

PART I

What Caused the 2008–9 Global Crisis?

The global financial crisis of 2008–9 caused the greatest contraction in the global economy since the Great Depression. The crisis began in the United States with a meltdown in the financial system following the bursting of the housing bubble and the collapse of Lehman Brothers. Government actions helped avoid the worst possible scenario, but the world economy remains fragile, with high unemployment and large excess capacity in the advanced economies and high levels of sovereign debt in Eurozone countries.

The economic crisis took almost everyone by surprise. As late as April 2007 the International Monetary Fund (IMF) was affirming that risks to the global economy were extremely low and that there were no issues of great concern.¹ Despite large and widening global imbalances in current accounts, confidence prevailed – confidence in the US financial and political system and its financial regulations, in a capital market that was the largest in the world,² and in monetary policy institutions that had always engendered trust.³ The world economy was seen as robust, and global imbalances were considered sustainable. Few economists expressed serious concerns about the US housing bubble and a disorderly unwinding of rising global imbalances.

But there were a few doomsayers, and their concerns were dramatically validated when the financial crisis erupted in September 2008.⁴ The coordinated policy response by the G20 countries – cash infusions, debt guarantees, and other forms of assistance on the order of \$10

¹ IMF (2007). ² Reinhart and Rogoff (2009: 214). ³ Bernanke (2005b).

⁴ The most vocal criticism came from Raghuram Rajan (2005), chief economist of the IMF, who warned of a collapse of the financial system in his Jackson Hole speech in August 2005, and Nouriel Roubini, who, in 2005, clearly forecast that housing prices were riding a speculative wave that would soon sink the economy. See, for example, Roubini (2008).

trillion⁵ – helped avoid a global depression. But the causes of the crisis remain the subject of fierce debate.

A dramatic rise in global imbalances had preceded the crisis. They were widely viewed as its cause, but economists disagree about how important the imbalances were. Some economists consider them to be the primary cause of the crisis, while others view them as only facilitating its development.⁶

Many observers believed that the imbalances arose from East Asian countries' export-oriented strategies and accumulation of foreign reserves as self-insurance following the 1997–8 regional financial crisis, and especially from China's undervalued exchange rate. The global imbalances and reserve accumulations, so the thinking went, led to cheap credit and a housing bubble in the United States. But there is another explanation. The combination in the United States of financial deregulation (starting in the 1980s), which allowed higher leverage, and low interest rates (following the bursting of the dot-com bubble in 2001) led to a large increase in liquidity, which fed the housing bubble. The wealth effect from the housing bubble and innovative financial instruments supported excessive household consumption. This consumption surge and the fiscal deficits needed to finance the wars in Iraq and Afghanistan generated large US trade deficits and global imbalances. The United States was able to maintain these severe imbalances for as long as it did because of the dollar's reserve currency status.

The excess liquidity in the United States also contributed to large gross capital outflows to other countries, supporting booms in their investments and equity markets and growth. The dollars obtained through trade surpluses and capital inflows were converted into local currencies and were held as reserves by the central banks. Those reserves then flowed back to the United States, to buy Treasury bills or to invest in US financial markets, giving the impression that low US interest rates were caused by the excessive accumulation of reserves in those nonreserve currency countries. When the housing bubble burst in the United States and the financial system collapsed, a global crisis resulted.

⁵ IMF (2009: tables 3 & 4).

⁶ See Portes (2009) and Krugman (2009a) for arguments that global imbalances were the primary cause of the crisis; see Rajan (2010), Lin, Dinh, and Im (2010), Roubini and Mihm (2010), Laibson and Mollerstrom (2010), and Obstfeld and Rogoff (2010) for arguments that the imbalances only facilitated its development.

Meanwhile, financial deregulation and liberalization also swept over Europe. Major European banks established branches in eastern and southern Europe, using high leverage to support housing bubbles and consumption booms. The adoption of the euro exacerbated intra-European imbalances, whose unsustainability became evident only in the aftermath of the global financial crisis, triggering the sovereign debt crisis. Fiscal positions that had been manageable before the crisis, when government revenues were rising, became unsustainable in the recession following the global financial crisis. The recession and the fiscal stimulus packages adopted to counteract it resulted in a ballooning of fiscal deficits and a massive deterioration in debt indicators, setting the stage for the sovereign debt crisis in the Eurozone that began with Greece in early 2010.

As early as 2003 many academics and policymakers in high-income countries were pointing at China as the culprit behind the mounting global imbalances, even though China did not begin to amass a large trade surplus until 2005. In fact, China's large current account surplus reflects mainly its high domestic saving rate. Had the academic and policy communities understood the real causes of the crisis and dealt with them earlier, the crisis could have been averted or at least mitigated. Only if we understand the roots of the crisis and its likely evolution can we design an appropriate policy response to prevent a recurrence.

1

The world economy and the 2008–9 crisis

The world economy grew rapidly between 2000 and 2008. Unemployment and poverty declined as advanced, emerging, and developing economies alike recorded high growth rates. Strong demand for raw materials from fast-growing developing and emerging market economies pushed up commodity prices, to the benefit of resource-rich countries. The world was experiencing a period of widespread euphoria.

The dampening in recent years of the volatility of business cycles in advanced industrial economies also bred optimism about economic prospects and the sustainability of economic growth (Figure 1.1). Recessions were shorter and their impacts milder. For example, the 1987 US stock market crash did not lead to a recession, and the 1990–91 recession was fairly short and shallow. Similarly, the bursting of the dot-com bubble in 2001 resulted in only a mild recession and a sluggish recovery. At the same time, expansions were lasting longer. Some refer to this success in stabilizing the business cycles and ushering in an era of low inflation, high growth, and modest recessions as the “Great Moderation.”¹

Business and financial deregulation and innovative financial instruments were credited with creating a more flexible and adaptable economic system, enabling the Great Moderation. Financial assets were considered less risky than beforehand, prompting more financial intermediation, which fueled economic growth and spurred financial innovation, especially through hedge funds. Business cycles were less volatile because of abundant global liquidity – partly reflecting surplus savings in some emerging market economies – giving the false sense that

¹ The term “Great Moderation” was coined by James Stock and Mark Watson (2002).

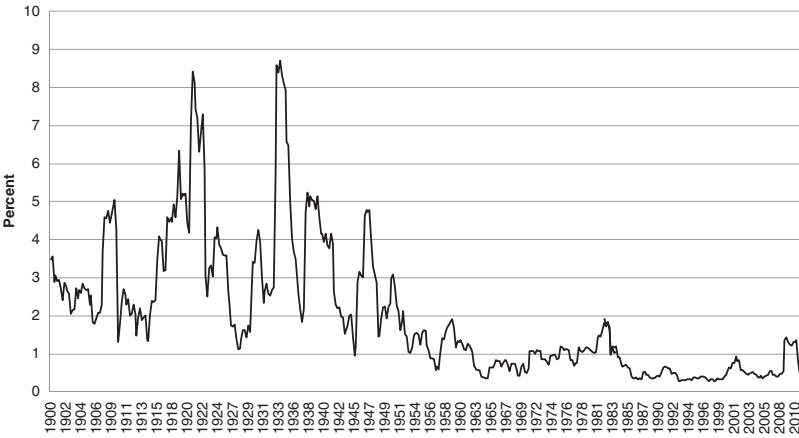


Figure 1.1 Standard deviation of growth in US gross national product
Source: Gordon (1990); the time series was extended to 2010 by the author.

stability was attributable to structural improvements in the financial system. In addition, expanding globalization and free trade – boosted in part by China’s entry into the World Trade Organization in 2001 – and the buoyant growth of China and newly emerging market economies were expected to keep inflation at bay even as global growth accelerated.²

As the subprime crisis spread in the United States, economists expected that the rest of the world would “decouple” – a concept propounded by Jim O’Neil of Goldman Sachs and rapidly taken up by others. Decoupling contended that Brazil, China, India, and the Russian Federation, shielded by their own strong domestic demand, would not be affected by the meltdown in the US subprime market. For example, in September 2008 the German minister of finance, Peer Steinbrueck, declared: “The crisis is above all an American problem. The other G7 ministers share this opinion.”³ Clearly, many policy-makers were unaware how closely linked US and European financial industries had become.

As the global economy was expanding rapidly, so were global imbalances, with large current account surpluses in East Asia (and, to a lesser extent, in Europe) and a widening current account deficit in the United States. Views on the importance of these global imbalances differed

² Roubini and Mihm (2010: 26–31). ³ Roubini and Mihm (2010: 115).

sharply. Economists such as Fred Bergsten and Miranda Xafa viewed the imbalances as a threat to world economic stability.⁴ In testimony before the US Congress, Bergsten asserted that “the global imbalances probably represent the single largest current threat to the continued growth and stability of the US and world economies.”⁵ Others, such as Ben Bernanke, considered imbalances to be the natural outcome of underdeveloped financial systems in developing countries, which prompted growing demand for US dollar–denominated financial assets, but he did not think that they presented a major risk to the global economy.⁶

But it was US domestic policy that was largely responsible for the global imbalances and the country’s real estate bubble. The loose monetary policy introduced in 2001 in response to the bursting of the dot-com bubble, magnified by financial deregulation and innovations in financial instruments, resulted in a boom in the US housing market. The wealth effect from the housing boom coupled with the financial innovations that allowed households to capitalize the gains in housing prices led to household overconsumption and overindebtedness. Rapidly rising household debt and public indebtedness to finance the Iraq and Afghanistan wars resulted in a large US current account deficit, made possible by the dollar’s reserve currency status.

In hindsight, the loose monetary policy response to the recession brought on by the bursting of the dot-com bubble in 2001 went too far and lasted too long. Moreover, when the US trade deficit became a growing concern to policymakers in 2003, the policy response could have been better tailored to the causes of the global imbalances had policymakers acknowledged the role of excess US demand instead of pointing to other countries to explain rising US imports. The US housing boom could have been restrained and financial regulation

⁴ Miranda Xafa, a member of the IMF’s executive board, argued before the crisis: “The rising US current account deficit has increased concerns among policymakers about a possible abrupt disruption and disorderly unwinding, involving a major sell-off of dollar assets, a sharp increase in US interest rates, and an associated sharp reduction in US absorption. Such an abrupt unwinding of imbalances, triggered by a sudden loss of market confidence in the dollar, would obviously have negative spillover market effects on financial markets and the global economy” (Xafa 2007).

⁵ Bergsten (2007). ⁶ Bernanke (2005a).

tightened much earlier, thereby avoiding the global crisis, or at least moderating its more harmful impacts.

Eruption, evolution, and consequences of the crisis

The global financial crisis erupted on September 15, 2008, with the collapse of Lehman Brothers, largely as a result of accumulating defaults on mortgages and derivative products. The ensuing financial crisis led to a sharp decline in credit to the private sector and a steep rise in interest rates. As more US financial institutions collapsed, so did equity markets and international trade and industrial production, with the effects now spreading to other advanced economies and to emerging market and developing economies as well (Figure 1.2). With real growth around the world well below projected rates, the advanced economies entered a recession. Only China and developing Asia maintained strong growth.

By most measures, the crisis reached proportions not seen in modern economic history. Barry Eichengreen and Kevin O’Rourke, two respected economic historians who documented the global financial

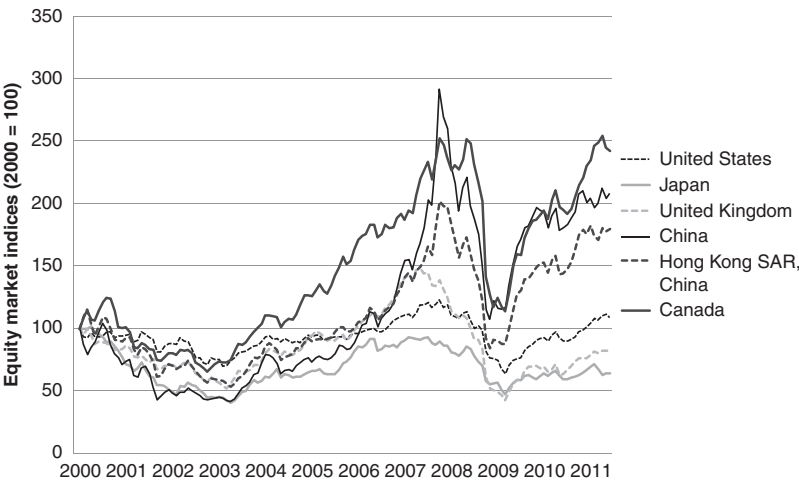


Figure 1.2 Collapse of equity markets
Source: World Bank’s “Global economic monitor” database: <http://data.worldbank.org/data-catalog/global-economic-monitor>.

crisis, have compared it with the Great Depression of the 1930s.⁷ World output and world trade collapsed, unemployment soared, credit dried up, and stock markets nosedived.

The bursting of the US real estate bubble triggered the crisis. Housing prices fell precipitously in the second quarter of 2007, but growth in housing prices had been slowing since 2005. Housing prices had begun to rise sharply in the late 1990s, increasingly deviating from market fundamentals as underwriting standards weakened.⁸ Prices peaked in April 2006. When the US Federal Reserve Board tightened monetary policy, banks stopped offering teaser rates on subprime mortgages (so-called “NINJA”⁹ loans, made without documentation of borrowers’ income) and started insisting that borrowers pay off debt. As housing prices continued to plunge, mortgage delinquencies, charge-offs, and defaults accelerated. The liquidation of foreclosed housing accelerated the already rapid decline in the real estate market. Alarmed by the expanding housing glut, banks that were overextended in the housing market cut back sharply on new mortgages. As housing prices continued to fall, increasing numbers of borrowers with adjustable-rate mortgages defaulted, further endangering the position of financial institutions that held subprime loans securitized through new instruments such as collateralized debt obligations (CDOs, discussed below).

As the bottom fell out of the CDO market, large-scale sell-offs of these instruments and of assets connected to the defaults followed.¹⁰ Hedge funds that dealt in these instruments had become highly leveraged, with the riskiest having debt to equity ratios as high as 20 to 1. By summer 2007, for example, two hedge funds run by Bear Stearns, which had invested several billion dollars of short-term loans in highly illiquid

⁷ Eichengreen and O’Rourke (2010).

⁸ According to Paul Krugman and Robin Wells (2010), it was synthetic mortgage securities and the degradation of underwriting standards that contributed most to the housing market crisis. Mortgage originators – which in many cases had no traditional banking business – made housing loans and then immediately sold the loans to other firms, which pooled and repackaged the loans and then sold shares in these security pools. Rating agencies gave AAA ratings to the most senior of these securities – those that had first claim on interest and principal repayment. As the housing bubble continued to inflate, making enormous profits for those involved, no one wanted to think about the risks inherent in a future housing bust. When the bust came, much of that AAA paper was worth just pennies on the dollar.

⁹ “NINJA” stands for “no income, no job, or assets.” ¹⁰ Lewis (2010).

subprime CDO tranches, were rapidly losing most of their value. Banks responded by withdrawing the short-term loans that the hedge funds had used to finance the CDOs. The collapse of those two funds presaged the fate of hundreds of other hedge funds and of other institutions in the shadow banking system that perform banking functions but are not regulated as banks, such as mutual funds and money market mutual funds.¹¹

The first signs of a serious crisis emerged in late 2007, when rising mortgage defaults led to the collapse of two international banks, the German IKB Deutsche Industriebank and the UK Northern Rock. In response, the central banks of Canada, the European Union, Switzerland, and the United States announced a plan in December 2007 to provide at least \$90 billion in short-term financing to banks. Shortly thereafter the European Central Bank injected \$500 billion into the financial system.

In March 2008 Bear Stearns filed for bankruptcy and was bought by J. P. Morgan for less than a tenth of its precrisis value. The crisis erupted in full force in September 2008, when Merrill Lynch, Lehman Brothers, and the insurance companies AIG and HBOS filed for bankruptcy, largely as a result of their exposure in the real estate market.¹² The banks were so highly leveraged that they were vulnerable to even a small decline in housing-related markets. Lehman Brothers' collapse was the largest bankruptcy in US history. With Lehman's fall, all credit between financial institutions ended abruptly, as the uncertainty of balance sheet positions made intrabank lending too risky. This sudden halt in credit, which triggered a liquidity crisis and bank runs, can be seen by the dramatic jump in 2008 in the spread between the London Interbank Offered Rate (LIBOR) and the overnight indexed swap rate (Figure 1.3).

With leading US banks, insurance companies, and pension funds facing bankruptcy, the US government responded swiftly with a \$700 billion bank bailout to forestall complete financial system collapse. To encourage banks to resume lending among themselves and to businesses and consumers, Congress authorized the Treasury to insure or purchase up to \$700 billion in commercial or residential mortgage securities or related financial instruments under the Troubled Assets Relief Program. To save AIG, the largest insurance company in the world,

¹¹ Roubini and Mihm (2010). ¹² Roubini and Mihm (2010).

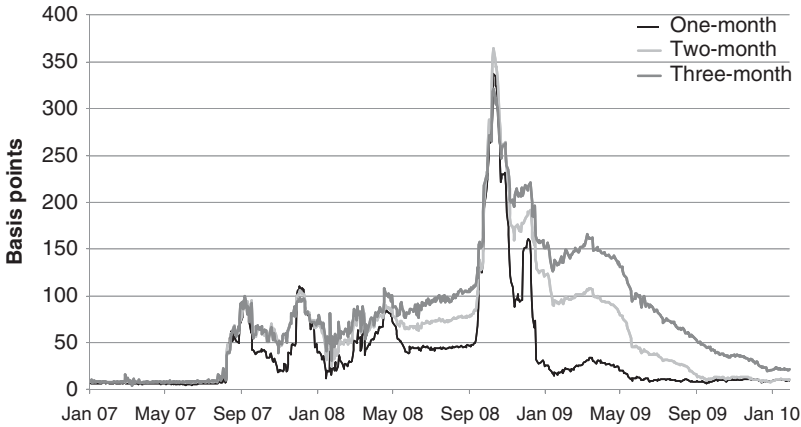


Figure 1.3 Spread between LIBOR and the overnight indexed swap rate

Note: The LIBOR–overnight indexed swap rate spread measures the risk of default associated with lending to other banks.

Source: Bullard (2010), based on daily data from the *Financial Times* and Reuters for 2007 to 2010.

from a liquidity crisis and help financial institutions restore credit, the Federal Reserve Board lowered effective interest rates to a nominal rate close to 0 percent. Shortly before the collapse of Lehman Brothers, the government had taken over Fannie Mae and Freddie Mac, whose sales of mortgage securities in the secondary mortgage market had gotten them into financial trouble.¹³

The financial crisis severely damaged the real economy. Consumer credit, which had been growing steadily during the boom years, dried up. Companies with expansion plans could not raise the capital to finance them. Worldwide, the number of start-ups tumbled, as lending for new projects became too risky.

The US recession started in December 2007 and lasted eighteen months, when growth finally began to pick up, though still sluggishly. US gross debt climbed from 62 percent of GDP before the crisis to almost 94 percent in 2010, largely reflecting a sharp downturn in tax revenue because of the recession. Demand fell in all sectors after September 2008,

¹³ Fannie Mae and Freddie Mac are US government-sponsored enterprises created to expand the secondary mortgage market by securitizing mortgages (mortgage-backed securities), thus allowing lenders to reinvest their assets in more lending and increase the number of lenders in the mortgage market.