Observations on the Financial Crisis

Keith Hennessey and Edward P. Lazear

Observations on the Financial Crisis

Keith Hennessey
Edward P. Lazear

Hoover Institution Press
Stanford University
Stanford, California
2013

The Hoover Institution on War, Revolution and Peace, founded at Stanford University in 1919 by Herbert Hoover, who went on to become the thirty-first president of the United States, is an interdisciplinary research center for advanced study on domestic and international affairs. The views expressed in its publications are entirely those of the authors and do not necessarily reflect the views of the staff, officers, or Board of Overseers of the Hoover Institution.

www.hoover.org

Hoover Institution Press Publication

First printing 2013
19 18 17 16 15 14 13 7 6 5 4 3 2 1

Manufactured in the United States of America

The paper used in this publication meets the minimum Requirements of the American National Standard for Information Sciences—Permanence of Paper for Printed Library Materials, ANSI/NISO Z39.48-1992. ∞

OBSERVATIONS ON THE FINANCIAL CRISIS

Keith Hennessey and Edward P. Lazear[1]

The financial shock of September 2008 occurred five years ago. The effects are still with us.

In this essay we draw on our experiences[2] in the Bush White House and our work and teaching since then to offer views on recent economic history. We attempt to correct certain popular misinterpretations of the events and policy decisions of the last year of the Bush Administration and the first few months of the Obama Administration. We also highlight certain points we think are underappreciated by many.

Rather than offering still another narrative of the financial crisis, we suggest a set of observations that we believe are key to understanding

---

1. Our views have benefited from discussion with colleagues at Stanford University and those who served with us in the Administration, as well as from students in our classes at Stanford.

2. Hennessey served as Deputy Director of the White House National Economic Council from 2002 through 2007 and as Director from December 2007 until the end of the Bush presidency in January 2009. He served as a member of the Financial Crisis Inquiry Commission and is a lecturer at Stanford's Graduate School of Business and Stanford Law School. Lazear served as Chairman of the Council of Economic Advisers from early 2006 through the end of the Bush presidency. He is the Jack Steele Parker Professor of Human Resources Management and Economics at Stanford's Graduate School of Business and the Morris Arnold and Nona Jean Cox Senior Fellow at the Hoover Institution.

this crisis. Our analysis is based on economic reasoning as well as an examination of the evidence that the passage of time permits.

OBSERVATION 1: "The recession that began in late 2007" conflates two distinct time frames.

Many popular accounts of the crisis refer to "the recession that began in late 2007." While technically correct,[3] this confuses rather than enlightens. The recession that began in late 2007 had two distinct phases: a mild recession beginning in December 2007 and continuing through the summer of 2008, followed by an almost year-long severe recession initiated by the September 2008 financial shock. In the first quarter of 2008 U.S. GDP was shrinking, but slowly, at less than a 2 percent annual rate. After the initial financial shock, GDP contracted at an annual rate of 8.9 percent in the fourth quarter of 2008 and then 5.2 percent in the first quarter of 2009.

Payroll employment data tell a similar story. The U.S. economy lost an average of 50,000 net jobs per month in the first quarter of 2008, indicating a mild recession. This grew to an average of 211,000 net jobs lost per month from April through August. The financial shock beginning in September dramatically accelerated net job losses. Net payroll employment declined by 459,000 jobs in September, steadily worsening to 830,000 jobs lost in March of 2008. The pre-panic and post-panic employment pictures are qualitatively different.

A more informative division of the crisis timeline would incorporate four phases:

1. A six-year period of sustained growth from late 2001 to late 2007;
2. A mild recession from late 2007 through the summer of 2008;

3. The NBER Business Cycle Dating Committee designates the recent economic peak as occurring in December 2007 and the trough in June 2009.

3. A severe recession beginning in September 2008 and ending in mid-2009; and
4. Four years of slow growth from mid-2009 to today.

Observation 2: The financial *panic* began in September 2008. The financial *crisis* began long before, and first showed significant signs in August 2007.

The first liquidity shock (usually manifested as an inability to borrow for short periods of time to pay off prior debt) occurred in early August 2007 when BNP Paribas refused to allow withdrawals of funds by some of their large clients, claiming the bank was not sufficiently liquid to provide the cash. The major central banks engaged in coordinated action in mid-August 2007 to alleviate liquidity pressure that was being felt around the world. Liquidity in interbank funding markets tightened again in November and December of that year. The UK Treasury took over mortgage lender Northern Rock in February 2008 and the U.S. Federal Reserve facilitated JPMorgan's purchase of Bear Stearns in March. Auction rate securities markets failed later that spring, at roughly the same time as the monoline insurers experienced distress.

Over late spring and summer a series of financial institutions neared failure.

- Bank of America's January purchase of Countrywide was approved in early June;
- Monoline insurers AMBAC and MBIA were downgraded in early June;
- IndyMac failed in mid-July; and
- Fannie Mae and Freddie Mac began to fail a few days later.

Popular descriptions of the financial crisis often describe it as beginning in mid-September 2008. But by that time a slow motion financial crisis had been gradually revealing itself for a full year. A week *before*

Lehman's failure the Dow Jones Industrial Average had already declined nearly 3,000 points from its pre-recession peak.

It is both more accurate and more revealing to describe September 2008 as the date of the financial shock and panic that triggered a severe economic recession rather than as the beginning of the financial crisis.

Observation 3: The shock and panic of September 2008 were triggered by a sequence of events, not just by the Lehman failure.

Popular accounts and most discussions of September 2008 focus too much on Lehman's unexpected failure and not enough on the sequence of financial institution failures and near-failures throughout that month. From our vantage point in the White House, Lehman's failure was merely one (albeit an important one) in a series of cascading events, the combined effects of which triggered the financial panic and shock.

- The Federal Housing Finance Authority [FHFA] moved a failing Fannie Mae and Freddie Mac into conservatorship on September 7.
- The following weekend in talks centered at the New York Federal Reserve, Bank of America agreed to buy Merrill Lynch, which was near collapse. That weekend, Lehman and AIG were on the verge of failure.
- On Monday Lehman filed for Chapter 11 protection.
- On Tuesday the Fed agreed to lend AIG up to $85 billion. That same day the Reserve Primary Fund broke the buck. We heard reports that other money market funds were about to begin restricting withdrawals.
- Washington Mutual and Wachovia had already shown major signs of distress and their survival was then in question.
- Goldman Sachs and Morgan Stanley asked for the Fed's permission to become bank holding companies.

- Iceland was experiencing its own financial disaster as a result of its central role in the carry-trade. The UK, Spain, and Ireland faced their own housing and securities problems.

If one removes Lehman from this set of events, the sum of the other events is still a significant financial shock. Lehman aside, the other events were sufficient to generate the financial panic that ensued. Was Lehman's failure a significant contributing factor? Absolutely. In particular, the institutional run on money market funds that resulted after the Reserve Primary Fund, which held Lehman paper, "broke the buck" was probably a direct result of Lehman's failure. Some of the stock market's increased volatility may have been fed by concerns over government policy reflected in the failure to save Lehman. But the crisis existed absent Lehman, and Lehman's failure was more a symptom of a larger ongoing financial disintegration that predates September, than a cause of a crisis starting in September.

At the time we knew that Lehman's failure was significant, but we did not distinguish it from these other domestic and international institutional failures and near-failures. It is impossible to isolate a single precipitating trigger to the financial panic, and in fact one may not exist. Yet the excessive public focus on Lehman, almost to the exclusion of other equally important and contemporaneous failures and near-failures, is misplaced. September 2008 is not just a Lehman story; it is instead a Fannie-Freddie-Merrill-Lehman-AIG-Reserve Prime-Washington Mutual-Wachovia-Goldman Sachs-Morgan Stanley story.

Some observers suggest that Messrs. Ben Bernanke, Hank Paulson, and Timothy Geithner "decided" to let Lehman fail. This is inconsistent with our experience and ignores the key point that differentiates Lehman from the other firms: there was no buyer for Lehman. Neither the Fed nor Treasury had liquidation authority, and the final attempt to facilitate a purchase by Barclays collapsed when the UK regulator refused to approve the transaction. After Barclays withdrew interest, the Fed and Treasury had no option to save Lehman that was both legal and viable.

Observation 4: Putting Fannie Mae and Freddie Mac into conservatorship likely averted larger shocks.

While too much importance is attached to Lehman's failure, not enough attention is typically paid to the importance of keeping the debt issued by Fannie Mae and Freddie Mac sound, which was accomplished by putting the two firms into conservatorship in early September 2008. Had these firms suddenly failed, and their failure at that point appeared imminent, the financial shock and ensuing crisis would likely have been more severe than it was.

Banking regulators treated GSE debt as equivalent to Treasuries. This led many financial institutions, other investors, and even some national governments to assume that GSE debt was perfectly safe. GSE debt was viewed as virtually riskless collateral, which caused other assets to be based on them.

For example, GSE debt was used as collateral in short-term lending markets, and a failure of GSE debt could have caused those markets to experience additional distress.

Additionally, Fannie and Freddie were so large and so dominated the mortgage securitization market, that their sudden failure would effectively have halted the creation of new mortgages.

Unfortunately, five years later, the underlying problems of the GSEs have not yet been solved.

Observation 5: The "deregulatory cause" hypothesis is flawed.

It is hardly obvious that deregulation, or even lack of regulation, was a key component of the crisis.

First, the trouble spots in the economy tended to be in the most regulated sectors, not the unregulated ones. Highly regulated banks and a large insurance company were the major vulnerabilities in 2008, not unregulated hedge funds. It is always possible to argue that the regulated firms were not regulated correctly, but that is exactly the point. Determining appropriate regulation is a large part of the problem and blanket calls for more or better regulation have little value.

Second, financial institutions in other countries failed. This suggests that any explanations for the crisis that rely on regulatory policies or practices specific to the United States are at best incomplete and at worst incorrect. The American Net Capital Rule, for instance, did not cause Fortis, Dexia, or Northern Rock to fail, and it is quite unlikely that U.S. housing or financial policies caused a housing bubble in Spain.

Third, the chronology of deregulatory moves corresponds poorly to the timing of the crisis. Six major regulatory actions are the best candidates for having caused the crisis. Three are associated with the Clinton Administration and three with the Bush Administration. In 1995, the Community Reinvestment Act was altered to help home ownership in underserved areas. The Gramm-Leach-Bliley Financial Services Modernization Act of 1999 repealed the prohibition of investment and commercial banking by the same entity. The Commodity Futures Modernization Act of 2000 ensured the deregulation of derivatives. In April 2004, during the Bush Administration, the Net Capital Rule allowed broker-dealers to increase their leverage. In late 2004, the Department of Housing and Urban Development targeted the GSEs (Fannie Mae and Freddie Mac in particular) to increase securitization of loans in low income and underserved areas. Finally, in 2005, the down payment requirements for FHA loans were reduced from 3 percent to zero.

Although it is certainly possible that some of these moves had effects on lending and leverage, the evidence is weak. The most notorious aspect of mortgage lending occurred in the sub-prime market. The growth of sub-prime originations occurred mostly between 2002 and 2004, which precedes the Bush moves and is somewhat delayed for them to be immediately linked to the Clinton deregulation. Additionally, investment bank leverage in particular picked up after relaxation of the net capital rule, but the growth began in 2003 and the levels reached at the peak were slightly lower than those which prevailed in the early- to mid-1990s. While excessive leverage and overly zealous home-ownership pushes may have exacerbated the crisis, there were other more fundamental causes.

Observation 6: The financial crisis was caused principally by unprecedented capital flows into the United States.

The best evidence suggests that the financial crisis was caused in large part by an unprecedented flow of funds into the United States and other developed economies. The typical historic pattern is that rich countries lend funds to poor countries. That pattern reversed in the mid-2000s and became quite pronounced by 2005 and 2006. Oil producers, Japan, and especially China were investing heavily in the United States, buying at a record pace a variety of instruments including U.S. Treasuries and asset-backed securities.

The consequence (although not a necessary one) was that credit spreads fell dramatically between 2003 and 2005. Credit spreads are the difference between the rates that borrowers pay on risky assets and those they pay on safe assets, usually denominated as U.S. Treasuries. When credit spreads fall, it becomes relatively cheap to finance risky investment; that is exactly what happened during the mid-2000s. The most obvious case of this was in the housing market, where housing starts jumped to a peak of around 2.2 million per year in the United States from their historic average of about 1.5 million. The consequence was a large boom in housing supply that eventually caused housing prices to decline starting in 2006. The decline in housing prices meant that mortgages which needed to be refinanced had a more difficult time obtaining funding because the mortgage was worth more than the house.

Default rates went up and financial assets that were tied to the repayment of the underlying mortgages also started to lose value. Many holding these assets were viewed as insufficiently solvent to acquire capital from other creditors. This was most dramatically demonstrated in March of 2008 when Bear Stearns, unable to roll over its debt, faced a sudden liquidity crisis. This liquidity issue soon became a solvency issue as the market value of the housing-related financial assets held by Bear Stearns rapidly declined. Bear Stearns was in no ways unique. Other institutions started to feel the same kind of pressure, and by September of 2008 the disease was rampant throughout the financial sector.

The straightforward and most plausible explanation of the financial crisis is that cheap credit made risky investment seem profitable. Those who undertook risky loans understood that they were risky, which is why those loans carried a premium. Sub-prime mortgages generally paid 300 or more basis points above conforming mortgages to compensate for the additional risk. The problem was that the risk turned out to be more pronounced than people had anticipated, and when it spread through the financial system, consequences were severe.

Observation 7: Dominoes vs. popcorn.

There are (at least) two views of how the financial shocks of 2007 and 2008 affected financial institutions and how they should have been treated by government. These two theories of economic destruction can be labeled the domino theory and the popcorn theory.

Everyone knows the domino theory, the analogy commonly used to denote financial contagion. If one domino falls it will topple the others. Conversely, if the first domino remains upright the others will not fall. Domino logic motivates most bailout strategies. It is also the logic behind a sequential strategy, where institutions are treated on a piecemeal basis, saving one at a time in the hope that doing so will prevent others from failing. The domino theory usually relies on two notions: (1) the failure of one institution provides information to the market that other institutions are in jeopardy; or (2) the two institutions are connected by counterparty credit risk such that the failure of the first causes the failure of the second.

The domino theory can also signal that the strategy the government has adopted to deal with the first failing institution will also be applied to the others that may need help. If, say, the first investment bank is allowed to fail, the market may reason that others will be allowed to fail as well.

The popcorn theory emphasizes a different mechanism, one that is pervasive among a group of otherwise unconnected firms. When popcorn is made the old-fashioned way, oil and corn kernels are placed in a pan, heat is applied, and the kernels pop. Were the first popped kernel to be removed from the pan, there would be no noticeable difference. The fundamental structural cause of individual kernels popping, the *common factor,* is heat. One kernel popping does not cause others to pop.[4]

If large financial firms operate in a popcorn world rather than a domino world, preventing one failure will do little if anything to prevent other failures. Each institution feels the same heat, here caused by some prior action like unwise risk-taking, undercapitalization, or overinvestment in housing. It is merely a matter of time before multiple institutions are ready to explode. Just as different kernels are located closer or further from the heat, one financial institution may feel pressure before and to a greater extent than another. But the fundamental cause of the problem for other institutions cannot be alleviated by treating the first institution that fails.

Contagion was a factor in a few significant specific cases. AIG Financial Products sold enormous amounts of credit derivatives to other firms, and GSE debt was held in great concentrations by a wide range of financial institutions. But the 2008 financial crisis was primarily a popcorn event. Many institutions held the asset-backed securities that were losing value because of underlying problems in the housing and other markets. When those securities lost value, the solvency of the institutions was threatened and it did not matter much whether other institutions had survived or failed.

4. Municipal bankruptcies are a popcorn problem. Detroit's bankruptcy may draw attention to parallel situations in other cities (and states) with severe fiscal imbalances, but these parallel situations are almost entirely independent.

Observation 8: TARP was a shift to a systemic solution from a case-by-case approach and was possible only when Congress accepted that inaction would lead to a catastrophic failure. Policy makers traded false negative errors for false positive errors.

For six months institutional failures were addressed on a case-by-case basis. When a large, highly interconnected financial firm faced imminent failure, policy makers (primarily Bernanke, Paulson, Geithner, and their staffs) would evaluate whether they thought its sudden failure would pose too great a risk of causing other financial firms to fail. If they did, some combination of the Fed, FDIC, and Treasury intervened through loans and subsidized transactions.

The principal advantages of this approach were that it was authorized by law and it conserved resources. Taxpayer resources were placed at risk only for the subset of large financial firms (big, closely-packed dominoes) that were thought too big to be allowed to fail suddenly. Policy makers might make firm-specific judgment calls with which others would disagree (as some have argued with Bear Stearns), but there would be no systematic overcommitment of taxpayer funds.

More importantly, Bernanke, Paulson, and Geithner (and FDIC Chairman Bair) used the only legal tools available to them. At the time there was neither legal authority to wind down a non-bank in an orderly fashion nor a large fiscal policy tool to address the rapidly expanding capital hole in the banking sector.

The principal risk of the case-by-case approach is that if the underlying structural problem is pervasive, the problem may linger for years or may suddenly manifest when the frying pan heats up. While one conserves taxpayer resources, one risks under-solving the underlying problem, especially if common factors and not contagion are the source of the problem.

In late spring/early summer there was a recognition that Congressional action would be needed for any systemic solution (like the one that later became TARP), and that such Congressional action would be impossible while the scope and severity of the underlying problem was unknown. After years of efforts by the Bush Administration to pass legislation addressing the GSEs, Congress was willing to do so only when it was obvious that Fannie Mae and Freddie Mac were on the verge of collapse. The same was true for the broader financial system—it would have been impossible to get Congress to provide broad policy tools like liquidation authority or TARP unless the financial system was already in the process of collapsing. Congress is not often good at planning ahead for low probability/high consequence events, especially when that planning requires significant policy costs and electoral risk.

The financial shock and beginning of the financial panic in September changed things in two ways. It made the "popcorn" nature of the underlying problem crystal clear, and it created an opportunity to convince Congress to take the legislative action needed for an aggressive systemic solution. The result was TARP.

TARP allowed policy makers to shift from a case-by-case to a systemic approach, based on an assumption that many of the largest financial institutions faced common underlying problems—they were severely undercapitalized and many were holding significant concentrations of housing-related risk.

By simultaneously recapitalizing all the largest banks and many medium-sized ones as well, TARP systematically addressed the underlying common factor. The combination of TARP and Fed actions was more likely to solve the underlying problems. In addition the shock-and-awe effect of announcing a package of interventions helped stop the panic that was taking hold in mid-September.

The principal challenge was that this new policy required Congressional approval. The principal downside was that we were shifting to over-solving the problem. This risked spending taxpayer funds on banks that were otherwise healthy and interfering in firms that had little need for government assistance.

This is a prototypical example of an implicit tradeoff in almost any policy decision, the choice between a *false positive* error and a *false negative* error. A false positive error is made when one takes an action which, after the fact, one regrets. A false negative error is choosing not to take an action which, after the fact, one would have preferred to have taken.

TARP used taxpayer money to aid financial firms, carrying with it a number of adverse consequences. Moral hazard tops the list. Taxpayer funds were at risk, and markets were distorted so that weak firms that should have failed ended up surviving. Whether these costs were worth it depends on how one evaluates the counterfactual. If things would have been fine without TARP, then the costs of TARP were high relative to the benefit and TARP was a false positive error. If in fact TARP prevented a financial and economic collapse, as we think it did, then the costs seem small in comparison.

Observation 9: TARP is the most successful financial policy for which no member of Congress will admit having voted "aye."

TARP, and specifically the Capital Purchase Program, succeeded. Combined with a few additional firm-specific actions, it quickly recapitalized the U.S. banking sector. After an initial failed vote in the House, the law passed both the House and Senate with significant bipartisan support. Yet today Members of Congress who voted "aye" are loath to admit they supported this program that succeeded in its core goal.

Four actions taken between September and December most likely stopped the panic that began in September:

1. Soon after the Reserve Primary Fund broke the buck, institutional investors began a run on money market funds. The Administration used Treasury's Exchange Stabilization Fund to guarantee money markets, providing FDIC-like insurance to those accounts. The run subsided almost immediately.
2. A collection of Fed actions enhanced liquidity and filled in gaps in commercial paper markets. These were crucial in helping the financial sector raise the funds it needed to deal with short-term debt obligations.

3. FDIC guarantees of new bank liabilities brought immediate relief to the overnight funds market, which had seen rates skyrocket.
4. Finally, TARP allowed Treasury to buy preferred shares in the largest banks, providing them with the equity they needed to survive. As a result of this capital infusion banks began to trust one another and interbank lending was restored.

There is little doubt that TARP and the Capital Purchase Program achieved their core goal, temporarily providing taxpayer capital to make financial institutions strong enough to withstand the panic and additional, future shocks. Private capital quickly replaced public capital, and the net cost to the taxpayer was far less than the original $700 billion appropriated by Congress.

Three uses of TARP funds are projected to result in a net cost to taxpayers: the bailout of AIG ($15 billion cost), loans to the auto industry ($17 billion cost), and the Obama Administration's mortgage programs ($16 billion cost). The Capital Purchase Program, the core of TARP, will result in a likely net *gain* to taxpayers of $17 billion.

During the crisis, President Bush directed his advisors to set aside the political consequences and focus only on the necessary course of policy action. To their credit, the four Congressional leaders and key senior committee members worked with the Bush Administration to eventually enact TARP.

Five years later, TARP and the other policy actions taken during the financial crisis nevertheless remain widely unpopular. This tension between a policy success and intense political unpopularity is a defining feature of the actions taking during the financial crisis.

Observation 10: Capital investment was indeed better policy than buying "toxic assets."

TARP was initially advertised as a plan to recapitalize large financial institutions by using taxpayer funds to buy "toxic" financial assets from those firms. Shortly after enactment of TARP, the Bush Administration and the Federal Reserve changed directions, instead using taxpayer funds to make equity investments in undercapitalized banks. To the chagrin of many conservatives in Congress, the U.S. Treasury became partial owners of the nation's largest financial firms rather than owners of bad housing-related financial assets purchased from those firms.

At the time many large financial institutions faced two related but separable problems: they were severely undercapitalized, and they faced significant downside risk because of the highly uncertain value of the housing-related financial assets that they owned.

Using TARP funds to buy these assets would at best have solved the second problem but not the first. Treasury would have traded cash for mortgage-backed securities of highly uncertain value. If Treasury paid market prices for these assets, the firm would see no improvement in its capital position but would have eliminated the downside risk of further balance sheet deterioration.

This initial approach faced three problems:

1. Treasury would likely have run out of TARP funds before buying enough toxic assets to solve the problem;
2. No one knew how to price these toxic assets quickly; and
3. Simultaneously recapitalizing the banks through these purchases would have required that Treasury "overpay" for them relative to market value, a politically untenable approach.

In hindsight the decision to change directions and instead use TARP funds to make direct equity investments was a wise one despite the strong negative reactions it caused in Congress at the time. Large, medium, and some small financial institutions were quickly recapitalized, restoring confidence even while these firms continued to hold downside risk on their balance sheets. Taxpayer funds were conserved and the equity investments were in most cases quickly repaid (see Observation 9).

Secretary Geithner and FDIC Chairman Sheila Bair (who was part of the Bush team's effort) tried to resurrect the asset purchase idea early in the Obama Administration with their Public-Private Investment Program (PPIP) proposal. They quickly ran into the same problems as faced by the Bush team and quietly abandoned the proposal a few months later.

OBSERVATION 11: The *financial crisis* was largely resolved by the time President Obama took office in late January 2009. President Obama's task was not to address the financial crisis, but instead to handle the ensuing *financial cleanup, financial policy reforms,* and the *severe macroeconomic recession* that resulted from the late-2008 financial crisis.

The popular narrative, no doubt encouraged by the Obama Administration, is that President Obama and his team saved the world from a financial crisis. But the financial crisis was largely resolved by January 20, 2009, leaving President Obama three challenging and important projects: addressing the already-underway severe macroeconomic recession, beginning the cleanup from the aftermath of the financial shock, and proposing, enacting, and implementing financial policy reforms.

It is a common mistake to conflate the financial shock/panic with the resulting macroeconomic recession. The former was largely ending by New Year's Day, 2009, while the recession continued to deepen into March and April. The evidence that the financial crisis was in President Obama's rearview mirror when he took office (although not far behind him) is clear.

All the major financial sector rescue policies were created and implemented during the last five months of the Bush Administration. These include:

- Placing Fannie Mae and Freddie Mac into conservatorship;
- The proposal and legislative enactment of TARP;
- Treasury implementation of the Capital Purchase Program;

- Money market mutual fund guarantees using Treasury's Exchange Stabilization Fund;
- Fed/Treasury creation of the Term Asset-backed Securities Loan Facility (TALF);
- FDIC's expanded guarantee of deposit insurance and new guarantee of transactional accounts used by small businesses;
- FDIC's guarantee of new interbank loans;
- The Fed's creation of the Commercial Paper Funding Facility;
- The Fed beginning to pay interest on reserves;
- Firm-specific actions on Bear Stearns, AIG, Citigroup (three), Goldman Sachs, Morgan Stanley, Washington Mutual, American Express, and CIT;
- The initial TARP loans to General Motors and Chrysler along with aid to their captive finance companies;
- Sales of Bear Stearns, Merrill Lynch, Wachovia, National City;
- Lehman's bankruptcy;
- The first G-20 Summit, in November 2008; and
- Release of the final $350 billion of TARP funds.

The TARP, TALF, FDIC, and Treasury guarantees of bank loans and money market funds, and even the initial tranche of auto loans were all done during the Bush Administration. The same is true for the overwhelming bulk of the TARP funds allocated. By the time President Obama took the oath of office on January 20, 2009, $299 billion of TARP funds had been spent. President Obama then spent another $98 billion on programs announced during the Bush tenure and $59 billion on programs initiated by the Obama Administration (PPIP and housing subsidies). Eighty-seven percent of TARP spending (95 percent if one excludes housing) was for programs announced during the Bush Administration.

The Obama Administration tweaked some of these policies, changed a few of the details, but largely continued implementation of financial rescue policies they "inherited." Their only major new financial rescue policy was the Treasury-FDIC Public-Private Investment Program (PPIP), their attempt to resurrect the toxic asset purchase idea. While announced with great fanfare in early 2009, it was abandoned much more quietly a few months later.

President Obama and his incoming team were by no means passive in their initial weeks and months; just the opposite. But the Obama Administration focused its initial policy efforts on addressing problems other than the financial shock that was largely behind them when they started. In late January, February, and March of 2009 the Administration rolled out policies to address mortgage foreclosures, the fiscal stimulus to dampen the severe macroeconomic recession caused by the financial shock, and longer-term loans and restructuring of the failing auto manufacturers.

The Obama Administration's financial sector efforts began with the Fed's stress tests (a logical outgrowth of the Bush-era TARP capital purchase program) and later expanded into a full-fledged restructuring effort that eventually became the Dodd-Frank law. While the financial rescue was done during the Bush era, the subsequent rebuilding and restructuring are taking place during President Obama's tenure.

OBSERVATION 12: This financial rescue continuity should not be surprising, since two of the three key players were unchanged.

In the last few months of the Bush Administration, the three economic policy makers who made many of the key decisions were Treasury Secretary Hank Paulson, Fed Chairman Ben Bernanke, and New York Fed President Timothy Geithner. Early in the Obama Administration the three key economic policy makers were Treasury Secretary Geithner, Fed Chairman Bernanke, and National Economic Council Director Lawrence Summers. While one shifted chairs, two of the three people making firm-specific decisions and developing recommendations for the President served in both administrations. It therefore should not be surprising that the Obama Administration, despite public claims to the contrary, largely continued and completed the Bush-era financial rescue efforts unchanged.

This also illustrates a popular misconception about Mr. Geithner's role. His efforts to resolve the financial crisis were much more in his role as New York Fed President than in his role as Treasury Secretary. When he moved from Liberty Street to Pennsylvania Avenue, Mr. Geithner's principal role shifted from financial institution and market crisis manager to developer of financial structural reforms, leader of mortgage and auto efforts, and fiscal stimulus advocate.

Observation 13: Some conservatives mistakenly assumed that Chapter 11 restructuring was a viable option for GM and Chrysler.

Some conservatives argue that President Bush should not have extended short-term loans to GM and Chrysler from TARP. They argue these firms should instead have followed the normal process by entering a "quick Chapter 11 restructuring," with the prospect of exiting from bankruptcy as financially viable firms. At the time we believed (and still do) that this option was not available.

In late December 2008 GM and Chrysler were nearly out of cash. These firms had to pay their suppliers the first week in January and were unable to get private loans to provide the needed cash. They faced not just insolvency but an impending liquidity crunch. Had the Bush Administration not loaned TARP funds to these firms, both firms would have faced a supplier run in January and soon thereafter had to enter a Chapter 7 liquidation process. As much as we wished it had been, Chapter 11 restructuring was not an option. In more stable financial markets private debtor-in-possession financing might have been available, but in December 2008 it was not.

It remains unclear whether this resulted from a savvy strategic move on the part of both firm's leaders, or instead from massive incompetence and mismanagement. It is possible that the leadership of both firms (correctly) calculated that policy makers would be unwilling to allow two of the three largest U.S.-based auto manufacturers to fail, and that they gambled their firms' existence on this political prediction. In GM's case this is reinforced by the little-known gambit they pulled in October of 2008, when they told Bush Administration officials they faced a likely supplier run the Monday before election day if they did not receive an immediate infusion of cash.

It is also, however, quite possible that this policy choice resulted from nothing more than overwhelming incompetence in the leadership of both firms. By December of 2008, neither firm had done the necessary legal or financial work to prepare for restructuring.

Regardless of the reason that these firms faced imminent failure, the choice that many conservatives wanted President Bush to confront was not the one he actually confronted. He had two viable options in front of him, not three. If he chose not to extend the loans, he was advised that these firms would likely liquidate within weeks. Private sources of debtor-in-possession financing that would have been necessary to allow GM and Chrysler to continue absent government aid were simply unavailable.

OBSERVATION 14: President Bush's decision to extend auto loans was in part influenced by the timing of the Presidential transition.

Although Barack Obama was not President Bush's choice in the 2008 election, after election day President Bush repeatedly reinforced to his staff the importance of a smooth transition to the Obama presidency. He was keenly aware of the challenges the new President would face during his first few days and weeks in office.

The timing of the transition significantly influenced President Bush's decision to extend short-term loans to GM and Chrysler. Had he decided otherwise, President Bush would have left President Obama with a huge blow to American manufacturing in addition to all the challenges of recovering from a severe financial shock. President Bush's decision was an attempt to give options and flexibility to his successor, to buy the new president some time and breathing room to make his own decisions about the fate of these two large firms.

Observation 15: While both were heavily involved in crisis management, Presidents Bush and Obama took different approaches to firm-level decisions.

President Bush was deeply involved in managing the response to the financial crisis, but his approach to firm-specific decisions differed from that of his successor. In particular, President Bush and his administration shunned assuming the responsibilities of ownership that a true nationalization of TARP-assisted firms would bring.

Beginning in August 2007 and continuing through the end of the Bush presidency in January 2009, we each spent countless hours preparing for a seemingly never-ending series of financial crisis policy meetings and briefings with President Bush. We were part of an extensive ongoing, eighteen-month policy dialogue between the President and his advisors.

Throughout that period the President and his entire team were wary of government control of firms that received government funds. To the extent possible, the goal was always to provide the resources required for survival, but make the responsibility for surviving still primarily a private matter. A clear indication of this was President Bush's unwillingness to grant voting rights to the government for the taxpayer-owned shares in companies that were acquired through TARP.

Perhaps the best example of the difference was evidenced in the different approaches the Obama and Bush administrations took to the auto loans. The Bush Administration provided short-term loans with conditions, but the firm managers were responsible for making the decisions to meet those conditions. In contrast, the Obama Administration effectively became management for GM and Chrysler. The starkest example of this difference was the Obama White House's boast that President Obama had personally made the decision to fire General Motors CEO Rick Wagoner.

In this same vein, reports that Obama White House officials regularly pushed Treasury staff to make TARP investments in particular financial institutions deviated from the Bush approach, as did the Obama Administration's assumption of direct control of the GM restructuring and the union-favored result of that process.

Coupled with that, more of the operational decisions occurred outside the White House during the Bush Administration. All major decisions on policy direction, major policy moves, and alterations in course were made by President Bush after hearing his advisors' thoughts. But for action, President Bush relied principally on Treasury Secretary Paulson, who worked in close cooperation with Fed Chairman Bernanke and New York Fed President Geithner. Like a commander-in-chief overseeing a general in the field, President Bush gave policy guidance when needed, while allowing Secretary Paulson and others leeway to apply that guidance to specific situations.

As in any recent administration, countless important policy decisions were elevated to President Bush for his decision or at least approval. At the same time, the Bush White House did its best to leave the application to specific firms of those presidential policy decisions to those working in the Cabinet,[5] to avoid the appearance of political decision-making and of picking winners and losers among particular firms. President Obama and his White House staff took a much more active role in specific firm-level decisions. To us it appears the Obama team adopted a highly political approach and one that was less consistent with allowing those with the best information, in government and at the level of the private firm, to make the decisions.

5. More often than not, this meant to Secretary Paulson and Treasury staff.

Observation 16: "The deepest recession *since* the Great Depression" does not mean the two are comparable in size.

The Obama Administration popularized the phrase "the deepest recession since the Great Depression." This has been misinterpreted by many to mean that the two periods are comparable in size.

U.S. GDP declined 4.7 percent in the recession of 2008–2009 from its previous peak in Q4 2007. That is a larger decline than in the four other major downturns since the end of World War II, during which GDP declined by 2.7% (1953–54), by 3.7% (1957–58), by 3.2% (1974–75), and by 2.9% (1981–82). But GDP declined by 26.7 percent in the period between 1929 and 1933.

Similarly, unemployment rates during the Great Depression were more than double those during the recent recession.

While both the Great Depression of the 1930s and the "Great Recession" of 2008–2009 were precipitated by financial shocks, the GDP loss of the former was more than six times as large, proportional to the economy at the time, as the latter. The recent loss of 4 percent of GDP has had severe and in many cases tragic consequences, but it is grossly misleading to suggest numeric comparability with the Great Depression.

Observation 17: At best, the fiscal stimulus offset about a quarter of output lost in the past five years.

Much discussion of the financial and economic crises centers on counterfactual claims: what would have happened if a different course of action had been taken?

Because time cannot be rewound, the counterfactual cannot be ascertained with certainty. One can assert that an action taken (or not) had a particular effect, but because it is impossible to know what would have happened otherwise, no claim can be conclusively proven or disproven. Since one cannot know what GDP growth would have been without a fiscal stimulus, there are no definitive estimates of the amount by which the fiscal stimulus law helped increase economic growth. Defenders of the fiscal stimulus argue that the counterfactual baseline was horrific and that the fiscal stimulus therefore had a significant impact, while critics of the same law argue the opposite. Because it is impossible to know the alternative, these debates cannot be conclusively resolved.

Still, it is possible to shed light on this question. Although there is a range of estimates of the effects of the fiscal stimulus that the Obama Administration and Democrats passed in early 2009, the highest of these estimates is in the 3.5 percentage point range, which means that had the stimulus not be passed, there would have been 3.5 percent lower GDP than we actually had. Did this save us from another Great Depression? If those estimates are even close to correct, the answer is unequivocally no. The recession and following slow recovery cost the economy around 12 percent of GDP (spread over several years) relative to what would have happened in the absence of any recession. If the highest estimate of the effect of the stimulus is assumed, then the output lost during the recession and slow recovery would have been 15.5 percent rather than 12 percent of GDP. The first wave of the Great Depression resulted in almost a 40 percent loss in output relative to what would have occurred had there been no Great Depression. Although the counterfactual cannot be disproved, even the largest estimates of the effects of the fiscal stimulus imply that, absent the 2009 stimulus, a somewhat worse recession would have occurred, but it would have been nothing like the Great Depression.

Observation 18: The exceptionally slow recovery has magnified the economic losses of the 2008–09 recession.

Another important feature of the recent recession is the unusually slow rate of recovery. Even now, five years after the severe recession began, U.S. GDP is far below its potential and the unemployment rate, in the mid-seven percent range, is much higher than is normal for the United

States. While the economy and employment are growing at a modest rate, their levels are still low enough, and the growth rate slow enough, that the employment and output gaps are not closing rapidly. Prior to the recession, over 63 percent of the working age population had jobs. Today that number is at 58.7 percent, just slightly better than where it has been for the past three years. This slow recovery means the cumulative effect of the 2008–09 recession and the slow 2009–13 recovery is a loss of 12 to 15 percent of GDP. The severe recession was bad enough, but the slow recovery is doing just as much damage to living standards since it is sustained over a longer time frame.

Observation 19: While the U.S. economy is growing, it is not returning quickly to its prior level.

When a patient recovers from a disease, his or her health is restored to its prior level. Unfortunately, there is little evidence to suggest that the U.S. economy will get back to the trajectory from which it departed in 2008. Already mentioned is that GDP remains below where it would have been had we continued along the path that we have followed in the post-war or last thirty-year period. Rather than moving back toward that path, which would require growth rates above 3 percent, we continue to move further away, seeing growth in the 2 percent range since the recession ended. Furthermore, despite optimistic forecasts for higher growth in the future, each year the government forecasts have been proven wrong—for the worse. There are two possible interpretations of these facts.

The first is that this recession was so bad that the recovery is necessarily slower than prior ones. There is no doubt that this recession was worse than others, but the historic evidence shows that in the years following recession, growth rates are highest when the recession is most severe. Indeed, the recessions that had the highest post-recession growth were those that followed the declines of the Great Depression, with annual growth rates of over 10 percent. The '80s recession, also a severe one (actually a double-dip recession) saw growth rates averaging near 5 percent in the four years following its end.

The second interpretation is that we have not adopted the kind of pro-growth policies that can return us to the higher growth rates of the past. Tried-and-true policies for enhanced economic growth include low and efficiently-structured taxes, sensible regulation where benefits exceed the costs, fiscal responsibility, and an active free-trade agenda. On all four counts, there is significant room for improvement. Studies show that the most harmful taxes are those on capital because capital can move across international borders, yet policy makers have recently raised rather than lowered tax rates on capital. Regulation has increased without obvious benefits, either social or economic. Our fiscal situation has worsened, with public debt more than doubling since 2008 relative to the economy. Excepting the significant accomplishment of moving the Bush-negotiated Korea, Columbia, and Panama trade agreements through Congress, there has been little aggressive action taken on the trade front.

If the second interpretation is correct, then by changing our policies we have the ability to accelerate U.S. economic growth.

Appendix: Financial Crisis Timeline

July 31, 2007

> Bear Stearns liquidates two hedge funds that invested in various types of mortgage-backed securities.

August 9, 2007

> BNP Paribas, France's largest bank, halts redemptions on three investment funds.

August 31, 2007

President Bush announces a program to help reduce foreclosures, including an expansion of an FHA program and a proposed tax change.

October 10, 2007

Treasury Secretary Paulson announces the HOME NOW initiative, an alliance of investors, servicers, mortgage market participants, and credit and homeowners' counselors encouraged by the Treasury Department and the Department of Housing and Urban Development.

December 12, 2007

The Fed announces the creation of a Term Auction Facility (TAF) in which fixed amounts of term funds will be auctioned to depository institutions against a wide variety of collateral.

January 11, 2008

Bank of America announces that it will purchase Countrywide Financial in an all-stock transaction worth approximately $4 billion.

January 18, 2008

President Bush proposes a $150 billion fiscal stimulus plan.

February 13, 2008

President Bush signs into law a $150 billion fiscal stimulus bill

February 17, 2008

Northern Rock is taken into state ownership by the Treasury of the United Kingdom.

March 11, 2008

The Fed announces the creation of the Term Securities Lending Facility.

March 13, 2008

Bear Stearns approaches the Fed and says it will fail without assistance.

March 16, 2008

The Federal Reserve Bank of New York announces it will provide term financing to facilitate JPMorgan's acquisition of Bear Stearns.

March 16, 2008

The Fed establishes the Primary Dealer Credit Facility, extending credit to primary dealers, including investment banks, at the primary credit rate against a broad range of investment grade securities.

March 24, 2008

JP Morgan's acquisition of Bear Stearns is amended to raise the price to Bear Stearns shareholders from $2 to $10 per share.

March 31, 2008

Treasury releases a blueprint for a modernized financial regulatory system.

February–June, 2008

Failure or near-failure of financial markets including auction rate securities, monoline insurers (MBIA and Ambac), and student loans, the last caused by departures and threatened departures of private lenders.

May–June, 2008

Council of Economic Advisers and Treasury representatives provide Department of Education with a student loan buy-back plan that prevents the collapse of the private student loan market.

July 11, 2008

The Office of Thrift Supervision closes IndyMac Bank. The FDIC announces the transfer of the insured deposits and most assets of IndyMac.

July 13, 2008

President Bush authorizes Treasury to seek emergency authorities from Congress to support the GSEs, including a temporary increase in the credit lines of Fannie Mae and Freddie Mac and a temporary authorization for the Treasury to purchase equity in either GSE if needed.

July 15, 2008

The Securities Exchange Commission issues an emergency order temporarily prohibiting naked short selling in the securities of Fannie Mae, Freddie Mac, and primary dealers at commercial and investment banks.

July 30, 2008

President Bush signs into law the Housing and Economic Recovery Act of 2008 (Public Law 110-289), which, among other provisions, authorizes Treasury to purchase GSE obligations and reforms the regulatory supervision of the GSEs under a new Federal Housing Finance Agency.

September 7, 2008

The Federal Housing Finance Agency (FHFA) places Fannie Mae and Freddie Mac into government conservatorship. Treasury announces three additional measures to complement the FHFA's decision: (1) preferred stock purchase agreements between the Treasury/FHFA and Fannie Mae and Freddie Mac to ensure the GSEs' positive net worth; (2) a new secured lending facility available to Fannie Mae, Freddie Mac, and the Federal Home Loan Banks; and (3) a temporary program to purchase GSE Mortgage-Backed Securities.

September 15, 2008

Bank of America agrees to buy Merrill Lynch.

Lehman Brothers files for bankruptcy protection.

September 16, 2008

The Reserve Primary Fund "breaks the buck."

The Fed loans $85 billion to AIG.

September 17, 2008

Treasury announces a Supplementary Financing Program consisting of a series of Treasury bill issues that will provide cash for use in Federal Reserve initiatives.

September 19, 2008

Treasury announces a temporary guaranty program to make available up to $50 billion from the Exchange Stabilization Fund to guarantee investments in participating money market mutual funds.

The SEC bans short sales on equities of financial institutions.

September 20, 2008

After consultation with Congressional leaders, the Bush Administration submits draft TARP legislation to Congress.

September 21, 2008

The Fed approves requests by Goldman Sachs and Morgan Stanley to restructure as bank holding companies (thereby getting Fed protection).

September 25, 2008

JP Morgan Chase agrees to buy Washington Mutual, facilitated by the FDIC.

September 29, 2008

The House of Representatives defeats the TARP legislation.

October 1, 2008

The Senate passes TARP legislation on a bipartisan 74–25 vote.

October 3, 2008

The House of Representatives passes the TARP bill 263-171.

President Bush signs it into law (Public Law 110-343), establishing the $700 billion Troubled Asset Relief Program (TARP), guaranteeing transaction accounts, and raising the cap for FDIC insurance to $250K.

October 6, 2008

The Fed announces it will pay interest on reserves.

October 7, 2008

The Fed creates the Commercial Paper Funding Facility.

FDIC increases deposit insurance to $250K.

October 8, 2008

The Fed loans AIG another $38 billion.

October 12, 2008

Wells Fargo purchases Wachovia.

October 14, 2008

Treasury announces the Capital Purchase Program of TARP, making available $250 billion of capital for preferred stock investments in U.S. financial institutions. Nine large financial organizations announce their intention to subscribe to the new TARP facility in an aggregate amount of $125 billion.

FDIC temporarily guarantees senior debt of banks.

Late October

GM meets with Department of Commerce and Council of Economic Advisers to announce that, absent government help, it will not be able to pay its suppliers in early November and that bankruptcy is imminent.

October 24, 2008

PNC buys National City Corporation.

October 28, 2008

Treasury purchases a total of $125 billion in preferred stock in nine U.S. banks under the Capital Purchase Program.

November 10, 2008

The Fed and Treasury announce a restructuring of the government's financial support of AIG. The Treasury will purchase $40 billion of AIG preferred shares under the TARP program, a portion of which will be used to reduce the Fed's loan to AIG from $85 billion to $60 billion.

American Express becomes a bank holding company.

November 11, 2008

Treasury announces a new streamlined loan modification program with cooperation from the Federal Housing Finance Agency, Department of Housing and Urban Development, and the HOPE NOW alliance.

November 12, 2008

Secretary Paulson formally announces that Treasury has decided not to use TARP funds to purchase illiquid mortgage-related assets from financial institutions. The Fed's Term Asset-Backed Securities Lending Facility is announced.

November 14, 2008

Treasury purchases a total of $33.5 billion in preferred stock in twenty-one U.S. banks under the Capital Purchase Program.

November 14–15, 2008

President Bush hosts the first G-20 summit in Washington.

November 21, 2008

Treasury agrees to serve as a buyer of last resort for The Reserve Fund's U.S. Government Fund.

Treasury purchases a total of $3 billion in preferred stock in twenty-three U.S. banks under the Capital Purchase Program.

November 23, 2008

Treasury, the Fed, and FDIC jointly announce an agreement with Citigroup to provide a package of guarantees, liquidity access, and capital. Citigroup will issue preferred shares to Treasury and FDIC in exchange for protection against losses on a $306 billion pool of commercial and residential securities held by Citigroup. The Federal Reserve will backstop residual risk in the asset pool through a non-recourse loan. In addition, Treasury will invest an additional $20 billion in Citigroup from the TARP.

Treasury and the Fed announce a new rescue package for Citigroup.

November 25, 2008

The Fed announces that the Term Asset-Backed Securities Lending Facility (TALF) will lend up to $200 billion on a non-recourse basis to holders of AAA-rated asset-backed securities and recently-originated consumer and small business loans through the Federal Reserve Bank of New York. Treasury will provide $20 billion of TARP money for credit protection.

The Fed agrees to buy housing-related financial assets created or guaranteed by Fannie and Freddie.

December 3, 2008

The SEC changes rules regarding credit rating agencies.

December 5, 2008

Treasury purchases a total of $4 billion in preferred stock in thirty-five U.S. banks under the Capital Purchase Program.

December 11–12, 2008

A House-passed bill to authorize $14 billion in loans to U.S. auto manufacturers dies in the Senate.

December 12, 2008

Treasury purchases a total of $6.25 billion in preferred stock in twenty-eight U.S. banks under the Capital Purchase Program.

December 19, 2008

President Bush authorizes loans of up to $13.4 billion for General Motors and $4.0 billion for Chrysler from TARP.

Treasury purchases a total of $27.9 billion in preferred stock in forty-nine U.S. banks under the Capital Purchase Program.

December 23, 2008

Treasury purchases a total of $15.1 billion in preferred stock from forty-three U.S. banks under the Capital Purchase Program.

December 29, 2008

President Bush authorizes Treasury to purchase $5 billion in equity from GMAC as part of its program to assist the domestic automotive industry. Treasury also agrees to lend up to $1 billion to General Motors "so that GM can participate in a rights offering at

GMAC in support of GMAC's reorganization as a bank holding company." This commitment is in addition to the support announced on December 19, 2008.

December, 2008–January, 2009

TARP is used for purchases of $8.1 billion in preferred stock from U.S. banks.

January 12, 2009

At the request of President-elect Obama, President Bush notifies Congress that he is releasing the remaining $350 billion in TARP funding for use by the incoming administration.

January 16, 2009

Treasury, Federal Reserve, and FDIC announce a package of guarantees, liquidity access, and capital for Bank of America.

Treasury, Federal Reserve, and FDIC finalize terms of their guarantee agreement with Citigroup. (See announcement on November 23, 2008.)

January 20, 2009

Barack Obama is sworn in as 44th President of the United States.

January 30, 2009

The Fed announces a policy to avoid preventable foreclosures on mortgages held by the Fed.

February 10, 2009

Treasury announces the concept of a new Public-Private Investment Program, to be run jointly by Treasury and the FDIC, to buy housing-related financial assets from financial institutions.

The Fed announces expansion of the TALF.

Treasury announces new foreclosure mitigation and small business lending initiatives.

February 18, 2009

President Obama signs into law an $862 billion fiscal stimulus bill (P.L. 111-5).

President Obama announces a new mortgage refinancing/modification plan, including $75 billion from TARP and increasing the scope and size of Fannie Mae and Freddie Mac's.

GM and Chrysler submit new restructuring plans to the Obama Administration.

March 2, 2009

The Fed and Treasury restructure AIG's aid package.

March 3, 2009

Treasury and the Fed launch TALF.

March 19, 2009

Treasury announces $5 billion from TARP to aid auto suppliers.

March 23, 2009

Treasury announces the details of the Public-Private Investment Program.

March 25, 2009

Treasury proposes new legislation for resolution authority for large financial firms.

March 26, 2009

Treasury proposes its outline for comprehensive financial reform.

March 30, 2009

President Obama fires GM CEO Rick Wagoner. The Obama Administration proposes to restructure GM and merge Chrysler with Fiat.

March 31, 2009

Treasury extends the guarantee of money market mutual funds.

April 30, 2009

Chrysler announces it will file for bankruptcy protection. The Obama Administration extends a long-term loan.

May 7, 2009

The Fed releases results of the stress tests.

June 1, 2009

GM files for bankruptcy protection. The Obama Administration extends a long-term loan.

July 10, 2009

GM emerges from bankruptcy.