APPENDIX 1A: The Financial Crisis: The Failure of Financial Institutions' Specialness

In the late 2000s, the United States, and indeed the world, experienced the worst financial crisis since the 1930s and the Great Depression. As of mid-March 2009, the Dow Jones Industrial Average (DJIA) had fallen in value 53.8 percent in less than 1½ years' time, larger than the decline during the market crash of 1937–1938, when it fell 49 percent. Home foreclosures reached record highs in late 2008 and continued to rise through 2009, with 1 in 45 households (2.8 million properties) in default on their home mortgage in 2009. The investment banking industry saw the failure or acquisition of all but two of its major firms (Goldman Sachs and Morgan Stanley) and these two firms converted to commercial bank holding companies. AIG, one of the largest insurance companies in the United States, survived only because of a federal government bailout. Commercial banking giant Citigroup required a massive government guarantee against losses and an injection of cash to prevent failure. The three major U.S. automakers faced imminent danger of bankruptcy without a federal bailout, and even with the bailout, Chrysler and General Motors declared Chapter 11 bankruptcy in May and June 2009, respectively. As of October 2009, the U.S. unemployment rate was over 10 percent, the highest level since 1983. Events associated with the financial crisis impacted financial institutions and the way they do business forever. In this appendix, we review the major events both leading up to and throughout the financial crisis. Throughout the text, we explore the root causes of and changes brought about by the financial crisis as they apply to specific areas of risk measurement and management within FIs.

The Beginning of the Collapse

Signs of significant problems in the U.S. economy first arose in late 2006 and the first half of 2007, when home prices plummeted and defaults by subprime mortgage borrowers began to affect the mortgage lending industry as a whole, as well as other parts of the economy. Mortgage delinquencies, particularly on subprime mortgages, surged in the last quarter of 2006 through 2008 as homeowners, who stretched themselves financially to buy a home or refinance a mortgage in the early 2000s, fell behind on their loan payments. Foreclosure filings jumped 93 percent in July 2007 over July 2006. Between August 2007 and October 2008, an additional 936,439 homes were lost to foreclosure.

As mortgage borrowers defaulted on their mortgages, financial institutions that held these mortgages and mortgage-backed securities started announcing huge losses on them. These securitized loans and, particularly, securitized subprime mortgage loans led to huge financial losses and possibly were even the root cause of the weakness of the U.S. economy in the mid- to late 2000s. Losses from the falling value of subprime mortgages and securities backed by these mortgages reached over $400 billion worldwide through 2007. In 2007, Citigroup, Merrill Lynch, and Morgan Stanley wrote off a combined $40 billion, due mainly to bad mortgage loans. Bank of America took a $3 billion write-off for bad loans in just the fourth quarter of 2007, while Wachovia wrote off $1.2 billion. UBS Securities took a loss of $10 billion, Morgan Stanley wrote off $9.4 billion, Merrill Lynch wrote down $5 billion, and Lehman Brothers took a loss of $52 million—all because of losses on investments in subprime mortgages or assets backed by subprime mortgages. Even mortgage-backed security insurers felt the losses. In February 2008, MBIA Inc.—one of the largest insurers of mortgage-backed securities credit risk—reported a $2.3 billion loss for the fourth quarter of 2007, due mainly to declines in the values of mortgage-backed securities it insured.

Early on, some large financial institutions were unable to survive the mortgage crisis. For example, Countrywide Financial, the country's largest mortgage issuer, nearly failed in the summer of 2007 due to defaults by its subprime mortgage borrowers. In an effort to add liquidity, Countrywide drew down its entire $11.5 billion line of credit with other financial institutions. Such an enormous and sudden drawdown sent Countrywide's shares down \$3.17 to \$21.29 (and down 50 percent for the year) and the DJIA down 2.83 percent on fears of an increasing degradation of the mortgage markets and potential contagion to other financial markets. Only a \$2 billion equity investment by Bank of America in 2007 and then an acquisition offer in 2008 kept Countrywide alive.

Another early casualty of the financial crisis was IndyMac Bank, the ninth largest mortgage lender in the United States in 2007, which was seized by the FDIC in July of 2008. In 2007, IndyMac had over \$32 billion in assets, making it one of the largest savings institutions in the United States. In late 2007 and early 2008, with mounting defaults on its mortgages, IndyMac was desperate for more capital, but could not find investors willing to put new funds into what appeared to be a failing institution. In the summer of 2008, despite FDIC insurance coverage, spooked depositors withdrew a total of \$1.3 billion and the FDIC stepped in to rescue the institution. At a cost to the FDIC of between \$8.5 billion and \$9.4 billion, IndyMac represented the largest depository institution failure in over 20 years.

The Failure of Bear Stearns

Investment banks and securities firms were major purchasers of mortgages and mortgage-backed securities in the early 2000s, which allowed them to increase their business of packaging the loans as securities. As mortgage defaults increased in the mid-2000s, investment banks were particularly hard hit, with huge losses on the mortgages and the securities backing them. A prime example of the losses incurred is that of Bear Stearns. In the summer of 2007, two Bear Stearns funds suffered heavy losses on investments in the subprime mortgage market. The two funds filed for bankruptcy in the fall of 2007. Bear Stearns's market value was hurt badly by these losses. The losses became so great that in March 2008 J. P. Morgan Chase and the Federal Reserve stepped in to rescue the then fifth largest investment bank in the United States before it failed or was sold piecemeal to various financial institutions. J. P. Morgan Chase purchased Bear Stearns for \$236 million, or \$2 per share. The stock was selling for \$30 per share three days prior to the purchase and \$170 per share less than a year earlier.

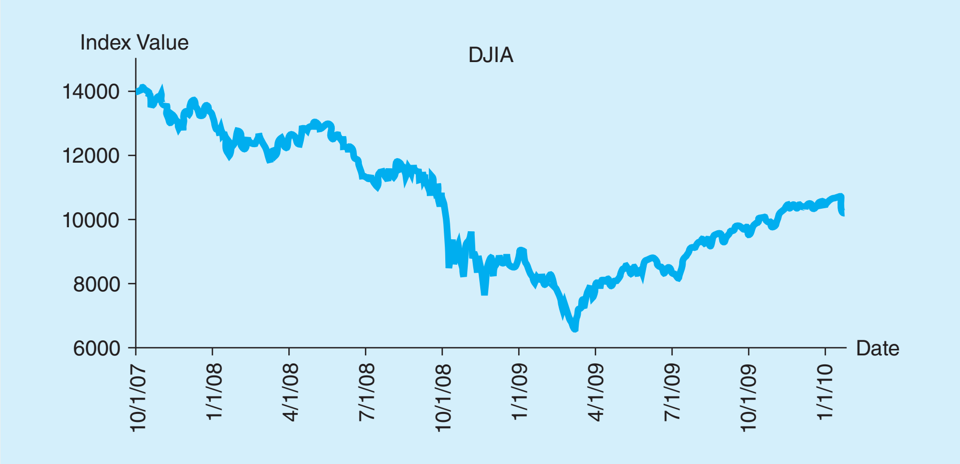
Along with brokering the sale of Bear Stearns to J. P. Morgan Chase, in the spring of 2008 the Fed took a series of unprecedented steps. First, for the first time, the Fed lent directly to Wall Street investment banks through the Primary Dealer Credit Facility (PDCF). In the first three days, securities firms borrowed an average of \$31.3 billion per day from the Fed. Second, the Fed cut interest rates sharply, including one cut on a Sunday night in March 2008. The widening regulatory arm of the Fed came amid criticism aimed at the SEC (traditionally the main regulator of investment banks) and its oversight of Bear Stearns before its collapse. The Fed was now acting as a lender to various financial institutions beyond depository institutions.

The Crisis Hits

September 2008 marked a crucial turning point in the financial crisis. On September 8, the U.S. government seized Fannie Mae and Freddie Mac, taking direct responsibility for the firms that provided funding for about three-quarters of new home mortgages written in the United States. Fannie Mae and Freddie Mac were particularly hard hit by the subprime mortgage market collapse in the mid-2000s as these government-sponsored agencies are deeply involved in the market that securitizes subprime mortgages. The two agencies recorded approximately \$9 billion in losses in the last half of 2007 related to the market for subprime mortgage-backed securities. With the seizure, the two companies were put under a conservatorship and continue to operate with management under the control of their previous regulator, the Federal Housing Finance Agency.

Then on Monday, September 15, Lehman Brothers (the 158-year-old investment bank) filed for bankruptcy; Merrill Lynch, rather than face bankruptcy, was bought by Bank of America; AIG (one of the world's largest insurance companies) met with federal regulators to raise desperately needed cash; and Washington Mutual (the largest savings institution in

Figure 1–9 **The Dow Jones Industrial Average, October 2007–January 2010**



the United States) was looking for a buyer to save it from failing. A sense of foreboding gripped Wall Street. As news spread that Lehman Brothers would not survive, FIs moved to disentangle trades made with Lehman. The Dow fell more than 500 points, the largest drop in over seven years. Figure 1–9 shows the movement in the Dow Jones Industrial Average from October 2007 (when it hit its all-time high of 14,164.53 on October 9, 2007) through January 25, 2010 (including March 9, 2009, when the DJIA closed at a low of 6,547.05).

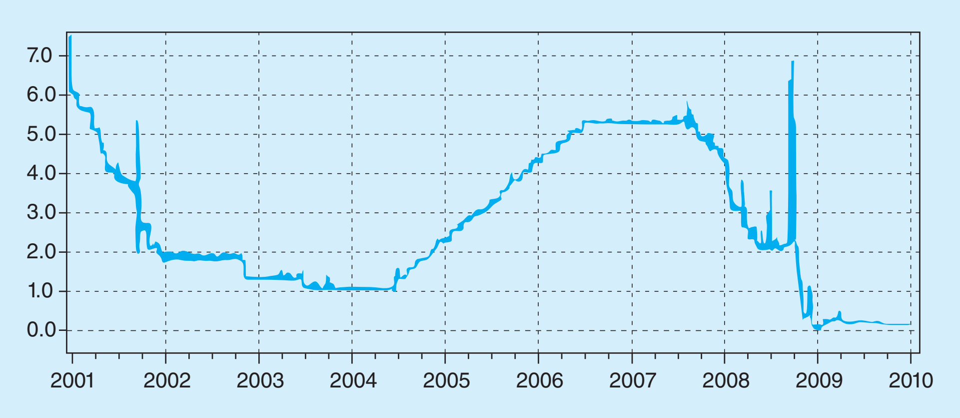
By Wednesday, September 17, tension mounted around the world. Stock markets saw huge swings in value as investors tried to sort out who might survive. Meanwhile, markets from Russia to Europe were forced to suspend trading as stock prices plunged. Money market mutual fund withdrawals skyrocketed—fund investors pulled out a record $144.5 billion through Wednesday (redemptions during the week of September 8 totaled just $7.1 billion) as investors worried about the safety of even these safest investments. Money market mutual funds participated heavily in the $1.7 trillion commercial paper market, which provided the bulk of the short-term funds to corporations. As investors pulled their money from these funds, the commercial paper market shrank by $52.1 billion for the week (through Wednesday). Without these funds available to meet short-term expenses, factories faced the real possibility of shutting down and laying off employees. Likewise, without these short-term funds, banks faced the inability to fund short-term lending units (such as credit card units). Given this turmoil, the two largest U.S. investment banks, Goldman Sachs and Morgan Stanley, sought Federal Reserve and government protection by converting to bank holding company status.

By mid-September 2008, financial markets froze and banks stopped lending to each other at anything but exorbitantly high rates. The overnight London Interbank Offered Rate (a benchmark rate that reflects the rate at which banks lend to one another) more than doubled (see Figure 1–10). Banks generally rely on each other for cash needed to meet their daily needs. Interest rates on this interbank borrowing are generally low because of the confidence that the financial institutions will pay each other back. But confidence had broken down in August of 2007 and had not been completely restored. Without funding, banks became reluctant to lend at all and credit markets froze further.

The Rescue Plan

Fully confident that a financial crisis was on hand, on Thursday, September 18, 2008, the Federal Reserve and central banks around the world invested $180 billion in global financial markets in an attempt to unfreeze credit markets. Further, then Treasury Secretary Henry Paulson met with congressional leaders to devise a plan to get bad mortgage loans and mortgage-backed securities off the balance sheets of financial institutions. After two

Figure 1–10 Overnight London Interbank Offered Rate (LIBOR), 2001–2010



weeks of debate (and one failed vote for passage), a $700 billion rescue plan was passed and signed into law by then President Bush on October 3, 2008. The bill established the Troubled Asset Relief Program (or TARP) that gave the U.S. Treasury funds to buy "toxic" mortgages and other securities from financial institutions. The federal government was mandated to take an equity stake and executive compensation was limited in the companies that took part in the TARP program. The bill also called for the administration to develop a plan to ease the wave of home foreclosures by modifying loans acquired by the government and increased FDIC deposit insurance to $250,000 from $100,000.

The Crisis Spreads Worldwide

As the U.S. government debated the rescue plan, the financial crisis continued to spread worldwide. During the last week of September and the first week of October 2008, the German government guaranteed all consumer bank deposits and arranged a bailout of Hypo Real Estate, the country's second largest commercial property lender. The United Kingdom nationalized mortgage lender Bradford & Bingley (the country's eighth largest mortgage lender) and raised deposit guarantees from $62,220 to $88,890 per account. Ireland guaranteed deposits and debt of its six major financial institutions. Iceland rescued its third largest bank with a $860 million purchase of 75 percent of the bank's stock and, a few days later, seized the country's entire banking system. The Netherlands, Belgium, and Luxembourg central governments together agreed to inject $16.37 billion into Fortis NV (Europe's first-ever cross-border financial services company) to keep it afloat. However, five days later this deal fell apart and the bank was split up. The Dutch government bought all assets located in the Netherlands for approximately $23 billion. The central bank in India stepped in to stop a run on the country's second largest bank, ICICI Bank, by promising to pump in cash. Central banks in Asia injected cash into their banking systems as banks' reluctance to lend to each other and a run on Bank of East Asia Ltd. led the Hong Kong Monetary Authority to inject liquidity into its banking system. South Korean authorities offered loans and debt guarantees to help small and midsize businesses with short-term funding. All of these actions were a result of the spread of the U.S. financial market crisis to world financial markets.

After the Rescue Plan

In the two months after the TARP rescue plan was enacted in the United States, the financial crisis deepened as the world assessed the possibility that the initial attempts to rescue the world's financial system would not be sufficient. Worldwide, stock market values plunged. By mid-October, the Dow had dropped 24.7 percent in less than a month, the

Shanghai Composite dropped 30.4 percent, and the various markets in Europe fell between 20 and 30 percent. By mid-November, the Dow fell to a 5½ year low and the S&P 500 Index erased its gains from the previous 10 years. Third quarter GDP in the United States declined to −2.7 percent. Indeed, some measures of economic activity found the United States entered a recession as early as December 2007. The United Kingdom and Germany also saw growth decline by 0.5 percent in the third quarter of 2008. Countries across the world saw companies scrambling for credit and cutting their growth plans. Additionally, consumers worldwide reduced their spending. Even China's booming economy slowed faster than had been predicted, from 10.1 percent in the second quarter of 2008 to 9.0 percent in the third quarter. This was the first time since 2002 that China's growth was below 10 percent and dimmed hopes that Chinese demand could help keep world economies going. In late October 2008, the global crisis hit the Persian Gulf as Kuwait's central bank intervened to rescue Gulf Bank, the first bank rescue in the oil-rich Gulf. Until this time, the area had been relatively immune to the world financial crisis. However, plummeting oil prices (which had dropped over 50 percent between July and October) left the area's economies suddenly vulnerable.

Between January and November 2008, 22 U.S. banks failed, up from 3 in 2007. The FDIC reported that it added 54 banks to its list of troubled institutions in the third quarter, a 46 percent increase over the second quarter. Additions to the list reflected the escalating problems in the banking industry. However, it should be noted that the 171 banks on the FDIC's problem list represented only about 2 percent of the nearly 8,500 FDIC-insured institutions. Still, the increase from 117 troubled banks in the second quarter was the largest seen since late 1995. Further, proving that some banks are too big to fail, commercial banking giant Citigroup required a massive government guarantee against losses (up to $306 billion) and a $20 billion injection of cash to prevent failure.

By the middle of November it became apparent that the rescue plan enacted in early October would not be sufficient as a growing number of distressed financial and nonfinancial companies and consumers called for assistance. Among the largest companies in need of a bailout were the Big Three automobile manufacturers (General Motors, Ford, and Chrysler). The leaders of these companies painted a grim picture of their financial position during two days of congressional hearings, warning that the collapse of the auto industry could lead to the loss of three million jobs nationwide. Both General Motors and Chrysler said they could collapse in weeks. However, automakers ran into resistance from House lawmakers, who chastised the executives for fighting tougher fuel-efficiency standards in the past and questioned their use of private jets while at the same time seeking government handouts. Fearing that the Big Three would take any bailout money and continue to make the same "stupid" decisions they had been making for 25 years, the U.S. Senate canceled plans for a vote on a bill to take $25 billion in new auto industry loans out of the $700 billion TARP rescue fund. Lawmakers gave the three automakers until mid-December to come back with substantial business plans outlining what they would do with any federal funds that might be lent and how they would restructure and improve the efficiency in their respective companies. After more days of testimony in mid-December, the U.S. Senate again failed to vote on a bailout for the automakers. General Motors and Chrysler stated that they did not have sufficient funds to continue operations through the end of December. Then on December 19, 2008, President George W. Bush announced that $13.4 billion in federal loans would be made immediately available to General Motors and Chrysler.

By the end of December, nearly $7 trillion of loans or commitments had been made. (Table 1–12 outlines the major commitments, loans, and investments made by the U.S. government through 2009.) The U.S. Treasury had used the first $362 billion of the $700 billion TARP rescue fund: $250 billion to inject capital into banks ($125 billion of which went to the 9 largest banks), another $40 billion to further stabilize insurer AIG, $25 billion to stabilize Citigroup, $20 billion to stabilize Bank of America, $20 billion used by the Fed to stabilize other lending institutions, and $24.9 billion lent to the auto industry. Note that the Treasury had dropped the original plans to use the TARP bailout

TABLE 1–12 Federal Government Rescue Efforts through December 2009

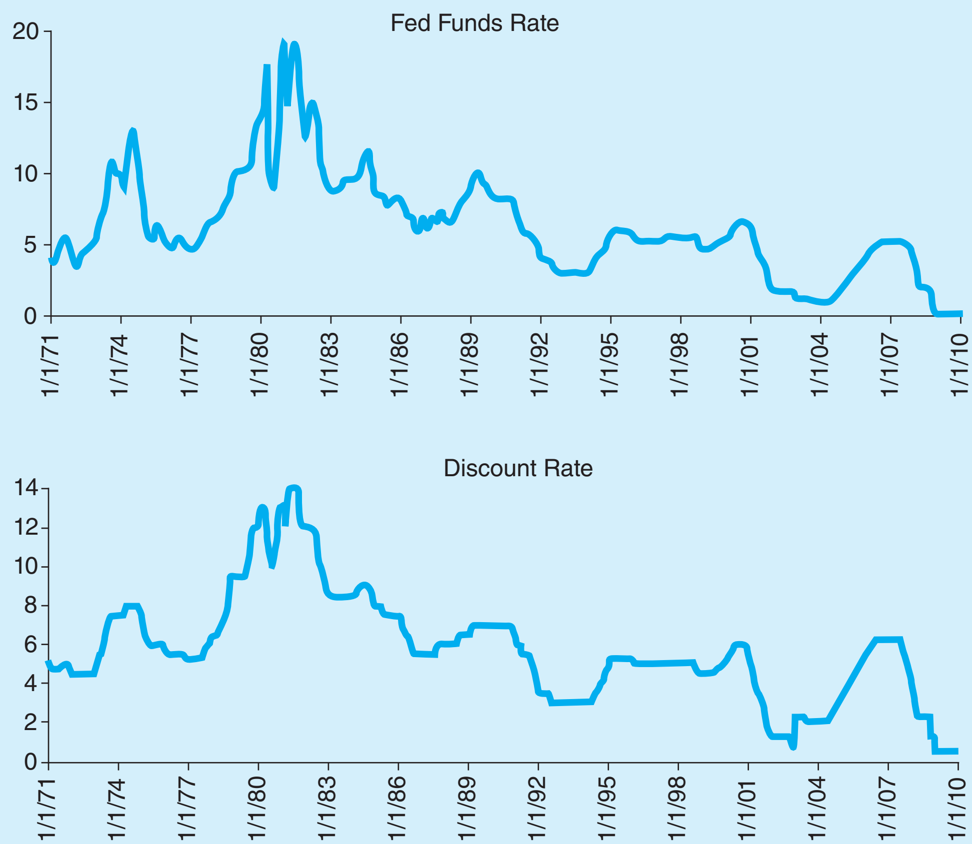
Program	Committed	Invested	Description
TARP	**$700.0 billion**	**$356.2 billion**	**Financial rescue plan aimed at restoring liquidity to financial markets**
AIG	70.0 b	69.8 b	
Auto industry financing	80.1 b	77.6 b	
Capital Purchase Program	218.0 b	204.7 b	
Public-Private Investment Program	100.0 b	26.7 b	
Targeted investments to Citigroup and Bank of America	52.5 b	45.0 b	
Amount repaid		*$118.5 billion*	
Federal Reserve Rescue Efforts	**$6.4 trillion**	**$1.5 trillion**	**Financial rescue plan aimed at restoring liquidity to financial markets**
Asset-backed commercial paper money market mutual fund liquidity facility	unlimited	$0.0	
Bear Stearns bailout	29.0 b	26.3 b	
Commercial paper funding facility	1.8 t	14.3 b	
Foreign exchange dollar swaps	unlimited	29.1 b	
GSE (Fannie Mae and Freddie Mac) debt purchases	200.0 b	149.7 b	
GSE mortgage-backed securities purchases	1.2 t	775.6 b	
Term asset-backed securities loan facility	1.0 t	43.8 b	
U.S. government bond purchase	300.0 b	295.3 b	
Federal Stimulus Programs	**$1.2 trillion**	**$577.8 billion**	**Programs designed to save or create jobs**
Economic Stimulus Act	168.0 b	168.0 b	
Student loan guarantees	195.0 b	32.6 b	
American Recovery and Reinvestment Act	787.2 b	358.2 b	
American International Group	**$182.0 billion**	**$127.4 billion**	**Bailout to help AIG through restructuring and to get rid of toxic assets**
Asset purchases	52.0 b	38.6 b	
Bridge loan	25.0 b	44.0 b	
TARP investment	70.0 b	44.8 b	
FDIC Bank Takeovers	**$45.4 billion**	**$45.4 billion**	**Cost to FDIC to fund deposit losses on bank failures**
2008 failures	17.6 b	17.6 b	
2009 failures	27.8 b	27.8 b	
Other Financial Initiatives	**$1.7 trillion**	**$366.4 billion**	**Other programs designed to rescue the financial sector**
NCUA bailout of U.S. Central Credit Union	57.0 b	57.0 b	
Temporary Liquidity Guarantee Program	1.5 t	308.4 b	
Other Housing Initiatives	**$745.0 billion**	**$130.6 billion**	**Other programs intended to rescue the housing market and prevent home foreclosures**
Fannie Mae and Freddie Mac bailout	400.0 b	110.6 b	
FHA housing rescue	320.0 b	20.0 b	
Overall Total	***$11.0 trillion***	***$3.0 trillion***	

money to buy troubled mortgage assets from financial institutions, stating that it was no longer the most effective way to restart credit markets. Rather, plans were to take equity stakes in financial institutions.

Some Bright Spots

While the economy remained in crisis, some positive things occurred between September and December 2008. Oil, which rose to over $142 per barrel in July, had dropped to below $40 in late 2008. As a result, gas prices, which rose to over $4.00 per gallon in the summer of 2008, had fallen to a national average of $1.65 in December. Led by a federal government push, many banks moved to restructure delinquent mortgage loans rather than foreclose and Fannie Mae and Freddie Mac suspended foreclosures on 16,000 homes over the 2008 holiday period while they evaluated whether the borrowers would qualify for the new loan modification programs. Fannie and Freddie's modification plan allowed mortgage restructuring, rather than foreclosure, for homeowners whose mortgages were held by one of the two companies, were at least three months behind on their payments, and whose mortgage payments were no more than 38 percent of the homeowner's pretax monthly income. The Federal Reserve's attempt to stabilize the housing market resulted in a drop in long-term mortgage rates (30-year fixed-rate mortgage rates dipped to below 5.0 percent in late November). In a historic move, on December 17, 2008, the Fed unexpectedly announced that it would drop its target fed funds rate to a range between zero and one-quarter percent and lower its discount window rate to one-half percent, the lowest level since the 1940s (see Figure 1–11). Along with this announcement, the Fed announced that

Figure 1–11 Federal Funds Rate and Discount Window Rate—January 1971 through January 2010



it would continue to use all its available tools to promote economic growth and preserve price stability. This was followed by interest rate cuts in many other countries, including Japan, the United Kingdom, Hong Kong, and the European Central Bank.

The Crisis Continues in 2009

Despite the many efforts of regulators to stem the tide of the growing recession, the U.S. and world economies deteriorated further at the start of 2009. The DJIA and the S&P 500 Index had their worst January ever, falling 8.84 percent and 8.57 percent, respectively. Unemployment in January hit 7.6 percent, the highest level since September 1992. Also in January, employers cut 589,000 jobs, the highest monthly job losses in over 34 years. Since December 2007 (as the recession began), the U.S. economy lost 3.6 million jobs, half of which were lost in the period from November 2008 through January 2009. Gross domestic product growth was announced, showing a drop of 3.8 percent in the fourth quarter of 2008 (later revised to −5.4 percent). New vehicle sales in the United States fell 37 percent in January, the industry's worst month since 1982 and the worst January since 1963. For the first time ever, more vehicles were sold in China than in the United States.

Worldwide, central governments tried to grapple with the building recession. The United Kingdom, Belgium, Canada, Italy, and Ireland were just a few of the countries to pass an economic stimulus plan and/or bank bailout plan. The Bank of England lowered its target interest rates to a record low of 1 percent hoping to help the British economy out of a recession. The Bank of Canada, Bank of Japan, and Swiss National Bank also lowered their main interest rates to 1 percent or below.

The U.S. Stimulus Plan. With the U.S. economy deteriorating at its swiftest rate in history, President Obama made good on his pre-election promise to have an economic stimulus plan approved and enacted shortly after his election. The House passed its version of an $819 billion stimulus package on January 28, 2009. The Senate passed an $827 billion version of a stimulus plan on February 10, 2009. After more debate and compromise, both arms of Congress agreed on and passed the Economic Stimulus Plan, called the American Recovery and Reinvestment Act, on February 13, 2009. The plan devoted $308.3 billion to appropriations spending, including $120 billion on infrastructure and science and more than $30 billion on energy-related infrastructure projects. Another $267 billion went for direct spending, including increased unemployment benefits and food stamps. Finally, $212 billion was set aside for tax breaks for individuals and businesses (Table 1–13 lists some of the major items in the stimulus plan).

Financial Rescue Plan. In addition to the overall economic stimulus plan, the Obama administration, including new Treasury Secretary Geithner, announced a separate plan that focused on the stabilization of the financial system. Early 2009 saw a plunge in the DJIA (falling to a low of 6,547.05 on March 9, 2009) and, particularly, the market values of financial institutions. Banks such as Citigroup, Bank of America, and J. P. Morgan Chase traded at less than their book values as investors had little confidence in the value of their assets. Through February 13, 2009, 13 U.S. banks had already failed in 2009, while 25 had failed in all of 2008 (the highest annual total since 1993). The financial rescue plan, announced on February 10, 2009, involved a number of initiatives, including injecting capital into banks, offering federal insurance to banks against losses on bad assets, buying distressed mortgages from banks, helping homeowners avoid foreclosure, giving the FDIC power to help troubled financial firms other than depository institutions, and expanding the Fed's Term Asset-Backed Securities Loan Facility (TALF). The TALF combined capital provided by the TARP with funding from the Federal Reserve in order to promote lending by increasing investor demand for securitized loans. The TALF significantly expanded the availability and reduced the cost of term financing for investors in derivative securities. The goal of TALF was to stimulate demand for these securities and thereby allow originators of securitized loans to lower the cost and increase the availability of credit to consumers and

TABLE 1–13 Major Items in the $787 Billion Stimulus Program as Passed by the U.S. Congress, February 13, 2009

$116.1 b.	for tax cuts and credits to low- and middle-income workers
69.8 b.	for middle-income taxpayers to get an exemption from the alternative minimum tax
87.0 b.	in Medicaid provisions
27.0 b.	for jobless benefits extension to a total of 20 weeks in addition to regular unemployment compensation
17.2 b.	for increases in student aid
40.6 b.	for aid to states
30.0 b.	for modernization of electric grid and energy efficiency
19.0 b.	for payments to hospitals and physicians who computerize medical record systems
29.0 b.	for road and bridge infrastructure construction and modernization
18.0 b.	for grants and loans for water infrastructure, flood prevention, and environmental cleanup

businesses. The Fed's TALF program initially provided financing for investors to purchase securities backed by consumer loans. The Treasury wanted to expand this beyond consumer loans. For homeowners, the banking plan called for the creation of national standards for loan modifications and for the use of tax dollars to give mortgage companies an incentive to modify mortgage loans. Further, along with the expanded TALF program, the Treasury, working with the Federal Reserve, FDIC, and private investors, created the Public-Private Investment Fund (PPIF) to acquire real estate–related off-balance-sheet assets. By selling to PPIF, financial institutions could reduce balance sheet risk, support new lending, and help improve overall market functioning.

Finally, in late February 2009, the Obama administration announced that it would conduct a "stress test" of the 19 largest U.S. banks, which would measure the ability of these banks to withstand a protracted economic slump (the unemployment rate above 10 percent and home prices dropping another 25 percent). Results of the stress test showed that 10 of the 19 banks needed to raise a total of $74.6 billion in capital. Within a month of the May 7, 2009, release of the results, the banks had raised $149.45 billion of capital.

The Economy Begins to Recover. Through the spring of 2009, the federal government continued to take actions to combat the stagnant economy. These actions included passage of the Job Creation Through Entrepreneurship Act (in May 2009), to help small businesses access capital and credit markets, and the wildly popular Cash for Clunkers Program (in June 2009), to stimulate automobile sales. By the summer and fall of 2009, the economy slowly began to recover. Pending home sales and residential construction both posted significant increases in September. September marked the eighth consecutive monthly increase in pending home sales, which was the longest such streak since 1991, when these data began to be tracked. Home sales rose at an annual rate of 6.1 percent in September and were 21.2 percent ahead of their September 2008 level. Meanwhile, the Commerce Department reported that residential construction spending increased at a 3.9 percent annual rate in September. It was the third consecutive monthly increase in residential construction. The National Association of Realtors announced that the number of signed contracts increased for the ninth consecutive month—31.8 percent higher than September 2008 and the biggest year-over-year gain in the history of the index. These signs of life in the construction industry were an indication that the first-time homebuyer tax credit put in place as part of the American Recovery and Reinvestment Act was working. Indeed, in November 2009, President Obama signed into law an expanded Homebuyer Tax Credit that extended a tax credit of up to $8,000 for qualified first-time home buyers and $6,500 for repeat home buyers purchasing a principal residence.

Third quarter 2009 GDP increased by 2.2 percent and fourth quarter GDP rose 5.7 percent. The third-quarter increase was the first since the second quarter of 2008. The increases were the result of consumer spending, which increased significantly. Spending on new cars and trucks was a big contributor (adding 1.45 percent to the third quarter change), reflecting the federal Cash for Clunkers Program in effect in July and August. The increase in GDP in the fourth quarter primarily reflected increases in private inventory investment, exports, and personal consumption expenditures. Automobile output continued to do well, adding 0.61 percent to the fourth-quarter change in GDP.

With the positive economic news, on October 14, 2009, the DJIA reached 10,000 for the first time in a year. However, unemployment countinued to lag, topping 10 percent in October. This greater-than-10-percent rate was short lived, as the unemployment rate dropped to 10 percent in November 2009 and job losses dramatically declined, with only 11,000 American jobs lost in November 2009, compared to 741,000 jobs lost in December 2008. Further, in 2009, there were 140 failures of banks with assets totaling $170.9 billion. The five largest bank failures were BankUnited ($12.8 billion in assets), Colonial Bank ($25 billion in assets), Guaranty Bank ($13 billion in assets), United Commercial Bank ($11.2 billion in assets), and AmTrust Bank ($12 billion in assets). The cost to the FDIC for resolving these failures was $27.8 billion. In comparison, in 2008 there were 25 bank failures with assets totaling $373.6 billion.

In December 2009, the Obama administration announced that the long-term cost of the Troubled Asset Relief Program would be at least $200 billion less than previously projected, which would help bring down the projected federal budget deficit. At the end of 2009, while the economy was still fragile and had certainly not fully recovered from the extreme financial crisis, it was stabilizing.

Finally, in July 2010, the U.S. Congress passed, and President Obama signed, the 2010 Wall Street Reform and Consumer Protection Act, which sought to prevent a repeat of the market meltdown. Touted as the most extensive proposal for the overhaul of financial rules since the Great Depression, this bill proposed a sweeping overhaul of the nation's financial system and the rules that govern it. The bill called for the Federal Reserve to receive new oversight powers and to impose conditions designed to discourage any type of financial institution from getting too big. The proposals put the Federal Reserve in charge of monitoring the country's biggest financial firms—those considered critical to the health of the system as a whole. Those firms also face new, stiffer requirements on how much capital and liquidity they must keep in reserve. The overhaul also provides unprecedented powers to the Fed to step into any financial institution—such as insurance giant AIG (whose main regulators include the New York State Department of Insurance and the Office of Thrift Supervision)—that is facing imminent collapse, in order to force an orderly bankruptcy and thereby protect the wider economy.

More specifically, the bill sets forth reforms to meet five key objectives:

1. *Promote robust supervision and regulation of financial firms* by establishing (i) a new Financial Services Oversight Council of financial regulators (chaired by the Treasury and including the heads of the principal federal financial regulators as members) to identify emerging systemic risks and improve interagency cooperation, (ii) a new authority for the Federal Reserve to supervise all firms that could pose a threat to financial stability, even those that do not own banks, (iii) stronger capital and other prudential standards for all financial firms, and even higher standards for large, interconnected firms, (iv) a new National Bank Supervisor to supervise all federally chartered banks, (v) elimination of the federal thrift charter for thrifts not dedicated to mortgage lending and other loopholes that allowed some depository institutions to avoid bank holding company regulation by the Federal Reserve, and (vi) the registration of advisors of hedge funds and other private pools of capital with the SEC.
2. *Establish comprehensive supervision of financial markets* by establishing (i) the regulation of securitization markets, including new requirements for market transparency, stronger regulation of credit rating agencies, and a requirement that issuers and originators retain a financial interest in securitized loans, (ii) comprehensive regulation of all

over-the-counter derivatives, and (iii) new authority for the Federal Reserve to oversee payment, clearing, and settlement systems.

3. *Protect consumers and investors from financial abuse* by establishing (i) a new Consumer Financial Protection Agency to protect consumers across the financial sector from unfair, deceptive, and abusive practices, (ii) stronger regulations to improve the transparency, fairness, and appropriateness of consumer and investor products and services, and (iii) a level playing field and higher standards for providers of consumer financial products and services, whether or not they are part of a bank.

4. *Provide the government with the tools it needs to manage financial crises* by establishing (i) a new regime to resolve nonbank financial institutions whose failure could have serious systemic effects and (ii) revisions to the Federal Reserve's emergency lending authority to improve accountability.

5. *Raise international regulatory standards and improve international cooperation* by establishing international reforms to support efforts in the United States, including strengthening the capital framework, improving oversight of global financial markets, coordinating supervision of internationally active firms, and enhancing crisis management tools.