010), pp. 115-24.
- Temin, Peter, and Barrie A. Wigmore, “The End of One Big Deflation,” *Explorations in Economic History* (October 1990): 483–502.
- Vines, David, “John Maynard Keynes, 1937-1946: The Creation of International Macroeconomics,” (Review essay on Skidelsky, 2000) *Economic Journal*, 113 (June 2003), F3380-F361.
- Wessel, David, *In Fed We Trust: Ben Bernanke’s War on the Great Panic* (New York: Crown Business, 2009).
- Wigmore, Barrie A., *The Crash and Its Aftermath: A History of Securities Markets in the United States, 1929–33* (Westport, Conn.: Greenwood Press, 1985), 433–447.
- Williamson, John, “What Washington Means by Policy Reform,” in *Latin American Adjustment: How Much has Happened?* In John Williamson, ed. (Washington, D.C.: Institute for International Economics, 1990).

Notes

¹ This paper synthesizes the discussion in two recent papers: Eichengreen and Temin, 2010; Temin, 2010. The quotes come from Keynes (1936), chap. 24, “Concluding Notes,” and Marx, (1852), p. 1.

² Dam, 1982. For more details and documentation on the following argument about the gold standard and the Great Depression, see Eichengreen and Sachs, 1985; Temin, 1989; Eichengreen, 1992; Eichengreen and Temin, 2000.

³ The treaty contains an obscure provision providing for the possibility that a member might withdraw from the EU, which would presumably entail abandoning the euro (although not necessarily, since a number of non-EU members such as Montenegro utilize the euro). But withdrawing from the EU is an extreme step that even financially-distressed member states would hesitate to take.