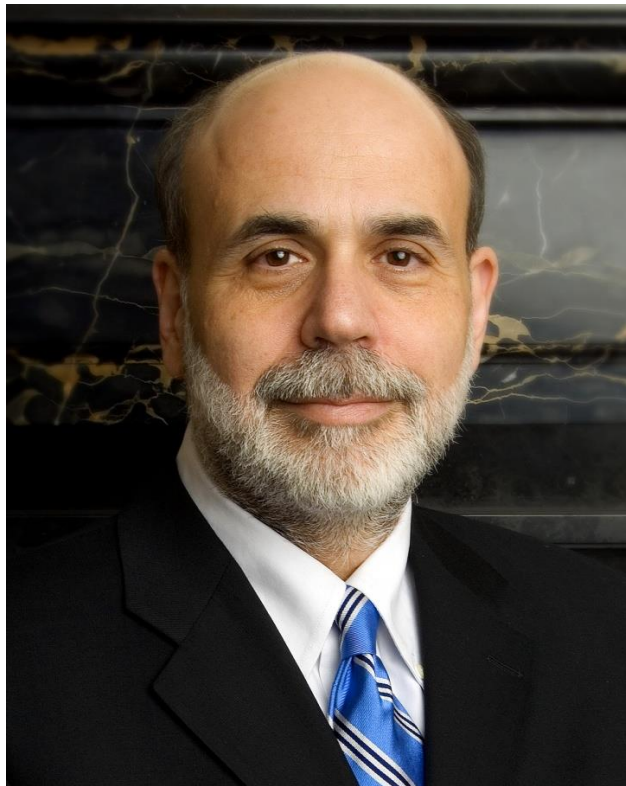


# *Economics of Democracy: The Ben Bernanke Project*

presented by

## **The Echo Foundation**



*"I'm not one of those people who looks at this as some kind of video game. I come from Main Street, from a small town that's really depressed. This is all very real to me." —Ben Bernanke, December 2009*

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# *Economics of Democracy: The Ben Bernanke Project Curriculum Guide*

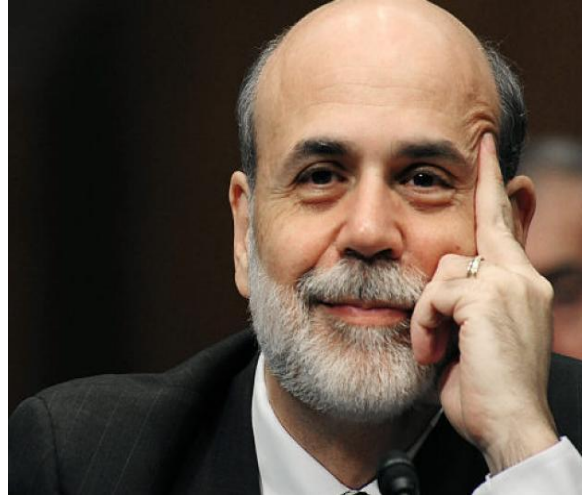
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*“[Bernanke] keeps his feelings and beliefs private... but it’s really embedded in who he is.” –Mark Gertler (Ben Bernanke close friend and collaborator)*



## *Ben S. Bernanke – Full Biography*

From The Brookings Institution

Ben S. Bernanke is a Distinguished Fellow in Residence with the Economic Studies Program at the Brookings Institution. From February 2006 through January 2014, he was Chairman of the Board of Governors of the Federal Reserve System. Dr. Bernanke also served as Chairman of the Federal Open Market Committee, the System's principal monetary policymaking body.



Before his appointment as Chairman, Dr. Bernanke was Chairman of the President's Council of Economic Advisers, from June 2005 to January 2006. He had already served the Federal Reserve System in several roles. He was a member of the Board of Governors of the Federal Reserve System from 2002 to 2005; a visiting scholar at the Federal Reserve Banks of Philadelphia (1987-89), Boston (1989-90), and New York (1990-91, 1994-96); and a member of the Academic Advisory Panel at the Federal Reserve Bank of New York (1990-2002).

From 1994 to 1996, Dr. Bernanke was the Class of 1926 Professor of Economics and Public Affairs at Princeton University. He was the Howard Harrison and Gabrielle Snyder Beck Professor of Economics and Public Affairs and Chair of the Economics Department at the university from 1996 to 2002. Dr. Bernanke had been a Professor of Economics and Public Affairs at Princeton since 1985.

Before arriving at Princeton, Dr. Bernanke was an Associate Professor of Economics (1983-85) and an Assistant Professor of Economics (1979-83) at the Graduate School of Business at Stanford University. His teaching career also included serving as a Visiting Professor of Economics at New York University (1993) and at the Massachusetts Institute of Technology (1989-90).

Dr. Bernanke has published many articles on a wide variety of economic issues, including monetary policy and macroeconomics, and he is the author of several scholarly books and two textbooks. He has held a Guggenheim Fellowship and a Sloan Fellowship, and he is a Fellow of the Econometric Society and of the American Academy of Arts and Sciences. Dr. Bernanke served as the Director of the Monetary Economics Program of the National Bureau of Economic Research (NBER) and as a member of the NBER's Business Cycle Dating Committee. In July 2001, he was appointed Editor of the *American Economic Review*. Dr. Bernanke's work with civic and professional groups includes having served two terms as a member of the Montgomery Township (N.J.) Board of Education.

Dr. Bernanke was born in December 1953 in Augusta, Georgia, and grew up in Dillon, South Carolina. He received a B.A. in economics in 1975 from Harvard University (summa cum laude) and a Ph.D. in economics in 1979 from the Massachusetts Institute of Technology.

Dr. Bernanke is married and has two children.

## Timeline

### 1953

Born December 13, in Augusta, Georgia to Edna and Philip Bernanke.

### 1965

Wins South Carolina state spelling bee.

### 1971-1975

Graduates Dillon High School as valedictorian with top SAT scores in South Carolina. Enters Harvard University. Begins working at South of the Border in South Carolina and construction at hospital.

### 1975

Graduates Harvard with B.A. in economics. Enters Massachusetts Institute of Technology.

### 1978

Weds Anna Friedmann.

### 1979

Graduates MIT with a PhD in Economics.

### 1979-1983

Assistant Professor of Economics at the Graduate School of Business, Stanford.

### 1983-1985

Associate Professor of Economics, Stanford University.

### 1985

Joined faculty at Princeton University.

### 1985-2002

Professor of Economics and Public Affairs, Princeton University.

### 1996-2002

Economics Department Chair, Princeton University.

### 2002-2005

Member of Board of Governors, Federal Reserve.



Ben S. Bernanke at Nationals Park in Washington. Credit Doug Mills/The New York Times

**2005-2006**

President's  
Council of  
Economic  
Advisors,  
Chairman

**2006**

Begins first term  
as Federal  
Reserve  
Chairman.

**2006-2010**

Financial Crisis  
and Great  
Recession.

**2010**

Nominated for  
second term as  
Federal Reserve  
Chairman.



U.S. President Obama meets with regulators and U.S. Securities and Exchange Commission Mary Shapiro, U.S. Secretary of the Treasury, Timothy Geithner and U.S. Federal Reserve Chairman Ben Bernanke in the Roosevelt Room of the White House, June 17, 2009. Source: Pool/Getty Images North America.

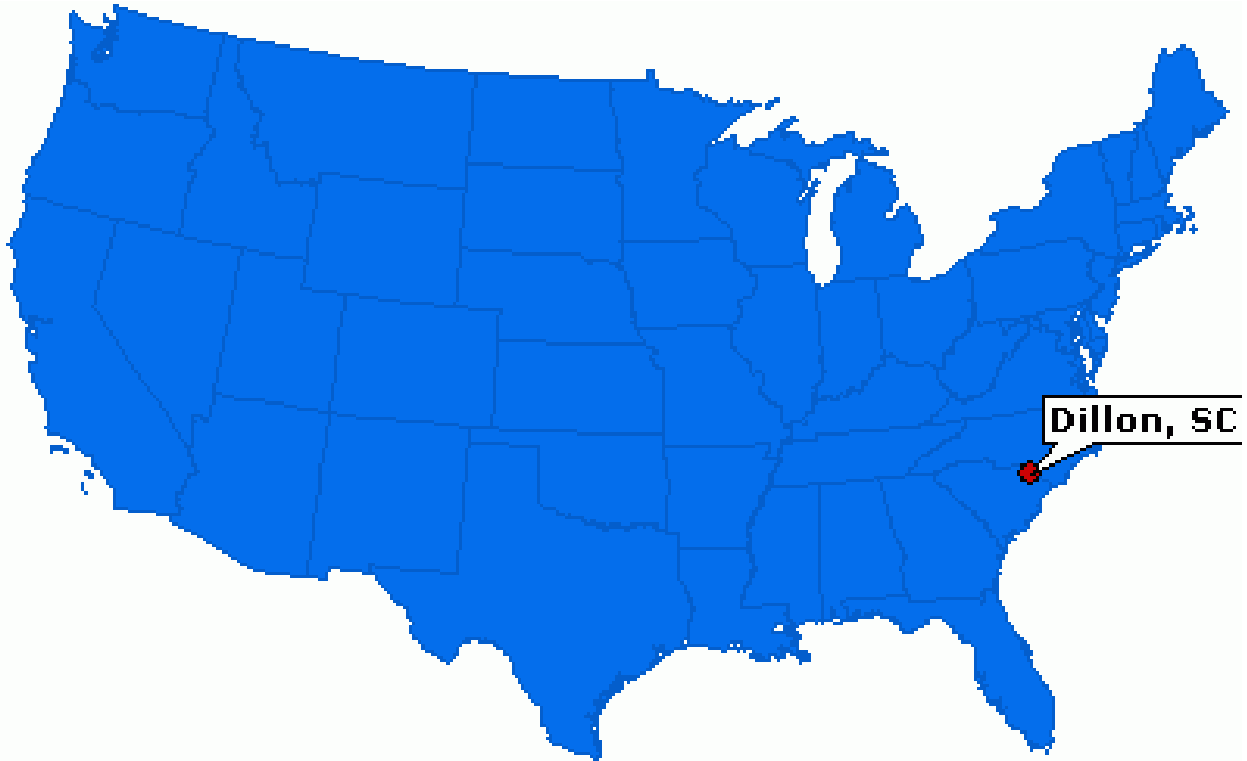
**2013**

President Barack Obama nominates Janet Yellen as Federal Reserve Chair successor.

**2014**

January 31 Bernanke steps down as Federal Reserve Chairman.  
Joins Brookings Institution as a Senior Fellow.

# *Ben Bernanke's Hometown: Dillon, South Carolina*



# Important People in Ben Bernanke's Life

Created by Student Interns, The Echo Foundadtion

**(1) President George W. Bush:**

- Appointed Bernanke to be on his Council of Economic Advisers.
- Nominated Bernanke to be the chairman of the Federal Reserve.

**(2) President Barack Obama:**

- Nominated Bernanke for a second term as chairman of the Federal Reserve.

**(3) Mark Gertler:**

- Close friend and collaborator with Bernanke.
- Supported him and his morals: "keeps his feelings and beliefs private... but it's really embedded in who he is" (Kessler).

**(4) Tim Geithner:**

- Treasurer Secretary
- Geithner served as head of the New York Fed during the Bush Administration (he was basically Bernanke's Ambassador to Wall Street).

**(5) Anna Friedmann:**

- Ben Bernanke's wife
- Keeps Bernanke grounded and helps him to remember his morals: "He prefers to eat at home with his wife, who still makes him do the dishes and take out the trash. Then they do crosswords or read" (Grunwald).



**(1)** Bush declaring Bernanke the new chairman of the Federal Reserve Board. (AP Photo/J. Scott Applewhite)



**(2)** President Obama nominating Ben Bernanke for a second term as chairman. (Source: Getty Images)



**(3)** Mark Gertler. (<http://www.generationaldynamics.com/pg/xct.gd.log0810.htm>)



**(4)** Tim Geithner and Ben Bernanke at a lunch meeting they would have each week. (DAN WINTERS FOR TIME)



**(5)** Anna Friedmann, Ben Bernanke's wife. (COURTESY BERNANKE FAMILY)



## *Fun Facts about Dr. Bernanke!*

Created by Student Interns, The Echo Foundation

1. In high school, Bernanke enjoyed playing the saxophone in his school band. In addition, he was a part of a small four man band called The FancyPants because they wore plaid trousers!
2. Bernanke's grandfather founded a small drug store in Dillon called Jay Bee Drug Co.
3. Ben Bernanke was nominated *Time Magazine* Person of the Year in 2009.
4. Bernanke studied 3 other majors before economics.
5. At the age of 11, Dr. Bernanke won the South Carolina state spelling bee!
6. Bernanke's family was one of the only Jewish families in his small Christian community. As a teenager, he participated in the Sabbath services at his local synagogue.
7. While a PhD student at MIT, Dr. Bernanke met his future wife, Anna, on a blind date!
8. As an economics professor at Princeton, Bernanke specialized in teaching about the Great Depression.
9. Instead of attending dinner parties, Bernanke enjoys staying home to eat and play crossword puzzles with his wife, who still makes him wash the dishes!
10. Bernanke is a strong advocate of loose monetary policies.
11. Dr. Bernanke enjoys playing playing basketball in the Federal Reserve Squash Court!
12. There is an exit alongside Interstate Highway 95 in Bernanke's hometown of Dillon called the *Ben Bernanke Interchange*.
13. A huge fan of the Washington Nationals, Dr. Bernanke rarely misses a game.
14. In high school, Bernanke taught himself calculus.

# Short Timeline Paragraphs

Created by Student Interns, The Echo Foundation

## Birth and Early Life



His father was a pharmacist who ran the family business.

Benjamin Shalom Bernanke was born in Augusta, Georgia but grew up in the small town of Dillon, South Carolina by Bernanke's grandfather, and his mother was a school teacher. Bernanke has two younger siblings, Seth and Sharon. The Bernanke's were a strong Jewish family, and the young Ben often volunteered in his local synagogue. As a teenager, Bernanke worked construction and waited tables at South of the Border. He also enjoyed playing the saxophone, and was a very bright student.

## Education and Young Adulthood

Growing up, Dr. Bernanke consistently excelled in school. Top of his class, he graduated as valedictorian of his high school, and from the start, it was clear that he was a bright student. Scoring a 1590 out of 1600 on his SAT, he earned the highest score in the whole state of South Carolina! Dr. Bernanke was also a National Merit Scholar, and attended both Harvard and MIT.



Photo courtesy of South of the Border.

## Controversy, Support and Opposition



Bernanke playing the saxophone as a teenager. (COURTESY BERNANKE FAMILY)

From 2009-2010, support for Dr. Bernanke was very little. As a result of the economic Recession, both republicans and democrats scrutinized Bernanke and many did not favor the idea of his second term. Opponent Russell D. Feingold stated, "Under the watch of Ben Bernanke, the Federal Reserve permitted grossly irresponsible financial activities that led to the worst financial crisis since the Great Depression." (Chan and Herszenhorn). However, Bernanke did receive support from several democratic senators, such as Christopher J. Dodd and Mary L. Landreiu, who had stated that "failing to reappoint Mr. Bernanke would only add turmoil to markets that are just beginning to recover." (Chan and Herszenhorn).

## Impact

Dr. Ben Bernanke impacted the Federal Reserve in several ways. He worked tirelessly through the financial crisis to preserve the transparency and stability of the banking system. Through frequent testifying and town hall meetings, Bernanke pushed to explain his actions to the citizens and worked to avoid an economic catastrophe. However, he admits he did not realize just how fragile the economy had become, and regrets the hardships that it caused. Dr. Bernanke expresses his hope and confidence that economic growth will continue.



Bernanke as a teenager. (COURTESY BERNANKE FAMILY)

# *Ben Bernanke: Life Summary*

Created by Student Interns, The Echo Foundation

Benjamin Shalom Bernanke was born on December 13, 1953 in Augusta, Georgia. However, he grew up in Dillon, SC, where his grandfather moved during the Depression, and established a pharmacy called Jay Bee Drugs, which became an “old-fashioned business” on Main Street in Dillon, SC. Bernanke's father also worked there, and the family pharmacy was one of the few businesses in Dillon that extended credit to African American people.

Bernanke was a brilliant student who thrived in school. He won the state spelling bee at the age of 11, and in high school he taught himself calculus. He also scored the highest SAT score in the state of South Carolina. From there, he was accepted into Harvard University. In 1975, he graduated from Harvard with a bachelor's degree in economics. Bernanke continued his studies at the Massachusetts Institute of Technology where he received his Ph. D in economics in 1979.

After graduating from MIT, Bernanke became an economics professor at Stanford University. In the mid-1980's, he went on to teach at Princeton, where he became the head of their department of economics.

Following his career in academia, Bernanke became involved in the federal reserve as a scholar and advisor. He went on to become a Federal Reserve governor. Three years later, Bush appointed Bernanke to serve as the chairman for his Council of Economic Advisers. In 2005, with the support of senators such as John Kerry and Charles Schumer, he was nominated to replace Alan Greenspan as chairman of the Federal Reserve, and in January 2006 he began his first term as chairman.



Ben Bernanke at Princeton to deliver the commencement address, June 2013. Source: Rich Schultz/AP.

As the 14th chairman of the Federal Reserve, Ben Bernanke helped guide monetary policy during the Recession. He created solutions to aid failing financial institutions in 2008. In 2010, he was nominated for a second term by president Barack Obama. Although there was heated controversy regarding his actions resulting from the 2008 economic crash, he was still approved for his second and final term. In October of 2013, Obama nominated Janet Yellen as Bernanke's replacement. In January of 2014, after serving two terms, Bernanke stepped down from his role as chairman of the Federal Reserve.

Ben Bernanke was an incredibly influential figure in the Federal Reserve. He utilized his morals and extensive knowledge to guide him in implementing numerous policies. By promoting the transparency of the central bank, he returned the federal reserve back to the root of its purpose. He worked to stabilize the banking industry throughout the economic crisis of the late 2000's.



## *Student Viewpoints: Influences on Ben Bernanke's Life*

Created by Student Interns, The Echo Foundation

Many factors in Dr. Bernanke's early life and background have had a substantial impact on his work. He grew up in 'Main Street' Dillon, South Carolina, where his family ran a small pharmacy. The Bernanke family business was one of the only businesses in Dillon that extended credit to black people, which educated him on diversity and the social differences in society.

Immersed in the culture of the working class, he understood the hardships of living a not-so-luxurious life; working in construction and restaurants as a teenager influenced his perspective on work and formed a life-long understanding and respect for the working class. This respect for the working class had a direct impact on his decisions while he was chairman of the Federal Reserve. He is empathetic toward the issue of unemployment and the effects of the Recession, saying "I really regret all the hardship. The scars of unemployment can last a long time" (Bernanke). After President Obama appointed him to a second term as chairman, he worked hard in the debate over the Federal Reserve and its role. "I understand why people are frustrated. I'm frustrated, too," Bernanke says. "I'm not one of those people who looks at this as some kind of video game. I come from Main Street, from a small town that's really depressed. This is all very real to me."



Unemployment line in New York during the Great Depression, circa 1930. Source: Getty Images.

Along with his appreciation of the working class, he was very interested and educated on the Great Depression. His grandfather, Jonas, was an Austro-Hungarian army officer and Russian prisoner of war. He moved to Dillon and started a pharmacy during the Depression to establish a new life for himself. Bernanke is very familiar with the effects of the Depression because of what his grandfather endured. His interest and education on the Depression "instilled a life-long interest in the effects of deflation and its impact

on people's lives" (Smith). As a result, Bernanke made it a priority to prevent deflation as Federal Reserve chairman.

In addition, his religion- Judaism- continues to be a part of his life. As a teenager, "he helped lead services and roll the Torah scrolls in the town's synagogue" (Kessler). Friend and collaborator Mark Gertler stated that Bernanke "keeps his feelings and beliefs private... but it's really embedded in who he is."

# *An Overview of Bernanke's Work at the Federal Reserve*

Created by Student Interns, The Echo Foundation

On February 1st, 2006, Dr. Ben Bernanke was selected to become Chairman of the United States Federal Reserve. As the successor to Al Greenspan, Bernanke was introduced to the world by President Bush as "...the right man to build off the record Alan Greenspan has established." Throughout his time in the Federal Reserve, Bernanke embarked on the quest to lead the Reserve's response to the financial crisis as well as the Great Recession of the late 2000's. Bernanke was responsible for guiding the monetary policy, as well as adopting an inflation target of only 2%. He aimed to "make monetary policy more predictable and more efficient" (Bernanke). He managed to bring interest rates to an all time low, while promising to keep them there.

Dr. Ben Bernanke also led the Federal Reserve in implementing processes such as Quantitative Easing, where the central bank essentially buys billions of dollars worth of long-term treasuries and mortgage-backed growth in an effort to stimulate economic prosperity. Dr. Bernanke utilized his extensive knowledge on the Great Depression to influence his policy making in an effort to



Source: Policy.Mic

prevent making the same mistakes as in the 1930's. In addition to this, Bernanke sought to push for transparency and better communication of the Fed by holding numerous press conferences. He believed that the clarity of the central bank to the United States citizens was a crucial factor in its success. In his first term, Bernanke supported the takeover of Bear Sterns by JP Morgan Chase, as well as the \$150 bailout of insurance superpower A.I.G. He proposed the Bernanke Doctrine, which presented the options available to the Fed in order to control monetary policy and price stability, while combating deflation.

However, throughout his second term, Bernanke was faced with scrutiny regarding controversy of his work as chairman throughout the financial crisis. The New York Times stated that Bernanke "has been attacked for failing to foresee the financial crisis, for bailing out Wall Street, and, most recently, for injecting an additional \$600 billion into the banking system to give the slow recovery a boost" (Chan). Bernanke has since apologized for not being able to foresee just how immense the crisis was, and expressed his hope for the continuity of economic growth. However, despite the scrutiny, Bernanke remains a hero for his work at the Reserve because he "energized the stock market, lowered long-term interest rates, supported the interest-rate-sensitive housing and auto markets, and cut unemployment."

## *Is Ben Bernanke Having Fun Yet?*

By Sewell Chan  
The New York Times  
May 15, 2010

NINE days ago, Ben S. Bernanke, the Federal Reserve chairman, caught a Friday-night flight from here so he could address 1,100 graduates at the University of South Carolina the next morning about “The Economics of Happiness.” After the speech, he took a call in his hotel room from Jean-Claude Trichet, head of the European Central Bank, and the next day pledged billions of dollars to help Europe stave off a financial crisis — a flashback to the huge lending programs the Fed put together in 2008 to forestall economic collapse at home.

Mr. Bernanke, 56, hasn’t had much time to reflect on whether history’s verdict on his extraordinary actions of recent years will be harsh or forgiving. Nor has he had time to read the spate of new books about how he and two Treasury secretaries, Henry M. Paulson Jr. and Timothy F. Geithner, navigated a maelstrom that left millions of Americans jobless, homeless or broke.

Nominated last August to a second four-year term by President Obama, Mr. Bernanke nearly saw his career in public service scuttled by widespread discontent about lax regulation of Wall Street and historic federal bailouts that rescued well-heeled bankers from their own mistakes. After a raucous debate in January, the Senate confirmed Mr. Bernanke by a vote of 70 to 30 — the lowest vote of support for any Fed chief since the central bank’s creation in 1913.

Today, early in his fifth year as chairman, Mr. Bernanke faces challenges far different from any that his predecessor, Alan Greenspan, confronted in his 18-year tenure. As the nation’s all-powerful arbiter of interest rates, which directly affect banks’ willingness to lend the funds that fuel the economy, Mr. Bernanke has held the benchmark short-term rate at nearly zero since December 2008, aiming to shore up faltering financial institutions.

He has to figure out not only when to start raising rates — weighing high unemployment against the fear of inflation — but also how to begin shrinking the Fed’s balance sheet, which has more than doubled, to \$2.3 trillion, since the crisis started.



Ben Bernanke has to steer the Fed beyond the financial crisis, amid questions about whether he could have prevented it. (Mary F. Calvert for The New York Times)

Despite the Fed's now-notorious failure to rein in years of pell-mell, subprime mortgage lending, the Senate is considering entrusting the Fed with added regulatory powers: oversight of the largest financial institutions, including nonbanks like insurers, and an enhanced duty to monitor the kind of risky behavior that brought the American economy to the precipice.



A Fed Chairman's Life.

Just last week, the Fed fought off proposals that would have subjected its monetary policy decisions to routine audits and transferred oversight of thousands of Fed-regulated state-chartered banks to the Federal Deposit Insurance Corporation. But it is also likely to be forced to disclose much more about how, exactly, it went about rescuing the financial sector in the last few years — a matter of heated debate in Congress and the courts.

“Responsible people in Congress have recognized that you can’t have a strong economy without a solid independent central bank that has appropriate regulatory roles,” Mr. Bernanke said in an interview. “I continue to count on good sense and wisdom to trump short-term political advantage.”

He’s also aware that new mandates might just set up the Fed for future rounds of criticism. “We have to manage expectations,” he says. “There is no possibility of eliminating financial crises, even severe ones, but that does not mean there isn’t a meaningful opportunity to reduce the risks and reduce the effects, which is what this is all about.”

A POST-CRISIS conventional wisdom has arisen around Mr. Bernanke, who as a scholar produced ground-breaking research exploring the intersection of macroeconomics and finance.

Some see his failure to anticipate the nature and severity of the financial crisis — and his role in helping Mr. Greenspan keep interest rates at a level that might have fed housing speculation — as unforgivable lapses. Others say there was no one better equipped, once the crisis began, to respond with the force, resolve and imagination he deployed to prevent an economic apocalypse.

The two views are not mutually exclusive, as Mr. Bernanke concedes.

“Some people have asked, ‘Why didn’t the Fed stop this from happening?’ ” he says. “Well, like other regulators, there were some things we could have done, at least with hindsight. But we had neither the mandate nor the tools to be the financial system’s supercop. We had well-defined responsibilities that excluded many of the areas that turned out to be problems.”

Mr. Bernanke says the regulatory apparatus that grew out of the Depression, oriented around commercial banks, didn’t adapt to the dizzying pace of financial innovation and interconnected, fast-moving markets.



In fact, markets can now move so fast that regulators sometimes seem winded just trying to catch up. When the stock market plunged 1,000 points on May 6 before reversing direction almost as quickly, regulators were at a loss to explain why. They still are.

For his part, Mr. Bernanke says he was concerned but not shocked by the drop. He says he and deputies had been girding for spillover effects from the European debt crisis for months and had been in regular contact with their European counterparts.

The brief market plunge “was just a small indicator of how complex and chaotic, in the formal sense, these systems have become,” he says. “Our financial system is so complicated and so interactive — so many different markets in different countries and so many sets of rules. What happened in the stock market is just a little example of how things can cascade or how technology can interact with market panic.”

More than ever, he suggests, the Fed’s supervisory role needs to be reoriented around financial stability.

“I just think it’s not realistic to think that human beings can fully anticipate all of possible interactions and complex developments,” he says. “The best approach for dealing with this uncertainty is to make sure that the system is fundamentally resilient and that we have as many fail-safes and backup arrangements as possible.”



Ben Bernanke with President Obama in Martha’s Vineyard, Mass. In August when nominated for a second term. He was confirmed in a 70-to 30 vote. (Jewel Samad/Agence France-Presse – Getty Images)

Crisis-fighter was not the primary role that Mr. Bernanke expected when he initially signed on as Fed chairman in 2006. His first two years were dotted with missteps. He memorably and erroneously described the subprime mess as “contained” and underestimated the depths of the broader housing crisis and how intertwined it had become with complex Wall Street trading.

As the crisis accelerated, the Fed lent \$29 billion to engineer Bear Stearns’ sale in March 2008 to JPMorgan Chase. The following August, the mortgage behemoths Fannie Mae and Freddie Mac were seized. Then, in September, after a desperate search for a buyer, the Treasury and the Fed let Lehman Brothers go bankrupt.

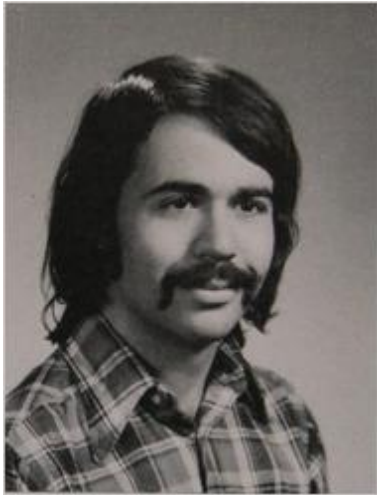
The Fed helped broker Merrill Lynch’s sale to Bank of America; swooped in with \$85 billion in a controversial rescue of the insurance giant A.I.G., and supported Mr. Paulson’s plea to Congress for a \$700 billion bank bailout.

Only after this first, experimental and headlong rush to place outsized Band-Aids on the financial system did the Fed seem to get its footing — aggressively dropping rates and deploying an

alphabet soup of lending programs. It spent last year acquiring mortgage bonds, Treasury securities and debts owed by Fannie and Freddie, while also conducting “stress tests” of the largest financial institutions.

Friends and acquaintances say that all the effort and creativity needed to wrestle with the crisis have taken a visible toll on Mr. Bernanke.

“You could see it weighed very heavily on him,” says Alan N. Rechtschaffen, a lawyer and derivatives expert who sees Mr. Bernanke periodically. “He understood the gravity of what was going on. You could see it in his face.”



Mr. Bernanke in Harvard's 1975 yearbook. He had considered math, physics and English, before choosing economics.

L. Douglas Lee, an economic forecaster, worried that the chairman might be on the brink of a meltdown of his own during the height of the crisis. “He just looked like he was fatigued,” Mr. Lee says. “He doesn’t look that way now.”

And Maurice Obstfeld, an economist at the University of California, Berkeley, who has been a friend since graduate school, says of Mr. Bernanke: “I don’t know how he has made it through the ordeal that he had to go through.”

Mr. Bernanke, accustomed to working every day of the week, says that he is logging fewer hours, but as he describes his labors he seems more motivated by duty than pleasure.

“My training and experience equipped me to serve the public, and I believe that I have a responsibility to provide that service,” he says. “I am not doing this for personal enjoyment.”

— Ben S. Bernanke, June 9, 2006

BEN BERNANKE was first quoted in a newspaper, *The Charlotte Observer*, in 1958, asking, “Grandma, why don’t you teach my mommy how to make blintzes?” He was 4 at the time.

His grandparents were Jewish immigrants from Eastern Europe who traced an uncommon route to the Carolinas. His paternal grandparents, Jonas and Pauline, immigrated from what is now Poland and owned a modest Manhattan drugstore. Their son Philip, Mr. Bernanke’s father, was born in Washington Heights, and the family moved in 1941 to Dillon, S.C., where it opened the Jay Bee drugstore, later run by Philip and his brother.

Mr. Bernanke’s maternal grandparents, Harold and Marcia Friedman, were Lithuanian immigrants who ended up in Charlotte, N.C., where Mr. Bernanke’s mother, Edna, was raised. Marcia, who made the blintzes, worked in a shoe factory. After she died, when Ben was 13, Harold, a cantor and kosher butcher, moved in with the Bernankes.

Philip and Edna met while studying at different campuses of the University of North Carolina; Ben was the oldest of their three children and could add and subtract as a toddler. He skipped first grade, memorized baseball statistics and, deploying the Hebrew his grandfather taught him, helped lead services in Dillon's small synagogue. At 11, he was a spelling-bee champ but flubbed a national round by misspelling "edelweiss."

At Dillon High School, he played saxophone in the marching band, scored a near-perfect 1,590 on the SAT and won a \$500 scholarship and a tour of Europe, thanks to Pan Am. He held summer jobs in hospital construction and at South of the Border, a souvenir hub along Interstate 95. He wore his black hair long and eventually adopted a prominent handlebar mustache.

His high school didn't integrate until his senior year, but he had black friends — including Kenneth R. Manning, six years older, who was already at Harvard and urged Mr. Bernanke to apply there. The Vietnam war draft was still active when he arrived at Harvard; he had a high lottery number in the draft — 335 — and was never called.

He had planned to study math, then flirted with physics and English before settling on economics. "Ben Bernanke, I learned more from sitting behind you in Ec 10 than from the class," a classmate, Suzanne Powell Bishopric, wrote in a report for a Class of 1975 reunion that takes place next month. (Mr. Bernanke isn't attending.)

Dale W. Jorgenson taught Mr. Bernanke econometrics at Harvard and supervised his senior thesis, which used economic models to examine natural-gas pricing — a timely topic in the wake of the 1973 oil crisis.

Mr. Bernanke lived in Winthrop House, a dorm along the Charles River, where classmates included Lloyd C. Blankfein, now C.E.O. of Goldman Sachs (who didn't know Mr. Bernanke well).

At Mr. Jorgenson's direction, Mr. Bernanke entered the Ph.D. program in economics at the Massachusetts Institute of Technology. Fellow graduate students there included Paul Krugman and Kenneth S. Rogoff, who would become two of the best-known economists of their generation. (Mr. Krugman also writes a column for The New York Times.)

Alexander S. Kelso Jr., who shared an M.I.T. office with Mr. Bernanke, says his classmate "may have been the smartest one of us, but he had plenty of competition."

In 1978, Mr. Bernanke married Anna Friedmann, whom he had met on a blind date. A Wellesley alumna, she had been born in Rome, the daughter of Jewish refugees from Croatia, and grew up in Denver.

Mr. Bernanke's 1979 dissertation explained why firms delay decisions to invest in times of uncertainty. He turned down Harvard for a job at Stanford's business school. (His wife, a

Spanish teacher, received a master’s in Spanish from Stanford and recently founded a school for disadvantaged teenagers.)

“He was an extremely good teacher from the first,” says Jeremy I. Bulow, a friend from M.I.T. who joined Stanford’s business school at the same time and still teaches there. “He’s probably had to make an effort to learn how to be less clear to do his current job.”

Stanley Fischer, Mr. Bernanke’s adviser at M.I.T., had urged his student to read “The Great Contraction, 1929-1933,” in which Milton Friedman and Anna Jacobson Schwartz blamed the Fed’s failure to expand the money supply for the Depression’s severity and duration.

The book ignited a passion.

“I guess I am a Depression buff, the way some people are Civil War buffs,” Mr. Bernanke once wrote.



Bernanke and Morgan Stanley Chief Financial Officer and Executive Vice President Ruth Porat participate in a panel discussion at the Brookings Institution March 2, 2015. Source: Chip Somodevilla/Getty Images.

In his writings, Mr. Bernanke explained how credit market disruptions — in particular, bank failures and debt deflation — worsened the depth and length of the Depression, and identified a “financial accelerator,” the idea that conditions in financial markets amplify developments in the real economy.

In 1985, he left Stanford for Princeton. His children — Joel, born in 1982, and Alyssa, born in 1986 — enrolled in public schools, and for six years he served on the

school board in Montgomery Township, N.J.

It was not his only taste of leadership. In 1996, he became chairman of Princeton’s economics department, where he helped strengthen the finance program.

“There’s a very strong group of egos here, so to get anything done requires a certain amount of diplomatic ability,” recalls Harvey S. Rosen, Mr. Bernanke’s predecessor as department chairman.



Mr. Rosen was surprised when Mr. Bernanke signed up for a second term as chairman; many professors consider the task a distraction. “I think he had accomplished a lot his first term,” Mr. Rosen says, “and he just wanted to go see it through.”

*“Because I appreciate the role of chance and contingency in human events, I try to be appropriately realistic about my own capabilities. I know there is much that I don’t know.”*

— Ben S. Bernanke, May 22, 2009



Source: The White House Archives.

IN 2002, R. Glenn Hubbard, a top economic adviser to President George W. Bush, asked whether Mr. Bernanke would consider serving as a Fed governor. “I was mildly surprised that Ben wanted to come,” Mr. Hubbard recalls. “I reached out to him expecting him to say, ‘No way.’ ”

That Mr. Bernanke was a Republican came as a surprise even to longtime colleagues like Alan S. Blinder, a Princeton economist who had been the Fed’s vice chairman during the Clinton administration. Mr. Bernanke, who is soft-spoken, is socially liberal but fiscally conservative.

The economy was slow to recover after the 2001 recession, and Mr. Bernanke and his Fed colleagues backed Mr. Greenspan as the Fed gingerly began to raise rates in 2004, while still keeping them at historically low levels. Critics have argued that easy loans born from artificially low rates helped fuel the housing bubble, an accusation Mr. Greenspan and Mr. Bernanke have denied.

In 2005, the White House tapped Mr. Bernanke to lead the Council of Economic Advisers. By then, he and his wife had bought a house on Capitol Hill, leaving open what they would do next.

Seven months later, he was Mr. Bush’s choice to lead the Fed. He had never worked in the markets and was neither politically active nor close to Mr. Bush, but was considered a safe pick. The Senate confirmed him on Jan. 31, 2006, the day Mr. Greenspan retired.

“I never thought I would get this job,” says Mr. Bernanke, adding that 9/11 had spurred his interest in public service. “But now that I have it obviously it’s important to do the very best I can — which is all I can do.”

In a 2006 open letter, the Harvard economist N. Gregory Mankiw urged Mr. Bernanke to “accept a lower public profile than Greenspan” and “become as boring a public figure as possible.” The Fed’s job, he wrote, “is to create stability, not excitement.”

Mr. Bernanke fits that bill. He is reserved, has a dry wit and doesn’t appear to relish the trappings of office. He once lamented that joining the Fed meant he couldn’t wear Hawaiian shirts and Bermuda shorts to work.

“Whatever political skills I have, have been gained painfully over many years,” he says. “I’m not naturally that kind of person.”

In January, as senators took turns denouncing Mr. Bernanke before his reconfirmation vote, he didn’t follow along on television or the Web. He did not learn the vote’s outcome until two aides interrupted a meeting to tell him.

“I had two principal objectives in accepting a second term,” he says. “First, I wanted to see through the process of financial regulatory reform, which will have long-lasting impacts on our economy. Second, I felt that I could play a useful role in managing the exit from our extraordinary policies, including our highly accommodative monetary policies.”

Ever the economic historian, Mr. Bernanke added, “Reflecting on the problems that were caused by the long transition between Presidents Hoover and Roosevelt during the Great Depression, I hoped to provide some policy continuity during the period of presidential transition.”

*“Keep a ‘gratitude journal,’ in which you routinely list experiences and circumstances for which you are grateful.”*

— Ben S. Bernanke, May 8, 2010

WILL future economists view Mr. Bernanke more charitably than some current ones?

John B. Taylor, a monetary policy expert, has accused Mr. Bernanke of bungling interest rates and conducting ad hoc bailouts. The leading historian of the Fed, Allan H. Meltzer, writes that the institution has been reduced to “a financing arm of the Treasury.” Anna Schwartz, whose work had so influenced the young Mr. Bernanke, called on Mr. Obama to replace him.

And Richard A. Posner, a judge and an authority on law and economics, fumed in a new book, “Bernanke has been shameless in refusing to assign any share of responsibility for the crisis to mismanagement of monetary policy.”



Cover of The Atlantic, April 21, 2013.

Mr. Bernanke defended the Fed's monetary policy decisions in a January speech to the American Economic Association. But in private, he seems puzzled and dismayed by the attacks. Friends don't dispute that.

"When you've gone your whole professional life with people always ecstatic about everything you've done, to have people now go on TV and say, 'This guy is an idiot' — that just can't be fun," Mr. Bulow says.

Others say that whatever critics think about the Fed's various maneuvers over the last few years, they believe that Mr. Bernanke helped stave off a much deeper crisis that would have occurred if he had merely sat on his hands.

"People just don't get how close the economy was to falling off the cliff," says Mark Gertler, a New York University economist and one of Mr. Bernanke's closest friends. "Yes, you can say the Fed didn't see it coming, but the way it responded after the crisis started to unfold was incredible. I honestly think there's nobody who could have handled the crisis as well as he did."

Mr. Bernanke's given names, Ben Shalom, mean "son of Peace" in Hebrew. Acquaintances say his name is apropos.

"He has been extraordinarily calm throughout — at least he's projected that on the surface," says the Fed's vice chairman, Donald L. Kohn, a close ally.

While Mr. Bernanke and Mr. Greenspan share certain views — that a global "savings glut" helped drive down long-term interest rates; that monetary policy is a poor tool for identifying, much less pricking, asset bubbles; and that the Fed's interest-rate policies didn't cause the crisis — the men differ in crucial ways.

While Mr. Greenspan tightly controlled Fed meetings, Mr. Bernanke is more collaborative. Unlike Mr. Greenspan, he avoids Washington's cocktail circuit. Mr. Greenspan would weigh in regularly with policy recommendations; Mr. Bernanke warns that the United States is on a fiscally unsustainable path but hasn't suggested specific tax increases or spending cuts.

Recently, he has seemed to be regaining his confidence and bearing. John H. Makin, an economist who shares with Mr. Bernanke an interest in Japan and deflation, says that "certainly in the last few months, he's looked a lot more self-possessed."

Mr. Bernanke reads avidly on his Kindle; Agatha Christie is a favorite. Recently, he read "The Immortal Life of Henrietta Lacks," by Rebecca Skloot, about the donor of a cell line used in research; the novel "Push" by Sapphire; and "The Help," by Kathryn Stockett, about maids in early-1960s Mississippi.

He is tempted to buy an iPad but isn't sure he can justify the cost. He likes to drive, but stays under the speed limit, friends say.

To relax, Mr. Bernanke shoots hoops in a squash court at the Fed. As a graduate student at M.I.T., he once skipped classes to cheer the Boston Red Sox against the Cincinnati Reds in the World Series, but he says his loyalties are now with the Washington Nationals.

“Bernanke is normal, which is fairly abnormal in that position,” says John Hope Bryant, a financial literacy advocate who credits Mr. Bernanke for speaking on that topic last June in Anacostia, a low-income neighborhood in southeast Washington.

And, colleagues say, he has grown wiser about how reality has a habit of intruding on well-formed academic theories about the economy.

“Maybe early on, there were some who believed Ben did not fully appreciate the rhythms of the markets,” says Kevin M. Warsh, a Fed governor who has been Mr. Bernanke’s liaison to Wall Street. “But he sure understands the flows of the markets now.”

**This article has been revised to reflect the following correction:**

Correction: May 23, 2010

An article last Sunday about the challenges facing Ben S. Bernanke, the Federal Reserve chairman, misidentified the university he attended when he went to a 1975 World Series game. He was a graduate student at M.I.T. that fall, not a senior at Harvard. A spokeswoman for the chairman also says now that because it was an evening game, he might not have skipped class to attend, as he said in a 2008 speech.

A version of this article appeared in print on May 16, 2010, on page BU1 of the New York edition.

# About The Brookings Institution

From The Brookings Institution



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—*The Global "Go-To Think Tanks"*, James G. McGann, Ph.D., January 2012

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—*Foreign Policy magazine's Think Tank Index, January 2009*

## **Trust and Impact**

"We need the intellectual heft of Brookings to solve our tough economic problems. We need your fresh ideas and new thinking."

— *Senator Mark Warner, March 8 2013, Capitol Visitors Center, Brookings Board Meeting*

"Brookings has achieved a special measure of respect in Washington because it has risen above partisanship, and that is not an easy thing to do in this town which is sort of built on partisanship."

—*Hon. Michael Bloomberg, Mayor, City of New York, August 28, 2007*

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- among the five most powerful
- among the ten most trusted
- equally trusted by Democrats, Republicans and Independents.

—*The Harris Poll's nationwide survey on inside-the-beltway groups, December 2007 (pdf)*

"Brookings has been at the center of every important policy debate in this country for 90 years."

—*Sen. Chuck Hagel, July 28, 2006*



## Links and Interviews

### Rick Perry vs. Ben Bernanke



Texas Governor and GOP presidential candidate Rick Perry took on the Federal Reserve this past week. But to Ben Stein, Perry's arguments don't exactly add up.

On **AUG 21, 2011 12:10 PM EDT** / **SUNDAY MORNING** / Play **VIDEO**

### Why can't Ben Bernanke refinance his mortgage?



The former Fed chairman says his inability to refinance his mortgage is a sign of "excessive" lending standards

On **OCT 3, 2014 3:05 PM EDT** / By **AIMEE PICCHI** / **MONEY**

### Interview with Fed Chairman Ben Bernanke



On "60 Minutes" this week, Scott Pelley interviewed Fed Chairman Ben Bernanke, discussing a wide range of economic issues. "60 Minutes Overtime" presents unaired excerpts from that interview.

On **DEC 4, 2010 1:42 PM EST** / **60 MINUTES OVERTIME** / Play **VIDEO**

### Interview with Federal Reserve Chairman Ben Bernanke



On "60 Minutes" this week, Scott Pelley interviewed Fed Chairman Ben Bernanke, discussing a wide range of economic issues. Here's the "60 Minutes Overtime" cut of the Bernanke interview.

On **DEC 5, 2010 7:54 PM EST** / By **OVERTIME STAFF** / **60 MINUTES OVERTIME**

### Ben Bernanke and the Washington Consensus

Ben Bernanke gave a speech in Cleveland Wednesday on what we can learn from developing economies about economic growth. The speech revolves around three principles, macroeconomic stability, increased reliance on market forces, and strong political and economic institutions that "are important for..."

On **SEP 28, 2011 9:14 PM EDT** / By **MARK THOMA** / **MARKETS**

# Chapter I: Ben Bernanke

## Study Questions

Created by Student Interns, The Echo Foundation

1. As a teenager, what kind of jobs did Bernanke work? How do you imagine that this impacted his future views on the working class?
2. How did the location of Bernanke's hometown affect his perspective on society?
3. What influences do you believe led Ben Bernanke to the Federal Reserve?
4. What personality traits do you believe converged in Ben Bernanke to inspire a small-town person to eventually change the world?
5. What role might Bernanke's religious background have played in shaping his identity, values and work?
6. What shaped Ben Bernanke's values?
7. What personality traits do *you* possess which shape your values?
8. Why was support so little for Bernanke's reelection in 2010?
9. How did Ben Bernanke's education in economics prepare him for the 2006-2010 financial crisis?
10. What leadership skills did Dr. Bernanke possess? How did they play out during the financial crisis?
11. What are some lessons that we can learn from Dr. Bernanke's consistent dedication throughout his life?



# Chapter II: *What Is The Federal Reserve?*



Photo courtesy of World Truth Today

History and Formation.....	X
Responsibilities.....	X
Organizational Structure of the Fed.....	X
The Structure and Organization of the System.....	X
Fiscal Policy and Monetary Policy.....	X
Inflation/Deflation/Hyperinflation/Stagflation.....	X
Why the Fed should worry about Deflation.....	X
Supervision and Regulation.....	X
Maintaining Stability in the Economy.....	X
Glossary of Terms.....	X
Further Reading/Resources.....	X
Study Questions.....	X

*“The Board of Governors of the Federal Reserve System and the Federal Open Market Committee shall maintain long run growth of the monetary and credit aggregates commensurate with the economy’s long run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates.” – The Federal Reserve Act of 1913*

## History and Formation

Created by Student Interns, The Echo Foundation



“Importance of Fed Independence — Did You Know?” by Richmond Fed is a short YouTube video summarizing the separation of Congress and the Fed.

The Federal Reserve, also known as The Fed, is the central banking system of the United States. It is independent

of the United States government, and is designed to ensure that politics do not control its actions. Congress created it in December of 1913 to provide a more stable, yet flexible financial system, achieved by using monetary policy to constantly pursue maximum employment and stable prices. The Federal Reserve Act was put in place by President Woodrow Wilson to accomplish these two goals. Prior to the creation of the Fed, the U.S. economy had been full of credit scarcity, and bank failures. Following the creation of the Federal Reserve Act, the Fed has generally maintained a more stable financial system.

The predecessor of the Federal Reserve Act was the National Banking Act, created in 1863, during the Civil War. This act provided government backing for the circulation of notes put forth by nationally chartered banks. An amendment to the act attempted to create a nationally uniform currency by establishing an additional tax on state bank notes. However, state banks continued to flourish due to popularity achieved during the Free Banking Era that last lasted from 1837-1862.



A [bank run](#) on the Fourth National Bank No. 20 Nassau Street, New York City, from *Frank Leslie's Illustrated Newspaper*, 4 October 1873

Despite the reforms made by Congress as part of the National Banking Act, a banking panic in 1893 occurred that led to the worst depression in U.S. history. Eventually, this depression was resolved by the intervention of J.P. Morgan, a powerful and influential banker. Another financial crisis arose near the beginning of the twentieth century. The Panic of 1907 was triggered by a plan to limit the popularity of trust companies. It was only resolved when the Federal Government provided \$30 million in aid to help alleviate the situation.

The Aldrich-Vreeland Act of 1908 was then created to provide emergency issued currency during the crisis. Additionally, the National Monetary Commission was created to search for a long term fix for the nation's economic instability. In December of 1912, President Woodrow Wilson signed the Federal Reserve Act, creating the Federal Reserve as we know it today.

In 1978, the Humphrey Hawkins Act was created to address growing inflation and rising unemployment. The Act created new temporary government jobs which eased

Generally the result of a growing economy, inflation is the continuous increase in prices for goods and services. As inflation increases, every dollar buys a smaller percentage of product. There are several kinds of inflation that vary in severity.

unemployment, developed new monetary policies to curb inflation, and increase liquidity and private sector employment.

The Federal Reserve's monetary policy has two primary objectives, to pursue stable prices and maximum employment. Stable prices are key to a nation's economic growth and prevent the price of goods being distorted by inflation. Additionally,

stable prices allow for maximum capital formation and savings, because when the risk of savings erosion is minimized, businesses are willing to invest more.

(Sources: Federal Reserve, Federal Reserve of San Francisco, Investopedia)



#### “Origins and Mission of the Federal Reserve”

Federal Reserve and the Financial Crisis lecture series at George Washington University. March 20, 2012.

<http://www.federalreserve.gov/newsevents/lectures/origins-and-mission.htm>



#### “The Federal Reserve after World War II”

Federal Reserve and the Financial Crisis lecture series at George Washington University. March 22, 2012.

<http://www.federalreserve.gov/newsevents/lectures/the-federal-reserve-after-world-war-ii.htm>



## *Responsibilities*

From The Federal Reserve

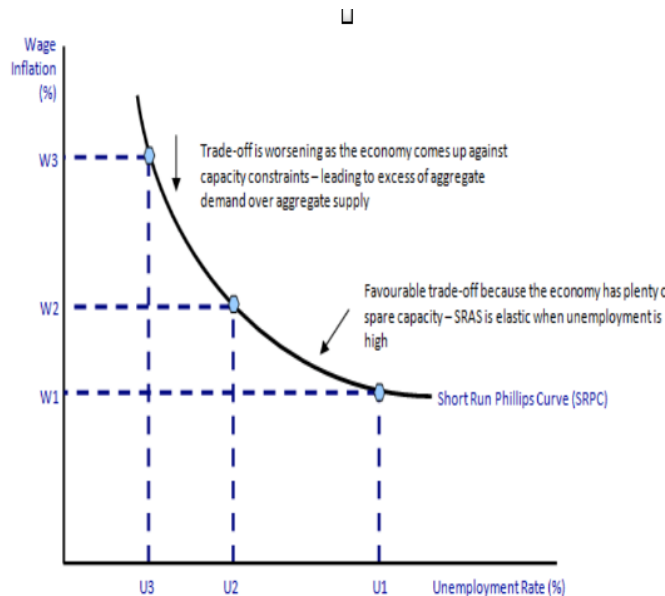
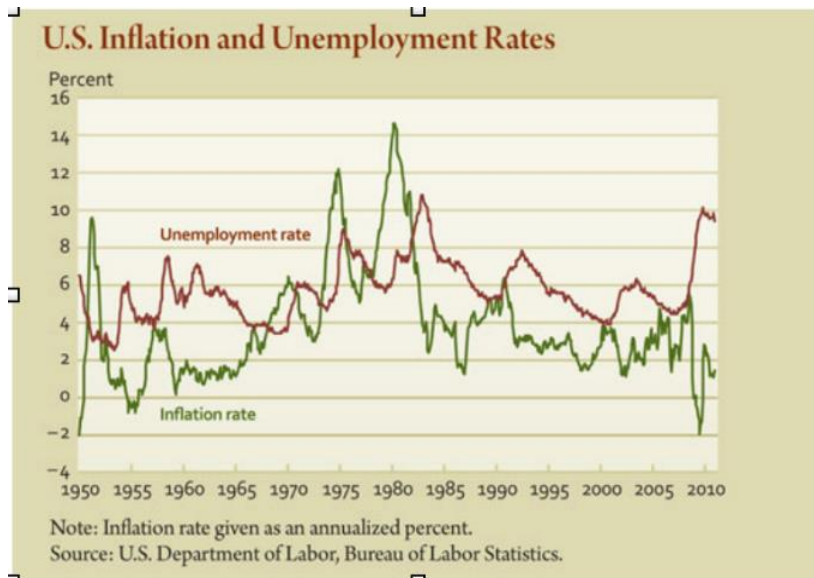
The Federal Reserve has 4 primary responsibilities:

1. Conduct the nation's monetary policy by influencing money and credit conditions in the economy in pursuit of full employment and stable prices
2. Supervise and regulate banks and other important financial institutions to ensure the safety and soundness of the nation's banking and financial system and to protect the credit rights of consumers.
3. Maintain the stability of the financial system and containing systemic risk that may arise in financial markets.
4. Provide certain financial services to the U.S. government, U.S. financial institutions, and foreign official institutions, and playing a major role in operating and overseeing the nation's payment systems. These services include:
  - Provide electronic payment services in the form of both automated clearing house (ACH) and wire transfer (Fedwire)
  - Check collection.
  - Maintain cash and coin processing operations to ensure a healthy money supply.
  - Maintain accounts for U.S. Treasury
  - Process government checks, postal money orders and U.S. savings bonds.
  - Collect federal tax deposits.
  - Issue, service, and redeem saving bonds

Maximum employment is primarily affected by non-monetary factors that affect the dynamics of the current job market. As a result, the FOMC does not specify a fixed goal for maximum employment; rather, the FOMC's policy decisions must be informed by its members' assessments of the maximum level of employment, ultimately leading to a consensus on what policies the Fed must pursue with regards to employment.

(Source: Dollars and Sense.org) The trade-off between inflation and unemployment was first reported by A. W. Phillips in 1958—and so has been called the Phillips curve. The simple theory behind this trade-off is that as unemployment falls, workers are empowered to push for higher wages. Firms try to pass these higher wage costs on to consumers, resulting in higher prices and an inflationary buildup in the economy. The trade-off suggested by the Phillips curve implies that policy makers can target low inflation rates or low unemployment, but not both. During the 1960s, monetarists emphasized price stability (low inflation), while Keynesians more often emphasized job creation.

As shown in the graph above, throughout history, there has been an inverse correlation between inflation and unemployment rates. Usually, when inflation is high, unemployment is low.





# Organization and Structure of the Fed

Created by Student Interns, The Echo Foundation

The Federal Reserve is comprised of two major components, a central authority in Washington D.C known as the Board of Governors as well as a network of 12 Reserve Banks located throughout the country. Within the Board of Governors sits the Federal Open Market Committee, comprised of the 12 presidents from each Reserve Bank. The Federal Open Market Committee is responsible for setting monetary policy.



Photo Credit: The Bernanke Federal Reserve Board  
(January 31, 2014)

**Board of Governors:** The center of the Federal Reserve's structure is the Board of Governors. This is an independent government agency comprised of a 7 member board and its staff. Board members are appointed by the President of the United States. Once confirmed by the Senate, members serve staggered fourteen year terms that expire every even numbered year. The reason for these abnormally long terms is to safeguard the system from being influenced by political pressure. The President also appoints a chairman and a vice chairman for the Board, who serve renewable four-year terms, subject to Senate approval.

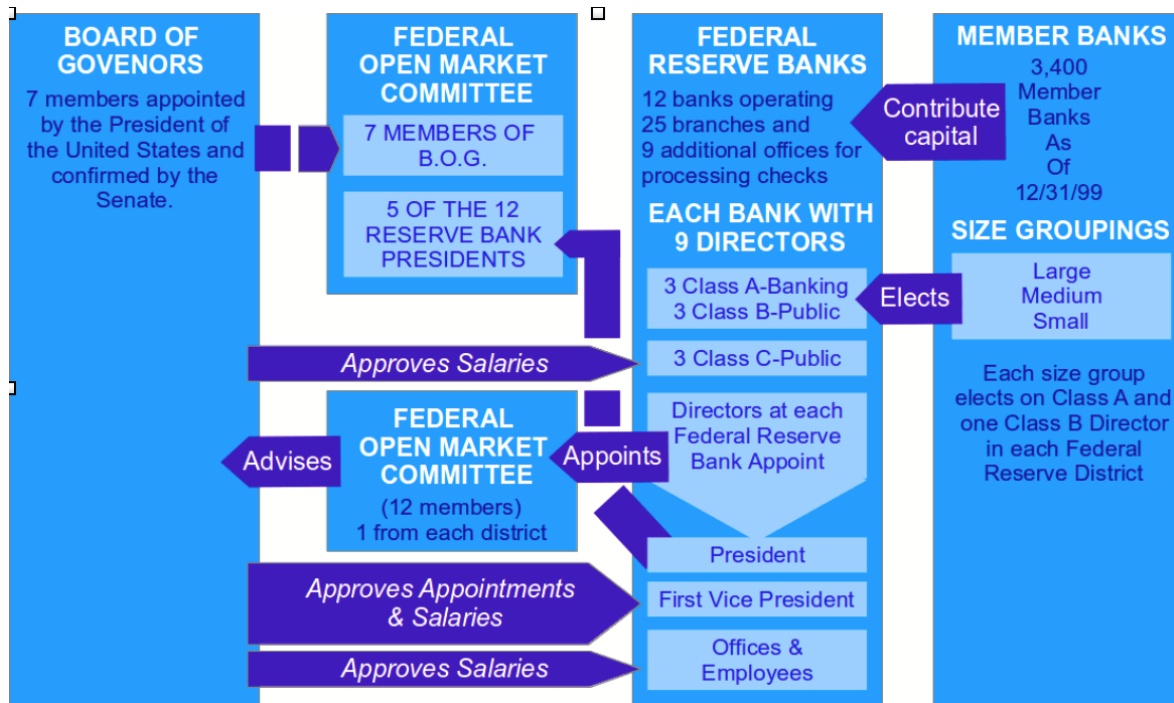


Board of Governors meeting January 1, 1922.  
(Source: Federal Reserve)

**Federal Reserve Banks:** Most normal operations of the Fed are carried out by 12 Federal Reserve banks. These “district banks” walk a fine line between being both a public and private corporations. Although technically set up as non-governmental organizations, these banks operate like private corporations while still serving public interests. Private, commercial banks have representatives that form a board of directors for each Reserve bank. Yet another safeguard against political influence is present here as well, as each bank president is appointed by the board of directors, (comprised of privately funded representatives) and then approved by the Board of Governors.

**Federal Open Market Committee (FOMC)** within the Fed is responsible for establishing and maintaining the nation's monetary policy. The seven members of the board of Governors, along with a constantly changing selection of five Reserve Bank presidents, make up the FOMC. The only permanent Reserve Bank president serving on the committee is that of the Reserve Bank of New York, who also serves as the vice chairman of the committee. All 12 presidents participate in meetings, whether they are current voting members or not.

**Member Bank** is part of the Federal Reserve System; or more generally, a bank that is part of a central clearing or central banking system. Such banks have to follow the rules and regulations put forward by the central bank or the clearing system.



(Source: Wikipedia)

**The Dodd-Frank Act:** Established in 2010, this Act possessed a number of revisions to the Fed’s structure. A second vice chairman was added to the Board of Governors, and directors representing commercial banks were excluded from the selection of presidents for the 12 reserve banks. New entities, such as a Consumer Financial Protection Bureau, and an Office of Minority and Women were created, as well.

(Source: Federal Reserve) *How they influence change:* The Fed promotes safety and stability throughout the nation’s banking system, stabilizes the financial markets, and ensures compliance with laws that fall under its jurisdiction. It accomplishes this through the use of its authority over the majority of banking institutions in the United States.

*Regulation:* The Fed is responsible for ensuring banking institutions under its authority comply with laws. The Board of Governors sets operational standards for banks through the use of regulations, rules, and policy guidelines. Legislation passed by Congress, such as the Dodd Frank Act, encourage certain regulations, whether permissive, or restrictive, to be implemented by the Fed.

*Supervising Stability of Financial System:* The Fed supervises banks, financial holding companies, state chartered banks; and international banking operations. Nationally chartered banks are bound by law to be members of the Federal Reserve banking system. They are supervised by the Office of the Comptroller of Currency. State Chartered banks that are not members of the system are monitored by the Federal Deposit Insurance Corporation.

# The Structure and Organization of the System

From: Richmond Federal Reserve  
Published: January 2012

The Fed's actions affect the economy and therefore affect you. To ensure that the Fed remains accountable and free from political pressure, the Federal Reserve System is composed of public and private elements. The Board of Governors of the Federal Reserve System provides oversight to the 12 Reserve Banks and their branches. The Federal Open Market Committee (FOMC), the Fed's monetary policymaking body, is made up of the members of the Board of Governors and presidents of the Reserve Banks. The Reserve Banks interact with more than 16,000 depository institutions that provide financial services to the public.



## Board of Governors

The seven members of the Board are appointed by the president of the United States and confirmed by the U.S. Senate. The full term of a Board member is 14 years, and members who have served a full term may not be reappointed.

The president also appoints the chairman and vice chairman of the Board from among the seven Board members. The chairman and vice chairman serve four-year terms and may be reappointed to these positions. The Board's seven governors serve as members of the Federal Open Market Committee.

Three advisory councils – the Federal Advisory Council, the Consumer Advisory Council and the Thrift Institutions Advisory Council – inform the Board on matters of current interest. These councils, whose members are drawn from each of the 12 Federal Reserve Districts, meet three to four times a year.



## The Federal Open Market Committee

The Federal Open Market Committee (FOMC) can affect overall economic activity through monetary policy. The FOMC sets monetary policy by establishing a target for the federal funds rate (the interest rate banks charge for overnight loans between banks). While all seven members of the Board of Governors and all 12 presidents of the Reserve Banks participate in each FOMC meeting, voting rights rotate among some participants. The seven members of the Board of Governors, the president of the New York Reserve Bank and the presidents of four other Reserve Banks, who serve one-year rotations, vote on monetary policy decisions.





## Reserve Banks

The 12 Reserve Banks are named after the locations of their headquarters – Atlanta, Boston, Chicago, Cleveland, Dallas, Kansas City, Minneapolis, New York, Philadelphia, Richmond, San Francisco and St. Louis. Each Bank is assigned a number and a corresponding letter. As the map on pages 6 and 7 shows, the naming convention begins with the Boston Fed, 1A, in the Northeast and continues south and west across the country to the San Francisco Fed, 12L.

### ***The Fed and You***

*Every day people make economic decisions. Deciding what to purchase, how much to save and whether to attend college will impact your life and the larger economy. The Fed's actions can affect the economic environment in which you make these decisions. Therefore the Fed's actions, your decisions and the economy are interconnected.*

The Reserve Banks are quasi-governmental, or legally private but functionally public, corporations. Reserve Banks are “owned” by commercial banks in their region (that is, banks hold stock in their Federal Reserve Bank) but serve public goals and are overseen by the Board of Governors, a government entity. While these member banks are considered “owners” of the Fed, they do not have many of the usual rights of stockholders. For example, although 6 percent of their capital is invested in the Reserve Banks, their dividend return on this investment is fixed at 6 percent by law. The purpose of this quasi-governmental arrangement is to ensure a central bank that is both accountable to the American people and insulated from political pressure.

The Reserve Banks carry out a number of important functions. Bank presidents contribute to the monetary policy discussion and vote on the direction of monetary policy during FOMC meetings. While each president brings his or her own unique views on the national economy to these meetings, one of the specific roles of Reserve Banks is to reach out to local communities within each District to gather information about the regional economy.

One channel through which Reserve Banks interact with the public and the banking industry is the Reserve Bank's own Board of Directors. Each Reserve Bank is governed by a Board that represents both member banks and the nonbank public. These nine directors oversee Bank operations and provide Fed officials with considerable "grassroots" information on business and financial conditions. While the member banks elect the Board of Directors, the Directors' decisions are subject to review by the Board of Governors.

The entrepreneurs and leaders who sit on the Reserve Banks' advisory committees also provide vital community-level input on the economy. These committees provide information on matters pertaining to small business, agriculture, labor, community development and payments. Members of advisory committees represent a diverse range of industries and interests in their Districts.

Reserve Banks also engage with the banking industry through supervisory activities and by providing payments services to depository institutions. The Reserve Banks support a number of community development and economic and financial education programs for the public. The Banks also work directly with the U.S. Treasury as its fiscal agent.



### Member Banks

Approximately 34 percent of the commercial banks in the United States are members of the Federal Reserve System. Nationally chartered banks are required to be members of the Federal Reserve System and state chartered banks may choose to become members. Member banks are required to hold 6 percent of their capital as stock in their Reserve Bank.



### Other Depository Institutions

In addition to member banks, about 13,700 other **depository institutions** provide checkable deposits and other banking services to the American people. These include state-chartered commercial banks, savings banks, savings and loan associations and credit unions. Although not formally part of the Federal Reserve System, these institutions have access to Fed financial services and are subject to System regulations.



### American People

The American people play an integral role in the Federal Reserve System. Voters elect the leaders who appoint members to the Board of Governors. Local business people serve on advisory councils and committees. While the actions of the Federal Reserve System impact the public, Federal Reserve policymakers rely on information from a myriad of individuals to make policy decisions. These decisions impact the economy in which we live, work and make our own economic decisions.

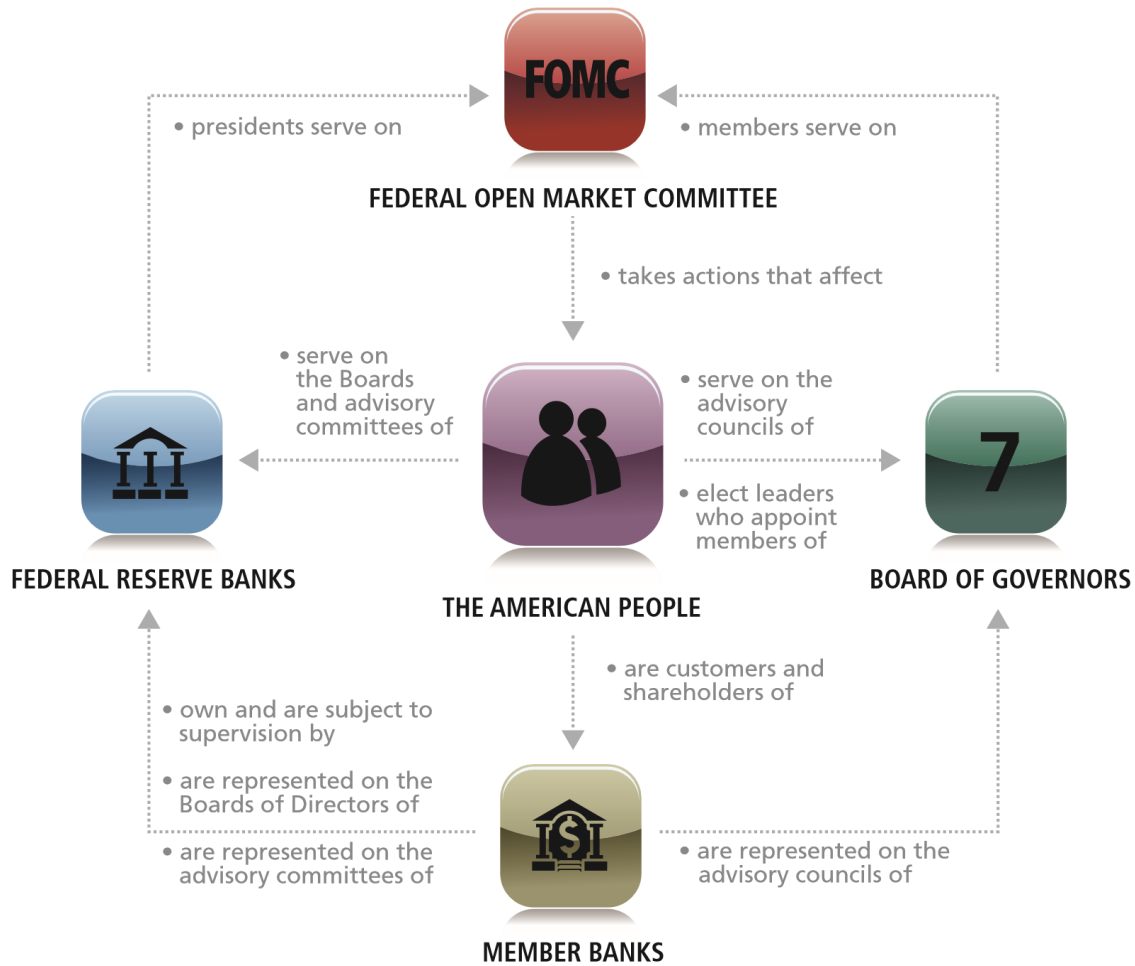
## **A Summary of the Components of the Federal Reserve System**

# **7**

FOMC

## The American People and The Federal Reserve System

Follow the arrows from any box in this graphic for the relationships between the American people and the Federal Reserve System.



## Full Employment

Full employment occurs when available skilled and unskilled labor resources are being used to grow the economy. Remaining unemployment is called “frictional unemployment”, and used to describe workers who are in-between jobs and still counted in the labor force. Although full employment is attainable, it will often result in a period of rising inflation, as firms bid up the price of labor and thus a rapid influx of disposable income generated by a larger workforce.

# Fiscal Policy and Monetary Policy

Fiscal policy is controlled and used as a tool by the government. Monetary policy is controlled by the Fed.



Watch YouTube video “Fed Is Responsible for Monetary Policy” by Richmond Fed. It is a concise 2 minute summary of the distinction between fiscal and monetary policy.

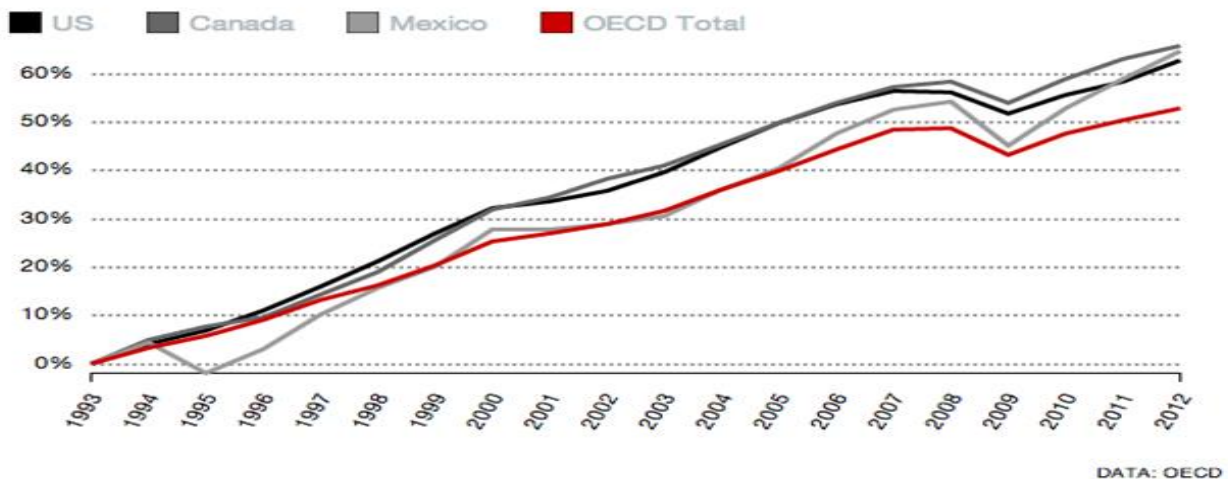
## Fiscal Policy

Fiscal policy is created by the government to influence spending, borrowing, and taxation, in order to monitor and influence the nation’s economy. In order to productively do this, the governmental powers are split across the executive and legislative branches. The separation of responsibilities between the two branches forms a system of checks and balances. In the executive branch, the president proposes the budget and signs or vetoes regulation concerning taxes. The Legislative branch is where congress passes the budget, and creates tax/spending regulation.

To measure the success of fiscal policy, Gross Domestic Product (GDP) is often used and is a measurement of the overall size of a nation’s economy. GDP measures how efficiently the economy is functioning and indicates the value of all goods. A country’s GDP represents the total income of the aggregated population or total spending, the sum of consumer spending, private investment and government spending. Theoretically, both numbers would be the same. A nation’s GDP will often mirror the performance of its stock market. Lower GDP will often mean companies within the country have posted lower earnings that year, resulting in lower stock prices. GDP is also used as one of the primary indicators to determine the overall health of a particular nation’s economy, and if that nation is in a recession for instance.

### GDP Growth Since 1993

NAFTA enacted Jan. 1, 1994



The chart above indicated various countries’ GDP over time (Source: Businessweek)



## Monetary Policy

Monetary policy is the mechanism by which the Fed manages and controls the economy. One of the most effective ways to influence the economy is to control that economy's money supply. Monetary Policy allows the Fed to directly influence the money supply by buying and selling securities, lending money to banks, and paying interest on bank reserves. These different actions also help to maintain price stability and sustainable employment while influencing interest rates in the desired direction. If the Fed does not regulate the growth in the money supply properly, it may grow too fast and cause inflation, or, if the money supply grows too slowly, it can cause a recession.

The Fed Funds Rate is one of the most impactful tools available to the Fed and explained in more detail below: The Fed does not want money supply to grow too rapidly, because then inflation will drastically increase. If the money supply grows too slowly, then the growth of the economy also slows down.

When determining monetary policy, including which tools to use, the Federal Reserve will look at various economic indicators, including GDP growth, inflation and unemployment.

An Excellent Resource For Educators, including lesson plans:

Spring/Summer 2013 - Volume 6, Issue 1

**5E**  
EDUCATOR

**Exploring the  
Distinctions between  
Monetary and Fiscal Policy**

ECONOMICS AND PERSONAL FINANCE RESOURCES FOR SECONDARY EDUCATORS

## In this issue

### PAGES 2–4 Class in Session

The debt of the U.S. government is at historically high levels, but how do we know whether debt levels are worrisome? Check out an excerpt from the Federal Reserve Bank of Richmond's July 2012 Economic Brief, "Unsustainable Fiscal Policy: Implications for Monetary Policy", to read about the potential consequences for the U.S. economy and monetary policy if large fiscal imbalances persist.

### PAGE 4 Snacks

Interested in using this issue's topic in your classroom? Consider using the activities, "The Monetary and Fiscal Policy Two Step" or "Deficit and Debt Direction Connection", created for either middle or high school students by Richmond Fed Economic Education staff. Click on the links in this section to access the PDF files of the activities.

### PAGE 5 Beyond the Textbook

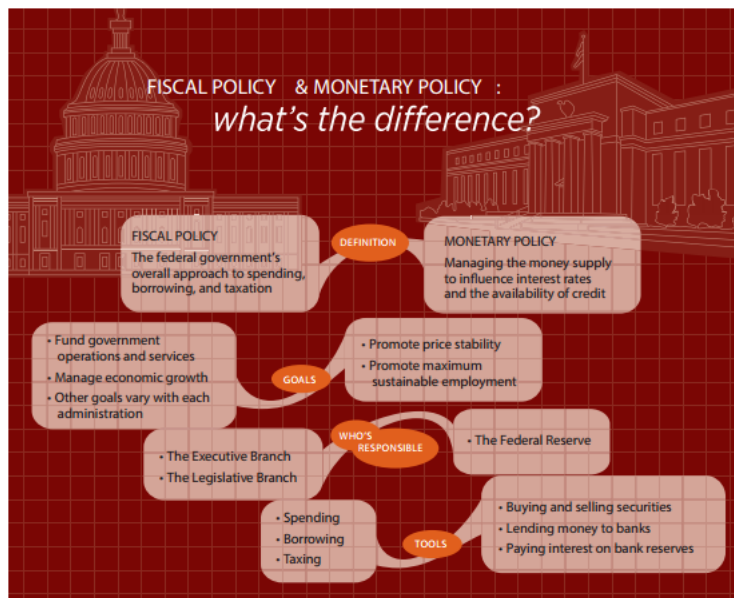
Resources to further reinforce the differences between monetary and fiscal policy.

### MISSION

The *5E Educator* provides secondary teachers with content to enhance understanding of economics and personal finance. It also offers lesson plans and Federal Reserve resources to reinforce state and local curriculum. We seek to enrich the learning experience for students and highlight the importance of economics and financial literacy in the process of everyday decision-making.

## Exploring the Distinctions between Monetary and Fiscal Policy

This issue of *5E Educator* highlights the distinctions between monetary and fiscal policy and includes an article excerpt, classroom activities and other resources to help you and your students explore this issue.



Source: Federal Reserve Bank of Richmond 2011 Annual Report (p.6)  
[www.richmondfed.org/publications/research/annual\\_report/2011/ar2011.cfm](http://www.richmondfed.org/publications/research/annual_report/2011/ar2011.cfm)

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## Class in Session

### Unsustainable Fiscal Policy: Implications for Monetary Policy

*This excerpt is taken from the July 2012 Economic Brief written by Economics Writer Renee Haltom and Senior Vice President, and Director of Research, John A. Weinberg, Federal Reserve Bank of Richmond.*

The debt of the United States government that is held by the public reached its highest point since World War II in 2011, at 68 percent of gross domestic product (GDP). This number is high by historical comparison, but even more important than its current value is the path it is likely to follow in the future. Several factors point to continued large demands on fiscal resources, most notably the aging population. As baby boomers exit the labor force, the number of people drawing age-related benefits from the government will rise quickly as a fraction of working-age individuals supporting them through taxes and Social Security contributions. This unprecedented demographic shift will increase demands on Social Security, Medicaid, and Medicare.

The nonpartisan Congressional Budget Office (CBO) provides a debt forecast under two scenarios: a "baseline" scenario that holds current laws constant and an "alternative" scenario that incorporates the effects of laws the CBO deems likely to pass. The budget outlooks under both scenarios are displayed in Figure 1. The baseline scenario reflecting current laws presents the more optimistic view of the future path of fiscal policy. Revenues would exceed noninterest spending under this scenario, but the federal government would continue to run net deficits when factoring in interest payments on debt. Under this scenario, the CBO argues that deficits would be small enough relative to the size of the economy for debt held by the public to decline slowly over time. Debt held

by the public would rise to 76 percent of GDP in 2014, declining gradually thereafter and falling below 50 percent of GDP by 2040, a level still greater than it was from 1957 through 2008 (Figure 2).

The alternative scenario—the one the CBO considers more likely because it reflects the policies that have prevailed in recent years—presents a more alarming picture of growth in federal debt. In this scenario, revenues do not rise much from where they are today, yet spending grows rapidly. Under these conditions, federal debt held by the public would rise sharply after 2011, exceeding its historical record of 109 percent of GDP by 2026. It would surpass 200 percent of GDP—nearly triple today's share of GDP—by the end of the 2030s, exceeding 250 percent of GDP after 2042.

The two scenarios represent optimistic and pessimistic alternatives from a range of possible outcomes, showing that the evolution of the federal government's

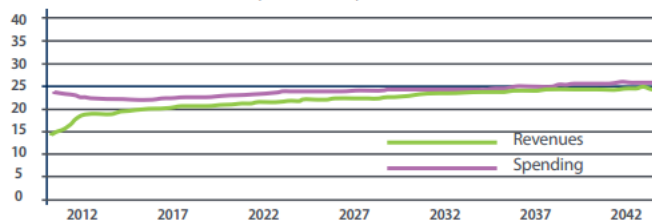
fiscal position depends largely on policy decisions that have yet to be made. Given the demands on fiscal resources coming from the aging population under existing laws, achieving a path toward fiscal balance will involve very difficult tradeoffs for fiscal policymakers.

#### When Is Fiscal Policy Unsustainable?

How do we know when high debt levels are a problem? Economists look to a simple framework known as the government's intertemporal budget constraint (IBC). A budget constraint is a basic accounting identity that says an entity must pay for everything that it purchases, while "intertemporal" simply means "over time." The government's IBC says that the value of its outstanding debt must equal the present value of its expected future surpluses (that is, what financial markets believe the surpluses will be, calculated in today's dollars). The main lesson to draw from the IBC is that the sustainability of government finances hinges crucially on financial markets

Figure 1: Projected Budget Gaps as a Percent of GDP

CBO's Extended Baseline Scenario (Current Laws)



CBO's Alternative Baseline Scenario (Expected Laws)



Source: Congressional Budget Office's 2012 Long-Term Budget Outlook, June 2012



## Class in Session

expecting that the government can and will raise adequate future surpluses given its debt.

A budget that is widely out of balance—the expected path for debt is much larger than the likely path of future surpluses—is often described as “unsustainable.” That characterization reflects the expectation that financial markets will force an adjustment in fiscal policy before such debt levels could be reached. For example, investors may demand a higher interest rate on government debt to compensate for the apparent risk that the government may not be able to repay its loans, causing a sudden and sharp increase in the government’s financing costs that forces it to immediately produce a credible plan for reducing future deficits and therefore debt. Because financial market expectations are not constant, neither the IBC framework nor experience provide a quick answer to precisely what

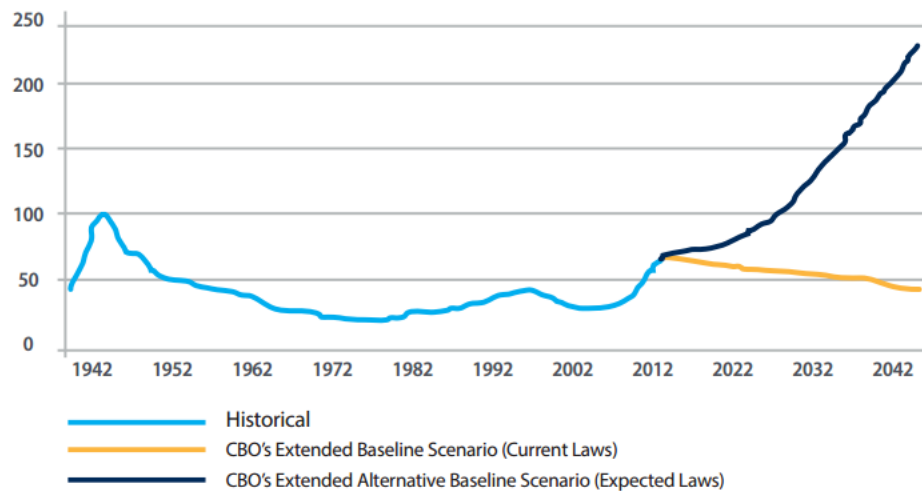
debt level is “sustainable.” The budget apparently can remain modestly out of balance for a long time. For example, debt levels grew slowly and steadily from 1970 to 1997 with no obvious concern from financial markets about the sources of future surpluses. This is less likely to occur when the imbalance between outstanding debt and the capacity for producing future surpluses is very large, as in the CBO’s alternative scenario. With debt levels predicted to grow much larger than GDP within two decades, many years of higher taxes would be required to produce enough surpluses to resolve the resulting imbalance. There is some level of debt that is high enough—although we don’t know how high that is—that generating the required amount of future surpluses required would be infeasible.

What we do know is that painful economic consequences can result from hitting that debt level. Economists have

called that point the “fiscal limit,” the point at which financial markets refuse to lend further to the government, and the government’s existing spending promises therefore cannot be funded. At least one of two events must occur at the fiscal limit: the government reduces its debt levels by defaulting, or the central bank takes action to reduce real debt levels.

The primary way a central bank can reduce the government’s real debt burden is by creating surprise inflation. Inflation allows all borrowers, the government included, to repay loans issued in nominal terms with cheaper dollars than the ones they borrowed. Roughly 90 percent of the federal government’s debt is issued in nominal terms at prices that reflect the market’s expectations for inflation over the life of the loan. A significant unanticipated jump in inflation therefore would produce a large transfer of wealth in the

Figure 2: Federal Debt Held by the Public as a Percent of GDP



Note: Projections begin with 2012, after 2042, debt held by public as a percent of GDP exceeds 250 percent under the alternative baseline scenario and continues falling gradually under the extended baseline scenario.

Source: Congressional Budget Office's 2012 Long-Term Budget Outlook, June 5, 2012

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## Class in Session

government's favor from its lenders. Historically, some central banks—though never the Federal Reserve—have produced inflation for the sole purpose of eroding the value of the government's debt.

Since inflation today is low and stable, and the Fed remains committed to its price stability objectives and operates independently from fiscal policy, the Fed's policies generally have little direct impact on the government's debt burden. This could change, however, if financial markets began to view hitting the fiscal limit as a possibility. That situation would inevitably invite monetary policymakers to intervene since inflation presents one possible source of revenue.

### Sources of Fiscal Inflation

Central banks often are called upon to intervene when the economy is facing severe challenges, as would likely be the case if a fiscal crisis arose in which markets forced the government to either default on its debt or enact some combination of severe spending cuts and tax increases. The first prospect, default, would wreak havoc on financial markets, and the second on economic activity. Thus, fiscal crisis almost certainly would jeopardize the Fed's mandate, leaving the Fed with a difficult tradeoff: the economic pain associated with fiscal crisis or the longer-term costs of central bank intervention to reduce debt levels.

Even the most conservative central banker might feel compelled to intervene in hopes of limiting a panic before it could grow more severe. Knowing that the central bank faces these incentives, the market's inflation expectations are liable to shift suddenly when debt levels are very large. Economist Eric Leeper at Indiana University argues that simply being near the fiscal limit is enough to enable an equilibrium in which markets expect the

central bank to accommodate the debt with inflation in the future. The public's expectation of higher inflation can push actual inflation higher before the central bank decides to create a single dollar.

The lesson from this literature is that when the public expects fiscal authorities to take action to satisfy the budget constraint while they still can, inflation need not rise. This is perhaps the situation the United States is in today: debt projections under the CBO's more likely scenario exceed historical records for most developed countries, yet markets appear perfectly willing to purchase government debt at low interest rates, indicating that markets believe fiscal imbalances will be resolved through fiscal policy rather than through inflation. However, as long as there is uncertainty over the feasibility of generating sufficient future surpluses, policymakers cannot be sure that market expectations will not shift unexpectedly to produce inflation.

### Encouraging Sustainable Policy

The Fed's best contribution to avoiding a fiscal crisis is to maintain its commitment to monetary policy objectives. Credibility may help maintain the expectation that the central bank will not readily step in to erode the debt through inflation. However, credibility may not be sufficient. When the expected path for fiscal policy does not by itself achieve balance in the IBC over time, the price level is the only other factor that can adjust to provide it. Fiscal policy that does not contain the debt may lead to inflation even if the central bank has the best intentions.

Even if inflation were to spike, it might not be effective at reducing debt levels. Most government debt is priced in nominal terms, so while inflation erodes the value of existing nominal debt, it increases the financing costs for newly issued debt. This effect would be greater for governments, such as the

United States, that have a short average maturity of government debt and therefore need to reissue it often.

For these and other reasons, the solution to current fiscal imbalances must ultimately come from fiscal authorities. Making these difficult decisions in a planned manner before a crisis arises almost certainly would entail fewer costs than if the decisions were forced by financial markets or by other events. These events include the so-called "fiscal cliff" that is scheduled to arise later this year as dramatic deficit reductions come into place under current law and as the result of automatic budget cuts built into the agreement to raise the federal debt ceiling in 2011 as a way to provide incentive to Congress to produce debt-reduction legislation.

For the time being, markets appear to believe that fiscal policymakers will put future debt, spending, and tax levels on a more sustainable path. If they are correct, our nation will not have to experience the significant economic challenges of a world in which those expectations have changed.

### For full article and endnotes:

[www.richmondfed.org/publications/research/economic\\_brief/2012/eb\\_12-07.cfm](http://www.richmondfed.org/publications/research/economic_brief/2012/eb_12-07.cfm)



## Snacks

To access teaching materials that correlate with the featured article excerpt, check out the following activities designed for middle and high school students by following these links:

[The Monetary and Fiscal Policy Two Step Deficit and Debt Direction Connection](#)

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## Beyond the Textbook

Consider using the following resources to further reinforce the differences between monetary and fiscal policy.

### The Fed Chairman Game

As a follow up to this issue's content focus and the interactive student activities, consider taking your students to a computer lab to play the Fed Chairman Game courtesy of the Federal Reserve Bank of San Francisco, <http://www.frbsf.org/education/activities/chairman/index.html>



### Budget Hero

Have your students try an online budget simulation called Budget Hero published by Minnesota Public Radio, [http://minnesota.publicradio.org/projects/2008/05/budget\\_hero/](http://minnesota.publicradio.org/projects/2008/05/budget_hero/)



Educators, for more information and lesson plans, go to

1. “The Federal Reserve and You” <http://www.philadelphiafed.org/education/federal-reserve-and-you/index.cfm>
2. “Lesson Plans for Teachers” <http://www.philadelphiafed.org/education/teachers/lesson-plans/index.cfm>

## **Balancing Interest Rates**

(Source: Investopedia.com) Interest rates also affect the economy. When the (Federal Funds Rate), which serves as the base rate for all other loans, is changed, it affects all loan rates across the nation. The higher the rate, the more expensive it is to borrow money. This can help to slow down an overly strong and healthy economy in order to reduce inflation and maintain consumer spending power. In order to keep inflation in check, the Fed uses increased interest rates when indicators such as Consumer Price Index (CPI) and Producer Price Index (PPI) began to rise at more than 2-3% a year. Once higher borrowing costs are established, spending will begin to fall, resulting in a drop in inflation. When the economy is experiencing a recession, the Fed uses the opposite strategy of lowering interest rates. When borrowing money becomes cheaper, people are more likely to spend money again.

When the Fed changes the interest rate, both positive and negative effects subsequently ripple across the U.S. economy. The Fed accomplishes this in several ways. By using interest rates, the Fed can control consumer spending, inflation, and recessions. Interest rates, which are a form of compensation paid by a consumer to the loaner, limit the amount of money consumers are willing to borrow and spend at one time. Low interest rates give people more spending money, which creates a ripple effect across the entire economy. Alternatively, high interest rates reduce spending money, which can adversely affect large businesses, who have to then cut back on large purchases and the number of hired employees (See Federal Reserve Tools)

# *Inflation/Deflation/Hyperinflation/Stagflation*

Investopedia.com

**Inflation** is the continuous increase in prices for goods and services and is generally an indicator of a growing economy. As inflation increases, every dollar buys fewer goods and services. In recent years, stable prices have become synonymous with low rates of inflation of around 2 percent per year.

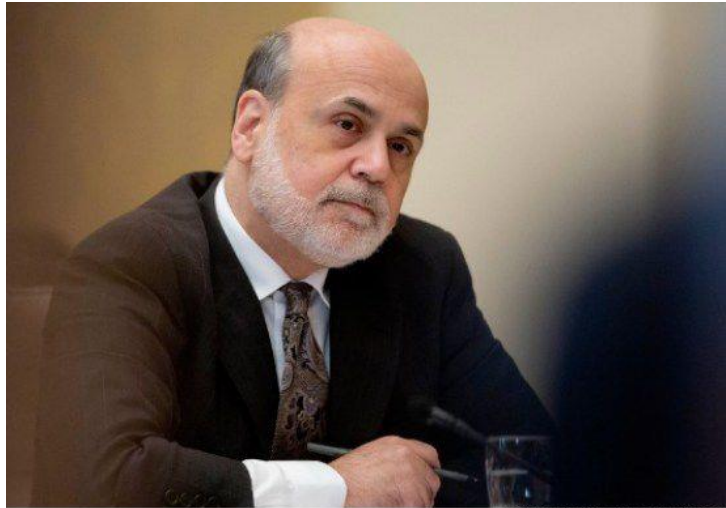
**Deflation**- The opposite of inflation, occurs when prices fall. The recent recession that rocked the global economy started with a decline in the liquidity that took place in the US banking sector. Widespread unemployment, a decline in recruitment and a peak in firings by companies all over the world was witnessed during the period starting from December 2007 till June 2009. Repercussions and ripples of economic depression can still be seen and felt at present, though on a much smaller scale than when it started.

# *Why the Fed should worry about deflation*

Fortune Magazine  
by Nin-Hai Tseng  
October 30, 2013

FORTUNE — As Federal Reserve policymakers wrap up their two-day meeting Wednesday, some have called on the central bank to do more to avoid threats of deflation.

Most don't like having to paying higher prices, and the Fed has long tried to stabilize the U.S. economy by keeping the general costs of everything from shelter to clothes from rising too rapidly. But as the New York Times noted over the weekend, a little inflation could be good for the economy, and there's growing concern inside and outside the Fed that inflation isn't rising fast enough.



Ben Bernanke

Many are wondering if the Fed should worry more about deflation rather than inflation. After all, when the central bank launched its large-scale bond-buying program to stimulate the economy, many expected inflation would climb. As it turns out, that hasn't happened. Just take a look at the price of gold, typically a hedge against inflation. Prices have fallen by 19% so far this year.

If disinflation leads the U.S. into deflation, it would certainly hurt the economy: Real interest rates would rise, potentially discouraging investing and spending; the value of debts would go up; job growth would slow. "Once an economy slips into deflation, the risks of a self-reinforcing deflationary spiral rises," according to a new paper by the American Enterprise Institute for Public Policy. The U.S. isn't alone, however. Over the past two years, European and Chinese inflation rates have drifted steadily lower. And even though Japan has tried hard to end 15 years of deflation, the world's third-largest economy has seen only modest relief.

In August, U.S. inflation rose just above its slowest pace at an annual pace to 1.2% — below the Fed's target of 2% for keeping the economy growing in a healthy way. Deflation arises when the inflation rate falls into negative territory, so the U.S. is safe, at least for now. The question is for how long?

Such worries have further complicated one of the Fed's main jobs to keep prices stable. Some say that while the inflation rate hasn't risen as much as expected, the central bank could lose control of prices as the economy recovers. If and when that happens is another question confronting the Fed.



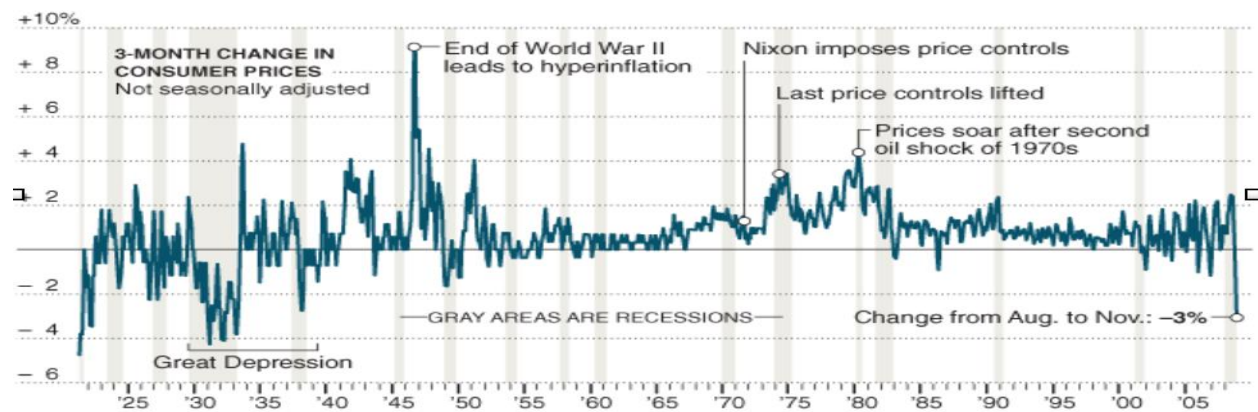
Perhaps, though, the Fed shouldn't wait. John Makin, economist at the American Enterprise Institute, urges the Fed to take steps now and offers advice for Janet Yellen, President Obama's nominee for the next Fed chair. He suggests extending the central bank's bond buying program and urges the incoming chair to discuss the risks of deflation "at some length."

More than that, Makin suggests an interesting way the Fed could guard against inflation and at the same time avoid deflation by lowering its inflation target. Currently, the central bank has a 2% target, and if inflation rises substantially above that it plans to tighten policy. Makin suggests lowering that target to 0.5% to 1.5%, signaling to investors that the Fed will not let the inflation rate fall below zero and cause the economy to spiral into deflation.

Of course, what the Fed might do next remains to be seen.

### Deflation Rears Its Head

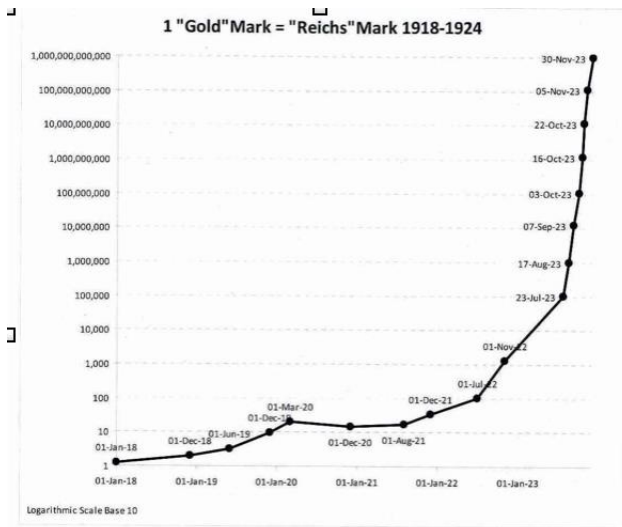
Over the last three months, prices fell at their fastest rate since the Depression.



Sources: Bureau of Labor Statistics; National Bureau of Economic Research

THE NEW YORK TIMES

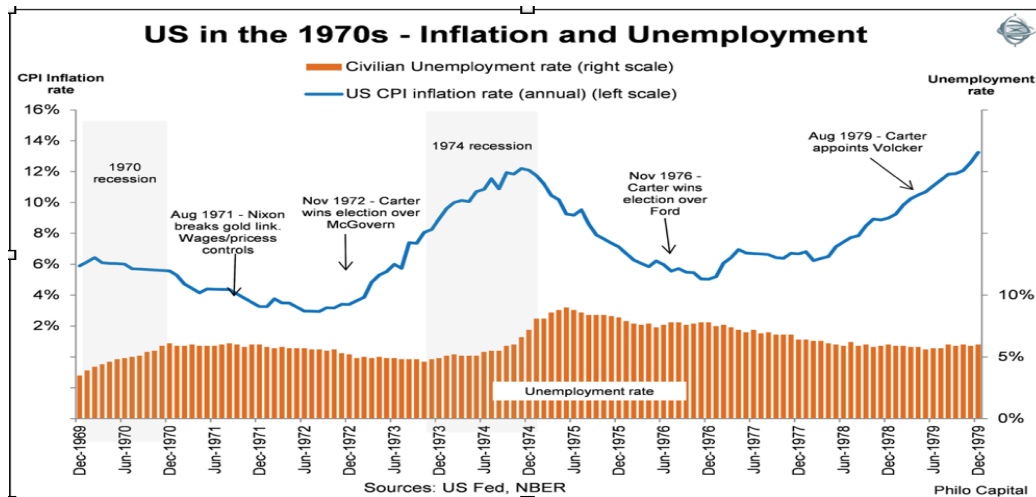
- **Hyperinflation** (Source: USA Gold.com) - Extremely fast inflation that can lead to the collapse of the nation's monetary policy. In Germany in 1923, the Reichsbank began unlimited printing of notes to try and compensate for the drop in gold value of money in circulation from £300 million to £20 million. In December of that year the exchange rate was 4,200,000,000,000 Marks to 1 US dollar.



Note: 1 "Gold" Mark value in grammes of fine gold (1913) = 0.35842g;  
 "Reichs" Mark = Currency not tied to the goldstandard in 1918 to 1924.

Source: Law about the Revaluation of Mortgages and other Claims (Revaluation Act 1925), issued the 16<sup>th</sup> of July, 1925 (*Anfuertungsgesetz, Reichsgesetzblatt, Teil I, 1925, p.133-135*) and Author's calculations.

- **Stagflation**- High unemployment combined with a stagnant economy. This is the one exception to the inverse relation between inflation and unemployment rates.



\*In 1976, Carter won over McGovern (not Ford)

The primary cause of inflation can be credited to a theory called “Demand-Pull Inflation”, this is generally when demand for goods increases faster than production. Although in some special instances inflation can be good, unexpected inflation can lead to several problems. Domestic products can become less competitive relative to other countries. Consumers living on a fixed income base will experience a massive reduction in spending power, and ultimately, economic output is hurt long term due to consumers less likely to spend because of uncertain financial conditions.

## Money Supply

The money supply, or the amount of money that is in circulation and available for spending, is measured by numerical groupings that divide the supply of money liquidity. These aggregates, in order from most fluid to least, range from M0-M2. M0 and M1, also called narrow money, normally include coins and notes in circulation and other money equivalents that are easily convertible into cash. M2 includes M1 plus short-term time deposits in banks and 24-hour money market funds. M3 includes M2 plus longer-term time deposits and money market funds with more than 24-hour maturity. Since it began to be monitored in the 1950's, the money supply has steadily declined in its influence on Fed policy due to changes in banking accounts, the proliferation of financing companies, and more widespread investment among consumers (stock and bond investments are not captured in M1 and M2 aggregates). It is, however, still monitored and published weekly, and is used as an effective indicator for inflation and consumer spending.

A positive result when the money supply increases, is that there is a decrease in interest rates, which allows for an increase in investments due to more attractive investment opportunities for businesses, ultimately putting more money in the hands of consumers. This leads to an increase in business activity, a higher demand for labor, and healthier employment rates



*Dollar's Reaction to being worth 95% less than in 1914*

## Federal Reserve Tools

### 1. *Feds Fund Rate (Source: Federal Reserve):*

The fed funds rate is the average overnight interest rate at which institutions lend money to each other overnight. The Federal Reserve's Open Market Committee (FOMC) determines the fed funds target rate. The Fed then uses Monetary Policy and other tools to influence the money supply and thus the overall Fed Funds Rate to reach the target rate. If the FOMC raises the fed funds target rate, then banks will, on average, charge a higher interest rate to each other. If banks charge a higher interest rate to each other, then in order to maintain their profit margins, they will have to raise the interest rate on loans they make to consumers and businesses. The higher this rate is, the more costly it is to borrow money. When that happens, consumers (or businesses) have less money to spend on other items because they are now paying more in interest expense, consequently slowing down economic growth overall.

#### Year 1

Total household debt: \$100,000

Interest Rate: The bank charges you 5% interest rate

The household is paying \$5,000 of its spending money in interest expense

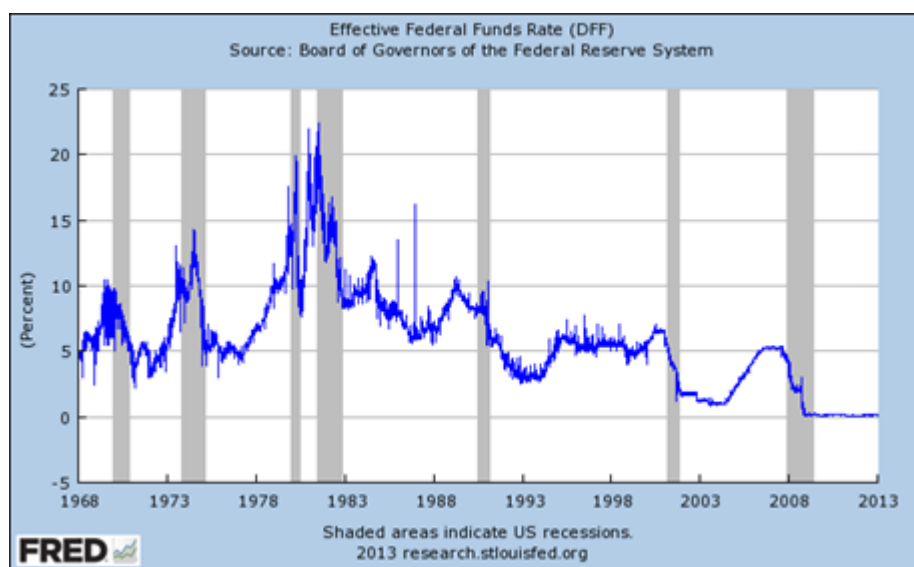
#### Year 2

Total household debt: \$100,000

Interest Rate: The bank charges you 7% interest rate

The household is paying \$7,000 of its spending money in interest expense

In year two, the consumer is paying \$7,000 a year in interest whereas previously the consumer was paying \$5,000/year. As a result, the consumer has \$2,000 less to spend on other purchases within the economy, which is why higher interest rates can slow growth overall.



This shows the Fed funds rate in the US over time (Source: Inman)

## **2. Federal Open Market Operations (Source: Federal Reserve)**

The twelve members of the Federal Reserve's Open Market Committee meet about eight times a year to discuss whether or not the Fed funds rate should be increased or decreased, based on the health of the economy and how much consumers are spending. The goal is to ensure steady and predictable growth. Any sudden fluctuations in growth or inflation can trigger economic downturns and potentially recessions. In order to increase the Fed Funds rate, securities are sold by the government.

### *Open market operations*

When the government sells securities (usually bonds, notes and treasury bills) to the market, this is referred to as "open market operations". Open market operations help implement monetary policy throughout the economy. The exchange of government securities in the market is what increases or decreased the money supply. When securities are sold by the government, they receive payment, thus reducing the money supply, and slowing growth which can sometimes be desirable. When securities are purchased by the government, additional money is injected into the economy, thus increasing the money supply. This increase in money being lent out within the economy can be used by individuals and businesses towards new investment and growth opportunities.

## **3. Reserve Requirements (Source: Investopedia.com)**

Reserve requirements are the amount of money that the banks must have in reserve against the deposits made by the customers. It has to be set aside as a "reserve", so it does not get used, or can be deposited at a Federal Reserve Bank. The Board of Governors controls the changes in reserve requirements. The amount that an institution must have depends on the reserve ratio, which depends on the amount of transaction accounts at the depository institutions. The amount is adjusted each year according to different acts that have been passed (The Garn-St Germain Act of 1982, Monetary Control Act of 1980).

## **4. Discount window lending (Source: Investopedia.com)**

Discount window lending allows certain institutions to borrow money from the Federal Reserve. It is useful for when the institutions are on temporary shortages caused by internal bank or external market disruptions, and the pressures of reserve requirements. The discount rate also allows the Fed to control the money supply, and helps stabilize financial markets. By decreasing the discount rate, commercial banks can borrow more cheaply, which increases their incentive to borrow, which in turn can be used to lend to business and consumers, thus increasing the money supply. The opposite forces are at work when the Fed increases the discount rate (Source: Investopedia.com).

The discount rate is the rate that commercial banks and other depositors must pay on loans that they receive from their closest Federal Reserve Bank lending facility. There are three different programs:

1. Primary Credit- loans used for a very short term to institutions in good financial condition
  - a. This is the main discount window program

2. Secondary Credit- institutions that cannot meet short term goals and are in financial trouble
  - a. The discount rate is above the rate of primary credit
3. Seasonal Credit- used for small institutions that are in need of funding
  - a. The discount rate depends on the average of selected market rates

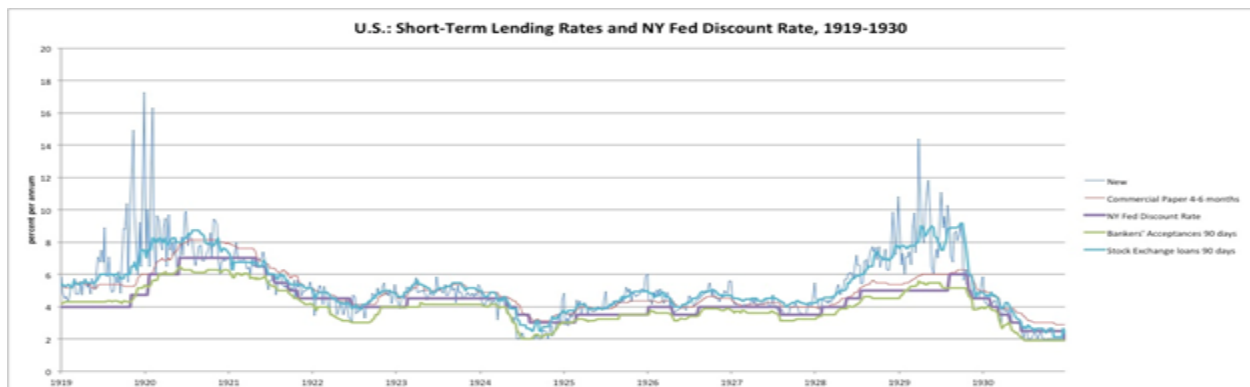
All of the different discount rates are made by the Board of Governors. These rates are the same for all Reserve Banks across the country.

### 5. Financial Crisis Special Tools

*“It’s Not Your Mother and Father’s Monetary Policy Anymore.”*



This is an article published in the *Social Education* journal in 2011 about the policy tools used during the financial crisis. It has a great table on the second page which may be useful in describing what the Fed did during the Great Recession



Source: New World Economics



# *Supervision and Regulation*

The Federal Reserve

The Federal Reserve has supervisory and regulatory authority over a wide range of financial institutions and activities. Through collaboration with other state and federal agencies, it ensures safety and stability of financial institutions, soundness of financial markets, and fair treatment of consumers. Due to its status as being the central bank of the United States, the Federal Reserve is able to coordinate its actions with other nations in periods of economic crisis, and supervise corporations with strong international presence.

The Division of Banking Supervision and Regulation is responsible for monitoring U.S. banking companies, foreign banking organizations operating in the U.S., and state-chartered member banks of the Federal Reserve System. It creates and enforces safety and soundness and other regulations for these entities under Board direction and in collaboration with Reserve Banks and other domestic and international regulatory authorities. In addition, it supports the conduct of monetary policy by monitoring current conditions and prospective developments affecting the banking industry and financial markets more generally.

The Federal Reserve is Responsible for the regulation of certain banking segments to ensure safe and sound economic practices. These include:

- Bank holding companies, including foreign banks with U.S. operations
- State chartered banks that are members of the Federal Reserve System (state member banks)
- Foreign branches of member banks
- Edge and agreement corporations, through which U.S. banking organizations may conduct international banking activities
- U.S. state licensed branches, agencies, and representative offices of foreign banks
- Non-banking activities of foreign banks

## **Enforcement**

(Source: Federal Reserve) In the event that the Federal Reserve finds that a state or member bank or holding company has issues that can negatively affect the institution's safety, or is not in compliance with laws and regulations, it maintains the right to take corrective action. Typically, such findings are communicated to the management and directors of a banking organization in a written report. The management is then required to identify and address all problems and insure that they will not recur. Most problems are resolved promptly after they are brought to the attention of an institution's management and directors. In certain situations, however, the Federal Reserve may need to take an informal supervisory action, requesting that an institution adopt a board resolution or agree to the provisions of a memorandum of understanding to address the problem.

# Maintaining Stability in the Economy

Richmond Federal Reserve

The Federal Reserve uses its tools to create a predictable market. As the Fed conducts monetary policy, and uses all of its tools, it helps maintain the stability of the economy. When the economy is stable, it would promote a low and non-fluctuating inflation rate, which then stops chaos within the market by keeping financial institutes healthy.

It is essential for the Fed to maintain a steady price stability, so that there can be long term economic growth and maximum employment. The Fed must stabilize the economy or else the costs of goods would rise too fast.

## Avoiding Deflation

If the prices in the economy starting deflating, the economy would hurt because real interest rates would rise, which then limits investing and spending, and also job growth would slow down.



The Fed has the job of collecting and distributing circulated bills, screening them for counterfeits and replacing old or worn out currency.

## Moderate Money Supply

The Fed has to manage its money supply, because if it produces too much money, it can lead to inflation, thus hurting the economy.

## Federal Reserve Act

The Federal Reserve Act was amended in 1977 to help the Fed achieve its goal. The Act promotes maximum employment, stable prices and moderate long-term interest rates. It establishes a form of economic stability and is very influencing the financial system (Source: Investopedia.com). By following this act, the Fed has a mandate to achieve its goals and be a lender to the banking system. In order to achieve its goals. The Fed must maintain low and stable inflation.

## Systemic Risk

(Source: Federal Reserve) The Fed also has to deal with systemic risk, which is present because of the extensive relationships between financial institutions and, as current Fed Chairman, Janet Yellen, notes, the growing shadow banking sector. (Learn more by going to <http://www.federalreserve.gov/newsevents/speech/yellen20130104a.htm> and at <http://www.federalreserve.gov/newsevents/speech/bernanke20090310a.htm> ) The Fed wants to reduce systemic risk, so that the financial system can remain stable. The Fed is attempting to address systematic risk by:

1. Close supervision and oversight of financial institutions, risk taking, risk management, and financial conditions while [holding these institutions] to high capital and liquidity standards.
2. Ensu[ing] a robust framework- both legally and in practice- for consolidated supervision of all system-wide, important financial firms.
3. [developing] improved tools to allow for the orderly resolution of systemically important non-bank financial firm.
4. increasing the resiliency of funds

# *Glossary of Terms*

Investopedia.com

**Federal Reserve System:** The central bank of the United States created by Congress and consisting of a seven member Board of Governors in Washington, D.C., 12 regional Reserve Banks, and depository institutions that are subject to reserve requirements.

**Federal Deposit Insurance Corporation (FDIC):** Agency of the federal government that insures accounts at most commercial banks and mutual savings banks. The FDIC also has primary federal supervisory authority over insured state banks that are not members of the Federal Reserve System.

**Financial Institution:** An institution that uses its funds chiefly to purchase financial assets (primarily loans and securities) as opposed to tangible property.

**Monetary Policy:** Federal Reserve actions to influence the availability and cost of money and credit, as a means of helping to promote high employment, economic growth, price stability, and a sustainable pattern of international transactions. Tools of monetary policy include open market operations, discount policy, and reserve requirements.

**Federal Open Market Committee (FOMC):** A 12 member committee consisting of the seven members of the Federal Reserve Board and five of the twelve Federal Reserve Bank presidents.

**Fiscal Policy:** Government policy regarding taxation and spending. Fiscal policy is made by Congress and the Administration.

**Inflation:** A rise, over time, in the average level of prices.

**Recession:** A significant decline in general economic activity extending over a period of time.

## *Further Reading / Resources*

### Links:

Federal Reserve Education:

<https://www.federalreserveeducation.org/about-the-fed/structure-and-functions/monetary-policy>  
<https://www.federalreserveeducation.org/about-the-fed/structure-and-functions/financial-services/>

Federal Reserve:

[http://www.federalreserve.gov/paymentsystems/fedfunds\\_about.htm](http://www.federalreserve.gov/paymentsystems/fedfunds_about.htm)  
[http://www.federalreserve.gov/pf/pdf/pf\\_5.pdf](http://www.federalreserve.gov/pf/pdf/pf_5.pdf)  
[http://www.federalreserve.gov/pf/pdf/pf\\_5.pdf](http://www.federalreserve.gov/pf/pdf/pf_5.pdf)

Investopedia:

<http://www.investopedia.com/university/releases/moneysupply.asp>

<http://www.investopedia.com/terms/f/federalfundrate.asp>

<http://www.investopedia.com/articles/stocks/09/how-interest-rates-affect-markets.asp>

<http://www.investopedia.com/terms/c/consumerpriceindex.asp>

<http://www.investopedia.com/terms/p/ppi.asp>

<http://www.investopedia.com/university/inflation/inflation1.asp>

Federal Reserve of New York:

<http://www.newyorkfed.org/markets/omo/dmm/fedfundsdata.cfm>

Federal Reserve of Cleveland:

[http://www.clevelandfed.org/about\\_us/annual\\_report/2011/maximum\\_employment.cfm](http://www.clevelandfed.org/about_us/annual_report/2011/maximum_employment.cfm)

Federal Reserve of St. Louis:

<https://www.stlouisfed.org/publications/regional-economist/january-2008/stable-prices-stable-economy-keeping-inflation-in-check-must-be-no-1-goal-of-monetary-policymakers>

Fortune Magazine:

<http://fortune.com/2013/10/30/why-the-fed-should-worry-about-deflation/>

Federal Reserve of Richmond:

[https://www.richmondfed.org/research/our\\_perspective/pricestability/index.cfm](https://www.richmondfed.org/research/our_perspective/pricestability/index.cfm)

Federal Reserve of San Francisco:

<http://www.frbsf.org/education/teacher-resources/what-is-the-fed/financial-stability>



## Books:

- The Panic of 1907 by Robert Brunner and Sean Carr. Gives a full account of the events leading up to this crisis and the actions that followed to solve it. This panic was the one that finally spurred action on creating a central bank in the U.S.
- A Monetary History of the United States by Milton Friedman and Anna Schwartz. Published in 1963, this was really the first attempt to provide a solid history of monetary economics. It's a bit more technical and covers a long period of history, but the chapters on the Great Depression include a lot of narrative.
- In Fed We Trust by David Wessel. An account of the Fed's actions during the Great Recession. The author was at the WSJ at the time and is now at Brookings.
- Central Banking After the Great Recession also by David Wessel includes an interview with Bernanke at the end of his term as Chair.

## Lessons:

- <http://www.federalreservehistory.org> is a searchable gateway that contains more than 11,000 artifacts related to the Fed's history. It includes some info on Bernanke.
- Federal Reserve Centennial Lessons: As part of the Centennial, three new classroom-ready lessons have been developed to help high school students understand Fed history, Fed functions and how the roles of the Fed have evolved over time. All of the lessons are tied to the Common Core and national content standards in social studies and economics. Two of the lessons are also accompanied by PowerPoint slides.
  - Lesson 1 - Defining Moments in Federal Reserve System History: 1907-1935
  - Lesson 2 - The Federal Reserve System Shuffle: 1945-1987 | PowerPoint Slides
  - Lesson 3 - The Modern Federal Reserve System: Changes and Trends in Federal Reserve Functions | PowerPoint Slides

\*Note: you will have to go onto the Federal Reserve website to find these lessons.

## *Chapter II: What is the Federal Reserve? Study Questions*

Created by Student Interns, The Echo Foundation

1. What is the mission of the Federal Reserve?
2. Explain how monetary policy is used to achieve economic stability.
3. What is the role of interest rates? Explain how the Fed uses interest rates to encourage an appropriate increase or decrease in the amount of spending money in the economy.
4. What economic conditions in the late 19th and early 20th century led to the creation of the Fed in 1913?
5. Why was the Fed designed to operate independently from Congress?
6. Compare and contrast the different types of inflation. Is a certain kind of inflation more detrimental to a nation's economy than another? Explain.
7. Explain the correlation between inflation and employment.
8. How is the Chairman of the Federal Reserve/Board of Governors appointed?
9. Define "Full Employment"
10. Compare Fiscal and Monetary Policy.
11. Explain the theory of "Demand-Pull Inflation"
12. Describe a positive result of an increase in the money supply.
13. Define "Open Market Operations" and how they help implement monetary policy into the economy.
14. Describe the numerical groupings that are used to measure the supply of money that is in circulation and available for spending.
15. Describe the organizational structure of the Fed.
16. How do the personal ethics and talents of the governors influence the Federal Reserve?

# Chapter III: The Economic Decline



Lehman Brothers is one of the major banking institutions that choked in the 2007/2008 crisis. Photo: Reuters, from Business Daily

Chapter Introduction.....	X
Understanding the Fundamentals of Financial Markets.....	X
Causes of the Crash.....	X
1. Government Policy & Economic Influences.....	X
2. Trends in the Market.....	X
3. Corporate Governance.....	X
4. Consumer Behavior: Before & After the Recession.....	X
The Crash: A Timeline.....	X
Reforms and Recovery.....	X
1. Federal Reserve Actions.....	X
2. “TARP” Troubled Asset Relief Program.....	X
3. Regulatory Actions after the Recession.....	X
4. Ben Bernanke’s Role as Fed Chairman.....	X
Results of Crisis Response.....	X
Further Reading/Resources.....	X
Study Questions .....	X

*“One of the challenges still out there is to help people understand why stabilizing the financial system was so important... They think somehow or another that we favored Wall Street instead of favoring Main Street and that’s unfortunate... I still think there are a lot of people out there who really don’t understand why we did what we did.” –Ben Bernanke, April 22, 2014*

## Chapter Introduction

Created by Student Interns, The EchoFoundation

The 2008 Financial Crisis was an economic crash in the United States caused by the popping of the housing bubble, subsequent bank failures and stock market crash. The causes of the crash are still debated among top economists. The following is a presentation of certain perspectives in general terms as to what caused the crash and the reforms that came after.

The causes of the crash can be broken down into four different categories: government policies and economic influences, trends in the housing market, corporate governance practices and consumer behavior.



Beginning in 1995, the Clinton administration created an initiative to make housing more accessible (the Community Reinvestment Act or the CRA), especially in low-income neighborhoods. This resulted in a lowering of credit standards which allowed banks to issue mortgages that could not be paid back (subprime mortgages).

Though there was a reduction in government regulation on credit standards, nobody expected the mortgages to be a problem because housing prices almost always had an upward trend. Housing prices over the past 100 years show a trend of increased housing prices – that means if home owners lost their jobs or couldn't pay their mortgage, they could simply sell the home for an amount greater than what they originally paid. As a result, banks started making more loans, and investors were more willing to invest in the banks.

In addition, stock options, ballooning salaries, and short term gains for top executives led to excessive risk taking which took the form of subprime mortgages. Major loan institutions, such as Countrywide Financial and Citigroup, granted more loans to buyers that couldn't pay them back. Many of these loans were backed by government-funded Fannie Mae and Freddie Mac. The 1999 repeal of the Glass-Steagall Act eliminated the separation depository banks and investment banks. This allowed banks to gamble with depositor's money. To make matters worse, consumers often made irresponsible purchases that they couldn't afford. In turn, the home owners began defaulting on their mortgages, financial institutions began to fail, housing prices plummeted, and the economy crashed.

The economic crash took the form of bank failures and subsequent stock market crash in 2008. Major financial institutions that failed include Bear Stearns and Lehman brothers. In response, Congress enacted TARP (Troubled Asset Relief Program) which allowed the treasury to purchase troubled assets and security backed mortgages from banks and funded many critical industries. These were controversial decisions because many supported letting the banks fail.

Following the economic crash, the Federal Reserve and U.S. government instituted a trend of increased regulations on financial institutions and credit requirements. The government and Fed took major steps to stabilize the economy through programs like TARP and the Dodd-Frank Act. Since 2010, all four economic indicators (as defined by Investopedia) have been positive. U.S. unemployment has decreased while inflation, GDP per capita and US stock markets have steadily increased.





# Understanding the Fundamentals of the Financial Market

Created by Student Interns, The EchoFoundation

There is abundant discussion concerning the causes, impact and solutions for the financial crisis that commenced in the United States around late 2007 and early 2008. The impact eventually spread throughout the globe. In order to fully understand the multitude of issues surrounding the crisis one must understand basic accounting concepts and how the financial world works. We have compiled a small sampling of information to assist in this endeavor. A useful source is the Khan Academy which has as its mission to provide free education world class education for anyone, anywhere.

Links to Khan Academy Series on 2008 Crash:

## [Video Bailout 1: Liquidity vs. solvency - Khan Academy](#)

*Explains a personal balance sheet including the concepts of assets, liabilities. Equity, solvency, liquidity, insolvency and illiquidity solvency.*



## [Video Bailout 2: Book value | 2008 Bank bailout | Khan Academy](#)

*Explains book value using illustration of bank balance sheet including concepts of government and corporate bonds, commercial mortgages, residential collateralized debt obligations, derivatives mortgage backed securities, tranches, liabilities and equity and book value.*



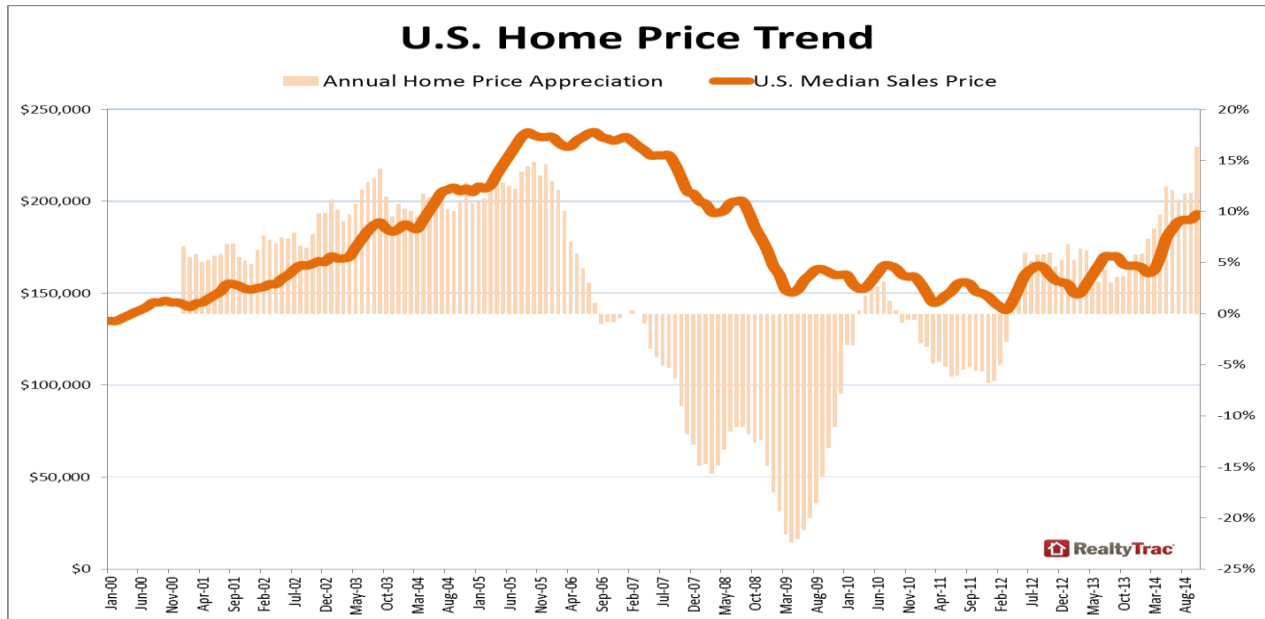
## [Video Bailout 3: Book value vs. market value - Khan Academy](#)

*Explains difference between book value and market value, market cap and secondary market.*



## Causes of the Crash

1. **Government policy and economic influences:** Government mandates, such as the Community Reinvestment Act (CRA), to increase home ownership by minorities played a major part in the 2008 housing market crash.



Before the 2008 Crash, housing prices were on a steady increase due to the increased buying and selling of houses, which was made easier by acts such as the CRA.

The following articles give different perspectives on how government policy caused the market crash.

## PERSPECTIVE

### Community Reinvestment Act and the Housing Market Crisis of 2008

From A Guide to the Political Left  
Discoverthe Networks.org Website

In his 2011 book, *Back to Work*, former president [Bill Clinton](#) attributed the housing-market crisis of 2008 to the greed of banks that “were over-leveraged, with too many risky investments, especially in subprime mortgages and securities and derivatives that were spun out of them.” In Clinton's calculus, “the crash occurred because there was too little government oversight of, and virtually no restraint on, risky loans without sufficient capital to back them up.” President [Barack Obama](#), for his part, [attributed](#) the crisis to the “failed policies” of “the days when Wall Street,” unencumbered by government regulators, “played by its own rules.” But in reality, the housing crisis was caused by *too much* government interference in the economy, and by government-mandated policies that actually *prevented* Wall Street from playing “by its own rules.”

The earliest roots of these government policies can be traced back to the mid-1970s, when progressive Democrats in Congress began a campaign to help low-income minorities improve their economic condition through homeownership. At that time, the [homeownership rates](#) of blacks and Hispanics alike were just a shade above 40%, while the white rate hovered near 70%. Seeing these inequalities as prima facie evidence of America's persisting racial injustice, many Democrats pushed for measures to rectify the situation.

Spearheading this endeavor was one of the [leading progressives](#) in Congress, Henry Reuss—an anti-war, pro-McGovern Democrat and chairman of the House Banking Committee—who sponsored the Housing and Community Development Act of 1977. Title VIII of this bill, known as the [Community Reinvestment Act](#) (CRA), “[required](#) each appropriate Federal financial supervisory agency to assess ... [each] bank's record of helping to meet the credit needs of its entire community, including low- and moderate-income neighborhoods.” This was a mandate for banks to make special efforts to seek out and lend to minority borrowers—particularly mortgagors—of meager to modest means. The bill was ultimately passed with near-unanimous Democratic support and was signed into law by Democrat President [Jimmy Carter](#) in 1977.

Like many government policies, the CRA began small but grew in scope and severity over the years.<sup>1</sup> The law was founded upon a planted axiom with far-reaching implications—that government intervention is necessary to counteract the fundamentally racist and inequitable nature of American society generally, and of the free market specifically.

The profound implications of that premise began to hit critical mass in the early 1990s, when studies showing disparate mortgage-loan approval rates for blacks and whites made sensational headlines in the media.<sup>2</sup> In 1992 researchers at the Federal Reserve Bank of Boston released the results of the [seminal study](#) in this regard, most commonly known as the Boston Fed Study, which [found](#) that whites and blacks with equivalent incomes had been denied mortgages at rates of 17% and 38%, respectively.<sup>3</sup>

In reaction to the study, Attorney General Janet Reno [warned](#) in 1994 that “no bank” would be “immune” to an aggressive Justice Department campaign to punish discrimination in lending practices. In a similar vein, Comptroller of the Currency Eugene Ludwig [told](#) the Senate Banking

Committee: “We have to use every means at our disposal to end discrimination and to end it as quickly as possible.”

The media, too, were quick to cite the Boston Fed Study as proof of discrimination in lending. According to the *Boston Globe*, the “[landmark study](#)” provided “the most damning evidence to date of racial hurdles facing minority homebuyers.” A [headline](#) in *BusinessWeek* read, “There's No 'Whites Only' Sign, But ...”; the accompanying article characterized the study as “[definitive](#).”

Notably, such critics carefully avoided assessing the weighty implications of a second 1992 study that was done for the Federal Reserve Bank of Boston, [showing](#) that black loan applicants not only had greater debt burdens and poorer credit histories than their white counterparts, but also tended to seek loans covering a higher percentage of the property values in question.<sup>4</sup> The later study found that after correcting for these and other standard credit criteria—income, net worth, age, education, and probability of employment—the loan-rejection gap between racial groups dwindled to 11% for whites and 17% for blacks.<sup>5</sup> (Conversely, the approval rates were 89% and 83%, meaning that both whites and blacks were approved for loans most of the time.) Economist Thomas Sowell observes: “The ... differential can be expressed by saying that there was a ... difference of 6 percentage points in loan approval rates, or that minority applicants were turned down 60 percent more often than white applicants with the same characteristics, since a 17 percent rejection rate is 60 percent higher than an 11 percent rejection rate. The Boston Federal Reserve Bank report chose the latter way of expressing the same facts,”<sup>6</sup> and thereby tacitly implied that racism had played a role.

But serious doubt was cast upon the racism theory by the fact that whites were [less likely](#) than Asians to be approved for mortgages; that black-owned banks were even more likely than white-owned banks to [turn down](#) black applicants; and, most notably, that whites and blacks who were approved for loans went on to have equivalent default rates. If lenders had been discriminating against blacks by holding them to stricter standards than whites (in terms of debt level, expense level, income, and credit history), white borrowers undoubtedly would have had a higher default rate than blacks. The fact that the default rates of whites and blacks were so similar provided strong evidence that lenders were applying race-neutral standards in awarding loans. When asked to comment on this point, the principal author of the Boston Fed Study, Alicia Munnell, acknowledged: “I do not have evidence [of discrimination].... No one has evidence.”<sup>7</sup>

The Federal Reserve Board in Washington later re-examined the original Boston Fed Study and [found](#) its conclusions “difficult to justify.” Similarly, Nobel Prize-winning economist Gary Becker found that the first Boston Fed Study had “serious methodological flaws” that made its results “of dubious value in formulating social policy.”<sup>8</sup> Moreover, in 1998 it was [reported](#) that the data used by that study contained literally [hundreds](#) of [errors](#) vis à vis such variables as the net worth of the applicants and the interest rates of the loans they sought. When those data errors were [corrected](#), evidence [suggesting](#) that lenders had discriminated against minority borrowers [disappeared](#). In 1999 the *Journal of Real Estate Research* likewise [concluded](#): “[W]e find no evidence of higher profitability on loans to Black borrowers but find evidence of lower equity for Black borrowers. These results are not consistent with racial discrimination in mortgage lending.”

But none of these facts—the substance of which, as noted above, had largely come to light before the end of 1992—prevented the Clinton administration from essentially transforming the Community Reinvestment Act from an outreach effort into a strict [quota system](#). Under this new arrangement, if a bank failed to meet its quota for loans to low-income minorities, it ran a high risk of failing to earn a “satisfactory” CRA [rating](#) from the Federal Deposit Insurance Corporation (FDIC). Such a failure, in turn, could derail the bank's [efforts](#) to open a new branch, relocate a home office, make an acquisition, or merge with another financial institution. From a practical standpoint, then, banks had no recourse other than to drastically [lower their standards](#) on down-payments and underwriting, and to approve many loans even to borrowers with weak credit credentials.

Additional pressure toward this end was applied by community organizations like [ACORN](#) and the [Greenlining Institute](#). By [accusing](#) banks—however frivolously or unjustly—of having engaged in racially discriminatory lending practices that violated the mandates of the CRA, these groups could [stall or prevent](#) banks from expanding or merging as they wished. Further, the community groups routinely [threatened](#) to file lawsuits or negative-publicity campaigns against such banks, which often responded by signing “agreements” pledging to increase, by any means necessary, their lending to undercapitalized nonwhites. Bruce Marks, executive director of Union Neighborhood Assistance Corporation and self-described “urban terrorist,” ominously [asserted](#) that if some banks were reluctant to meet the new CRA standards, “we’ll have to start making it in their interest [to do so].”

As a result of such pressures, CRA commitments, which from 1977 to 1991 had cumulatively totaled just under \$9 billion, suddenly [jumped](#) to \$34 billion in 1992 alone. Then, over the ensuing 16 years, those commitments would amount to [\\$6 trillion](#).

The CRA was by no means the only mechanism designed by government to impose lending quotas on financial institutions. The Department of Housing and Urban Development (HUD), under the leadership of Henry Cisneros, developed [rules](#) encouraging lenders to increase their approval rates for loans to minority applicants by a hefty 20% within a one-year period. In 1993 HUD began bringing [legal actions](#) against mortgage bankers who had turned down a higher percentage of minority applicants than white applicants, regardless of their reasons for doing so. This, too, caused lenders to lower their down-payment and income requirements for minorities.

Moreover, HUD [pressured](#) the government-sponsored enterprises Fannie Mae and Freddie Mac, the two largest sources of housing finance in the United States, to earmark a rising number of their own loans for low-income borrowers. As the *Wall Street Journal* [reports](#): “For 1996, HUD gave Fannie and Freddie an explicit target: 42% of their mortgage financing had to go to borrowers with income below the median in their area. The target increased to 50% in 2000 and 52% in 2005.” Further, HUD in 1996 [required](#) that 12% of all mortgages that Fannie and Freddie purchased from banks and other direct-mortgage lenders be “special affordable” loans, typically to borrowers with incomes at least 40% below the median for their area. Many of these were subprime mortgages—loans characterized by higher interest rates and less favorable terms in order to compensate lenders for the high credit risk they were incurring. The 12% figure [increased](#) to 20% in 2000, 22% in 2005, and 28% in 2008. Nonwhite minorities, because of their comparatively poor credit ratings, were far likelier than whites to be the recipients of such loans.

In December 2006, *The New York Times* reported: “The most recent Home Mortgage Disclosure Act data from lending institutions show that over half of African-Americans and 40 percent of Hispanics received subprime loans.”

No one supported such reckless lending practices more fervently than Democratic Congressman Barney Frank, a ranking member (and later the chairman) of the powerful House Committee on Financial Services. In 2003 Frank lauded Fannie Mae and Freddie Mac for having “played a very useful role in helping make housing more affordable.” Dismissing the “exaggerate[d]” warnings of critics who exhorted Fannie and Freddie to stop approving and purchasing so many high-risk loans, he preferred “to roll the dice a little bit more ... towards subsidized housing.” In 2004 Frank said that the federal government had “probably done too little rather than too much” to push Fannie and Freddie “to meet the goals of affordable housing and to set reasonable goals.” “I would like to get Fannie and Freddie more deeply into helping low income housing and possibly moving into something that is more explicitly a subsidy,” he declared.

Democratic Senator Christopher Dodd, chairman of the Senate Banking Committee, was of a like mind. In 2004 he called Fannie and Freddie “one of the great success stories of all time” and “caution[ed]” that restricting their activities would do “great damage to what has been one of the great engines of economic success in the last 30 or 40 years.” As late as July 2008, Dodd continued to defend Fannie and Freddie as being “on sound footing.”

Democrats were not alone in calling for lower mortgage-approval standards; a number of Republicans favored such a course of action as well. In 2002 the Bush administration pressed Congress to pass the American Dream Downpayment Initiative (ADDI) to subsidize the downpayments and closing costs of low-income, first-time homebuyers. After ADDI was enacted in 2003, Bush also pushed Congress to pass legislation permitting the Federal Housing Administration (FHA) to make zero-downpayment loans at low interest rates to low-income people, on the theory that “those who can afford the monthly payment but have been unable to save for a down payment should [not] be deprived from owning a home.”

These political pressures entirely restructured the landscape of the mortgage-lending industry. Subprime loans, which had constituted just 7% of all mortgages in 2001, accounted for fully 19% of mortgages by 2006. During the same period, other nontraditional loans (such as zero-downpayment loans) rose from fewer than 3% of all mortgages to nearly 14%.<sup>9</sup> Thus the real-estate market became a proverbial house of cards, destined inevitably to collapse. When the indebtedness reached a critical mass, the ensuing financial crash produced a tidal wave of home foreclosures across the United States. “It was ultimately the skyrocketing rates of mortgage delinquencies and defaults,” writes Hoover Institution Fellow Thomas Sowell, “that were like heavy rain in the mountains that caused the flooding downstream.... Government was not passively inefficient. It was actively zealous in promoting risky mortgage lending practices.”<sup>10</sup>

The situation was exacerbated further by the fact that many banks securitized the risky loans—i.e., bundled them together and sold them to third-party investors. Indeed, an ever-growing number of loans were made for the express purpose of securitization and eventual sale. From 2000 to 2005, private securitization of home and commercial mortgages grew tenfold, reaching a peak of more than \$1.5 trillion in 2006. Many of these securitized loans were subprime mortgages. Between 2001 and 2006, the securitized share of subprime mortgages increased from



54% to 75%. The result of these ill-conceived lending practices was a full-blown financial crisis characterized by countless home foreclosures and skyrocketing unemployment rates.

It is notable that the primary victims of these calamities were nonwhite minorities of modest means—the very people who ostensibly were the intended beneficiaries of the CRA, ADDI, and the aforementioned HUD and FHA policies. From January 2007 through the end of 2009, some **2.5 million foreclosures** were completed nationwide, the vast majority of which were on properties whose mortgages had **originated** between 2005 and 2008. Of the two-and-a-half million homeowners who were affected, **56.1%** were whites (who had taken out 65.9% of all mortgages), and **27.8%** were blacks and Hispanics (who together had taken out just 19% of all mortgages). In June 2010 the Center for Responsible Lending **reported** that **among** borrowers who had taken out mortgages between 2005 and 2008, **nearly 8%** of both African-Americans and Hispanics had lost their homes to foreclosure; the corresponding rate for whites was 4.5%. As of **November 2011**, approximately one-fourth of all black and Hispanic borrowers had either already lost their homes to foreclosure or were seriously delinquent, compared to just under 12% of white borrowers.

These disparities in foreclosure rates were largely due to the fact that African Americans and Hispanics "**because** of their comparatively poor credit ratings" were disproportionately represented among those who had fallen into the financial trap of the high-priced subprime mortgages encouraged by the CRA and similar government policies. For instance, 52% of blacks (vs. only 16% of whites) had credit scores low enough to classify them as subprime borrowers.<sup>11</sup> Among all borrowers in 2006, some 41.5% of blacks, 30.9% of Hispanics, and 17.8% of whites were recipients of subprime loans. (The notion that such figures reflect lenders' bias against nonwhites is derailed by the **fact** that the corresponding rate for Asians was only 11.5%.) And across the United States, the very places where subprime loans were most prevalent also had the **highest** foreclosure rates. As Thomas Sowell observes: "Being granted loans because the bank needs to meet statistical target 'quotas' in order to keep federal agencies off their backs, rather than because you are likely to be able to repay the loans, is not unequivocally a benefit to a borrower."

Prior to the crash, home ownership accounted for **63%** of the average net worth of African Americans, as compared to just 38.5% of average white net worth. **By 2009**, as a result of the government policies that had caused the housing crisis, the median net worth of black households was just \$5,677, a 53% decline from the 2005 figure of \$12,124 (in constant 2009 dollars). The median net worth of Hispanic households, meanwhile, had fallen by 66% (from \$18,359 to \$6,325 in constant 2009 dollars) during the same period. (For **whites**, the decline was just 16%, from \$134,992 to \$113,149.) According to a Pew Research Center **report**, "Plummeting house values were the principal cause [of this] erosion in household wealth among all groups." The Pew study further **found** that by 2009 the wealth gap between white households and their black or Hispanic counterparts had grown to its widest point since the government began publishing such data by ethnicity in 1984.

It should be noted that the declines in black and Hispanic net worth from 2005-2009 were not just givebacks of windfalls which those groups had reaped during the housing boom of 2000-2005. In 2000, on the eve of that boom, the median **net worths** (in 2009 dollars) of white, black, and Hispanic households were \$99,250, \$9,375, and \$12,188, respectively. In other words, the

housing crisis would actually leave blacks and Hispanics (but not whites) in a significantly worse economic position than they had been in prior to the five-year boom. **In fact**, blacks and Hispanics (but not whites) were worse off in 2009 than they had been twenty-one years earlier, when the median **net worths** (in 2009 dollars) of white, black, and Hispanic households were \$78,770, \$7,589, and \$10,046. In one fell swoop, progressive “benevolence” had utterly wiped out decades of black and Hispanic efforts to rise economically. Nor did 2009 mark the end of the calamity for nonwhites. **From 2009 to 2012**, the African American community collectively lost another \$193 billion, and the Hispanic community \$180 billion.

The housing-market crisis cast a heavy cloud over what had been one of America’s greatest success stories—the rise of the black middle class. Between 1949 and 1994, the proportion of African Americans in the middle class had nearly quadrupled, from 12% to 44%—an unprecedented advance for any oppressed group in any society on record. But blacks were now, along with Hispanics, the chief victims of the housing disaster that government programs had created. “These are people who played by the rules,” **observed** National Urban League President Marc Morial. “They built wealth, went to college and had good jobs. But in a short period of time, they've fallen back.”

Moreover, it should be noted that home foreclosures were only part of the calamity suffered by nonwhite minorities. When the bottom fell out of the housing market, it inevitably fell out of the jobs market as well. In January 2007, the respective **unemployment rates** for Hispanics and blacks in the U.S. had been 5.7% and 8.0%. By December 2009, those **figures** spiked to 12.9% and 15.8%. (The white jobless rate also rose, from 4.1% to 9.2%.) In **September 2010**, unemployment in the black community was 16.1%, including 17.6% for black men and a staggering 49% for black teenagers. The corresponding rates for **Hispanics and whites**, meanwhile, were 12.4% and 8.7%. By **August 2011**, the black unemployment rate was at 16.7% overall and 19.1% for black males—figures comparable to those of the Great Depression. For **Hispanics and whites**, the figures were 11.3% and 8.0%, respectively.

As the economist Thomas Sowell **puts it**:

“Government agencies, from the Department of Housing and Urban Development to the Federal Reserve leaned on lenders to lower lending standards, and the Department of Justice threatened prosecutions for discrimination if the racial makeup of people approved for mortgage loans did not match their preconceptions. It worked. In fact, it worked so well that many blacks got loans that they could not have gotten otherwise. Now the statistics tell us, belatedly, that blacks lost out, big time, from this 'favor' done for them by politicians.”

Notwithstanding the colossal disaster which the Community Reinvestment Act inflicted on the American people—and on nonwhite minorities in particular—left-wing Democrats, for reasons of “economic justice,” tried to resurrect the CRA in 2009. That year, Rep. Eddie Bernice Johnson (D-Texas) **sponsored** (along with 51 fellow Congressional Democrats) the **Community Reinvestment Modernization Act** “to close the wealth gap in the United States” by increasing “home ownership and small business ownership for low- and moderate-income borrowers and persons of color.” Specifically, the legislation **sought** to extend the CRA's strict lending requirements to credit unions, insurance companies, and mortgage lenders, and to make its mandates more explicitly race-based by applying lower lending standards not only to low- and moderate-income borrowers, but to any nonwhite minorities, regardless of income.

On April 2, 2013, the *Washington Post* [reported](#) that the Obama administration, in an effort to boost the economy, was pushing banks to make more loans to people with weak credit ratings. Said the *Post*:

President Obama’s economic advisers and outside experts say the nation’s much-celebrated housing rebound is leaving too many people behind, including young people looking to buy their first homes and individuals with credit records weakened by the recession. In response, administration officials say they are working to get banks to lend to a wider range of borrowers by taking advantage of taxpayer-backed programs — including those offered by the Federal Housing Administration — that insure home loans against default.

Housing officials are urging the Justice Department to provide assurances to banks, which have become increasingly cautious, that they will not face legal or financial recriminations if they make loans to riskier borrowers who meet government standards but later default. Officials are also encouraging lenders to use more subjective judgment in determining whether to offer a loan and are seeking to make it easier for people who owe more than their properties are worth to refinance at today’s low interest rates, among other steps....

From 2007 through 2012, new-home purchases fell 30 percent for people with credit scores above 780 (out of 800), according to Federal Reserve Governor Elizabeth Duke. But they declined 90 percent for people with scores between 680 and 620 — historically a respectable range for a credit score.

“If the only people who can get a loan have near-perfect credit and are putting down 25 percent, you’re leaving out of the market an entire population of creditworthy folks, which constrains demand and slows the recovery,” said Jim Parrott, who until January was the senior adviser on housing for the White House’s National Economic Council....

The effort to provide more certainty to banks is just one of several policies the administration is undertaking. The FHA is also urging lenders to take what officials call “compensating factors” into account and use more subjective judgment when deciding whether to make a loan — such as looking at a borrower’s overall savings. “My view is that there are lots of creditworthy borrowers that are below 720 or 700 — all the way down the credit-score spectrum,” [FHA commissioner Carol] Galante said. “It’s important you look at the totality of that borrower’s ability to pay.”

In November 2014, the *Washington Free Beacon* [reported](#):

Critics warn that government agencies are making the same mistakes that led to the economic downturn of 2008. Federal agencies have made a series of recent moves that could precipitate another housing crisis similar to the one in 2008, experts say, again threatening the stability of the entire U.S. economy.

Housing regulators and other agencies have announced rulings and proposals in recent weeks that would lower credit and lending standards for home mortgages. Subprime or low-quality mortgages that defaulted in 2008—a [majority](#) of which were backed by the government housing giants Fannie Mae and Freddie Mac—were a significant contributor to the economic downturn.

Additionally, Fannie and Freddie currently hand over most of their earnings to the Treasury Department under [changes](#) made by the agency in 2012. That means that as home loans become more risky, the companies [Fannie and Freddie] known as government-sponsored enterprises (GSEs) would have no capital buffer to absorb losses. Taxpayers could again be called upon to rescue them in the event of another economic shock.

Treasury [provided](#) \$188 billion during the 2008 crisis to save Fannie and Freddie, which were seized by the government and [placed](#) in “conservatorship” by the newly established Federal Housing Finance Agency (FHFA).

“When those two firms fail—as they will, especially when they don’t have any capital—the result will be the taxpayer will have to pick up the bill again,” said Peter Wallison, a fellow at the American Enterprise Institute (AEI) and former general counsel of Treasury during the Ronald Reagan administration, in an interview. “The lessons of the financial crisis have not been learned,” he added.

FHFA [Federal Housing Finance Agency] Director Mel Watt [said](#) last month that Fannie and Freddie would soon begin to guarantee loans with down payments as low as 3 percent, though the final details of that plan have yet to be released. The two companies operate by buying loans from lenders, selling those loans in mortgage-backed securities, and then guaranteeing payment to investors if the loans default.

Fannie and Freddie [purchased loans](#) with little or no down payments before 2008, but had largely stopped doing so in recent years.

Watt also expressed concerns that lenders had restricted loans to borrowers with lower incomes or credit scores out of concern that Fannie and Freddie would force them [the lenders] to buy back the loans if they [the borrowers] defaulted. He outlined instances where lenders would not have to repurchase the loans, and encouraged them to loosen up lending standards....

Watt sought to assuage concerns that lower down payments would result in more defaults. Borrowers will still need to have “compensating factors” such as strong credit records or lower debt-to-income (DTI) ratios, he said, and the loans will require a form of “credit enhancement” such as private mortgage insurance. “There are creditworthy borrowers in today’s market who have the income to afford monthly mortgage payments but do not have the money to make a large down payment and pay closing costs,” he said in [prepared remarks](#) at the National Association of Realtors Conference & Expo. “Purchase guidelines that allow for 3 percent down payments will provide an opportunity for access to credit for some of these borrowers.”

Wallison said he was skeptical that private mortgage insurance firms would accept mortgages with the low down payments, adding that the risk would eventually go back to Fannie and Freddie or the Federal Housing Administration (FHA). The loans could actually be more expensive with the addition of mortgage insurance premiums. “The right conclusion would be to have a good solid down payment and good credit score and the borrower gets a much less expensive mortgage,” he said.

Six federal agencies, including the FHFA, also [announced](#) last month that while sellers of some asset-backed securities must retain at least five percent of the credit risk of the assets, other

securities backed by “qualified residential mortgages” (QRMs) are exempt from the risk retention requirement. The [new criteria](#) for “prime” or traditional mortgages requires borrowers to document their debt and income and meet a DTI benchmark of 43 percent or less.

However, the new rule dropped the tougher credit and lending requirements of the [initial proposal](#) in April 2011—which included a down payment of at least 20 percent and a DTI ratio of 36 percent or less. Wallison said the rule “completely destroyed” the risk retention goal of the Dodd-Frank Act that was supposed to make mortgage-backed securities less risky. Those securities were a principal cause of the financial crisis.

On January 19, 2015, political analyst [Michael Barone](#) wrote:

What caused the financial crisis?... The real problem was housing finance, argues my American Enterprise Institute colleague Peter Wallison in his new book *Hidden in Plain Sight: What Really Caused the World’s Worst Financial Crisis and Why It Could Happen Again*. Without changes in housing finance policy, he says, there would have been no financial crisis in 2008.

Government policies encouraged the granting of mortgages to non-creditworthy homebuyers, and government-sponsored enterprises [GSEs] Fannie Mae and Freddie Mac funneled securities laced with high-risk mortgages into major financial institutions. When house prices suddenly and unexpectedly dropped in 2007, these mortgage-backed securities became unsellable and the financial crisis quickly followed.

Wallison traces the policy mistake back to 1992, when Congress passed a law requiring the GSEs to purchase a certain percentage of its mortgages granted to low- and moderate-income homebuyers—30 percent originally, later adjusted up to 56 percent by the Department of Housing and Urban Development.

Previously the GSEs bought only mortgages in which the buyer made 10 to 20 percent down payments. That was revised downward to 3 percent and even zero. Such subprime mortgages proliferated until in 2008 they accounted for more than half of U.S. mortgages, 76 percent of which were on the books of the GSEs or government agencies like the FHA.

This was in line with the policy priorities of the Clinton and Bush administrations. They hailed the increase of homeownership from the 64 percent that prevailed from the mid-1960s up eventually, and temporarily, to 69 percent. They emphasized the importance of increasing homeownership by blacks and Hispanics who did not qualify as creditworthy under traditional credit standards, which were treated as superstitions.

The result was a house price bubble of unprecedented magnitude. Low-down payment mortgages inflated housing prices, because buyers could afford a larger house with the same down payment. Above-average households, though not the intended beneficiaries of lowered mortgage standards, took advantage of them by converting inflated housing values into cash by refinancing their mortgages.

The problem metastasized into large financial institutions because of imperfect information and perverse government regulations. Fannie and Freddie classified as subprime only those



mortgages they bought through traditional subprime lenders — an action for which their officers were later sued by the Securities and Exchange Commission.

The three rating agencies licensed by the SEC paid by the sellers, rather than the buyers, of securities — a classic case of misaligned incentives — gave mortgage-backed securities AAA ratings, which encouraged big banks to buy them. Similarly, the Basel II international banking standards rated mortgage-backed securities as ultra-safe investments.

When housing prices fell, the market in mortgage-backed securities tanked: No one would pay anything for them. Financial institutions that borrowed to buy them had to raise equity to account for the losses. Wallison argues that the government response made things worse: By rescuing Bear Stearns in March 2008, regulators led other firms to believe they would be rescued too — but Lehman Brothers was allowed to fail six months later, and panic followed.

That panic would not have occurred, Wallison argues, had not the government sparked the creation of defective securities and had not government regulations masked their defects. Private firms, after all, do not buy assets that they believe will become worthless.

Could it happen again? Wallison points out that government regulators are once again reducing the credit standards for mortgage seekers. The argument, as in the 1990s and 2000s, is that traditional standards are misleading and unduly prevent low-income and minority households from buying homes.

Fannie and Freddie are now purchasing the large majority of mortgages and announced last month they would buy mortgages with only 3 percent down payments. The qualified mortgage standards laid down by HUD and other regulators in October allowed for mortgages with zero down payments.

That sounds like a recipe for another housing bubble — and for mass foreclosures, which hurt the policies' intended beneficiaries — and perhaps for another financial crisis as well.

**NOTES: PAGE NUMBERS NEED CORRECTING**

1 Thomas Sowell, *The Housing Boom and Bust* (New York: Basic Books), 2009, p. 36.

2 Ibid.

3 Dinesh D'Souza, *The End of Racism* (New York: The Free Press, 1995), p. 280

4 Thomas Sowell, *The Vision of the Anointed* (New York: Basic Books), 1995, p. 41.

5 Dinesh D'Souza, *The End of Racism* (New York: The Free Press, 1995), p. 280; Thomas Sowell, *The Vision of the Anointed* (New York: Basic Books, 1995), p. 41.

<http://www.urban.org/publications/309090.html>

6 Thomas Sowell, *The Vision of the Anointed* (New York: Basic Books, 1995), p. 41.

7 Ibid., p. 42.



8 Thomas Sowell, *The Housing Boom and Bust*, p. 104.

9 Thomas Sowell, *The Housing Boom and Bust* (New York: Basic Books), 2009, p. 42.

10 Ibid., pp. 67-68.

11 Thomas Sowell, *The Housing Boom and Bust*, p. 101.

**PERSPECTIVE**  
**How Government Created the Financial Crisis**

By John Taylor  
The Wall Street Journal  
February 9, 2009

Many are calling for a 9/11-type commission to investigate the financial crisis. Any such investigation should not rule out government itself as a major culprit. My research shows that government actions and interventions -- not any inherent failure or instability of the private economy -- caused, prolonged and dramatically worsened the crisis.

The classic explanation of financial crises is that they are caused by excesses -- frequently monetary excesses -- which lead to a boom and an inevitable bust. This crisis was no different: A housing boom followed by a bust led to defaults, the implosion of mortgages and mortgage-related securities at financial institutions, and resulting financial turmoil.



David Gothard

Monetary excesses were the main cause of the boom. The Fed held its target interest rate, especially in 2003-2005, well below known monetary guidelines that say what good policy should be based on historical experience. Keeping interest rates on the track that worked well in the past two decades, rather than keeping rates so low, would have prevented the boom and the bust. Researchers at the Organization for Economic Cooperation and Development have provided corroborating evidence from other countries: The greater the degree of monetary excess in a country, the larger was the housing boom.

The effects of the boom and bust were amplified by several complicating factors including the use of subprime and adjustable-rate mortgages, which led to excessive risk taking. There is also evidence the excessive risk taking was encouraged by the excessively low interest rates. Delinquency rates and foreclosure rates are inversely related to housing price inflation. These rates declined rapidly during the years housing prices rose rapidly, likely throwing mortgage underwriting programs off track and misleading many people.

Adjustable-rate, subprime and other mortgages were packed into mortgage-backed securities of great complexity. Rating agencies underestimated the risk of these securities, either because of a lack of competition, poor accountability, or most likely the inherent difficulty in assessing risk due to the complexity.

Other government actions were at play: The government-sponsored enterprises Fannie Mae and Freddie Mac were encouraged to expand and buy mortgage-backed securities, including those formed with the risky subprime mortgages.

Government action also helped prolong the crisis. Consider that the financial crisis became acute on Aug. 9 and 10, 2007, when money-market interest rates rose dramatically. Interest rate spreads, such as the difference between three-month and overnight interbank loans, jumped to unprecedented levels.

Diagnosing the reason for this sudden increase was essential for determining what type of policy response was appropriate. If liquidity was the problem, then providing more liquidity by making borrowing easier at the Federal Reserve discount window, or opening new windows or facilities, would be appropriate. But if counterparty risk was behind the sudden rise in money-market interest rates, then a direct focus on the quality and transparency of the bank's balance sheets would be appropriate.

Early on, policy makers misdiagnosed the crisis as one of liquidity, and prescribed the wrong treatment.

To provide more liquidity, the Fed created the Term Auction Facility (TAF) in December 2007. Its main aim was to reduce interest rate spreads in the money markets and increase the flow of credit. But the TAF did not seem to make much difference. If the reason for the spread was counterparty risk as distinct from liquidity, this is not surprising.

Another early policy response was the Economic Stimulus Act of 2008, passed in February. The major part of this package was to send cash totaling over \$100 billion to individuals and families so they would have more to spend and thus jump-start consumption and the economy. But people spent little if anything of the temporary rebate (as predicted by Milton Friedman's permanent income theory, which holds that temporary as distinct from permanent increases in income do not lead to significant increases in consumption). Consumption was not jump-started.

A third policy response was the very sharp reduction in the target federal-funds rate to 2% in April 2008 from 5.25% in August 2007. This was sharper than monetary guidelines such as my own Taylor Rule would prescribe. The most noticeable effect of this rate cut was a sharp depreciation of the dollar and a large increase in oil prices. After the start of the crisis, oil prices doubled to over \$140 in July 2008, before plummeting back down as expectations of world economic growth declined. But by then the damage of the high oil prices had been done.

After a year of such mistaken prescriptions, the crisis suddenly worsened in September and October 2008. We experienced a serious credit crunch, seriously weakening an economy already suffering from the lingering impact of the oil price hike and housing bust.

Many have argued that the reason for this bad turn was the government's decision not to prevent the bankruptcy of Lehman Brothers over the weekend of Sept. 13 and 14. A study of this event suggests that the answer is more complicated and lay elsewhere.

While interest rate spreads increased slightly on Monday, Sept. 15, they stayed in the range observed during the previous year, and remained in that range through the rest of the week. On Friday, Sept. 19, the Treasury announced a rescue package, though not its size or the details. Over the weekend the package was put together, and on Tuesday, Sept. 23, Fed Chairman Ben Bernanke and Treasury Secretary Henry Paulson testified before the Senate Banking Committee. They introduced the Troubled Asset Relief Program (TARP), saying that it would be \$700

billion in size. A short draft of legislation was provided, with no mention of oversight and few restrictions on the use of the funds.

The two men were questioned intensely and the reaction was quite negative, judging by the large volume of critical mail received by many members of Congress. It was following this testimony that one really begins to see the crisis deepening and interest rate spreads widening.

The realization by the public that the government's intervention plan had not been fully thought through, and the official story that the economy was tanking, likely led to the panic seen in the next few weeks. And this was likely amplified by the ad hoc decisions to support some financial institutions and not others and unclear, seemingly fear-based explanations of programs to address the crisis. What was the rationale for intervening with Bear Stearns, then not with Lehman, and then again with AIG? What would guide the operations of the TARP?

It did not have to be this way. To prevent misguided actions in the future, it is urgent that we return to sound principles of monetary policy, basing government interventions on clearly stated diagnoses and predictable frameworks for government actions.

Massive responses with little explanation will probably make things worse. That is the lesson from this crisis so far.

**Mr. Taylor, a professor of economics at Stanford and a senior fellow at the Hoover Institution, is the author of "Getting Off Track: How Government Actions and Interventions Caused, Prolonged and Worsened the Financial Crisis," published later this month by Hoover Press.**

## PERSPECTIVE

### New Study Finds CRA 'Clearly' Did Lead to Risky Lending

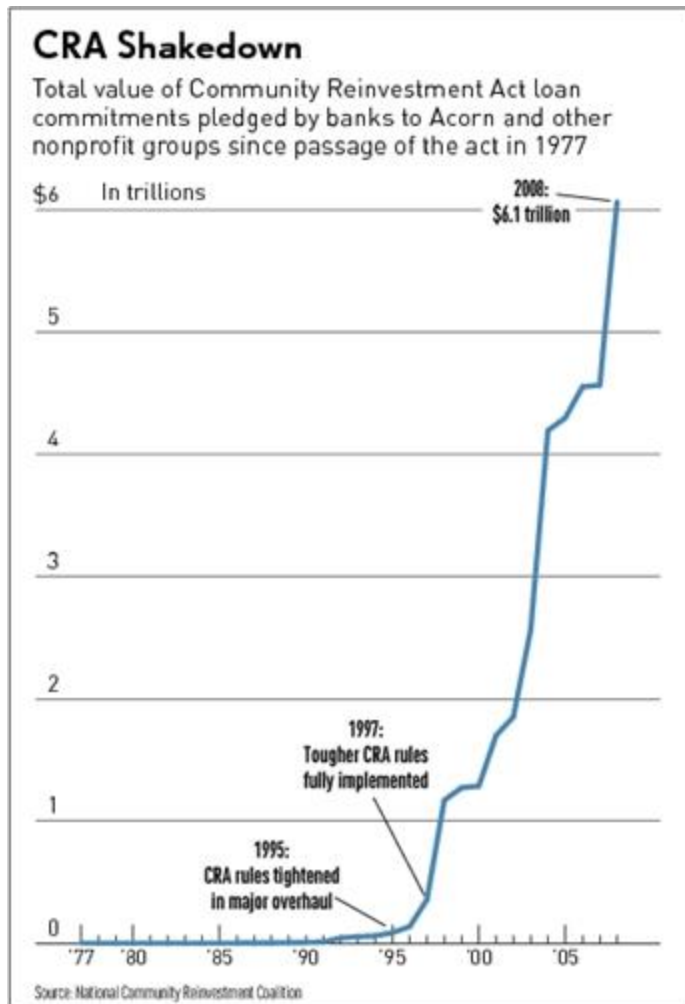
By Paul Sperry  
Investors.com  
December 20, 2012

Democrats and the media insist the Community Reinvestment Act, the anti-redlining law beefed up by President Clinton, had nothing to do with the subprime mortgage crisis and recession.

But a new study by the respected National Bureau of Economic Research finds, "Yes, it did. We find that adherence to that act led to riskier lending by banks."

Added NBER: "There is a clear pattern of increased defaults for loans made by these banks in quarters around the (CRA) exam. Moreover, the effects are larger for loans made within CRA tracts," or predominantly low-income and minority areas.

To satisfy CRA examiners, "flexible" lending by large banks rose an average 5% and those loans defaulted about 15% more often, the 43-page study found.



The strongest link between CRA lending and defaults took place in the runup to the crisis — 2004 to 2006 — when banks rapidly sold CRA mortgages for securitization by Fannie Mae and Freddie Mac and Wall Street.

CRA regulations are at the core of Fannie's and Freddie's so-called affordable housing mission. In the early 1990s, a Democrat Congress gave HUD the authority to set and enforce (through fines) CRA-grade loan quotas at Fannie and Freddie.

It passed a law requiring the government-backed agencies to "assist insured depository institutions to meet their obligations under the (CRA)." The goal was to help banks meet lending quotas by buying their CRA loans.

But they had to loosen underwriting standards to do it. And that's what they did.

"We want your CRA loans because they help us meet our housing goals," Fannie Vice Chair Jamie Gorelick beseeched

lenders gathered at a banking conference in 2000, just after HUD hiked the mortgage giant's affordable housing quotas to 50% and pressed it to buy more CRA-eligible loans to help meet those new targets. "We will buy them from your portfolios or package them into securities."

She described "CRA-friendly products" as mortgages with less than "3% down" and "flexible underwriting."

From 2001-2007, Fannie and Freddie bought roughly half of all CRA home loans, most carrying subprime features.

Lenders not subject to the CRA, such as subprime giant Countrywide Financial, still fell under its spell. Regulated by HUD, Countrywide and other lenders agreed to sign contracts with the government supporting such lending under threat of being brought under CRA rules.

"Countrywide can potentially help you meet your CRA goals by offering both whole loan and mortgage-backed securities that are eligible for CRA credit," the lender advertised to banks.



## 2. Trends in the market:

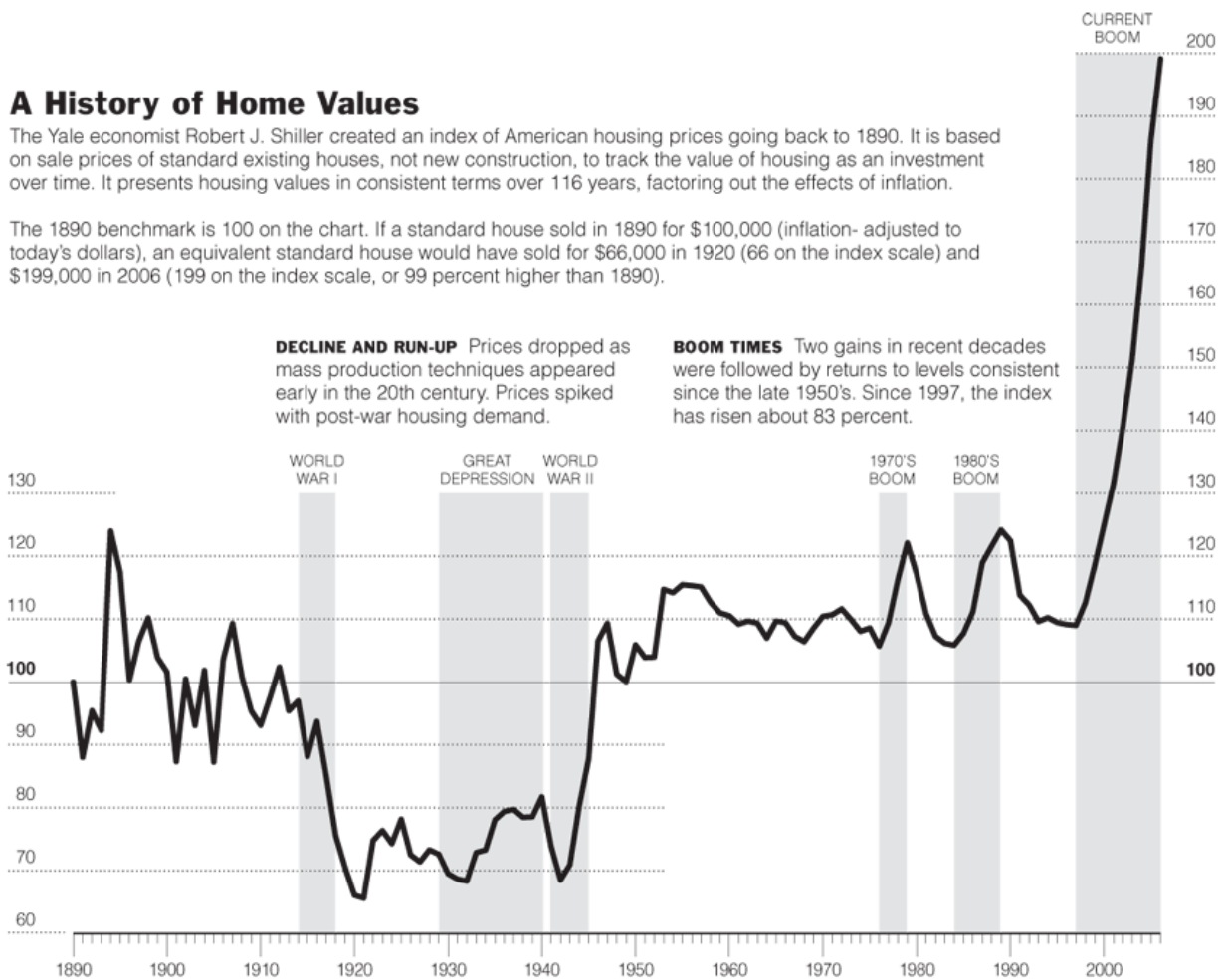
“The housing bubble was an archetypal bubble. Like others before it, this bubble began innocently enough, as an increase in demand for real estate. An increase in market demand tends to increase prices, and the housing market proved no exception. Unfortunately, the increase in home prices fed a speculative frenzy, and millions rushed to buy, believing that prices could only go in one direction—up! The buyers included not only would-be homeowners, but also speculators who were buying simply with an interest in “flipping” the property (reselling at a higher price).”

After 2000, housing prices began rapid appreciation; in 2000, the average home value was \$207,000 while in 2007, the average home value rose to \$313,600. The housing market had almost always had an upward trend; analysts never would have predicted a 25% drop in housing prices.

### A History of Home Values

The Yale economist Robert J. Shiller created an index of American housing prices going back to 1890. It is based on sale prices of standard existing houses, not new construction, to track the value of housing as an investment over time. It presents housing values in consistent terms over 116 years, factoring out the effects of inflation.

The 1890 benchmark is 100 on the chart. If a standard house sold in 1890 for \$100,000 (inflation-adjusted to today's dollars), an equivalent standard house would have sold for \$66,000 in 1920 (66 on the index scale) and \$199,000 in 2006 (199 on the index scale, or 99 percent higher than 1890).



Source: "Irrational Exuberance," 2nd Edition, 2006, by Robert J. Shiller

Bill Marsh/The New York Times

The Khan Academy internet website presents educational video titled “**Mortgages, credit and why the bubble popped.**” These 5-10 minute videos talk about:

- Trends in housing prices
- How lower lending standards led to housing price inflation
- Why did lending standards become more and more lax from 2000 to 2006?
- The circle of housing appreciation and lowered default rate

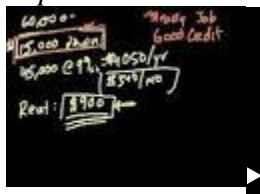
### Video Housing price conundrum - Khan Academy

*Explains how credit practices contributed to the crisis.*

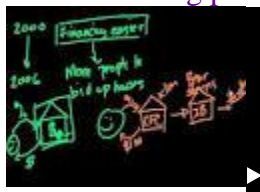


### Video Housing price conundrum (part 2) - Khan Academy

*Explains how lower lending standards led to housing price inflation.*

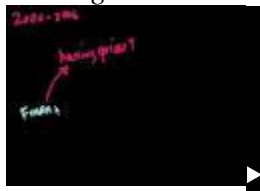


### Video Housing price conundrum (part 3) - Khan Academy



### Video Housing conundrum (part 4) - Khan Academy

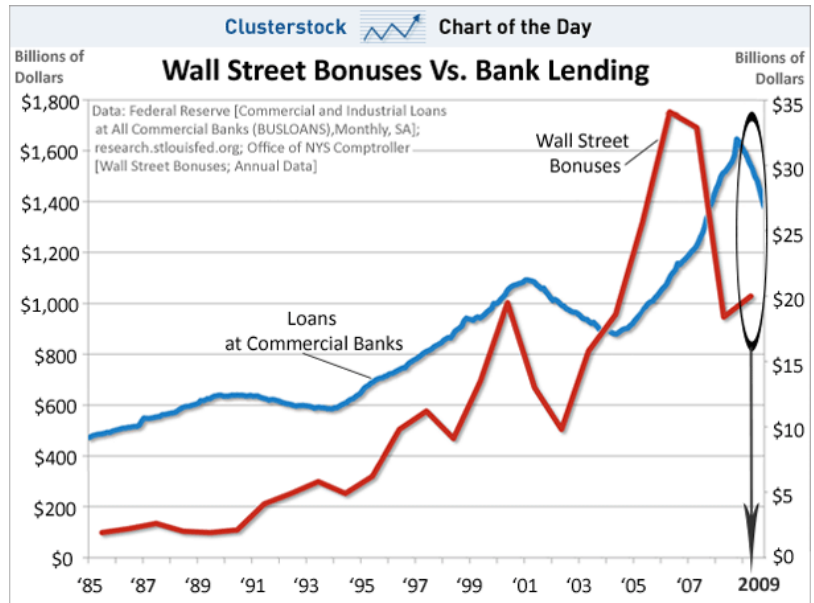
*Explains the role in home value appreciation to lending practices and impact of decline in housing values.*



## Definition of the Housing Bubble

From Investopedia.com

A run-up in housing prices fueled by demand, speculation and the belief that recent history is an infallible forecast of the future. Housing bubbles usually start with an increase in demand (a shift to the right in the demand curve), in the face of limited supply which takes a relatively long period of time to replenish and increase. Speculators enter the market, believing that profits can be made through short-term buying and selling. This further drives demand. At some point, demand decreases (a shift to the left in the demand curve), or stagnates at the same time supply increases, resulting in a sharp drop in prices - and the bubble bursts.



### 'Housing Bubble'

Traditionally, housing markets are not as prone to bubbles as other financial markets due to large transaction and carrying costs associated with owning a house. However, a combination of very low interest rates and a loosening of credit underwriting standards can bring borrowers into the market, fueling demand. A rise in interest rates and a tightening of credit standards can lessen demand, causing a housing bubble to burst. Other general economic and demographic trends can also fuel and burst a housing bubble.

### Interactive Resource: [Housing Prices](#)

This resource provides graphical depiction of housing market changes. Lightner, Renee; Van Dam, Andrew and Timiraos, "U.S. Housing Market Tracker," originally published October 24, 2014 and updated.

3. **Corporate Governance:** Common corporate governance practices could be another cause of the global financial crisis. Stock options and short term gains lead to excessive risk taking (which took the form of subprime mortgage lending).
  - Bonuses increase as bank loans increase.
  - “Subprime Lenders were (Primarily) Private: Only one of the top 25 subprime lenders in 2006 was directly subject to the housing laws overseen by either Fannie Mae, Freddie Mac or the Community Reinvestment Act.”

## Subprime losses The 15 largest subprime servicing companies in 2008:

Rank	Servicer (parent)	2Q 2008 servicing volume, in billions	Percent Change from 2Q 2007
1	Countrywide Financial (Bank of America)	\$98.86	-21.4
2	HSBC Finance (HSBC)	80.48	-9.0
3	Chase Home Finance (JPMorgan Chase)	67.20	-17.7
4	Wells Fargo Home Mortgage (Wells Fargo)	49.35	-5.4
5	American Home Mortgage (WL Ross & Co.)	49.00	-24.9
6	Ocwen Financial Corp.	44.83	-15.6
7	Litton (Goldman Sachs)	44.10	-5.0
8	Home Loan Services (Bank of America)	44.00	-19.1
9	HomEq Mortgage Servicing (Barclays)	39.63	-21.0
10	Washington Mutual (JPMorgan Chase)	38.03	-30.7
11	Residential Capital LLC (GMAC)	31.13	-35.2
12	Saxon Mortgage (Morgan Stanley)	30.00	-21.3
13	Citi (Citigroup)	22.94	-46.8
14	American General Finance (AIG)	19.45	5.3
15	EMC Mortgage (Bear Stearns/JPMorgan Chase)	19.43	-20.5

Source: Inside Mortgage Finance

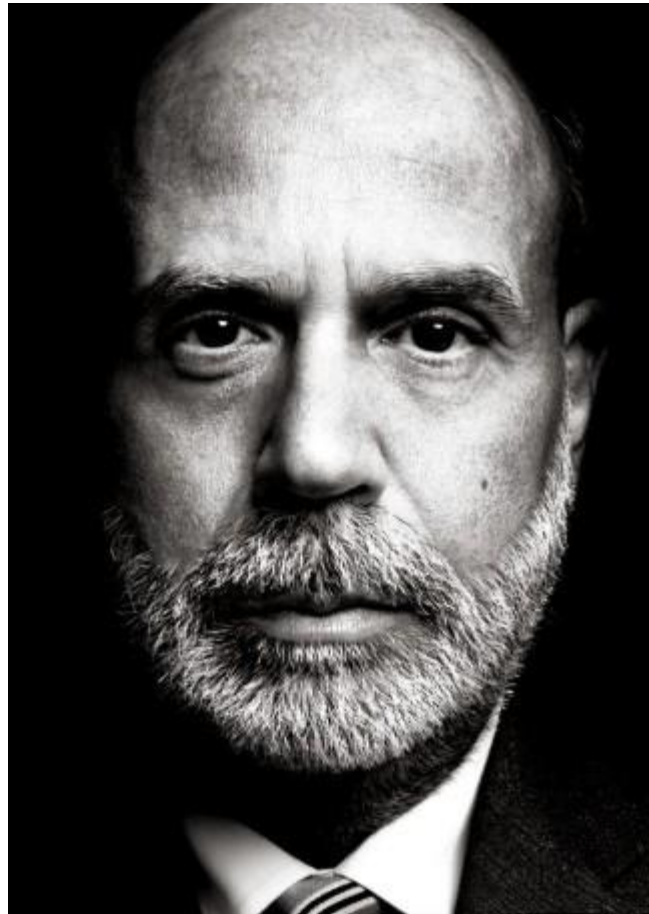
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## Anatomy of a Meltdown *Ben Bernanke and the financial crisis.*

By John Cassidy  
The New Yorker  
December 1, 2008

**Bernanke says that he was “mistaken early on in saying that the subprime crisis would be contained.” Photograph by Platon.**

Some are born radical. Some are made radical. And some have radicalism thrust upon them. That is the way with Ben Bernanke, as he struggles to rescue the American financial system from collapse. Early every morning, weekends included, Bernanke arrives at the headquarters of the Federal Reserve, an austere white marble pile on Constitution Avenue in Foggy Bottom. The Fed, which is as hushed inside as a mausoleum, is a place of establishment reserve. Its echoing hallways are lined with sombre paintings. The office occupied by Bernanke, a soft-spoken fifty-four-year-old former professor, has high ceilings, several shelves of economics textbooks, and, on the desk, a black Bloomberg terminal. On a shelf in a nearby closet sits a scruffy gym bag, which in calmer days Bernanke took to the Fed gym, where he played pickup basketball with his staffers.



At Princeton, where Bernanke taught economics for many years, he was known for his retiring manner and his statistics-laden research on the Great Depression. For more than a year after he was appointed by President George W. Bush to chair the Fed, in February, 2006, he faithfully upheld the policies of his immediate predecessor, the charismatic free-market conservative Alan Greenspan, and he adhered to the central bank's formal mandates: controlling inflation and maintaining employment. But since the market for subprime mortgages collapsed, in the summer of 2007, the growing financial crisis has forced Bernanke to intervene on Wall Street in ways never before contemplated by the Fed. He has slashed interest rates, established new lending programs, extended hundreds of billions of dollars to troubled financial firms, bought debt issued by industrial corporations such as General Electric, and even taken distressed mortgage assets onto the Fed's books. (In March, to facilitate the takeover by J. P. Morgan of Bear Stearns, a Wall Street investment bank that was facing bankruptcy, the Fed acquired twenty-nine billion dollars' worth of Bear Stearns's bad mortgage assets.) These moves hardly amount to a Marxist revolution, but, in the eyes of many economists, including supporters and opponents of the

measures, they represent a watershed in American economic and political history. Ben Bernanke, who seemed to have been selected as much for his predictability as for his economic expertise, is now engaged in the boldest use of the Fed's authority since its inception, in 1913.

Bernanke, working closely with Henry (Hank) Paulson, the Treasury Secretary, a voluble former investment banker, was determined to keep the financial sector operating long enough so that it could repair itself—a policy that he and his Fed colleagues referred to as the “finger-in-the-dike” strategy. As recently as Labor Day, he believed that the strategy was working. The credit markets remained open; the economy was still expanding, if slowly; oil prices were dropping; and there were tentative signs that house prices were stabilizing. “A lot can still go wrong, but at least I can see a path that will bring us out of this entire episode relatively intact,” he told a visitor to his office in August.

By mid-September, however, the outlook was much grimmer. On Monday, September 15th, Lehman Brothers, another Wall Street investment bank that had made bad bets on subprime mortgage securities, filed for bankruptcy protection, after Bernanke, Paulson, and the bank's senior executives failed to find a way to save it or to sell it to a healthier firm. During the next forty-eight hours, the Dow Jones Industrial Average fell nearly four hundred points; Bank of America announced its purchase of Merrill Lynch; and American International Group, the country's biggest insurance company, began talks with the New York Fed about a possible rescue. Goldman Sachs and Morgan Stanley, the two wealthiest investment banks on Wall Street, were also in trouble. Their stock prices tumbled as rumors circulated that they were having difficulty borrowing money. “Both Goldman and Morgan were having a run on the bank,” a senior Wall Street executive told me. “People started withdrawing their balances. Counterparties started insisting that they post more collateral.”

The Fed talked with Wall Street executives about creating a “lifeline” for Goldman Sachs and Morgan Stanley, which would have given the firms greater access to central-bank funds. But Bernanke decided that even more drastic action was needed. On Wednesday, September 17th, a day after the Fed agreed to inject eighty-five billion dollars of taxpayers' money into A.I.G., Bernanke asked Paulson to accompany him to Capitol Hill and make the case for a congressional bailout of the entire banking industry. “We can't keep doing this,” Bernanke told Paulson. “Both because we at the Fed don't have the necessary resources and for reasons of democratic legitimacy, it's important that the Congress come in and take control of the situation.”

Paulson agreed. A bailout ran counter to the Bush Administration's free-market principles and to his own belief that reckless behavior should not be rewarded, but he had worked on Wall Street for thirty-two years, most recently as the C.E.O. of Goldman Sachs, and had never seen a financial crisis of this magnitude. He had come to respect Bernanke's judgment, and he shared his conviction that, in an emergency, pragmatism trumps ideology. The next day, the men decided, they would go see President Bush.

On October 3rd, Congress passed an amended bailout bill, giving the Secretary of the Treasury broad authority to purchase from banks up to seven hundred billion dollars in mortgage assets, but the turmoil on Wall Street continued. Between October 6th and October 10th, the Dow suffered its worst week in a hundred years, falling eighteen per cent. As the selling spread to



overseas markets, the Fed's failure to save Lehman Brothers was roundly condemned. Christine Lagarde, the French finance minister, described it as a "horrendous" error that threatened the global financial system. Richard Portes, an economist at the London Business School, wrote in the *Financial Times*, "The U.S. authorities' decision to let Lehman Brothers fail will be severely criticised by financial historians—the next generation of Bernankes." Even Alan Blinder, an old friend and former colleague of Bernanke's in the economics department at Princeton, who served as vice-chairman of the Fed from 1994 to 1996, was critical. "Maybe there were arguments on either side before the decision," he told me. "After the fact, it is extremely clear that everything fell apart on the day Lehman went under."

The most serious charge against Bernanke and Paulson is that their response to the crisis has been ad hoc and contradictory: they rescued Bear Stearns but allowed Lehman Brothers to fail; for months, they dismissed the danger from the subprime crisis and then suddenly announced that it was grave enough to justify a huge bailout; they said they needed seven hundred billion dollars to buy up distressed mortgage securities and then, in October, used the money to purchase stock in banks instead. Summing up the widespread frustration with Bernanke, Dean Baker, the co-director of the Center for Economic and Policy Research, a liberal think tank in Washington, told me, "He was behind the curve at every stage of the story. He didn't see the housing bubble until after it burst. Until as late as this summer, he downplayed all the risks involved. In terms of policy, he has not presented a clear view. On a number of occasions, he has pointed in one direction and then turned around and acted differently. I would be surprised if Obama wanted to reappoint him when his term ends"—in January, 2010.

Bernanke and Paulson's reversals have been deeply unsettling, perhaps especially so for the millions of Americans who have lost jobs or defaulted on mortgages so far this year. And yet, for the past year and a half, the government has confronted a financial debacle of unprecedented size and complexity. "Everyone knew there were issues and potential problems," John Mack, the chairman and chief executive of Morgan Stanley, told me. "Nobody knew the enormity of it, how global it was and how deep it was." In responding to the crisis, Bernanke has effectively transformed the Fed into an Atlas for the financial sector, extending more than \$1.5 trillion in loans to troubled banks and investment firms, and providing financial guarantees worth roughly another \$1.5 trillion, making it global capitalism's lender of first and last (and sometimes only) resort.

"Under Ben's leadership, we have felt compelled to create a new playbook for the Fed," Kevin Warsh, a Fed governor who has worked closely with Bernanke, told me. "The circumstances of the last year caused us to cross more lines than this institution has crossed in the previous seventy years." Paul Krugman, the *Times* columnist, a former colleague of Bernanke's at Princeton, and the winner of this year's Nobel Prize in Economics, said, "I don't think any other central banker in the world would have done as much by way of expanding credit, putting the Fed into unconventional assets, and so on. Now, you might say that it all hasn't been enough. But I guess I think that's more a reflection of the limits to the Fed's power than of Bernanke getting it wrong. And things could have been much worse."

Six and a half years ago, Bernanke was a little-known professor living in Montgomery Township, a hamlet near Princeton. Long hours, enormous stress, and constant criticism have left

him looking pale and drawn. “Ben is a very decent and sincere person,” Richard Fisher, the president of the Dallas Fed, told me. “The question is, Is that an asset or a liability in his job? If he were six feet seven, like Paul Volcker”—a former Fed chairman—“that would be a big advantage. If he was a tough S.O.B., like Jerry Corrigan”—a former head of the New York Fed, who successfully managed a previous financial crisis, in 1987—“that would be a big advantage. But you make do with what you have—a prodigious brain, a tremendous knowledge of past financial crises, and a personality that is above reproach. And you surround yourself with good people and use their expertise.”

As Fed chairman, Bernanke inherited an unprecedented housing bubble and an unsustainable borrowing spree. The collapse of these phenomena occurred with astonishing speed and violence. The only precursor for the current financial crisis is the Great Depression, but even that isn’t a very good comparison. In the nineteen-thirties, the financial system was much less sophisticated and interconnected. In dealing with problems affecting arcane new financial products, including “collateralized debt obligations,” “credit default swaps,” and “tri-party repos,” Bernanke and his colleagues have had to become expert in market transactions of baffling intricacy.

Bernanke grew up in Dillon, South Carolina, an agricultural town just across the state line from North Carolina, where, in 1941, his paternal grandfather, Jonas Bernanke, a Jewish immigrant from Austria, founded the Jay Bee Drugstore, subsequently operated by Ben’s father and an uncle. The eldest of three siblings, Bernanke learned to read in kindergarten and skipped first grade. When he was eleven, he won the state spelling championship and went to Washington to compete in the National Spelling Bee. He made it to the second round, but stumbled on the word “edelweiss,” an Alpine flower featured in “The Sound of Music.” He hadn’t seen the movie, because Dillon didn’t have a movie theatre. Had he spelled the word correctly and won the competition, Bernanke tells friends, he would have appeared on “The Ed Sullivan Show,” which was his dream.

In high school, Bernanke taught himself calculus, submitted eleven entries to a state poetry contest, and played alto saxophone in the marching band. During his junior year, he scored 1590 out of 1600 on his S.A.T.s—the highest score in South Carolina that year—and the state awarded him a trip to Europe. In the fall of 1971, he entered Harvard, where he wrote a prize-winning senior thesis on the economic effects of U.S. energy policy. After graduating, he enrolled at M.I.T., whose Ph.D. program in economics was rated the best in the country. His doctoral thesis was a dense mathematical treatise on the causes of economic fluctuations. He accepted a job at the Stanford Graduate School of Business, where Anna Friedmann, a Wellesley senior whom Bernanke married the weekend after she graduated, had been admitted into the master’s program in Spanish.

The couple lived in Northern California for six years, until Princeton awarded Bernanke, then just thirty-one, a tenured position. Settling in Montgomery Township, they brought up two children: Joel, who is now twenty-five and applying to medical school, and Alyssa, a twenty-two-year-old student at St. John’s College. By 2001, Bernanke was the editor of the *American Economic Review* and the co-author, with Robert Frank, of “Principles of Economics,” a well-regarded college textbook. His scholarly interests ranged from abstruse matters such as the

theoretical merits of setting a formal inflation target to historical questions, including the causes of the Great Depression. Even when Bernanke was writing about historical events, much of his scholarship was couched in impenetrable technical language. “I always thought that Ben would stay in academia,” Mark Gertler, an economist at New York University who has known Bernanke well since 1979, told me. “But two things happened.”

In 1996, Bernanke became chairman of the Princeton economics department, a job many professors regard as a dull administrative diversion from their real work. Bernanke, however, embraced the chairmanship, staying on for two three-year terms. Under his stewardship, the department launched new programs and hired leading scholars, among them Paul Krugman, whom Bernanke wooed personally. Bernanke also bridged a long-standing departmental divide between theorists and applied researchers, in part by raising enough money so that the two sides could coexist peaceably, and by engaging in diplomacy. “Ben is very good at respecting minority opinion and giving people the feeling they have been heard in the debate even if they get outvoted,” Alan Blinder said.

The other event that changed Bernanke’s career occurred in the summer of 1999, at the height of the Internet stock boom, when he and Gertler were invited to present a paper at an annual policy conference organized by the Federal Reserve Bank of Kansas City. The topic of the conference—which takes place at a resort in Jackson Hole, Wyoming—was New Challenges for Monetary Policy. Then, as now, there was vigorous debate among economists about whether central banks should raise interest rates to counter speculative bubbles. By increasing the cost of borrowing, the Fed, at least in theory, can restrain speculative activity and prevent the prices of assets such as stocks and real estate from rising excessively.

Bernanke and Gertler argued that the Fed should ignore bubbles and stick to its traditional policy of controlling inflation. If a bubble inflated and burst of its own accord, they said, the Fed could always bring down rates to alleviate damage to the broader economy. To support their case, they presented a series of computer simulations, which appeared to show that a policy of targeting inflation stabilized the economy more effectively than one that targeted bubbles. The presentation got a mixed reception. Henry Kaufman, a well-known Wall Street economist, said that it would be irresponsible for the Fed to ignore rampant speculation. Rudi Dornbusch, an M.I.T. professor (who has since died), pointed out that Bernanke and Gertler had overlooked the possibility that credit could dry up after a bubble burst, and that such a development could have serious effects on the economy. But Greenspan was more supportive. “He didn’t say anything during the session,” Gertler recalled. “But after it was over he walked by and said, as quietly as he could, ‘You know, I agree with you.’ That had us in seventh heaven.”

In December, 1996, Greenspan had warned that investors could fall victim to “irrational exuberance.” Subsequently, though, he had adopted a policy of benign neglect toward the stock market, ignoring warnings that a bubble in technology and Internet stocks had developed. The paper by Bernanke and Gertler provided theoretical support for Greenspan’s stance, and it received a good deal of publicity, something neither of its authors had previously experienced. “Ben was a bit taken aback by the public attention,” Gertler said. “*The Economist* attacked us viciously.”

In 2002, when the Bush Administration was looking to fill two vacant governorships at the Fed—there are seven in all—Glenn Hubbard, who is the dean of Columbia Business School and who was then the chairman of the White House Council of Economic Advisers, proposed Bernanke. “We needed a strong economist who understood the financial markets, and Ben had expertise in that area,” Hubbard recalled. “He is also an extremely nice person. In terms of getting on with people, he is very affable, and I thought that would help him, too.”

Although the Fed is an independent agency, it is subject to congressional oversight, and Presidents typically appoint people who are sympathetic to their world view. Hubbard knew little about Bernanke’s politics. “I was aware he was an economic conservative, but I didn’t know whether he was a Republican,” Hubbard said. Robert Frank, a liberally inclined economist at Cornell and Bernanke’s co-author on “Principles of Economics,” believed that Bernanke was a Democrat. When the White House announced that it was nominating Bernanke to be a Fed governor, Frank was shocked. “I asked Ben, ‘Why is Bush appointing a Democrat?’ ” Frank told me. “He said, ‘Well, I’m not a Democrat.’ ” In writing their book, Frank was impressed not only by Bernanke’s openness to opposing views but also by his wry humor and his lack of ego. “In most situations, he is the smartest guy in the room, but he doesn’t seem too eager to show that,” Frank said.

When Bernanke joined the Fed, it was struggling to revive the economy after the Nasdaq collapse of 2000-01 and the terrorist attacks of September 11, 2001. Between September, 2001, and June, 2003, Greenspan and his colleagues cut the federal funds rate—the key interest rate under the Fed’s control—from 3.5 per cent to one per cent, its lowest level since the nineteen-fifties. Cutting interest rates during an economic downturn is standard policy at the Fed; lower borrowing costs encourage households and businesses to spend more. But Greenspan’s rate reductions were unusual in both their scale and their longevity. The Fed didn’t reverse course until the summer of 2004, and even then it moved slowly, raising the federal funds rate in quarter-point increments.

With cheap financing readily available, a housing boom developed. Families bought homes they couldn’t have afforded at higher interest rates; speculators bought properties to flip; people with modest incomes or poor credit took out mortgages designed for marginal buyers, such as subprime loans, interest-only loans, and “Alt-A” loans. On Wall Street, a huge market evolved in subprime mortgage bonds—securities backed by payment streams from dozens or hundreds of individual subprime mortgages. Banks and other mortgage lenders relaxed their credit standards, knowing that many of the loans they issued would be bundled into mortgage securities and sold to investors.

“The Fed’s easy-money policy put a lot of the wind at the back of some of the transactions in the housing market and elsewhere that we are now suffering from,” Glenn Hubbard told me. Before leaving government, in 2003, Hubbard argued in White House meetings that the Fed needed to start raising rates. “It was particularly striking for the Fed to maintain an accommodative policy after the 2003 tax cut, which gave another boost to the economy,” Hubbard said. “That was a significant error.”

Greenspan dominated the Federal Open Market Committee (F.O.M.C.), which sets the federal funds rate, but Bernanke explained and defended the Fed's actions to other economists and to the public. In October, 2002, a few months after joining the Fed, he gave a speech to the National Association for Business Economics, in which he said, "First, the Fed cannot reliably identify bubbles in asset prices. Second, even if it could identify bubbles, monetary policy is far too blunt a tool for effective use against them." In other words, it is difficult to distinguish a rise in asset prices that is justified by a strong economy from one based merely on speculation, and raising rates in order to puncture a bubble can bring on a recession. Greenspan had made essentially this argument during the dot-com era and reiterated it during the real-estate boom. (As late as 2004, Greenspan said that a national housing bubble was unlikely.)

As house prices soared, many Americans took out home-equity loans to finance their spending. The personal savings rate dipped below zero, and the trade deficit, which the United States financed by borrowing heavily from abroad, expanded greatly. Some experts warned that the economy was on an unsustainable course; Bernanke disagreed. In a much discussed speech in March, 2005, he argued that the main source of imbalance in the global economy was not excess spending at home but, rather, excess saving in China and other developing countries, where consumption was artificially low. Lax American policy was helping to mop up a "global savings glut."

"Bernanke provided the intellectual justification for the Fed's hands-off approach to asset bubbles," Stephen S. Roach, the chairman of Morgan Stanley Asia, who was among the economists urging the Fed to adjust its policy, told me. "He also played a key role in the development of the 'global savings glut' theory, which the Fed used as a very convenient excuse to say we are doing the world a big favor in maintaining demand. In retrospect, we didn't have a global savings glut—we had an American consumption glut. In both of those cases, Bernanke was complicit in massive policy blunders on the part of the Fed."

Another expert who dissented from the Greenspan-Bernanke line was William White, the former economics adviser at the Bank for International Settlements, a publicly funded organization based in Basel, Switzerland, which serves as a central bank for central banks. In 2003, White and a colleague, Claudio Borio, attended the annual conference in Jackson Hole, where they argued that policymakers needed to take greater account of asset prices and credit expansion in setting interest rates, and that if a bubble appeared to be developing they ought to "lean against the wind"—raise rates. The audience, which included Greenspan and Bernanke, responded coolly. "Ben Bernanke really believes that it is impossible to lean against the wind on the way up and that it is possible to clean up the mess afterwards," White told me recently. "Both of these propositions are unproven."

Between 2004 and 2007, White and his colleagues continued to warn about the global credit boom, but they were largely ignored in the United States. "In the field of economics, American academics have such a large reputation that they sweep all before them," White said. "If you add to that the personal reputation of the Maestro"—Greenspan—"it was very difficult for anybody else to come in and say there are problems building."

After years of theorizing about the economy, Bernanke revelled in the opportunity to participate in policy decisions, though he rarely challenged Greenspan. “He wouldn’t have gotten into that club if he didn’t go along,” Douglas Cliggott, the chief investment officer at Dover Investment Management, a mutual-fund firm, told me. “Mr. Greenspan ran a tight ship, and he didn’t fancy people spouting off with their own views.” In January, 2005, Bernanke gave a speech at the annual meeting of the American Economic Association, in which he reflected on his transition from teaching: “The biggest downside of my current job is that I have to wear a suit to work. Wearing uncomfortable clothes on purpose is an example of what former Princeton hockey player and Nobel Prize winner Michael Spence taught economists to call ‘signalling.’ You have to do it to show that you take your official responsibilities seriously. My proposal that Fed governors should signal their commitment to public service by wearing Hawaiian shirts and Bermuda shorts has so far gone unheeded.”

A month later, Greg Mankiw, the chairman of the Council of Economic Advisers, announced that he was returning to Harvard, and recommended Bernanke as his replacement. Al Hubbard, an Indiana businessman who headed the National Economic Council, which advises the President on economic policy, wasn’t convinced that Bernanke was the right choice. “When you meet him, he comes over as incredibly quiet,” Hubbard told me. “I wanted to make sure he was somebody who wouldn’t be reluctant to engage in the economic arguments.” After talking with Bernanke, Hubbard changed his mind. “He’s actually very self-confident, and he’s not intimidated by anybody,” Hubbard said. “You could always count on him to speak up and give his opinion from an economic perspective.”

In June, 2005, Bernanke was sworn in at the Eisenhower Executive Office Building. One of his first tasks was to deliver a monthly economics briefing to the President and the Vice-President. After he and Hubbard sat down in the Oval Office, President Bush noticed that Bernanke was wearing light-tan socks under his dark suit. “Where did you get those socks, Ben?” he asked. “They don’t match.” Bernanke didn’t falter. “I bought them at the Gap—three pairs for seven dollars,” he replied. During the briefing, which lasted about forty-five minutes, the President mentioned the socks several times.

The following month, Hubbard’s deputy, Keith Hennessey, suggested that the entire economics team wear tan socks to the briefing. Hubbard agreed to call Vice-President Cheney and ask him to wear tan socks, too. “So, a little later, we all go into the Oval Office, and we all show up in tan socks,” Hubbard recalled. “The President looks at us and sees we are all wearing tan socks, and he says in a cool voice, ‘Oh, very, very funny.’ He turns to the Vice-President and says, ‘Mr. Vice-President, what do you think of these guys in their tan socks?’ Then the Vice-President shows him that he’s wearing them, too. The President broke up.”

As chairman of the Council of Economic Advisers, Bernanke was expected to act as a public spokesman on economic matters. In August, 2005, after briefing President Bush at his ranch in Crawford, Texas, he met with the White House press corps. “Did the housing bubble come up at your meeting?” a reporter asked. “And how concerned are you about it?”

Bernanke affirmed that it had and said, “I think it is important to point out that house prices are being supported in very large part by very strong fundamentals. . . . We have lots of jobs,



employment, high incomes, very low mortgage rates, growing population, and shortages of land and housing in many areas. And those supply-and-demand factors are a big reason why house prices have risen as much as they have.”

By this time, the President’s ambitious plans to partly privatize Social Security had been stymied by congressional opposition, and his plans to simplify the tax system appeared likely to meet a similar fate. Nevertheless, the White House economics team was searching for market-friendly policy proposals, and Bernanke was happy to contribute. On the flight from Crawford to Washington, D.C., he and Hennessey discussed replacing tax subsidies to employer-based health-insurance plans with a fixed tax credit or deduction that families could use to buy their own coverage. In Washington, they continued to develop the idea, which proved popular with economic conservatives, though some experts have said it would lead to a dramatic drop in employer-provided health plans. “It’s what we proposed, and it’s what John McCain proposed,” Al Hubbard said. “If we can keep health care in the private sector, it is what eventually will happen. Ben and Keith are the guys who came up with it.”

From the moment Bernanke went to work for Bush, he was seen as a likely successor to Greenspan, who was due to retire in January, 2006. Shortly after Labor Day, 2005, at Bush’s request, Al Hubbard and Liza Wright, the White House personnel director, compiled a list of eight or ten candidates for the Fed chairmanship and interviewed several of them. The selection committee eventually settled on Bernanke. “An important part of the Fed job is bringing people along with you, on the F.O.M.C. and so on,” Hubbard told me. “He had the right personality to do that. Plus, Ben is a very powerful thinker. We were impressed with his theories of the world and the way he thinks. He believes in free markets.”

Some press reports have suggested that the public controversy over the abortive nomination to the Supreme Court of Harriet Miers, the White House counsel, helped Bernanke’s chances, because it put pressure on the Administration to appoint a nonpartisan figure to the Fed. “That was never even discussed,” Hubbard insisted to me. “We didn’t take account of Harriet Miers or anything else. There was no politics involved.” On October 24, 2005, President Bush nominated Bernanke as the fourteenth chairman of the Fed, saying, “He commands deep respect in the global financial community.” After thanking the President, Bernanke said that if the Senate confirmed him his first priority would be “to maintain continuity with the policies and policy strategies established during the Greenspan years.”

For more than a year, Bernanke kept his word. In the first half of 2006, the F.O.M.C. raised the federal funds rate in three quarter-point increments, to 5.25 per cent, and kept it there for the rest of the year. But cheap money was only part of Greenspan’s legacy. He had also championed financial deregulation, resisting calls for tighter government oversight of burgeoning financial products, such as over-the-counter derivatives, and applauded the growth of subprime mortgages. “Where once more marginal applicants would simply have been denied credit, lenders are now able to quite efficiently judge the risks posed by individual applicants and to price that risk appropriately,” Greenspan said in a 2005 speech.

Bernanke hadn’t said much about regulation before being nominated as the Fed chairman. Once in office, he generally adhered to Greenspan’s *laissez-faire* approach. In May, 2006, he rejected

calls for direct regulation of hedge funds, saying that such a move would “stifle innovation.” The following month, in a speech on bank supervision, he expressed support for allowing banks, rather than government officials, to determine how much risk they could take on, using complicated mathematical models of their own devising—a policy that had been in place for a number of years. “The ongoing work on this framework has already led large, complex banking organizations to improve their systems for identifying, measuring, and managing their risks,” Bernanke said.

It is now evident that self-regulation failed. By extending mortgages to unqualified lenders and accumulating large inventories of subprime securities, banks and other financial institutions took on enormous risks, often without realizing it. Their mathematical models failed to alert them to potential perils. Regulators—including successive Fed chairmen—failed, too. “That was largely Greenspan, but Bernanke clearly shared an ideology of taking a hands-off approach,” Stephen Roach, of Morgan Stanley Asia, said. “In retrospect, it is unconscionable that the Fed didn’t really care about regulation, or didn’t show any interest in it.”

Bernanke was more concerned about inflation and unemployment, the Fed’s traditional areas of focus, than he was about the growth of mortgage securities. “The U.S. economy appears to be making a transition from the rapid rate of expansion experienced over the preceding years to a more sustainable, average pace of growth,” he told the Senate banking committee in February, 2007. By then, home prices in many parts of the country had begun to drop. At least two prominent economists—Nouriel Roubini, at N.Y.U., and Joseph Stiglitz, at Columbia—had warned that a nationwide housing slump could trigger a recession, but Bernanke and his colleagues thought this was unlikely. “You could think about Texas in the nineteen-eighties, when oil prices went down, or California in the nineteen-nineties, when the peace dividend hit the defense industry, but these were regional things,” one Fed policymaker told me. “A national decline in house prices hadn’t occurred since the nineteen-thirties.”

On February 28, 2007, Bernanke told the House budget committee that he didn’t consider the housing downturn “as being a broad financial concern or a major factor in assessing the state of the economy.” He maintained an upbeat tone over the next several months, during which two large subprime lenders, New Century Financial Corp. and American Home Mortgage, filed for bankruptcy, and the damage spread to Wall Street firms that had invested in subprime securities. On August 3rd, the day after American Home Mortgage announced that it was shutting down, the Dow fell almost three hundred points, and CNBC’s Jim Cramer, in a four-minute rant that is still playing on YouTube, accused the Fed of being “asleep.”

“Bernanke is being an academic,” Cramer bellowed. “He has no idea how bad it is out there! . . . My people have been in this game for twenty-five years, and they are losing their jobs, and these firms are going to go out of business, and he’s nuts! They’re nuts! They know nothing!”

Four days later, the F.O.M.C. met, but left the federal funds rate unchanged. In a statement, the committee acknowledged the housing “correction” but said that its “predominant policy concern remains the risk that inflation will fail to moderate as expected.” Looking back on this period, Bernanke told me, “I and others were mistaken early on in saying that the subprime crisis would be contained. The causal relationship between the housing problem and the broad financial

system was very complex and difficult to predict.” Relative to the fourteen trillion dollars in mortgage debt outstanding in the United States, the two-trillion-dollar subprime market seemed trivial. Moreover, internal Fed estimates of the total losses likely to be suffered on subprime mortgages were roughly equivalent to a single day’s movement in the stock market, hardly enough to spark a financial conflagration.

One of the supposed advantages of securitizing mortgages was that it allowed the risk of homeowners’ defaulting on their mortgages to be transferred from banks to investors. However, as the market for mortgage securities deteriorated, many banks ended up accumulating big inventories of these assets, some of which they parked in off-balance-sheet vehicles called conduits. “We knew that banks were creating conduits,” Don Kohn, the Fed’s vice-chairman, told me. “I don’t think we could have recognized the extent to which that could come back onto the banks’ balance sheets when confidence in the underlying securities—the subprime loans—began to erode.”

On August 9, 2007, the crisis escalated significantly after BNP Paribas, a major French bank, temporarily suspended withdrawals from three of its investment funds that had holdings of subprime securities, citing a “complete evaporation of liquidity in certain market segments of the U.S. securitization market.” In other words, trading in the mortgage securities market had ceased, leaving many financial institutions short of cash and saddled with assets that they couldn’t sell at any price. Stocks fell sharply on both sides of the Atlantic, and the following day Bernanke held a conference call with members of the F.O.M.C., during which they discussed reducing the interest rate at which the Fed lends to commercial banks—the “discount rate.” Since the Fed was founded, it has had a “discount window,” from which commercial banks may borrow as needed. In recent years, however, most banks had stopped using the window, because they could raise money more cheaply from investors and other banks.

The Fed decided to keep the discount rate at 6.25 per cent but issued a statement reminding banks that the discount window was open if they needed money. Seven days later, however, after more wild swings in the markets, the Fed voted to cut the discount rate by half a point, to 5.75 per cent. It declared that it was “prepared to act as needed to mitigate the adverse effects on the economy arising from the disruptions in financial markets.”

Bernanke now realized that the subprime crisis posed a grave threat to some of the country’s biggest financial institutions and that Greenspan-era policies were insufficient to contain it. In the third week of August, he made his second visit as head of the Fed to Jackson Hole, where he invited some of his senior colleagues to join him in a brainstorming session. “What’s going on and what do we need to do?” he asked. “What tools have we got and what tools do we need?”

The participants included Don Kohn; Kevin Warsh; Brian Madigan, the head of monetary affairs at the Fed; Tim Geithner, the head of the New York Fed; and Bill Dudley, who runs the markets desk at the New York Fed. The men agreed that the financial system was facing what is known as a “liquidity crisis.” Banks, fearful of lending money to financial institutions that might turn out to be in trouble, were starting to hoard their capital. If this situation persisted, businesses and consumers might be unable to obtain the loans they needed in order to spend money and keep the economy afloat.

Bernanke and his colleagues settled on a two-part approach to the crisis. (Geithner later dubbed it “the Bernanke doctrine.”) First, to prevent the economy from stalling, the Fed would lower the federal funds rate modestly—by half a point in September and by a quarter point in October, to 4.5 per cent. This was standard Fed policy—trimming rates to head off an economic decline—but it didn’t directly address the crisis of confidence afflicting the financial system. If banks wouldn’t extend credit to one another, the Fed would have to act as a “lender of last resort”—a role it was authorized to perform under the 1913 Federal Reserve Act. However, borrowing from the Fed’s discount window, its main tool for supplying banks with cash, not only meant paying a hefty interest rate but also signalled to competitors that the lender was having difficulty raising money. Moreover, many of the banks that had bought subprime securities and needed to lend dollars weren’t in the United States.

Kohn proposed a potential solution. Before the turn of the millennium, he recalled, worries about widespread computer failures had prompted many financial institutions to hoard capital. The Fed, determined to keep money flowing in the event of a crisis, had developed several ideas, including auctioning Fed loans and setting up currency swaps with central banks abroad, to enable cash-strapped foreign banks to lend in dollars. Y2K had transpired without incident, and none of the ideas had been tested. Kohn suggested that the Fed revisit them now.

Versions of the Y2K proposals became the second part of the Bernanke doctrine—its most radical component. Over fifteen months, beginning in August, 2007, the Fed, through various novel programs known by their initials, such as T.A.F., T.S.L.F., and P.D.C.F., lent more than a trillion dollars to dozens of institutions. One program, T.A.F., allowed banks and investment firms to compete in auctions for fixed amounts of Fed funding, while T.S.L.F. enabled firms to swap bad mortgage securities for safe Treasury bonds. The programs, which have received little public attention, were supposed to be temporary, but they have been greatly expanded and remain in effect. “It’s a completely new set of liquidity tools that fit the new needs, given the turmoil in the financial markets,” Kevin Warsh, the Fed governor, said. “We have basically substituted our balance sheet for the balance sheet of financial institutions, large and small, troubled and healthy, for a time. Without these credit facilities, things would have been a lot worse. We’d have a lot more banks needing to be resolved, unwound, or rescued, and we would have run out of buyers before we ran out of sellers.”

Richard Fisher, the head of the Dallas Fed, told me that the lending programs would be Bernanke’s main legacy. He likened what the Fed has done to replacing a broken sprinkler system. “If the pipes are blocked up, the sprinkler heads don’t receive any water, and the lawn turns brown and dies,” he said. “In this case, the piping system had been broken and clogged. Just turning the faucet of the federal funds rate was insufficient to the challenges the Fed faced.”

Although many people at the Fed worked on the details of the lending programs, Bernanke provided the impetus for their development. One of his first acts on taking office was to establish a financial-stability working group, which brought together economists, finance specialists, bank supervisors, and lawyers from different departments at the Fed to devise solutions to potential problems. As the subprime crisis unfolded, Bernanke met with the task force frequently to discuss the Fed’s response, including how, in seeking to expand the scope of its activities, it could exploit obscure laws from the nineteen-thirties. “Ben is very good at making decisions—

none of this waiting for the definitive academic paper before acting,” said Geithner, who last week was reported to have been selected as Treasury Secretary by President-elect Barack Obama. “We’ve done some incredibly controversial, consequential things in a remarkably short period of time, and it’s because he was willing to act quickly, with force and creativity.”

Despite the rate cuts and lending programs, months passed without discernible improvements in the credit markets. During the summer and fall of 2007, the drop in house prices accelerated and the number of subprime delinquencies increased. In October, at a meeting in Washington of central bankers, executives, and economists, Allen Sinai, the chief economist at Decision Economics, Inc., asked Bernanke how he thought a central bank should manage the economic risks posed by a housing bubble. According to Sinai, Bernanke said that he had no way of knowing if there had been a housing bubble. “I realized then that he just didn’t realize the scale of the problem,” Sinai told me.

At F.O.M.C. meetings, some members compared the subprime debacle with the financial crisis of 1998, when the Fed organized a consortium of Wall Street firms to prevent the giant hedge fund Long Term Capital Management from collapsing. The markets had gyrated for a couple of months before recovering strongly, and the broader economy had been largely unaffected. “In September, it still looked good,” Frederic Mishkin, a Columbia professor and a close friend of Bernanke, who served as a Fed governor from September, 2006, until August of this year, told me. “I thought it was going to be worse than 1998, but not much worse. I thought it was going to be over in a few months.”

By the end of 2007, however, Bernanke was beginning to agree with some of the Fed’s critics that interest rates needed to come down quickly. On January 4, 2008, the Labor Department reported that the unemployment rate had jumped from 4.7 per cent to five per cent, prompting a number of economists to say that the United States was on the brink of a recession. More banks and investment banks, including Citigroup, UBS, and Morgan Stanley, were reporting big losses—a development that particularly concerned Bernanke because of its historical overtones.

In an article Bernanke published in 1983, he showed how the Fed’s failure in the early thirties to prevent banks from collapsing contributed to the depth and severity of the Great Depression—a finding that supported a theory first proposed in 1963 by the economists Milton Friedman and Anna Schwartz. In November, 2002, shortly after joining the Fed, Bernanke appeared at a conference to mark Friedman’s ninetieth birthday, and apologized for the Fed’s Depression-era policies. “I would like to say to Milton and Anna: regarding the Great Depression, you’re right; we did it,” he said. “We’re very sorry. But, thanks to you, we won’t do it again.”

On January 21, 2008, stock markets around the world fell sharply. The U.S. markets were closed for Martin Luther King Day, but at six o’clock that evening Bernanke convened a conference call of the F.O.M.C., which voted to cut the federal funds rate by three-quarters of a point, to 3.5 per cent. It was the first rate cut to occur between meetings since September, 2001, and the largest one-day reduction in the rate.

When the committee met on January 29th, it cut the federal funds rate by another half a point, to three per cent. In a month and a half, the Fed had shifted from a policy roughly balanced between

fighting inflation and maintaining economic growth to one explicitly aimed at heading off a recession. To people inside the Fed, which is accustomed to moving at a stately pace, the change felt wrenching. “To move that far that fast was unprecedented,” Frederic Mishkin, the Columbia professor and former Fed governor, said. “In our context, it’s remarkable how fast we reacted.” Some economists who worry about inflation were outraged by the rate cuts. “They’re doing the same stupid things they did in the nineteen-seventies,” Allan Meltzer, an economist at Carnegie Mellon, who has written a history of the Fed, told the *Times*. “They were always saying then that we’re not going to let inflation get out of hand, that we’re going to tackle it once the economy starts growing, but they never did.”

Bernanke was frustrated by the attacks on his policies, especially when they came from academics whose work he respected. If he moved slowly, people on Wall Street accused him of timidity. If he brought rates down sharply, academic economists accused him of going soft on inflation.

As the financial crisis worsened, Bernanke worked more closely with Paulson, who, after becoming Treasury Secretary, in June, 2006, had established considerable autonomy in determining the Bush Administration’s economic policy. The men appeared to have little in common. Bernanke was scholarly and reserved; Paulson, an English major who played offensive tackle for Dartmouth in the seventies, where he was known as the Hammer, was gregarious. Both, however, were political moderates who liked baseball. On his desk, Paulson, a Cubs fan, kept a copy of Bill James’s “Historical Baseball Abstract,” given to him by Bernanke, a former Red Sox fan who, since moving to the capital, had adopted the Washington Nationals.

Paulson and Bernanke met for breakfast every week and saw each other often at meetings of the President’s Working Group on Financial Markets, which was led by Paulson and included senior officials from the Securities and Exchange Commission and the Commodity Futures Trading Commission. Paulson frequently solicited Bernanke’s advice. “I’ve been impressed with his pragmatism and how intellectually curious he is,” Paulson told me in September. “He’s willing to consider all ideas—conventional and non-conventional—and he doesn’t easily accept things that the bureaucracy comes up with.”

In early March, 2008, stock in Bear Stearns, the investment bank and a major underwriter of subprime securities, fell steeply amid rumors that the firm was having trouble raising money in the overnight markets, on which, like all Wall Street firms, it depended to finance its huge trading positions. Many of the bank’s clients began to withdraw their money, and many of its creditors demanded more collateral for their loans. In accommodating these requests, Bear was forced to draw on its cash reserves. By the afternoon of Thursday, March 13th, it reportedly had just two billion dollars left, not nearly enough to meet its obligations on Friday morning.

The Bernanke doctrine hadn’t been designed to deal with such a situation. When Bernanke and Tim Geithner, the Fed’s point man on Wall Street, first learned of Bear’s predicament, they believed that the bank should be allowed to fail. For decades, the Fed had resisted lending to Wall Street firms for fear that it would encourage them to take excessive risks—a concern that economists refer to as “moral hazard.” (The discount window is confined to commercial banks.)



Bear wasn't one of Wall Street's biggest firms, and its demise seemed unlikely to lead to other failures. In the argot of central bankers, the bank didn't appear to present a "systemic risk."

By late Thursday night, after officials from the New York Fed and the S.E.C. visited Bear's offices to review its books, the assessment had changed. The company was a major participant in the "repurchase"—or "repo"—market, a little publicized but vitally important market in which banks raise cash on a short-term basis from mutual funds, hedge funds, insurance companies, and central banks. Every night, about \$2.5 trillion turns over in the repo market. Most repo contracts roll over on a daily basis, and the lender can at any time return the collateral and demand its cash. This is precisely what many of Bear's lenders were doing—a process akin to the run by depositors on the Bailey Bros. Building & Loan in "It's a Wonderful Life."

Bear was also a big dealer in credit-default swaps (C.D.S.s), which are basically insurance contracts on bonds. In return for a premium, the seller of a swap promises to cover the full value of a given bond in the case of a default. Bear alone reportedly had more than five thousand institutional partners with whom it had traded C.D.S.s. If the bank were to default before the markets opened on Friday, the effect on the repo and swaps markets would be chaotic.

At two o'clock that morning, Geithner called Don Kohn and told him that he wasn't confident that the fallout from the bankruptcy of Bear Stearns could be contained. At about 4 A.M., Geithner spoke to Bernanke, who agreed that the Fed should intervene. The central bank decided to extend a twenty-eight-day loan to J. P. Morgan, Bear's clearing bank, which would pass the money on to Bear. In agreeing to make the loan, Bernanke relied on Section 13(3) of the Federal Reserve Act of 1932, which empowered the Fed to extend credit to financial institutions other than banks in "unusual and exigent circumstances."

News of the Fed's loan got Bear through trading on Friday, but Bernanke and Paulson were eager to find a permanent solution before the Asian markets opened on Sunday night. After a weekend of torturous negotiations, J. P. Morgan agreed to buy Bear Stearns for a knockdown price of two dollars a share, but only after the Fed agreed to take on Bear's twenty-nine-billion-dollar portfolio of subprime securities. "The further we got into it, the more we said, 'Oh, my God! We really need to address this problem,' " a senior Fed official recalled. "The problem wasn't the size of Bear Stearns—it wasn't the fact that some creditors would have borne losses. The problem was—people use the term 'too interconnected to fail.' That's not totally accurate, but it's close enough." In the repo market, for example, Bear Stearns had borrowed heavily from money-market mutual funds. "If Bear had failed," the senior official went on, "all these money-market mutual funds, instead of getting their money back on Monday morning, would have found themselves with all kinds of illiquid collateral, including C.D.O.s"—collateralized debt obligations—"and God knows what else. It would have caused a run on that entire market. That, in turn, would have made it impossible for other investment banks to fund themselves."

The day the Federal Reserve announced the rescue of Bear Stearns, it also cut the discount rate by another quarter point, and said that for a time it would open the discount window to twenty Wall Street firms—an unprecedented step. Fed officials felt they had little choice but to let investment banks borrow from the Fed on the same terms as commercial banks, even if it encouraged moral hazard. "We thought that even if we were successful in getting a solution that

avoided a default for Bear, what was happening in the credit markets had too much momentum,” a Fed official recalled. “We weren’t going to be able to contain the damage simply by helping avoid a failure by Bear.”

There is now wide agreement that Bernanke and his colleagues made the correct decision about Bear Stearns. If they had allowed the firm to file for bankruptcy, the financial panic that developed this fall would almost certainly have begun six months earlier. Instead, the markets settled for a while. “I think we did the right thing to try to preserve financial stability,” Bernanke said. “That’s our job. Yes, it’s moral-hazard-inducing, but the right way to address this question is not to let institutions fail and have a financial meltdown. When the economy has recovered, or is on the way to recovery, that’s the time to say, ‘How can we fix the system so it doesn’t happen again?’ You want to put the fire out first and then worry about the fire code.”

Nevertheless, after Bear Stearns’s deal with J. P. Morgan was announced, Bernanke was attacked—by the media, by conservative economists, even by former Fed officials. In an editorial titled “Pushovers at the Fed,” the *Wall Street Journal* declared that James Dimon, the chairman and chief executive of J. P. Morgan Chase, was “rolling over” the Fed and the Treasury. In early April, Paul Volcker, who chaired the Fed from 1979 to 1987, told the Economic Club of New York, “Sweeping powers have been exercised in a manner that is neither natural nor comfortable for a central bank.” The Fed’s job is to act as “custodian of the nation’s money,” Volcker went on, not to take “many billions of uncertain assets onto its own balance sheet.”

Some of the criticisms were unfair. Bear Stearns’s stockholders lost almost everything in the deal; James Cayne, the bank’s chairman, lost almost a billion dollars. Still, even some Fed officials were uneasy about the acquisition of Bear Stearns’s mortgage securities. Bernanke was sufficiently disturbed by Volcker’s speech that he called to reassure him that the Fed’s action had been an improvised response to a crisis rather than a template for future action.

In fact, it quickly became clear that an important precedent had been set: the Bernanke doctrine now included preventing the failure of major financial institutions. Since the collapse of the mortgage-securities market on Wall Street, in the summer of 2007, mortgage securitization had been left mainly in the hands of two companies that operated under government charters to encourage home-ownership: the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac). Like the Wall Street firms, Fannie and Freddie had suffered big losses on their vast loan portfolios, and many Wall Street analysts believed that the companies were on the verge of insolvency—an alarming prospect for the U.S. government. In order to finance their purchases of mortgages and mortgage bonds, Fannie and Freddie had issued \$5.2 trillion in debt, and although they were technically private companies, their debt traded as if the government had guaranteed it. If the companies defaulted, the creditworthiness of the entire government would be called into question.

On Sunday, July 13th, Paulson told reporters outside the Treasury Department that he would request from Congress authority to invest an unspecified amount of taxpayers’ money in Fannie and Freddie, which would remain shareholder-owned corporations. Fed officials said that until Congress agreed to Paulson’s request the central bank would insure that the mortgage companies

had sufficient cash by lending them money through the discount window. “We could recognize the systemic risk here,” the Fed policymaker said. “Paulson had a plan to deal with that risk, and the system required that somebody be there while the plan was being implemented. We had the money to bridge to the new facility.”

The plan to prop up Freddie and Fannie was no more warmly received than the Bear Stearns rescue package had been. “When I picked up my newspaper yesterday, I thought I woke up in France,” Senator Jim Bunning, a Republican from Kentucky, said to Bernanke when he appeared before the Senate banking committee. “But no, it turned out it was socialism here in the United States of America.” Two prominent Democratic economists, Lawrence Summers, the former Treasury Secretary, and Joseph Stiglitz, pointed out that the highly paid managers of the mortgage companies had been left in place, with few restrictions on how they operated. David Walker, the former director of the Government Accountability Office, said the rescue was a bad deal for the taxpayers.

Bernanke couldn’t say so publicly, but he agreed with some of the critics. For years, the Fed had warned that Fannie and Freddie were squeezing out competitors and engaging in risky mortgage-lending practices. Bernanke would have liked to combine a rescue package with extensive reforms, but he realized that an overhaul of the companies was not politically feasible. Despite their financial problems, Fannie and Freddie still had many powerful allies in Congress, and Bernanke was determined that the plan be approved quickly, in order to restore confidence in the markets.

On August 21st, Bernanke departed for the annual Jackson Hole conference, which was to be devoted to the credit crunch. Over the course of three days, one speaker after another challenged aspects of the Fed’s response, and, implicitly, of Bernanke’s leadership. Allan Meltzer, of Carnegie Mellon, complained that the Fed had adopted an ad-hoc approach to bailing out troubled firms. Franklin Allen, a professor at the Wharton School, said that banks and investment firms could use the Fed’s lending facilities as a means of concealing the state of their finances, and Willem Buiter, of the London School of Economics, accused the Fed of doing the financial industry’s bidding, saying that the central bank had “internalized the fears, beliefs, and world views of Wall Street” and fallen victim to “cognitive regulatory capture.”

Alan Blinder, Bernanke’s friend and colleague from Princeton, defended him, arguing that the Fed had performed well in trying circumstances, and Martin Feldstein, a Harvard economist, said that it had “responded appropriately this year.” But Feldstein added that the financial crisis was getting worse as housing prices continued to drop and homeowners to default. Perhaps the most suggestive comments were made by Yutaka Yamaguchi, a former deputy governor of the Bank of Japan, who, during the nineties, helped manage Japan’s response to a ruinous speculative bust. The Bank of Japan began cutting interest rates in July, 1991, Yamaguchi recalled, but the financial system didn’t stabilize until after the Japanese government bailed out a number of banks, a project that took almost a decade. The main lesson of the Japanese experience, he said, was the need for an “early and large-scale recapitalization of the financial system,” using public money.

Throughout the discussion, Bernanke sat quietly and listened. He looked exhausted, and during one presentation he appeared to fall asleep. In his own speech, he defended the Fed's actions and argued that in the future the agency should be given more power to supervise big financial firms and opaque markets such as the repo market, and that a legal framework should be established to allow the government to intervene when they got into trouble. The speech suggested that Bernanke had adopted a more favorable view of regulation, but he made no mention of using monetary policy to deflate speculative bubbles or of recapitalizing the banking system.

Bernanke still believed that his finger-in-the-dike strategy was working. After all, in the second quarter of the year the Gross Domestic Product had expanded at an annualized rate of almost three per cent—and the unemployment rate was under six per cent. Commodity prices, including oil prices, had started to fall, which would ease inflation pressures. In Washington, over Labor Day weekend, Bernanke and Paulson met to discuss Fannie and Freddie. In the five weeks since Congress had given the Bush Administration broad authority to invest in the companies, the firms had tried unsuccessfully to raise capital on their own. Paulson and Bernanke decided that a government takeover was now the best option. In addition to removing the threat that Fannie and Freddie would default on their debts, it would enable the government to expand their lending activities and help stabilize house prices. “We have worked together for nine months, recognizing that the real-estate market is at the heart of our economic problems,” Paulson told me later in September. “We said, ‘If you wanted to get at that, how would you do it?’ ”

On Sunday, September 7th, Paulson announced that the government would place Fannie and Freddie in a “conservatorship,” replacing their chief executives, taking an eighty-per-cent ownership stake in each of the companies, and providing them with access to as much as two hundred billion dollars in capital. The next day, the Dow closed up almost three hundred points. The billionaire Warren Buffett, whom Paulson had briefed on the move, said that it represented “exactly the right decision for the country.” Even the *Wall Street Journal's* editorial page, which for months had criticized Paulson and Bernanke, grudgingly endorsed the plan.

At the Treasury Department and the Fed, there was little opportunity to celebrate. On Tuesday, September 9th, stock in Lehman Brothers dropped by forty-five per cent, following reports that it had failed to secure billions of dollars in capital from a Korean bank. Lehman approached several potential buyers, including Bank of America and Barclays, the British bank. But by the end of the week it was running out of cash. On Friday evening, Geithner and Paulson summoned a group of senior Wall Street executives to the New York Fed and told them that the government wanted an “industry” solution to Lehman's problems. Talks continued through the weekend, but by Sunday afternoon both Bank of America and Barclays had bowed out, and word circulated that Lehman was preparing to file for bankruptcy.

Remarkably, once the potential bidders dropped out, Bernanke and Paulson never seriously considered mounting a government rescue of Lehman Brothers. Bernanke and other Fed officials say that they lacked the legal authority to save the bank. “There was no mechanism, there was no option, there was no set of rules, there was no funding to allow us to address that situation,” Bernanke said last month, at the Economic Club of New York. “The Federal Reserve's ability to lend, which was used in the Bear Stearns case, for example, requires that adequate collateral be posted. . . . In this case, that was impossible—there simply wasn't enough collateral to support

the lending. . . . We worked very hard, over one of those famous weekends, with not only some potential acquirers of Lehman but we also called together many of the leading C.E.O.s of the private sector in New York to try to come to a solution. We didn't find one." Bernanke insisted to me, too, that there was nothing he could have done to prevent Lehman from going under. "With Bear Stearns, with all the others, there was a point when someone said, 'Mr. Chairman, are we going to do this deal or not?' With Lehman, we were never anywhere near that point. There wasn't a decision to be made."

However, Bernanke and Paulson were undoubtedly sensitive to the charge, made in the wake of their efforts to salvage Bear Stearns, Fannie Mae, and Freddie Mac, that they were bailing out greedy and irresponsible financiers. For months, the Treasury and the Fed had urged Lehman's senior executives to raise more capital, which the bank had failed to do. Many analysts remain skeptical that the Fed couldn't have rescued Lehman. "It's really hard for me to accept that they couldn't have come up with something," Dean Baker, of the Center for Economic and Policy Research, said. "They've been doing things of dubious legal authority all year. Who would have sued them?"

At the time, a popular interpretation of Lehman Brothers' demise was that Bernanke and Paulson had finally drawn a line in the sand. ("We've reestablished 'moral hazard,' " a source involved in the Lehman discussions told the *Wall Street Journal*.) But less than forty-eight hours later the Fed agreed to extend up to eighty-five billion dollars to A.I.G., a firm that had possibly acted even more irresponsibly. One difference was that the Fed, in charging A.I.G. an interest rate of more than ten per cent and demanding up to eighty per cent of the company's equity, had been able to impose tough terms in exchange for its support. "We felt we could say that this was a well-secured loan and that we were not putting fiscal resources at risk," the senior Fed official told me.

More important, A.I.G. was a much bigger and more complex firm than Lehman Brothers was. In addition to providing life insurance and homeowners' policies, it was a major insurer of mortgage bonds and other types of securities. If it had been allowed to default, every big financial firm in the country, and many others abroad, would have been adversely affected. But even the announcement of A.I.G.'s rescue wasn't enough to calm the markets.

On Tuesday, September 16th, the Reserve Primary Fund, a New York-based money-market mutual fund that had bought more than seven hundred million dollars in short-term debt issued by Lehman Brothers, announced that it was suspending redemptions because its net asset value had fallen below a dollar a share. The subprime virus was infecting parts of the financial system that had appeared immune to it—including the most risk-averse institutions—and the news that the Reserve Primary Fund had "broken the buck" sparked an investor panic that by mid-October had become global, striking countries as far removed as Iceland, Hungary, and Brazil.

Bernanke accompanied Paulson to Capitol Hill to warn reluctant congressmen about the catastrophic consequences of failing to pass a bailout bill. ("When you listened to him describe it, you gulped," Senator Chuck Schumer, the New York Democrat, said of Bernanke's evocation of the crisis.) He helped enable Goldman Sachs and Morgan Stanley to convert to bank holding companies, and he cooperated with other regulators on the seizure of Washington Mutual and the

sale of most of its operations to J. P. Morgan. He was in his office until 4 A.M. finalizing Citigroup's takeover of Wachovia. (The government agreed to cap Citigroup's potential losses on Wachovia's huge mortgage portfolio.) The Fed also announced that it would spend up to a half-trillion dollars shoring up money-market mutual funds.

Often, it was clear that Bernanke and Paulson were improvising. On November 10th, the Fed and the Treasury Department announced that they would provide more money to A.I.G., raising the total amount of public funds committed to the company to a hundred and fifty billion dollars. (The Fed's original eighty-five-billion-dollar loan, and a subsequent one, of \$37.8 billion, had proved inadequate.) Two days later, Paulson abandoned the idea of buying up distressed mortgage securities—a proposal that he and Bernanke had vigorously defended—and last week, at a hearing of the House Financial Services Committee, congressmen excoriated him. “You seem to be flying a seven-hundred-billion-dollar plane by the seat of your pants,” Gary Ackerman, a Democrat from New York, scolded Paulson. Perhaps the most damning criticism came from the committee's chairman, Barney Frank, the Massachusetts Democrat, who noted that although the bailout legislation had included specific provisions to address foreclosures, Americans continued to default on mortgages at a record rate.

The Congressman had a point. Paulson's and Bernanke's efforts to prop up the financial system have so far had little effect on the housing slump, which is the source of the trouble. Until that problem is addressed, the financial sector will remain under great stress.

Last week, the stock market plunged to its lowest level in eleven years, auto executives flew into Washington on their corporate jets to demand a bailout, and Wall Street analysts warned that the political vacuum between Administrations could create more turmoil. “We can't get from here to February 1st if the current ‘who's in charge?’ situation continues,” Robert Barbera, the chief economist at I.T.G., an investment firm, told the *Times*.

Bernanke, though, remains remarkably calm. (Jim Cramer would say oblivious.) He is unapologetic about the alterations to the bailout plan, arguing that changing circumstances demanded them, and he is relieved that the Treasury Department and Congress are now leading the government's response to the crisis. Despite grim news on unemployment, retail sales, and corporate earnings, he is hopeful that an economic recovery will begin sometime next year. Until the middle of last week, there were signs that the credit crisis was easing: some banks were lending to each other again, the interest rates that they charge each other have come down, and no major financial institution has failed since the passage of the bailout bill. “It was a very important step,” Bernanke told me last week, referring to the bailout. “It greatly diminished the threat of a global financial meltdown. But, as Hank Paulson said publicly, ‘you don't get much credit for averting a disaster.’ ”

On Wall Street, Bernanke's reviews have improved, especially at firms that have received assistance from the Fed. “I think he has done a superb job, both in coming up with innovative solutions and in coordinating the policy response with the New York Fed, the Treasury Department, and the S.E.C.,” John Mack, of Morgan Stanley, told me. “I give him very high marks.” George Soros, the investor and philanthropist, whose firm has not benefitted from the Fed's largesse, said, “Early on, being an academic, he didn't realize the seriousness of the



problem. But after the start of the year he got the message and he acted very decisively.” Still, Soros went on, citing renewed turbulence in the markets and speculation about the fate of Citigroup, whose stock price last Friday fell below four dollars, the crisis is far from over. “With Lehman, the system effectively broke down. It is now on life support from the Fed, but it’s really touch and go whether they can hold it together. The pressure is mounting even as we speak.” He added, “We may be on the verge of another collapse.”

Bernanke, in a search for inspiration and guidance, has been thinking about two Presidents: Franklin Delano Roosevelt and Abraham Lincoln. From the former he took the notion that what policymakers needed in a crisis was flexibility and resolve. After assuming office, in March, 1933, Roosevelt enacted bold measures aimed at reviving the moribund economy: a banking holiday, deposit insurance, expanded public works, a devaluation of the dollar, price controls, the imposition of production directives on many industries. Some of the measures worked; some may have delayed a rebound. But they gave the American people hope, because they were decisive actions.

Bernanke’s knowledge of Lincoln was more limited, but one morning the man who organizes the parking pool in the basement of the Fed’s headquarters had given him a copy of a statement Lincoln made in 1862, after he was criticized by Congress for military blunders during the Civil War: “If I were to try to read, much less answer, all the attacks made on me, this shop might as well be closed for any other business. I do the very best I know how—the very best I can; and I mean to keep doing so until the end. If the end brings me out all right, what is said against me won’t amount to anything. If the end brings me out wrong, ten angels swearing I was right will make no difference.”

Bernanke keeps the statement on his desk, so he can refer to it when necessary.

## On Wall Street, Bonuses, Not Profits, Were Real

By Louise Story  
The New York Times  
December 17, 2008



E. Stanley O'Neal, the former chief executive of Merrill Lynch, was paid \$46 million in 2006, \$18.5 million of it in cash. *"As a result of the extraordinary growth at Merrill during my tenure as C.E.O., the board saw fit to increase my compensation each year."* Photo: Daniel Acker/Bloomberg News

For Dow Kim, 2006 was a very good year. While his salary at Merrill Lynch was \$350,000, his total compensation was 100 times that — \$35 million.

The difference between the two amounts was his bonus, a rich reward for the robust earnings made by the traders he oversaw in Merrill's mortgage business.

Mr. Kim's colleagues, not only at his level, but far down the ranks, also pocketed large paychecks. In all, Merrill handed out \$5 billion to \$6 billion in bonuses that year. A 20-something analyst with a base salary of \$130,000 collected a bonus of \$250,000. And a 30-something trader with a \$180,000 salary got \$5 million.

But Merrill's record earnings in 2006 — \$7.5 billion — turned out to be a mirage. The company has since lost three times that amount, largely because the mortgage investments that supposedly had powered some of those profits plunged in value.



Dow Kim received \$35 million in 2006 from Merrill Lynch. Photo: Bloomberg News.

Unlike the earnings, however, the bonuses have not been reversed.

As regulators and shareholders sift through the rubble of the financial crisis, questions are being asked about what role lavish bonuses played in the debacle. Scrutiny over pay is intensifying as banks like Merrill prepare to dole out bonuses even after they have had to be propped up with billions of dollars of taxpayers' money. While bonuses are expected to be half of what they were a year ago, some bankers could still collect millions of dollars.

Critics say bonuses never should have been so big in the first place, because they were based on ephemeral earnings. These people contend that Wall Street's pay structure, in which bonuses are based on short-term profits, encouraged employees to act like gamblers at a casino — and let them collect their winnings while the roulette wheel was still spinning.

“Compensation was flawed top to bottom,” said Lucian A. Bebchuk, a professor at Harvard Law School and an expert on compensation. “The whole organization was responding to distorted incentives.”

Even Wall Streeters concede they were dazzled by the money. To earn bigger bonuses, many traders ignored or played down the risks they took until their bonuses were paid. Their bosses often turned a blind eye because it was in their interest as well.

“That's a call that senior management or risk management should question, but of course their pay was tied to it too,” said Brian Lin, a former mortgage trader at Merrill Lynch.

The highest-ranking executives at four firms have agreed under pressure to go without their bonuses, including John A. Thain, who initially wanted a bonus this year since he joined Merrill Lynch as chief executive after its ill-fated mortgage bets were made. And four former executives at one hard-hit bank, UBS of Switzerland, recently volunteered to return some of the bonuses they were paid before the financial crisis. But few think others on Wall Street will follow that lead.

For now, most banks are looking forward rather than backward. Morgan Stanley and UBS are attaching new strings to bonuses, allowing them to pull back part of workers' payouts if they turn out to have been based on illusory profits. Those policies, had they been in place in recent years, might have clawed back hundreds of millions of dollars of compensation paid out in 2006 to employees at all levels, including senior executives who are still at those banks.

### **A Bonus Bonanza**

For Wall Street, much of this decade represented a new Gilded Age. Salaries were merely play money — a pittance compared to bonuses. Bonus season became an annual celebration of the riches to be had in the markets. That was especially so in the New York area, where nearly \$1 out of every \$4 that companies paid employees last year went to someone in the financial industry. Bankers celebrated with five-figure dinners, vied to outspend each other at charity auctions and spent their newfound fortunes on new homes, cars and art.

The bonanza redefined success for an entire generation. Graduates of top universities sought their fortunes in banking, rather than in careers like medicine, engineering or teaching. Wall Street worked its rookies hard, but it held out the promise of rich rewards. In college dorms, tales of 30-year-olds pulling down \$5 million a year were legion.

While top executives received the biggest bonuses, what is striking is how many employees throughout the ranks took home large paychecks. On Wall Street, the first goal was to make “a buck” — a million dollars. More than 100 people in Merrill’s bond unit alone broke the million-dollar mark in 2006. Goldman Sachs paid more than \$20 million apiece to more than 50 people that year, according to a person familiar with the matter. Goldman declined to comment.

Pay was tied to profit, and profit to the easy, borrowed money that could be invested in markets like mortgage securities. As the financial industry’s role in the economy grew, workers’ pay ballooned, leaping sixfold since 1975, nearly twice as much as the increase in pay for the average American worker.

“The financial services industry was in a bubble,” said Mark Zandi, chief economist at Moody’s [Economy.com](http://Economy.com). “The industry got a bigger share of the economic pie.”

### A Money Machine

Dow Kim stepped into this milieu in the mid-1980s, fresh from the Wharton School at the University of Pennsylvania. Born in Seoul and raised there and in Singapore, Mr. Kim moved to the United States at 16 to attend Phillips Academy in Andover, Mass. A quiet workaholic in an industry of workaholics, he seemed to rise through the ranks by sheer will. After a stint trading bonds in Tokyo, he moved to New York to oversee Merrill’s fixed-income business in 2001. Two years later, he became co-president.

Even as tremors began to reverberate through the housing market and his own company, Mr. Kim exuded optimism.

After several of his key deputies left the firm in the summer of 2006, he appointed a former colleague from Asia, Osman Semerci, as his deputy, and beneath Mr. Semerci he installed Dale M. Lattanzio and Douglas J. Mallach. Mr. Lattanzio promptly purchased a \$5 million home, as well as oceanfront property in Mantoloking, a wealthy enclave in New Jersey, according to county records.

Merrill and the executives named in this article declined to comment or say whether they would return past bonuses. Mr. Mallach did not return telephone calls.

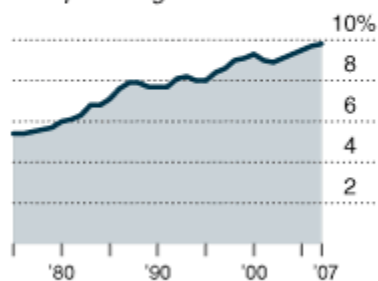
### Financials Gain

Wall Street has been capturing a greater share of profits and salaries for more than 30 years.

Financial services profits  
As a percentage of U.S. total



Financial services wages and salaries  
As a percentage of U.S. total



Source: Moody’sEconomy.com

Mr. Semerci, Mr. Lattanzio and Mr. Mallach joined Mr. Kim as Merrill entered a new phase in its mortgage buildup. That September, the bank spent \$1.3 billion to buy the First Franklin Financial Corporation, a mortgage lender in California, in part so it could bundle its mortgages into lucrative bonds.

Yet Mr. Kim was growing restless. That same month, he told E. Stanley O’Neal, Merrill’s chief executive, that he was considering starting his own hedge fund. His traders were stunned. But Mr. O’Neal persuaded Mr. Kim to stay, assuring him that the future was bright for Merrill’s mortgage business, and, by extension, for Mr. Kim.

Mr. Kim stepped to the lectern on the bond-trading floor and told his anxious traders that he was not going anywhere, and that business was looking up, according to four former employees who were there. The traders erupted in applause.

“No one wanted to stop this thing,” said one former mortgage analyst at Merrill. “It was a machine, and we all knew it was going to be a very, very good year.”

Merrill Lynch celebrated its success even before the year was over. In November, the company hosted a three-day golf tournament at Pebble Beach, Calif.

Mr. Kim, an avid golfer, played alongside William H. Gross, a founder of Pimco, the big bond house, and Ralph R. Cioffi, who oversaw two Bear Stearns hedge funds whose subsequent collapse in 2007 would send shock waves through the financial world.

“There didn’t seem to be an end in sight,” said a person who attended the tournament.

Back in New York, Mr. Kim’s team was eagerly bundling risky home mortgages into bonds. One of the last deals they put together that year was called “Costa Bella,” or beautiful coast — a name that recalls Pebble Beach. The \$500 million bundle of loans, a type of investment known as a collateralized debt obligation, was managed by Mr. Gross’s Pimco.

Merrill Lynch collected about \$5 million in fees for concocting Costa Bella, which included mortgages originated by First Franklin.

But Costa Bella, like so many other C.D.O.’s, was filled with loans that borrowers could not repay. Initially part of it was rated AAA, but Costa Bella is now deeply troubled. The losses on the investment far exceed the money Merrill collected for putting the deal together.

### **So Much for So Few**

By the time Costa Bella ran into trouble, the Merrill bankers who had devised it had collected their bonuses for 2006. Mr. Kim’s fixed-income unit generated more than half of Merrill’s revenue that year, according to people with direct knowledge of the matter. As a reward, Mr. O’Neal and Mr. Kim paid nearly a third of Merrill’s \$5 billion to \$6 billion bonus pool to the 2,000 professionals in the division.

Mr. O’Neal himself was paid \$46 million, according to Equilar, an [executive compensation](#) research firm and data provider in California. Mr. Kim received \$35 million. About 57 percent of their pay was in stock, which would lose much of its value over the next two years, but even the cash portions of their bonus were generous: \$18.5 million for Mr. O’Neal, and \$14.5 million for Mr. Kim, according to Equilar.

Mr. Kim and his deputies were given wide discretion about how to dole out their pot of money. Mr. Semerci was among the highest earners in 2006, at more than \$20 million. Below him, Mr. Mallach and Mr. Lattanzio each earned more than \$10 million. They were among just over 100 people who accounted for some \$500 million of the pool, according to people with direct knowledge of the matter.

After that blowout, Merrill pushed even deeper into the mortgage business, despite growing signs that the housing bubble was starting to burst. That decision proved disastrous. As the problems in the subprime mortgage market exploded into a full-blown crisis, the value of Merrill’s investments plummeted. The firm has since written down its investments by more than \$54 billion, selling some of them for pennies on the dollar.



Brian Lin is a former mortgage trader at Merrill Lynch who lost his job at Merrill and now works at RRMS Advisors. Photo: Patrick Andrade for The New York Times.

Mr. Lin, the former Merrill trader, arrived late to the party. He was one of the last people hired onto Merrill’s mortgage desk, in the summer of 2007. Even then, Merrill guaranteed Mr. Lin a bonus if he joined the firm. Mr. Lin would not disclose his bonus, but such payouts were often in the seven figures.

Mr. Lin said he quickly noticed that traders across Wall Street were reluctant to admit what now seems so obvious: Their mortgage investments were worth far less than they had thought.

“It’s always human nature,” said Mr. Lin, who lost his job at Merrill last summer and now works at RRMS Advisors, a consulting firm that advises investors in troubled mortgage investments. “You want to pull for the market to do well because you’re vested.”

But critics question why Wall Street embraced the risky deals even as the housing and mortgage markets began to weaken.

“What happened to their investments was of no interest to them, because they would already be paid,” said Paul Hodgson, senior research associate at the Corporate Library, a shareholder activist group. Some Wall Street executives argue that paying a larger portion of bonuses in the form of stock, rather than in cash, might keep employees from making short-sighted decisions. But Mr. Hodgson contended that that would not go far enough, in part because the cash rewards alone were so high. Mr. Kim, for example, was paid a total of \$116.6 million in cash and stock from 2001 to 2007. Of that, \$55 million was in cash, according to Equilar.



## Leaving the Scene

As the damage at Merrill became clear in 2007, Mr. Kim, his deputies and finally Mr. O’Neal left the firm. Mr. Kim opened a hedge fund, but it quickly closed. Mr. Semerci and Mr. Lattanzio landed at a hedge fund in London.

All three departed without collecting bonuses in 2007. Mr. O’Neal, however, got even richer by leaving Merrill Lynch. He was awarded an exit package worth \$161 million.

Clawing back the 2006 bonuses at Merrill would not come close to making up for the company’s losses, which exceed all the profits that the firm earned over the previous 20 years. This fall, the once-proud firm was sold to Bank of America, ending its 94-year history as an independent firm.

Mr. Bebchuk of Harvard Law School said investment banks like Merrill were brought to their knees because their employees chased after the rich rewards that executives promised them.

“They were trying to get as much of this or that paper, they were doing it with excitement and vigor, and that was because they knew they would be making huge amounts of money by the end of the year,” he said.

Ben White contributed reporting.

## Who Is To Blame For The Subprime Crisis?

By Eric Petroff  
Investopedia

Anytime something bad happens, it doesn't take long before blame starts to be assigned. In the instance of [subprime mortgage](#) woes, there is no single entity or individual to point the finger at. Instead, this mess is a collective creation of the world's central banks, homeowners, lenders, credit rating agencies and underwriters, and investors. Let's investigate.

### The Mess

The economy was at risk of a deep recession after the [dotcom bubble](#) burst in early 2000; this situation was compounded by the September 11 terrorist attacks that followed in 2001. In response, [central banks](#) around the world tried to stimulate the economy. They created capital [liquidity](#) through a reduction in interest rates. In turn, investors sought higher returns through riskier investments. Lenders took on greater risks too, and approved subprime mortgage loans to borrowers with poor credit. Consumer demand drove the [housing bubble](#) to all-time highs in the summer of 2005, which ultimately collapsed in August of 2006. (For an in-depth discussion of these events, see [The Fuel That Fed The Subprime Meltdown](#).)

The end result of these key events was increased [foreclosure](#) activity, large lenders and hedge funds declaring bankruptcy, and fears regarding further decreases in economic growth and consumer spending. So who's to blame? Let's take a look at the key players.

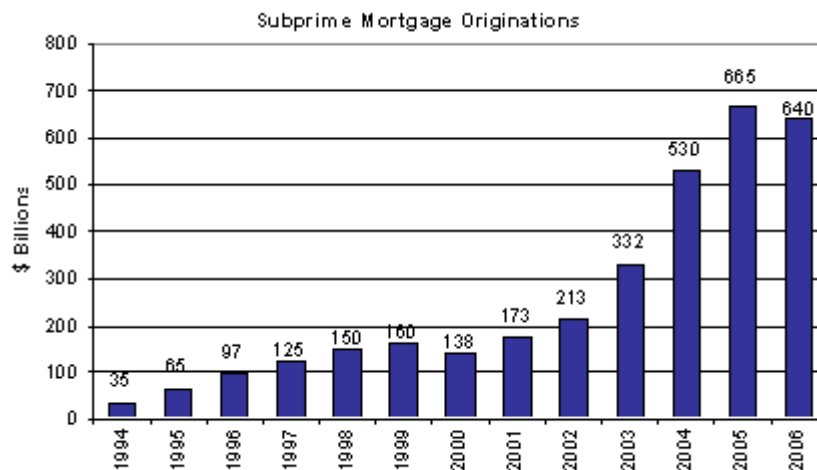
### Biggest Culprit: The Lenders

Most of the blame should be pointed at the [mortgage originators](#) (lenders) for creating these problems. It was the lenders who ultimately lent funds to people with poor credit and a high risk of default. (To learn more about subprime lending, see [Subprime Is Often Subpar](#).)

When the central banks flooded the markets with capital liquidity, it not only lowered interest rates, it also broadly depressed [risk premiums](#) as investors sought riskier opportunities to bolster their investment returns. At the same time, lenders found themselves with ample capital to lend and, like investors, an increased willingness to undertake additional risk to increase their investment returns.

In defense of the lenders, there was an increased demand for mortgages, and housing prices were increasing because interest rates had dropped substantially. At the time, lenders probably saw subprime mortgages as less of a risk than they really were: rates were low, the economy was healthy and people were making their payments.

As you can see in Figure 1, subprime mortgage [originations](#) grew from \$173 billion in 2001 to a record level of \$665 billion in 2005, which represented an increase of nearly 300%. There is a clear relationship between the liquidity following September 11, 2001, and subprime loan originations; lenders were clearly willing and able to provide borrowers with the necessary funds to purchase a home.



Source: Credit Suisse, Hammond Associates Institutional Fund Consultants

Figure 1

Note: The data presented herein are believed to be reliable but have not been independently verified. Any such information may be incomplete or condensed.

### Partner In Crime: Homebuyers

While we're on the topic of lenders, we should also mention the home buyers. Many were playing an extremely risky game by buying houses they could barely afford. They were able to make these purchases with non-traditional mortgages (such as [2/28](#) and [interest-only mortgages](#)) that offered low introductory rates and minimal initial costs such as "no down payment". Their hope lay in price appreciation, which would have allowed them to [refinance](#) at lower rates and take the equity out of the home for use in other spending. However, instead of continued appreciation, the housing bubble burst, and prices dropped rapidly. (To learn more, read [Why Housing Market Bubbles Pop.](#))

As a result, when their mortgages reset, many homeowners were unable to [refinance](#) their mortgages to lower rates, as there was no [equity](#) being created as housing prices fell. They were, therefore, forced to reset their mortgage at higher rates, which many could not afford. Many homeowners were simply forced to default on their mortgages. Foreclosures continued to increase through 2006 and 2007.

In their exuberance to hook more subprime borrowers, some lenders or mortgage brokers may have given the impression that there was no risk to these mortgages and that the costs weren't that high; however, at the end of the day, many borrowers simply assumed mortgages they couldn't reasonably afford. Had they not made such an aggressive purchase and assumed a less risky mortgage, the overall effects might have been manageable. (To learn about moral debate surrounding all things subprime, read [Subprime Lending: Helping Hand Or Underhanded?](#))

Exacerbating the situation, lenders and investors of securities backed by these defaulting mortgages suffered. Lenders lost money on defaulted mortgages as they were increasingly left with property that was worth less than the amount originally loaned. In many cases, the losses were large enough to result in bankruptcy.

## Investment Banks Worsen the Situation

The increased use of the [secondary mortgage market](#) by lenders added to the number of subprime loans lenders could originate. Instead of holding the originated mortgages on their books, lenders were able to simply sell off the mortgages in the secondary market and collect the originating fees. This freed up more capital for even more lending, which increased liquidity even more. The snowball began to build momentum. (For a crash course on the secondary mortgage market, check out [Behind The Scenes Of Your Mortgage](#).)

A lot of the demand for these mortgages came from the creation of assets that pooled mortgages together into a security, such as a [collateralized debt obligation](#) (CDO). In this process, investment banks would buy the mortgages from lenders and [securitize](#) these mortgages into bonds, which were sold to investors through CDOs.

The chart below demonstrates the incredible increase in global CDOs issues in 2006.

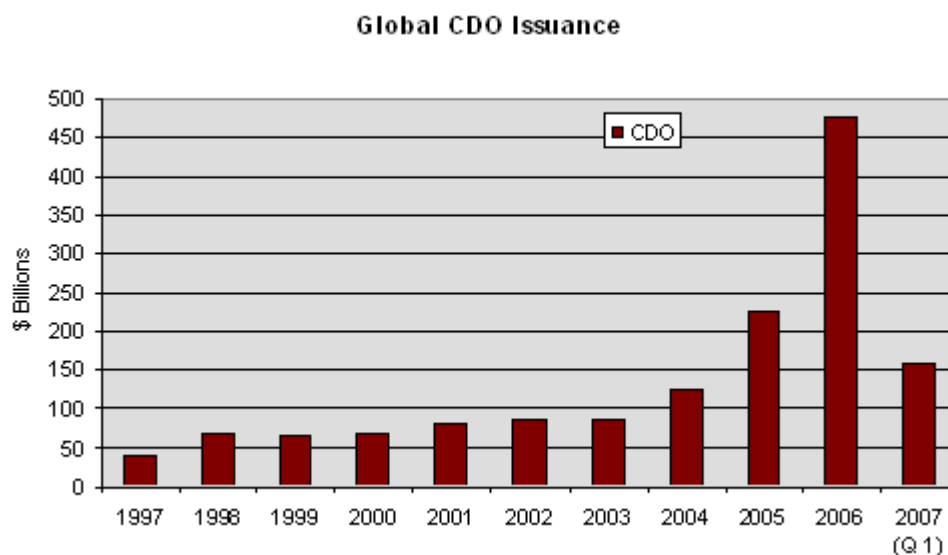


Image courtesy [Hammond Associates](#). The data presented herein are believed to be reliable but have not been independently verified. Any such information may be incomplete or condensed.

Figure 2

## Rating Agencies: Possible Conflict of Interest

A lot of criticism has been directed at the [rating agencies](#) and [underwriters](#) of the CDOs and other mortgage-backed securities that included subprime loans in their mortgage pools. Some argue that the rating agencies should have foreseen the high default rates for subprime borrowers, and they should have given these CDOs much lower ratings than the 'AAA' rating given to the higher quality [tranches](#). If the ratings had been more accurate, fewer investors would

have bought into these securities, and the losses may not have been as bad. (To learn more on the ratings system, see [What Is A Corporate Credit Rating?](#))

Moreover, some have pointed to the conflict of interest between rating agencies, which receive fees from a security's creator, and their ability to give an unbiased assessment of risk. The argument is that rating agencies were enticed to give better ratings in order to continue receiving service fees, or they run the risk of the underwriter going to a different rating agency (or the security not getting rated at all). However, on the flip side, it's hard to sell a security if it is not rated.

Regardless of the criticism surrounding the relationship between underwriters and rating agencies, the fact of the matter is that they were simply bringing bonds to market based on market demand.

### **Fuel to the Fire: Investor Behavior**

Just as the homeowners are to blame for their purchases gone wrong, much of the blame also must be placed on those who invested in CDOs. Investors were the ones willing to purchase these CDOs at ridiculously low premiums over [Treasury bonds](#). These enticingly low rates are what ultimately led to such huge demand for subprime loans.

Much of the blame here lies with investors because it is up to individuals to perform due diligence on their investments and make appropriate expectations. Investors failed in this by taking the 'AAA' CDO ratings at face value.

### **Final Culprit: Hedge Funds**

Another party that added to the mess was the [hedge fund](#) industry. It aggravated the problem not only by pushing rates lower, but also by fueling the market [volatility](#) that caused investor losses. The failures of a few investment managers also contributed to the problem. (To learn more, check out [Taking A Look Behind Hedge Funds](#).)

To illustrate, there is a type of hedge fund strategy that can be best described as "credit [arbitrage](#)". It involves purchasing subprime bonds on credit and hedging these positions with [credit default swaps](#). This amplified demand for CDOs; by using [leverage](#), a fund could purchase a lot more CDOs and bonds than it could with existing capital alone, pushing subprime interest rates lower and further fueling the problem. Moreover, because leverage was involved, this set the stage for a spike in volatility, which is exactly what happened as soon as investors realized the true, lesser quality of subprime CDOs.

Because hedge funds use a significant amount of leverage, losses were amplified and many hedge funds shut down operations as they ran out of money in the face of margin calls. (For more on this, see [Massive Hedge Fund Failures](#) and [Losing The Amaranth Gamble](#).)

## **Plenty of Blame to Go Around**

Overall, it was a mix of factors and participants that precipitated the current subprime mess. Ultimately, though, human behavior and greed drove the demand, supply and the investor appetite for these types of loans. Hindsight is always 20/20, and it is now obvious that there was a lack of wisdom on the part of many. However, there are countless examples of markets lacking wisdom, most recently the dotcom bubble and ensuing "irrational exuberance" on the part of investors.

It seems to be a fact of life that investors will always extrapolate current conditions too far into the future - good, bad or ugly.

For a one-stop shop on subprime mortgages and the subprime meltdown, check out the [Subprime Mortgages Feature](#).



#### 4. Consumer Behavior: Before & After the Recession:

### How the Great Recession Has Changed Life in America

Pew Research Findings  
June 30, 2010

#### I. Overview

Of the 13 recessions that the American public has endured since the Great Depression of 1929-33, none has presented a more punishing combination of length, breadth and depth than this one. A new Pew Research survey finds that 30 months after it began, the Great Recession has led to a downsizing of Americans' expectations about their retirements and their children's future; a new frugality in their spending and borrowing habits; and a concern that it could take several years, at a minimum, for their house values and family finances to recover.

The survey also finds that more than half of the adults in U.S. labor force (55%) have experienced some work-related hardship — be it a spell of unemployment, a cut in pay, a reduction in hours or an involuntary move to part-time work. In addition, the bursting of

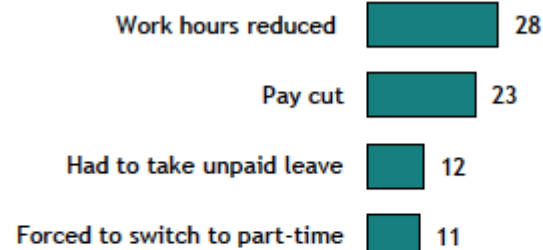
the pre-recession housing and stock market bubbles has shrunk the wealth of the average American household by an estimated 20%, the deepest such decline in the post-World War II era, according to government data.

While nearly all Americans have been hurt in one way or another, some groups have suffered more than others. Blacks and Hispanics have borne a disproportionate share of both the job losses and the housing foreclosures. Young adults have taken the biggest losses on the job front. Middle-aged adults have gotten the worst of the downturn in house values, household finances and retirement accounts. Men have lost many more jobs than women. And across most indicators, those with a high school diploma or less education have been hit harder than those with a college degree or more.

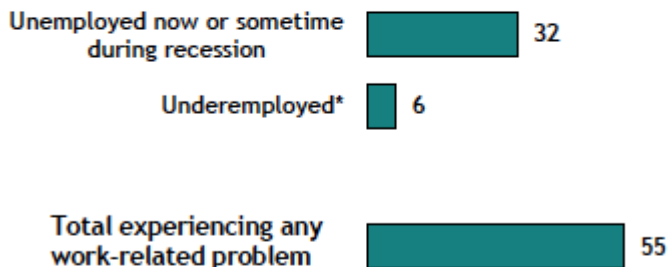
#### The Recession at Work

% of each group who experienced each of the following since the recession began

##### Among currently employed (n=1,604)



##### Among total labor force (n=2,256)

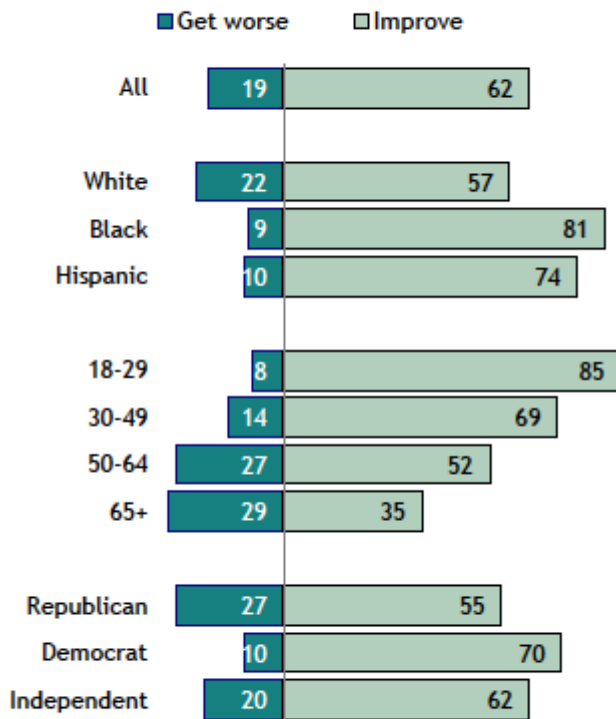


\*The under-employed are part-time workers who say they want a full-time job but do not have one because they cannot find full-time employment or because of other economic reasons.

PewResearchCenter

### Some Groups More Optimistic than Others

% saying, over the next year, their financial situation will...



Note: Hispanics are of any race. Whites and blacks include only non-Hispanics. "Stay the same" and "Don't know/Refused" responses not shown.

PewResearchCenter

Whether by choice or necessity, many Americans have already significantly scaled back their pre-recession borrow-and-spend habits. According to government data, household spending has gone down, savings rates have gone up, consumer credit has remained stable and mortgage debt has plunged during this recession.

The survey finds that the public is starting to see some light at the end of the tunnel. More than six-in-ten survey respondents (62%) say they expect their personal financial situation to improve in the coming year—the most optimistic reading on this question since before the recession began. Likewise, about six-in-ten (61%) say they believe the damage the recession has inflicted on the U.S. economy will prove to be temporary rather than permanent.

This report sets out to present a comprehensive balance sheet on the Great Recession by looking at economic outcomes, behavioral changes and attitudinal trends among the full

population as well as various subgroups. Our analysis is drawn from two sources—a comprehensive Pew Research telephone survey of a representative, national sample of 2,967 adults conducted from May 11 to May 31, 2010 (see Appendix for details), and a Pew Research analysis of government economic and demographic trend data.

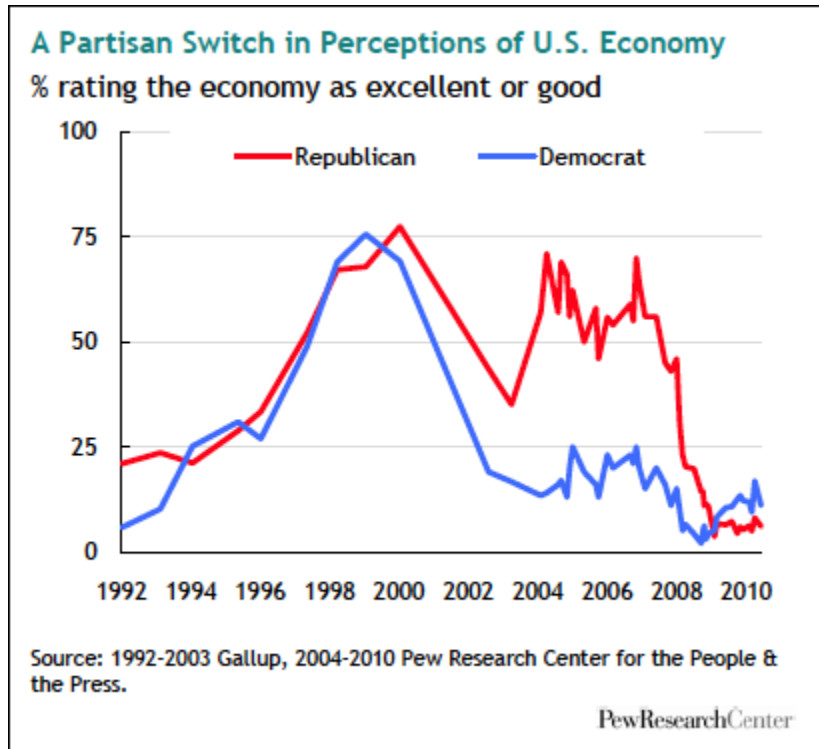
One striking finding of the survey is that some of the demographic groups that have suffered the worst economic hits are also the ones most optimistic about a recovery—both for themselves personally and for the U.S. economy as a whole.

Blacks and Hispanics are more upbeat than whites. The young are more optimistic than middle-aged and older Americans. And Democrats are more upbeat than Republicans, even though Democrats have lower incomes and less wealth and have suffered more recession-related job losses.

These group differences are apparent not just in responses to specific survey questions, but also in a set of statistical models that examine the independent impact of race, partisanship and age on the likelihood that a respondent will express optimism on six different attitudes about the economy tested in the survey, controlling for a range of demographic variables and recession-related experiences.<sup>1</sup> The analysis finds that blacks, Democrats and, on most questions, younger

adults are more likely than whites, Republicans and older adults to hold positive views about the national economy and their personal finances, regardless of their income, education, gender or whether they have had difficulty paying their bills, making mortgage or rent payments; getting or paying for medical care; or have had to cut spending during the recession.

One likely explanation for these seemingly counterintuitive patterns is that in an age of highly polarized politics, Democrats and Republicans differ not only in their values, attitudes and policy positions, but, increasingly, in their basic perceptions of reality.



This is not the first Pew Research survey taken in the past year that shows that the election of Barack Obama (which came at the height of the recession in November 2008) appears to have put his most enthusiastic supporters—especially blacks, Democrats and young adults—in a more positive frame of mind than Obama’s detractors about many aspects of national life.<sup>2</sup>

For example, since Obama was elected Democrats have become more optimistic than Republicans about the state of the national economy. For most of the time that George W. Bush was in office, the reverse was true: Republicans were more upbeat—often, much more upbeat—than Democrats.

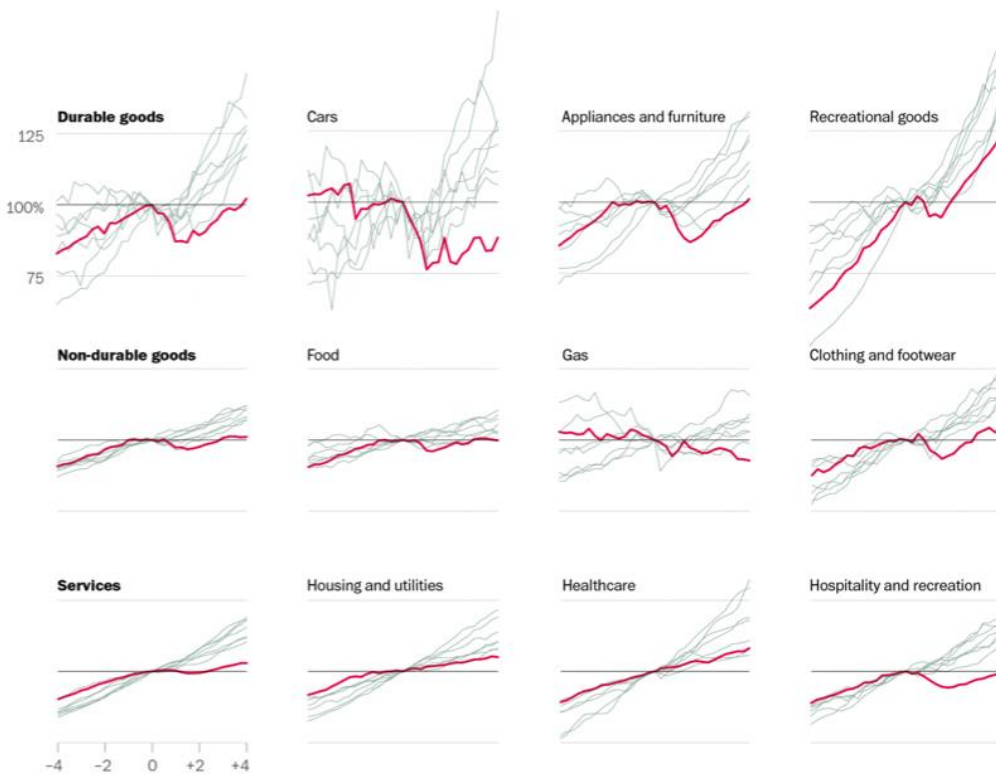
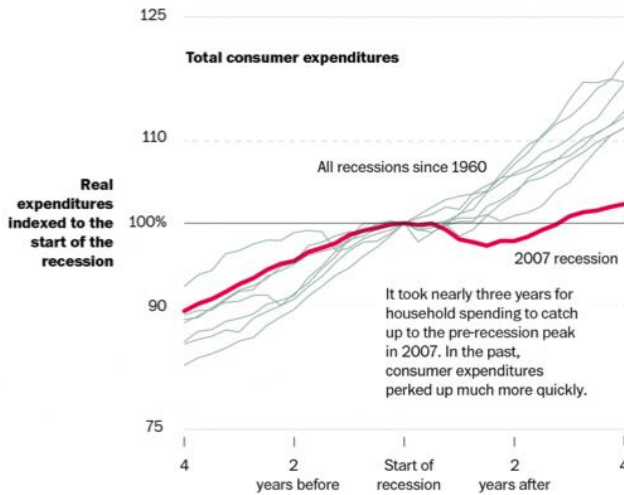
1. In addition to race, party identification and age, the logistic regression models include gender, education, income and whether the respondent had experienced recession-related problems to predict the respondents’ views on the current state of the economy, their personal financial situation and how they think their family will fare financially in the coming year.
2. For similar findings of this nature from another Pew Research Center survey, see “Blacks Upbeat about Black Progress, Prospects,” January 12, 2010.
3. Guo, John (2014, October 3) These charts show just how bad the recession was for U.S. consumers, *Washington Post*. Internet

### Measured in spending, recovery has been slow

In these charts, we plot how consumer expenditures fared during the 2007 recession compared with the seven recessions that preceded it.

For each recession, there is a single line that represents consumer spending relative to the level of spending at the start of that recession. For instance, in 2011 Q4, consumer spending was still only about 2.4 percent higher than it was four years prior at the beginning of the recession.

Below, consumer expenditures are broken out by spending categories. Purchases of goods were greatly affected by the recession, while the effect on services was milder. At one extreme, car purchases were pinned to the mat from 2007 to 2011. At the other extreme, the recession barely touched health-care spending, which continued on its upward trend.



SOURCE: Bureau of Economic Analysis and NBER. Data are seasonally adjusted.

washingtonpost.com/storyline

### Recovery Measured by Spending 2007 - 2011

- The recovery from the recession has been very slow as measured in terms of consumer spending. The charts compare spending four years before and after recession.
- Charts show how consumers purchased different types of things: Goods (Cars, washing machines and houses) and services (healthcare, Disney)
- Before recession consumers were buying goods and services at a fast rate. After recession there was a steady decline for two years.
- Purchases of goods were very slow to recover.
- The Fed analysis indicates that household frugality was responsible for about 38% of the cutback in combined credit card and auto loan obligations.

# High-income Household Spending And The Economic Recovery

By Aaron E. Cobet  
U.S. Bureau of Labor Statistics, *Spotlight on Statistics*  
April 2014

In late 2007, the United States fell into a "Great Recession." According to the National Bureau of Economic Research the recession officially ended in June 2009, but it took several more years for average household income and expenditures to exceed their 2008 levels in nominal terms. The recession lowered household income and consumer expenditures across all income groups. This Spotlight on Statistics examines trends in income and expenditures and how unevenly the gains were distributed across socioeconomic groups.

## **Income and expenditures have returned to 2008 levels**

Average levels of income and expenditures have returned to prerecession levels in nominal dollars, which are not adjusted for price inflation. In 2011, average household income exceeded the 2008 level. Similarly, in 2012, average consumer expenditures exceeded 2008 levels.

## **Income grew predominantly for the higher income quintiles**

While average income has returned to prerecession levels, income gains have been distributed unevenly across income quintiles. (Income quintiles are five equally sized groups of households that have been divided from lowest to highest according to their annual income.) Between 2008 and 2012, the highest income quintile accounted for more than 80 percent of the total increase in household income in the United States. The fourth income quintile also experienced a significant gain between 2008 and 2012, while the lowest, second, and third income quintiles experienced essentially no change in income.

## **Expenditures also grew more for the higher income quintiles**

The expenditure gains were also distributed unevenly, but their distribution was less extreme than the distribution of income. Between 2008 and 2012, the expenditure increases of the highest income quintile accounted for almost half of the total spending gains across all five quintiles.

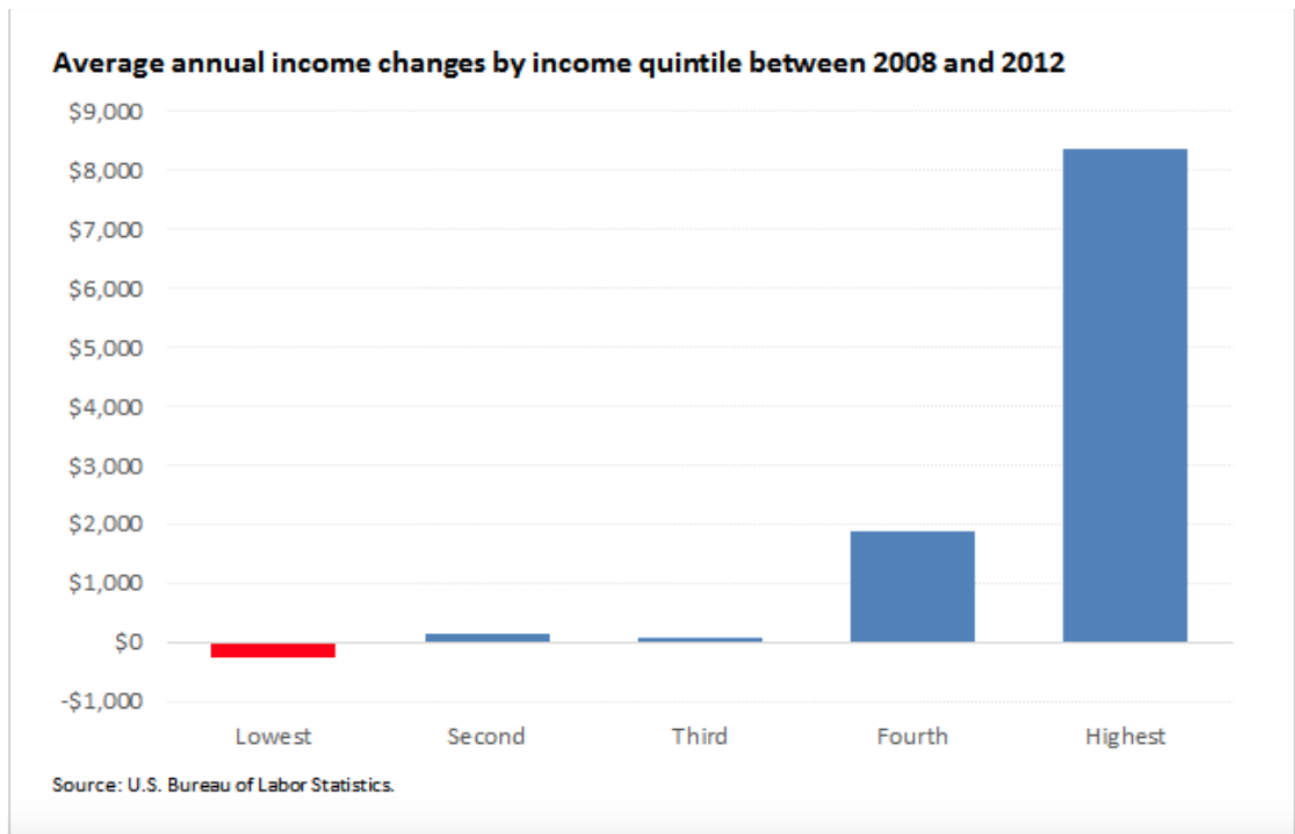
The expenditure increases of the fourth quintile were roughly equal to the combined spending increases of the lowest three quintiles. However, the second income quintile also recorded notable expenditure increases.

## **Sources of increased expenditures in the highest quintile**

Between 2008 and 2012, the highest income quintile increased overall spending by more than \$2,300. Spending increased by about \$3,800 in nine categories, while spending decreased by about \$1,500 in five categories.

The largest spending increases were for health care, transportation, and education. Health care spending increased because of higher expenditures for health insurance and medical supplies;

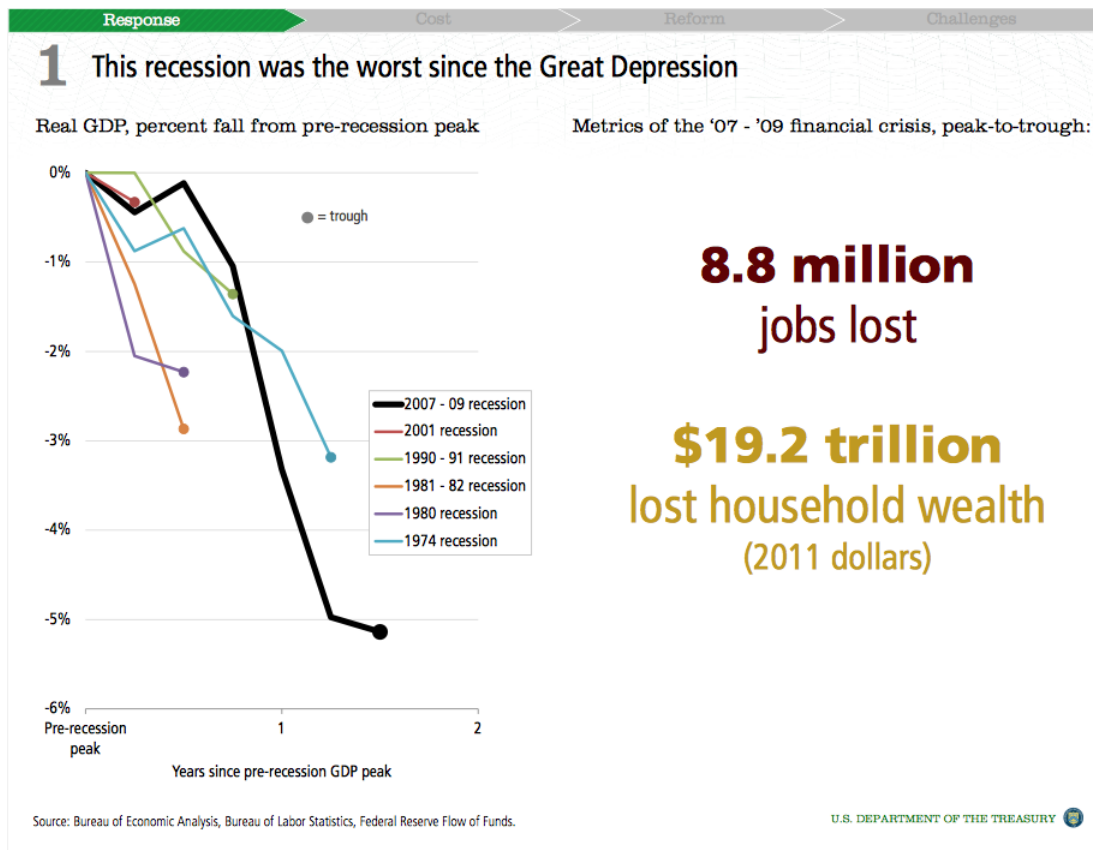
transportation spending increased because of vehicle purchases; and education spending increased because of college tuition. The largest spending decreases were for housing.



Federal research shows that the highest quintile (top 20% by wealth) increased their spending by \$2300 while the lowest quintile decreased their spending by \$150.



# The Crash: A Timeline



## 9 August 2007

BNP Paribas freeze three of their funds, indicating that they have no way of valuing the complex assets inside them known as collateralised debt obligations (CDOs), or packages of sub-prime loans. It is the first major bank to acknowledge the risk of exposure to sub-prime mortgage markets. Adam Applegarth (right), Northern Rock's chief executive, later says that it was "the day the world changed"

Larry Elliott, economics editor, said: "As far as the financial markets are concerned, August 9 2007 has all the resonance of August 4 1914. It marks the cut-off point between 'an Edwardian summer' of prosperity and tranquillity and the trench warfare of the credit crunch – the failed banks, the petrified markets, the property markets blown to pieces by a shortage of credit"

## 14 September 2007

British bank Northern Rock has borrowed large sums of money to fund mortgages for customers, and needs to pay off its debt by reselling (or "securitising") those mortgages in the international capital markets. But now that demand for securitised mortgages has fallen, Northern Rock faces a liquidity crisis and it needs a loan from the British government. This sparks fears that the bank will shortly go bankrupt – prompting customers to queue round the block to withdraw their savings. It is the first run on a British bank for 150 years.

A member of the court of the Bank of England, who asked not to be named, "At about 6.30pm, we were told there would be a meeting of court. Instead of coming to the bank, where we would be photographed coming in the front door, we were all to meet outside the McDonald's in Liverpool Street where we would be picked up in a people-carrier with darkened windows and driven in through the back of the bank. There were two problems with this. Firstly, Robert Peston had already broken the story about Northern Rock. Secondly, there were two McDonald's outside Liverpool Street. Half of us were outside one, and the rest of us were outside the other."

### **24 January 2008**

Analysts announce the largest single-year drop in US home sales in a quarter of a century

Sandra Michel, a nurse, nearly lost her home in 2008 – until Boston Community Capital stepped in. "The house cost \$312,000 and we borrowed the whole amount. Then in 2008 my husband lost his job.



Abandoned house in Antioch, California. Photograph: Justin Sullivan/Getty Images

It became hard to keep up with the mortgage

payments. We were a couple of payments off. We asked them about modifying the loan, but they didn't want to work out anything with us"

### **17 February 2008**

After the failure of two private takeover bids, Alistair Darling nationalises Northern Rock in what he claims will be a temporary measure. It will be nearly four years before it returns to the private sector

### **14 March 2008**

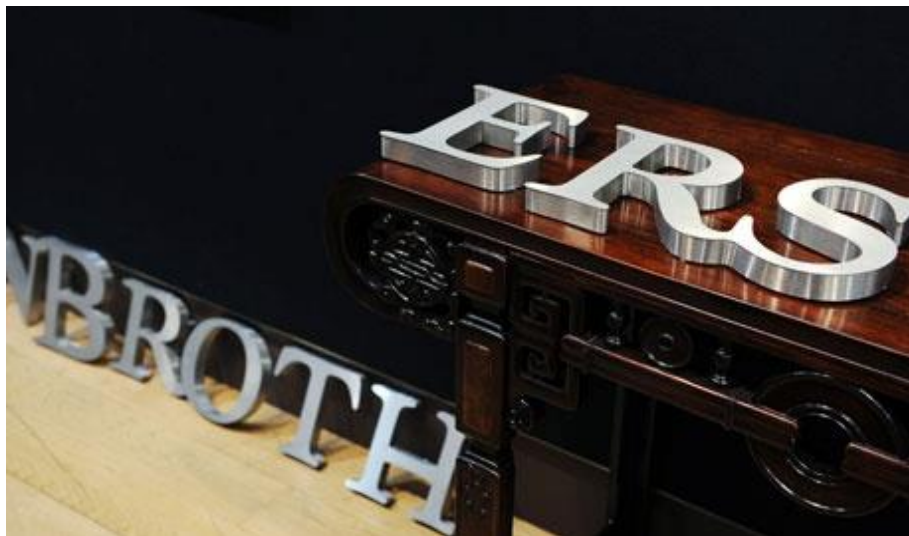
The investment bank Bear Stearns is bought out by JP Morgan. It is the biggest casualty of the crisis so far

### **6 May 2008**

Hank Paulson, US Treasury secretary from 2006 to 2009, in an interview with the Wall Street Journal: "I do believe that the worst is likely to be behind us"

### **7 September 2008**

The US government bails out Fannie Mae and Freddie Mac – two huge firms that had guaranteed thousands of sub-prime mortgages. Larry Elliott, Guardian economics editor, writing in the aftermath, "Hank Paulson, secretary of the US treasury, did not take Fannie Mae and Freddie



A lot from the Lehman Brothers: Artwork and Ephemera" sale at Christie's of London in September 2010, on the second anniversary of the investment bank's bankruptcy. Photograph: Linda Nylind for the Guardian Linda Nylind/Guardian

Mac into public ownership because he has become a born-again socialist: he acted because he feared a systemic global financial crisis that would prompt the biggest depression since the 1930s. This is the biggest rescue operation since the credit crunch began – but it probably won't be the last."

### **15 September 2008**

Heavily exposed to the sub-prime mortgage market, the American bank Lehman Brothers files for bankruptcy, prompting worldwide financial panic.

Dick Fuld, the final chairman and CEO of the bank, was the focus of protesters' anger when he testified before the US House of Representatives about the effects of the collapse of Lehman Brothers.

### **17 September 2008**

The UK's largest mortgage lenders, HBOS, is rescued by Lloyds TSB after a huge drop in its share price. Alex Salmond, leader of the Scottish National Party, at the time, "I am very angry that we can have a situation where a bank can be forced into a merger by basically a bunch of short-selling spivs and speculators in the financial markets. All financial regulators have got to wake up to where we are at the present moment."

### **21 September 2008**

US investment banks are pummeled on the stock markets and Goldman Sachs and JP Morgan Chase change their status to banking holding companies, marking the end of the investment banking model dominant during the nineties.

### **25-29 September 2008**

Two more American banks collapse – Washington Mutual and Wachovia

### **30 September 2008**

Shortly after becoming the first European country to slide into recession, Ireland's government promises to underwrite the entire Irish banking system – a pledge that they were ultimately unable to uphold.



President Bush shakes hands with Treasury Secretary Henry Paulson after Congress passed the \$700bn financial bailout bill, 2008. Photograph: Charles Dharapak/AP

### **October 2008**

After days of wrangling in Congress, Hank Paulson pushes through the Troubled Asset Relief Program (Tarp), which at that point bought or insured toxic sub-prime mortgage securities from the major banks. David Buik, market strategist, and consultant at Cantor Index, "We might have been critical of Hank Paulson. But with Tarp, he took a decision. And that has to be right. Markets cope very well with good news. They cope even better with bad news. They do not cope with uncertainty."

### **7-8 October 2008**

Iceland's three biggest commercial banks – Glitnir, Kaupthing, and Landsbanki – collapse. To protect the deposits of their many British customers, Gordon Brown uses anti-terror legislation to freeze the assets of the banks' UK subsidiaries.

### **8 October 2008**

Amid the worst ever week for the Dow Jones, eight central banks including the Bank of England, the European Central Bank, and the Federal Reserve cut their interest rates by 0.5% in a coordinated attempt to ease the pressure on borrowers.

### **13 October 2008**

To avert the collapse of the UK banking sector, the British government bails out several banks, including the Royal Bank of Scotland, Lloyds TSB, and HBOS. The deal is thrashed out over the weekend, and well into the small hours of Monday morning. Paul Myners, City minister 2008-10, "RBS, HBOS and Lloyds were experiencing a professional bank run, where the markets were no longer willing to fund the UK banks. That's why we stepped in. We will never appreciate how close we came to a collapse of the banking system."



### **7 November 2008**

Figures show that 240,000 Americans lost their jobs in the last month.

### **12 November 2008**

After criticism from high-profile economists, Hank Paulson announces drastic changes to Tarp. He cancels the acquisition of toxic assets, and decides instead to give banks cash injections. Charles Ferguson, director, *Inside Job*, an Oscar-winning documentary about the banking crisis, "It was totally clear nobody knew what they were doing. Hank Paulson would change his plans and his public statements on approximately a daily basis. It also became clear that they were not going to punish people or change the nature of the system."

### **14 November 2008**

The G20 meets for the first time since Lehman's went under, in a meeting that was compared in significance to the Bretton Woods summit in 1944.

### **10 December 2008**

"We not only saved the world ..." In a slip of the tongue at PMQs, Gordon Brown reveals how highly he rates his role during the financial crisis.



French President Nicolas Sarkozy (L), US President Barack Obama (C) and British Prime Minister Gordon Brown(R) at the G20 summit, 2009. Photograph: Jacques Witt/AFP/Getty Images

### **2 April 2009**

The G20 agrees on a global stimulus package worth \$5tn.

### **27 August 2009**

Adair Turner, the chairman of the Financial Services Authority, calls some banking activity "socially useless."

**10 October 2009**

George Papandreou's socialist government is elected in Greece. Just over a week later, he reveals that the hole in Greece's finances are double what was previously feared.

**27 April 2010**

Greek debt is downgraded to junk.

**2 May 2010**

In a move that signals the start of the Eurozone crisis, Greece is bailed out for the first time, after Eurozone finance ministers agree loans worth €110bn. This intensifies the austerity programme in the country, and sends hundreds of thousands of protesters to the streets.

Mario Draghi, president of the European Central Bank. Photo: AP/Michael Probst Michael Probst/AP

**28 November 2010**

European ministers agree a bailout for Ireland worth €85bn.

**5 May 2011**

The ECB bails out Portugal.

**21 July 2011**

Having failed to get its house in order, Greece is bailed out for a second time.

**5 August 2011**

S&P downgrades US sovereign debt.

**12 February 2012**

Greece passes its most severe austerity package yet.

**12 March 2012**

The number of unemployed Europeans reaches its highest ever level.

**12 June 2012**

The level of Spanish borrowing reaches a record high.

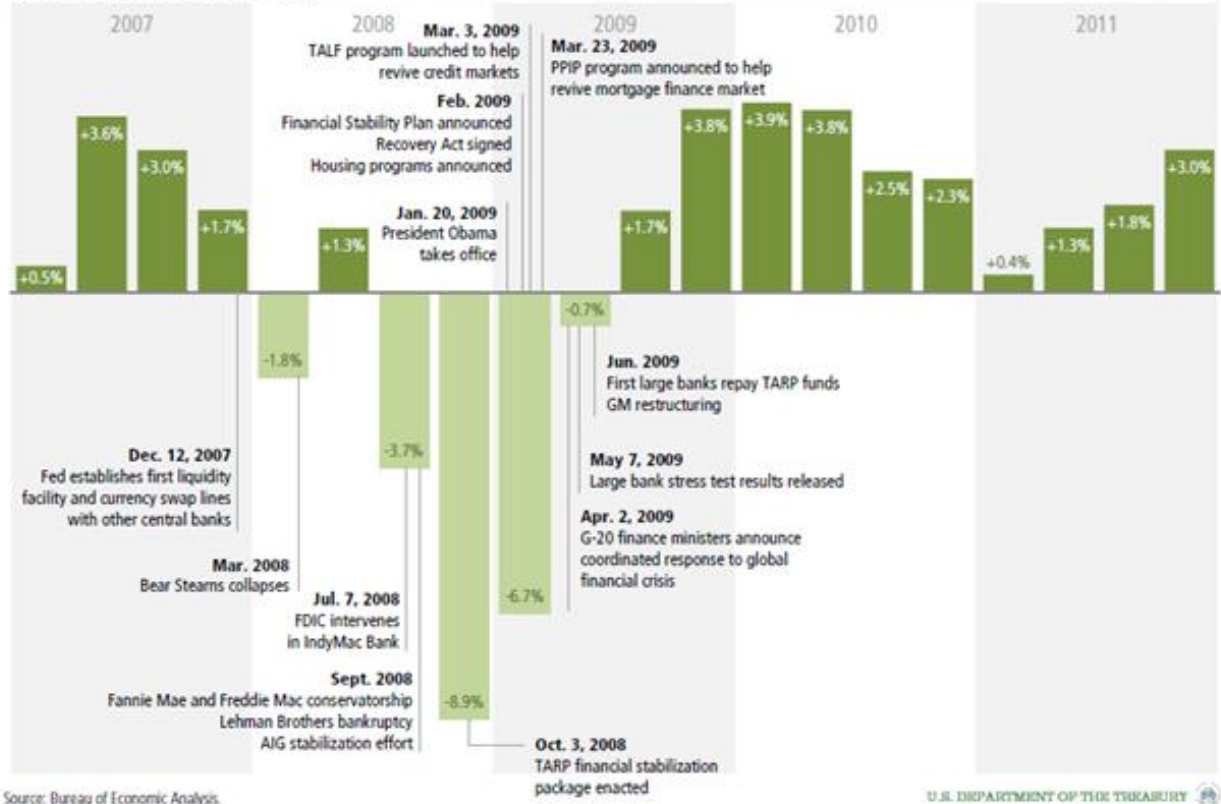
**26 July 2012**

Unexpectedly, ECB president Mario Draghi, above, gives his strongest defence yet of the Euro, prompting markets to rally.



## 2 The crisis response helped restart economic growth

Real GDP growth, quarterly



Source: Bureau of Economic Analysis.

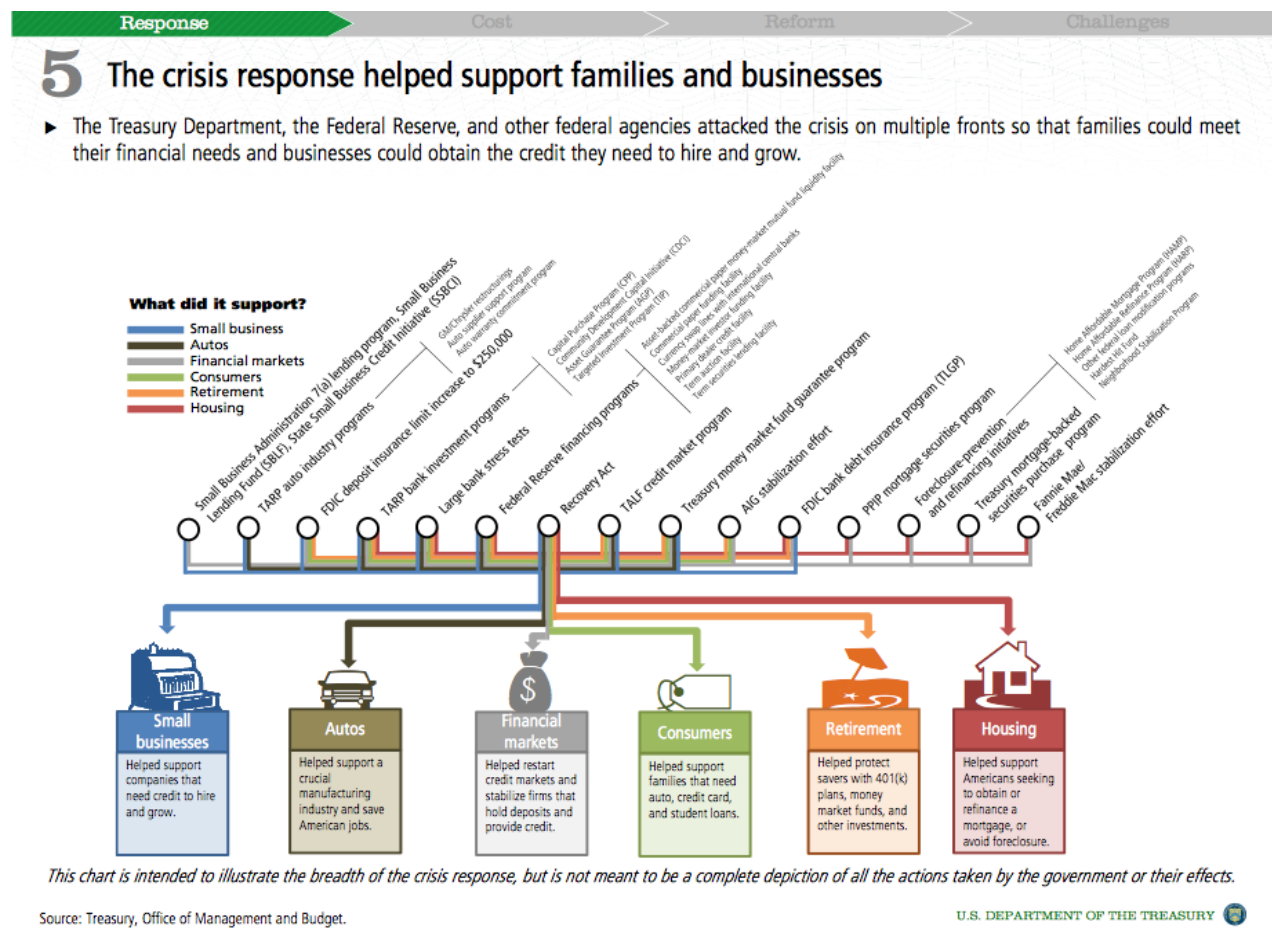
U.S. DEPARTMENT OF THE TREASURY

# Reforms and Recovery

## 1. Federal Reserve Actions

“Historians of the Great Depression have criticized that era's policymakers—including the Fed—for responding too late and in too limited a fashion. Determined not to repeat those mistakes, and convinced that bold initiatives can improve credit markets, build confidence and restore financial stability, Chairman Bernanke and the Fed have taken vigorous steps to reestablish normal credit channels and flows. Indeed, the speed and breadth of the Fed's response have been unprecedented in both the extension of existing programs and the creation of new ones.”

What can the Federal Reserve Do?



## How The Federal Reserve Fights Recession

By Marc Davis  
Investopedia  
July 5, 2012

America's central bank, the Federal Reserve, has several methods by which to fight [recession](#). Among other measures, the Fed can raise or lower interest rates as economic circumstances require; it can sell and buy U.S. government debt - Treasury bills and notes - and it can extend cash and or credit to various financial institutions. In its ongoing effort to fight the recession and stimulate the economy, the Fed has used all of those measures.



SEE: [The Federal Reserve: Introduction](#)

Here's a closer look at what the Fed has done:

### Help for Unemployment

In the third week of June, the Fed announced that it would continue its "[Operation Twist](#)" program to reduce long-term interest rates until year's end. The program is designed to make borrowing cheaper for businesses and consumers when the Fed sells short-term U.S. debt and takes the cash to buy long-term U.S. debt. Fed Chairman, Ben Bernanke, said that additional Fed action may be required if unemployment doesn't fall below 8.2%. The labor market showed signs of modest improvement in the early months of 2012, but had slowed through the spring and early summer.

### Money for Mortgages

Throughout the years of America's recent recession and subsequent slow recovery, the Fed, under chairman Bernanke, has been actively attempting to restart the faltering economy. In recent years, the Fed announced it was to buy a significant amount of mortgages. The money would be used to buy mortgage debt and government bonds, a move designed to stimulate spending, reduce long-term interest rates and fire up the stock market. This Fed action was known as [quantitative easing](#), or QE for short.

### Lending for Banks

In 2008 and 2009, as the nation's economic problems became severe, the Fed provided [lines of credit](#) to financial and lending institutions. This cash infusion provided funds for consumer loans and consequent consumer buying - the engine that drives the economy. A follow-up effort to pull

down long-term interest rates was initiated in 2010, with an additional \$267 billion earmarked by the Fed for bond buying.

Besides these actions by the Fed, America's central bank loaned money to J.P. Morgan Chase to help the banking giant takeover the failing investment bank, Bear Stearns. The Fed also established a line of credit and financing for the government's acquisition of American International Group (AIG), one of the largest global insurance firms. By mid-June this year, these loans had been totally repaid, according to the Federal Reserve Bank of New York.

SEE: [When The Federal Reserve Intervenes \(And Why\)](#)

Beginning in 2008, the Fed has also provided cash to some central banks of foreign countries so that loans could be made to local banks with liquidity problems and for lending purposes to businesses and consumers. The loans were made by the Fed to protect U.S. markets that relied, in part, on these foreign economies.

### **The Bottom Line**

The results of all this effort by the Fed have only been partially successful. The economy enjoyed a somewhat faster growth rate in early 2012, but has since slowed. The extended "Operation Twist" program, with its projected sales of \$267 billion of short-term debt and the purchase of an equal amount of long-term securities, is hoped to ignite the economy and create more jobs for millions of currently unemployed Americans.

SEE: [The Treasury And The Federal Reserve](#)

Prospects for a quick recovery seem dim, however. Fed Chairman Bernanke cited the European debt crisis as a contributing factor to the struggling U.S. economy. Fed officials forecast an unemployment rate of at least 7.5% for the next 18 months or so. If "Operation Twist" has limited results, Bernanke stated at a Federal Open Market meeting in June that he is prepared to take additional steps.

## Actions to Restore Financial Ability

By Niel Willardson  
Federal Reserve Bank of Minneapolis  
December 1, 2008

The financial turmoil of 2007-08 has deeply affected our nation's households and businesses. What began as a nationwide housing downturn has led to a national and global financial crisis with serious consequences for the real economy. In his Oct. 20 testimony to the House Budget Committee, Federal Reserve Chairman Ben Bernanke summarized the situation as follows:

*[T]he turmoil is the aftermath of a credit boom characterized by the underpricing of risk, excessive leverage, and an increasing reliance on complex and opaque financial instruments that have proved to be fragile under stress. A consequence of the unwinding of this boom and the resulting financial strains has been a broad-based tightening in credit conditions that has restrained economic growth.<sup>1/</sup>*

Historians of the Great Depression have criticized that era's policymakers—including the Fed—for responding too late and in too limited a fashion. Determined not to repeat those mistakes, and convinced that bold initiatives can improve credit markets, build confidence and restore financial stability, Chairman Bernanke and the Fed have taken vigorous steps to reestablish normal credit channels and flows. Indeed, the speed and breadth of the Fed's response have been unprecedented in both the extension of existing programs and the creation of new ones.

These actions to inject liquidity and thereby stabilize credit and financial markets are not the first of their kind, however. Several of them build upon traditional Fed tools. Others, particularly those taken since March 2008, represent a rapid expansion of nontraditional lending programs and efforts authorized under Section 13(3) of the Federal Reserve Act.

Given the large number of initiatives launched or expanded in recent months, a summary review of actions undertaken by the Fed may be useful. With that goal in mind, this article consists of three parts.

- First, it discusses the aggressive modification and use of traditional Fed programs and tools to provide liquidity that have taken place over the past year.
- Second, it describes a new set of nontraditional programs and actions that have been serially implemented, beginning in March and expanding over the past several months as the crisis gained momentum.
- Lastly, the article attempts to quantify the magnitude of the overall Fed response by describing the effect of these actions on the size and composition of the Fed's balance sheet.<sup>2/</sup>

### **I. Aggressive use of traditional programs to provide liquidity**

#### ***A. Monetary Policy***

One of the Fed's central functions is the development and execution of monetary policy on behalf of the United States. In evaluating the appropriate monetary policy stance, the Federal Reserve

considers the "dual mandate," established by Congress, of price stability and maximum employment. Policymakers conduct monetary policy through (1) open market operations, (2) the discount rate and (3) reserve requirements.

Using these tools, the Fed influences the demand and supply of balances at the Fed, and ultimately shifts the actual federal funds rate toward the target set at meetings of the Federal Open Market Committee. The federal funds rate is the interest rate at which depository institutions make overnight loans from their balances at the Federal Reserve Banks to other depository institutions. The federal funds rate is important because it affects short- and long-term interest rates that businesses and individuals pay.

As liquidity pressures on financial markets increased from late 2007 through 2008 (see "[Measuring Perceived Risk—The TED Spread](#)"), the Fed acted aggressively by lowering the target federal funds rate to mitigate the risk that decreased liquidity would excessively dampen economic activity.

The overall reduction in the target federal funds rate since late 2007 has been dramatic, going from 5.25 percent in September 2007 to a range of 0 percent to 0.25 percent on Dec. 16, 2008. To be clear, as in the past, reductions in the target federal funds rate may not result in exactly parallel movements in interest rates available to individuals and businesses, but they have kept most interest rates lower than they would otherwise have been.

At the same time, bank borrowing has also been made more affordable by reducing the spread between the target federal funds rate and the primary credit rate (the rate the Fed charges banks in good condition). This spread was 100 basis points as of early-August 2007, meaning that in general, banks could borrow much more cheaply from the interbank market (where banks lend to one another) than from the Fed. Since mid-August 2007, the Fed has narrowed the spread to a mere 25 basis points to provide a ready source of liquidity to healthy financial institutions.

The actions to lower bank costs of borrowing by reducing the spread are a significant step, though simply a modification of traditional Fed programs. As a result, the rate offered to banks is still an above-market rate, although modestly so. As recently as 2002, banks could actually borrow from the Fed at a below-market rate, although credit was administered by more closely reviewing banks' funding situations and the Fed monitoring the use of funds lent to banks.

The Federal Reserve requires that depository institutions maintain a particular amount of funds (reserves), in the form of either vault cash or deposits with Federal Reserve Banks. Congress, through the Emergency Economic Stabilization Act passed in early October 2008, permitted the Federal Reserve to pay interest on required reserve balances and excess balances. The payment of interest on reserves permits the Federal Reserve to expand its balance sheet as necessary to provide the liquidity needed to support financial stability while implementing the appropriate monetary policy.

### ***B. Enhancements to existing liquidity programs—Credit programs and swap lines***



The Fed's enhancement of traditional programs has not been limited to monetary policy (open market operations, the discount rate and reserve requirements). The Fed has also significantly expanded its liquidity facilities. These facilities, in particular the discount window, have long been a source of backup liquidity for financial institutions. Until recently, though, discount window lending has been relatively limited in scale, except in short periods of credit tightening such as post 9/11. This was because of three factors: (1) the Fed's rates were generally higher than those available in the interbank market; (2) some financial institutions viewed borrowing from the Fed as a sign of weakness; and (3) financial institutions and the Fed positioned Fed discount window borrowing as a backup to other bank borrowing.

Since late 2007, the Fed has moved from a secondary to a primary source of liquidity. (See "[Actions to Increase Credit Availability](#)".) This move began with the narrowing of loan pricing available from the Fed, as noted above. But a more significant enhancement was the Term Auction Facility, a facility implemented in December 2007 to provide term funding to banks (currently up to 84 days) through overlapping competitive auctions. The TAF has been highly utilized by banks—the amount of outstanding funding made available through it is expected to approximate \$900 billion at year-end 2008. As a result, total TAF loans at year-end 2008 have the potential to approximate the entire Fed balance sheet as of year-end 2007.

While the TAF is a new addition to the Fed tool kit, the borrowers, the rates, the collateral and other key components (aside from the process of how credit is allocated through an auction) are similar to the traditional primary credit program. Other enhancements to existing programs include additional term loan options through the usual credit programs offered by Federal Reserve Banks.

Another enhancement to a long-standing program has been to increase the number and magnitude of temporary currency arrangements (or swap lines) with other central banks. The first swap line between the Fed and a foreign central bank was set up in March 1962, and since that time, these arrangements have ebbed and flowed with other central banks as circumstances required. Over recent months, however, swap lines have increased significantly. As of December 2008, the Federal Reserve has established swap lines with 14 other central banks. As of the end of November, over \$500 billion had been drawn upon. These swap lines make dollars available to other central banks when these banks post their own currency as collateral. These central banks outside the United States in turn provide financing to commercial banks in fundamentally sound and well-managed economies that need dollar funding.

## **II. Rapid expansion of nontraditional lending programs**

The magnitude and diversity of nontraditional lending programs and initiatives developed over the past year are unprecedented in Fed history. The statutory source of these new programs is Section 13(3) of the Federal Reserve Act, which was a little-known and seldom-used authority before March 2008 when the Fed lent \$29 billion to facilitate the purchase of Bear Stearns by JPMorgan Chase. As David Fettig wrote in "[The History of a Powerful Paragraph](#)," the Fed has made loans to "all types of businesses" during its history, though only in "unusual and exigent circumstances," as called for under Section 13(3).<sup>3/</sup>

But the Bear Stearns transaction does not stand alone. Just prior to that \$29 billion transaction, the Fed began a Term Securities Lending Facility for use by primary dealers. And since March, several new broad-based lending programs have been implemented under Section 13(3), providing funding to a wide array of new parties, including U.S. money market mutual funds, commercial paper issuers and others. These programs, plus the September American International Group (AIG) loan, have rapidly expanded the current lending programs offered via the Fed.<sup>4</sup> While these actions may appear somewhat unrelated, together they serve as progressively powerful and innovative tools to address emerging problems.

The 13(3) lending programs are all designed to "unfreeze" and stabilize various parts of the credit markets, with the overall goal that parties receiving credit via these new Fed programs will in turn provide funding to creditworthy individuals and firms. The two initiatives taken to address emergencies—the potential failure of AIG, a major insurance company, and the collapse of Bear Stearns—represent extraordinary actions of the Fed heavily coordinated with government officials. Both situations were considered to have major systemic implications in the form of likely spillover to the broader financial system. Accordingly, the Fed loaned \$29 billion to facilitate the acquisition of Bear Stearns and established a credit facility to provide up to \$85 billion in funding to AIG, collateralized by AIG's assets; funding available to AIG was later increased to \$122.8 billion. The transaction was fundamentally restructured on Nov. 10, 2008, by the Federal Reserve and the U.S. Treasury.

To provide context for these nontraditional Fed programs and efforts, the [table](#) lists the name of each program and its month of inception, a basic description, recipients or target audience, and a brief explanation of the goal of each program. Note that in many cases, the programs are designed to be temporary. In all cases, the Fed programs require sufficient collateral to support the loan granted.

This table is color-coded to facilitate reference from the final section of this article, which reviews how these various programs have affected the balance sheet of the Federal Reserve System. To provide a comprehensive picture of Fed actions, the [traditional lending programs](#) are listed in the table.

### **III. The Fed's balance sheet—Growing and changing composition**

Indications of how rapidly and broadly the Federal Reserve System has responded can be found in its balance sheet over the past 16 months. The Fed's balance sheet has more than doubled from August 2007 to December 2008, and its composition has been fundamentally altered as a result of these programs. (The [balance sheet chart](#) depicts this compositional change with colors coded to the table in Section II. This balance sheet chart does not reflect the Term Asset-Backed Securities Loan Facility or the Money Market Investor Funding Facility, because neither program is active at this time. The Term Securities Lending Facility, as explained in footnote 2 to the table, is listed as an off-balance sheet item.)

Total assets on the Fed's balance sheet are now more than \$2 trillion, more than twice the highest year-end total in its history. The doubling in the balance sheet from year-end 2007 dwarfs any other year-to-year increase (the next highest was a 60 percent increase from 1933 to 1934). As of

Dec. 10, 2008, total Fed assets were approximately 15.8 percent of GDP, the highest total since the late 1940s. Fed loans as a percentage of GDP stands at 4.8 percent, near record highs, and three times what it was in the 1980s.

As other assets have grown over the past year, the traditional base of the Fed's balance sheet (largely Treasury securities) declined considerably. From 1934 to 2006, year-end loans comprised less than 3 percent of total assets. At year-end 2007, primarily due to the TAF, loans were 5 percent of total assets. As of Dec. 10, 2008, loans were 30.1 percent of total assets.

Significant dollar and percentage increases over the past year, particularly since July 2008, in traditional liquidity programs (traditional lending facilities, all other assets—largely driven by swaps, and the TAF) are highlighted in the chart. The new, [nontraditional lending programs](#), however, are increasingly contributing to the Fed balance sheet, and with new programs implemented in October and November of 2008 and early 2009, this is where future growth will likely take place.

#### **IV. Conclusion**

In concert with others (see "[Other Actions to Stabilize Markets](#)"), the Fed has responded to the evolving financial crisis both by expanding traditional Fed programs and implementing nontraditional programs. The aim of these actions is to improve credit markets through targeted infusions of liquidity and to thereby restore confidence and financial stability. In his Oct. 20 testimony to the House Budget Committee, Chairman Bernanke said,

*I am confident that these initiatives, together with other actions by the Treasury, the Federal Reserve, and other regulators, will help restore trust in our financial system and allow the resumption of more-normal flows of credit to households and firms. ... That said, the stabilization of the financial system, though an essential first step, will not quickly eliminate the challenges still faced by the broader economy.*<sup>5/</sup>

Over the coming months, as the financial situation continues to evolve, the Fed will modify, expand or contract these activities, depending upon existing circumstances and emerging challenges.

\*The views expressed are strictly those of the author. They do not necessarily represent the position of the Federal Reserve Bank of Minneapolis or the Federal Reserve System.

## Speech: The Crisis and the Policy Response

By Chairman Ben S. Bernanke  
At the Stamp Lecture, London School of Economics, London, England  
January 13, 2009

For almost a year and a half the global financial system has been under extraordinary stress--stress that has now decisively spilled over to the global economy more broadly. The proximate cause of the crisis was the turn of the housing cycle in the United States and the associated rise in delinquencies on subprime mortgages, which imposed substantial losses on many financial institutions and shook investor confidence in credit markets. However, although the subprime debacle triggered the crisis, the developments in the U.S. mortgage market were only one aspect of a much larger and more encompassing credit boom whose impact transcended the mortgage market to affect many other forms of credit. Aspects of this broader credit boom included widespread declines in underwriting standards, breakdowns in lending oversight by investors and rating agencies, increased reliance on complex and opaque credit instruments that proved fragile under stress, and unusually low compensation for risk-taking.

The abrupt end of the credit boom has had widespread financial and economic ramifications. Financial institutions have seen their capital depleted by losses and write downs and their balance sheets clogged by complex credit products and other illiquid assets of uncertain value. Rising credit risks and intense risk aversion have pushed credit spreads to unprecedented levels, and markets for securitized assets, except for mortgage securities with government guarantees, have shut down. Heightened systemic risks, falling asset values, and tightening credit have in turn taken a heavy toll on business and consumer confidence and precipitated a sharp slowing in global economic activity. The damage, in terms of lost output, lost jobs, and lost wealth, is already substantial.

The global economy will recover, but the timing and strength of the recovery are highly uncertain. Government policy responses around the world will be critical determinants of the speed and vigor of the recovery. Today I will offer some thoughts on current and prospective policy responses to the crisis in the United States, with a particular emphasis on actions by the Federal Reserve. In doing so, I will outline the framework that has guided the Federal Reserve's responses to date. I will also explain why I believe that the Fed still has powerful tools at its disposal to fight the financial crisis and the economic downturn, even though the overnight federal funds rate cannot be reduced meaningfully further.

### **The Federal Reserve's Response to the Crisis**

The Federal Reserve has responded aggressively to the crisis since its emergence in the summer of 2007. Following a cut in the discount rate (the rate at which the Federal Reserve lends to depository institutions) in August of that year, the Federal Open Market Committee began to ease monetary policy in September 2007, reducing the target for the federal funds rate by 50 basis points.<sup>1</sup> As indications of economic weakness proliferated, the Committee continued to respond, bringing down its target for the federal funds rate by a cumulative 325 basis points by the spring of 2008. In historical comparison, this policy response stands out as exceptionally rapid and proactive. In taking these actions, we aimed both to cushion the direct effects of the

financial turbulence on the economy and to reduce the virulence of the so-called adverse feedback loop, in which economic weakness and financial stress become mutually reinforcing.

These policy actions helped to support employment and incomes during the first year of the crisis. Unfortunately, the intensification of the financial turbulence last fall led to further deterioration in the economic outlook. The Committee responded by cutting the target for the federal funds rate an additional 100 basis points last October, with half of that reduction coming as part of an unprecedented coordinated interest rate cut by six major central banks on October 8. In December the Committee reduced its target further, setting a range of 0 to 25 basis points for the target federal funds rate.

The Committee's aggressive monetary easing was not without risks. During the early phase of rate reductions, some observers expressed concern that these policy actions would stoke inflation. These concerns intensified as inflation reached high levels in mid-2008, mostly reflecting a surge in the prices of oil and other commodities. The Committee takes its responsibility to ensure price stability extremely seriously, and throughout this period it remained closely attuned to developments in inflation and inflation expectations. However, the Committee also maintained the view that the rapid rise in commodity prices in 2008 primarily reflected sharply increased demand for raw materials in emerging market economies, in combination with constraints on the supply of these materials, rather than general inflationary pressures. Committee members expected that, at some point, global economic growth would moderate, resulting in slower increases in the demand for commodities and a leveling out in their prices--as reflected, for example, in the pattern of futures market prices. As you know, commodity prices peaked during the summer and, rather than leveling out, have actually fallen dramatically with the weakening in global economic activity. As a consequence, overall inflation has already declined significantly and appears likely to moderate further.

The Fed's monetary easing has been reflected in significant declines in a number of lending rates, especially shorter-term rates, thus offsetting to some degree the effects of the financial turmoil on financial conditions. However, that offset has been incomplete, as widening credit spreads, more restrictive lending standards, and credit market dysfunction have worked against the monetary easing and led to tighter financial conditions overall. In particular, many traditional funding sources for financial institutions and markets have dried up, and banks and other lenders have found their ability to securitize mortgages, auto loans, credit card receivables, student loans, and other forms of credit greatly curtailed. Thus, in addition to easing monetary policy, the Federal Reserve has worked to support the functioning of credit markets and to reduce financial strains by providing liquidity to the private sector. In doing so, as I will discuss shortly, the Fed has deployed a number of additional policy tools, some of which were previously in our toolkit and some of which have been created as the need arose.

### **Beyond the Federal Funds Rate: The Fed's Policy Toolkit**

Although the federal funds rate is now close to zero, the Federal Reserve retains a number of policy tools that can be deployed against the crisis.

One important tool is policy communication. Even if the overnight rate is close to zero, the Committee should be able to influence longer-term interest rates by informing the public's

expectations about the future course of monetary policy. To illustrate, in its statement after its December meeting, the Committee expressed the view that economic conditions are likely to warrant an unusually low federal funds rate for some time.<sup>2</sup> To the extent that such statements cause the public to lengthen the horizon over which they expect short-term rates to be held at very low levels, they will exert downward pressure on longer-term rates, stimulating aggregate demand. It is important, however, that statements of this sort be expressed in conditional fashion--that is, that they link policy expectations to the evolving economic outlook. If the public were to perceive a statement about future policy to be unconditional, then long-term rates might fail to respond in the desired fashion should the economic outlook change materially.

Other than policies tied to current and expected future values of the overnight interest rate, the Federal Reserve has--and indeed, has been actively using--a range of policy tools to provide direct support to credit markets and thus to the broader economy. As I will elaborate, I find it useful to divide these tools into three groups. Although these sets of tools differ in important respects, they have one aspect in common: They all make use of the asset side of the Federal Reserve's balance sheet. That is, each involves the Fed's authorities to extend credit or purchase securities.

The first set of tools, which are closely tied to the central bank's traditional role as the lender of last resort, involve the provision of short-term liquidity to sound financial institutions. Over the course of the crisis, the Fed has taken a number of extraordinary actions to ensure that financial institutions have adequate access to short-term credit. These actions include creating new facilities for auctioning credit and making primary securities dealers, as well as banks, eligible to borrow at the Fed's discount window.<sup>3</sup> For example, since August 2007 we have lowered the spread between the discount rate and the federal funds rate target from 100 basis points to 25 basis points; increased the term of discount window loans from overnight to 90 days; created the Term Auction Facility, which auctions credit to depository institutions for terms up to three months; put into place the Term Securities Lending Facility, which allows primary dealers to borrow Treasury securities from the Fed against less-liquid collateral; and initiated the Primary Dealer Credit Facility as a source of liquidity for those firms, among other actions.

Because interbank markets are global in scope, the Federal Reserve has also approved bilateral currency swap agreements with 14 foreign central banks. The swap facilities have allowed these central banks to acquire dollars from the Federal Reserve to lend to banks in their jurisdictions, which has served to ease conditions in dollar funding markets globally. In most cases, the provision of this dollar liquidity abroad was conducted in tight coordination with the Federal Reserve's own funding auctions.

Importantly, the provision of credit to financial institutions exposes the Federal Reserve to only minimal credit risk; the loans that we make to banks and primary dealers through our various facilities are generally overcollateralized and made with recourse to the borrowing firm. The Federal Reserve has never suffered any losses in the course of its normal lending to banks and, now, to primary dealers. In the case of currency swaps, the foreign central banks are responsible for repayment, not the financial institutions that ultimately receive the funds; moreover, as further security, the Federal Reserve receives an equivalent amount of foreign currency in exchange for the dollars it provides to foreign central banks.



Liquidity provision by the central bank reduces systemic risk by assuring market participants that, should short-term investors begin to lose confidence, financial institutions will be able to meet the resulting demands for cash without resorting to potentially destabilizing fire sales of assets. Moreover, backstopping the liquidity needs of financial institutions reduces funding stresses and, all else equal, should increase the willingness of those institutions to lend and make markets.

On the other hand, the provision of ample liquidity to banks and primary dealers is no panacea. Today, concerns about capital, asset quality, and credit risk continue to limit the willingness of many intermediaries to extend credit, even when liquidity is ample. Moreover, providing liquidity to financial institutions does not address directly instability or declining credit availability in critical nonbank markets, such as the commercial paper market or the market for asset-backed securities, both of which normally play major roles in the extension of credit in the United States.

To address these issues, the Federal Reserve has developed a second set of policy tools, which involve the provision of liquidity directly to borrowers and investors in key credit markets. Notably, we have introduced facilities to purchase highly rated commercial paper at a term of three months and to provide backup liquidity for money market mutual funds. In addition, the Federal Reserve and the Treasury have jointly announced a facility that will lend against AAA-rated asset-backed securities collateralized by student loans, auto loans, credit card loans, and loans guaranteed by the Small Business Administration. The Federal Reserve's credit risk exposure in the latter facility will be minimal, because the collateral will be subject to a "haircut" and the Treasury is providing \$20 billion of capital as supplementary loss protection. We expect this facility to be operational next month.

The rationales and objectives of our various facilities differ, according to the nature of the problem being addressed. In some cases, as in our programs to backstop money market mutual funds, the purpose of the facility is to serve, once again in classic central bank fashion, as liquidity provider of last resort. Following a prominent fund's "breaking of the buck"--that is, a decline in its net asset value below par--in September, investors began to withdraw funds in large amounts from money market mutual funds that invest in private instruments such as commercial paper and certificates of deposit. Fund managers responded by liquidating assets and investing at only the shortest of maturities. As the pace of withdrawals increased, both the stability of the money market mutual fund industry and the functioning of the commercial paper market were threatened. The Federal Reserve responded with several programs, including a facility to finance bank purchases of high-quality asset-backed commercial paper from money market mutual funds. This facility effectively channeled liquidity to the funds, helping them to meet redemption demands without having to sell assets indiscriminately. Together with a Treasury program that provided partial insurance to investors in money market mutual funds, these efforts helped stanch the cash outflows from those funds and stabilize the industry.

The Federal Reserve's facility to buy high-quality (A1-P1) commercial paper at a term of three months was likewise designed to provide a liquidity backstop, in this case for investors and borrowers in the commercial paper market. As I mentioned, the functioning of that market deteriorated significantly in September, with borrowers finding financing difficult to obtain, and

then only at high rates and very short (usually overnight) maturities. By serving as a backup source of liquidity for borrowers, the Fed's commercial paper facility was aimed at reducing investor and borrower concerns about "rollover risk," the risk that a borrower could not raise new funds to repay maturing commercial paper. The reduction of rollover risk, in turn, should increase the willingness of private investors to lend, particularly for terms longer than overnight. These various actions appear to have improved the functioning of the commercial paper market, as rates and risk spreads have come down and the average maturities of issuance have increased.

In contrast, our forthcoming asset-backed securities program, a joint effort with the Treasury, is not purely for liquidity provision. This facility will provide three-year term loans to investors against AAA-rated securities backed by recently originated consumer and small-business loans. Unlike our other lending programs, this facility combines Federal Reserve liquidity with capital provided by the Treasury, which allows it to accept some credit risk. By providing a combination of capital and liquidity, this facility will effectively substitute public for private balance sheet capacity, in a period of sharp deleveraging and risk aversion in which such capacity appears very short. If the program works as planned, it should lead to lower rates and greater availability of consumer and small business credit. Over time, by increasing market liquidity and stimulating market activity, this facility should also help to revive private lending. Importantly, if the facility for asset-backed securities proves successful, its basic framework can be expanded to accommodate higher volumes or additional classes of securities as circumstances warrant.

The Federal Reserve's third set of policy tools for supporting the functioning of credit markets involves the purchase of longer-term securities for the Fed's portfolio. For example, we recently announced plans to purchase up to \$100 billion in government-sponsored enterprise (GSE) debt and up to \$500 billion in GSE mortgage-backed securities over the next few quarters. Notably, mortgage rates dropped significantly on the announcement of this program and have fallen further since it went into operation. Lower mortgage rates should support the housing sector. The Committee is also evaluating the possibility of purchasing longer-term Treasury securities. In determining whether to proceed with such purchases, the Committee will focus on their potential to improve conditions in private credit markets, such as mortgage markets.

These three sets of policy tools--lending to financial institutions, providing liquidity directly to key credit markets, and buying longer-term securities--have the common feature that each represents a use of the asset side of the Fed's balance sheet, that is, they all involve lending or the purchase of securities. The virtue of these policies in the current context is that they allow the Federal Reserve to continue to push down interest rates and ease credit conditions in a range of markets, despite the fact that the federal funds rate is close to its zero lower bound.

### **Credit Easing versus Quantitative Easing**

The Federal Reserve's approach to supporting credit markets is conceptually distinct from quantitative easing (QE), the policy approach used by the Bank of Japan from 2001 to 2006. Our approach--which could be described as "credit easing"--resembles quantitative easing in one respect: It involves an expansion of the central bank's balance sheet. However, in a pure QE regime, the focus of policy is the quantity of bank reserves, which are liabilities of the central bank; the composition of loans and securities on the asset side of the central bank's balance sheet

is incidental. Indeed, although the Bank of Japan's policy approach during the QE period was quite multifaceted, the overall stance of its policy was gauged primarily in terms of its target for bank reserves. In contrast, the Federal Reserve's credit easing approach focuses on the mix of loans and securities that it holds and on how this composition of assets affects credit conditions for households and businesses. This difference does not reflect any doctrinal disagreement with the Japanese approach, but rather the differences in financial and economic conditions between the two episodes. In particular, credit spreads are much wider and credit markets more dysfunctional in the United States today than was the case during the Japanese experiment with quantitative easing. To stimulate aggregate demand in the current environment, the Federal Reserve must focus its policies on reducing those spreads and improving the functioning of private credit markets more generally.

The stimulative effect of the Federal Reserve's credit easing policies depends sensitively on the particular mix of lending programs and securities purchases that it undertakes. When markets are illiquid and private arbitrage is impaired by balance sheet constraints and other factors, as at present, one dollar of longer-term securities purchases is unlikely to have the same impact on financial markets and the economy as a dollar of lending to banks, which has in turn a different effect than a dollar of lending to support the commercial paper market. Because various types of lending have heterogeneous effects, the stance of Fed policy in the current regime--in contrast to a QE regime--is not easily summarized by a single number, such as the quantity of excess reserves or the size of the monetary base. In addition, the usage of Federal Reserve credit is determined in large part by borrower needs and thus will tend to increase when market conditions worsen and decline when market conditions improve. Setting a target for the size of the Federal Reserve's balance sheet, as in a QE regime, could thus have the perverse effect of forcing the Fed to tighten the terms and availability of its lending at times when market conditions were worsening, and vice versa.

The lack of a simple summary measure or policy target poses an important communications challenge. To minimize market uncertainty and achieve the maximum effect of its policies, the Federal Reserve is committed to providing the public as much information as possible about the uses of its balance sheet, plans regarding future uses of its balance sheet, and the criteria on which the relevant decisions are based.<sup>4</sup>

### **Exit Strategy**

Some observers have expressed the concern that, by expanding its balance sheet, the Federal Reserve is effectively printing money, an action that will ultimately be inflationary. The Fed's lending activities have indeed resulted in a large increase in the excess reserves held by banks. Bank reserves, together with currency, make up the narrowest definition of money, the monetary base; as you would expect, this measure of money has risen significantly as the Fed's balance sheet has expanded. However, banks are choosing to leave the great bulk of their excess reserves idle, in most cases on deposit with the Fed. Consequently, the rates of growth of broader monetary aggregates, such as M1 and M2, have been much lower than that of the monetary base. At this point, with global economic activity weak and commodity prices at low levels, we see little risk of inflation in the near term; indeed, we expect inflation to continue to moderate.

However, at some point, when credit markets and the economy have begun to recover, the Federal Reserve will have to unwind its various lending programs. To some extent, this unwinding will happen automatically, as improvements in credit markets should reduce the need to use Fed facilities. Indeed, where possible we have tried to set lending rates and margins at levels that are likely to be increasingly unattractive to borrowers as financial conditions normalize. In addition, some programs--those authorized under the Federal Reserve's so-called 13(3) authority, which requires a finding that conditions in financial markets are "unusual and exigent"--will by law have to be eliminated once credit market conditions substantially normalize. However, as the unwinding of the Fed's various programs effectively constitutes a tightening of policy, the principal factor determining the timing and pace of that process will be the Committee's assessment of the condition of credit markets and the prospects for the economy.

As lending programs are scaled back, the size of the Federal Reserve's balance sheet will decline, implying a reduction in excess reserves and the monetary base. A significant shrinking of the balance sheet can be accomplished relatively quickly, as a substantial portion of the assets that the Federal Reserve holds--including loans to financial institutions, currency swaps, and purchases of commercial paper--are short-term in nature and can simply be allowed to run off as the various programs and facilities are scaled back or shut down. As the size of the balance sheet and the quantity of excess reserves in the system decline, the Federal Reserve will be able to return to its traditional means of making monetary policy--namely, by setting a target for the federal funds rate.

Although a large portion of Federal Reserve assets are short-term in nature, we do hold or expect to hold significant quantities of longer-term assets, such as the mortgage-backed securities that we will buy over the next two quarters. Although longer-term securities can also be sold, of course, we would not anticipate disposing of more than a small portion of these assets in the near term, which will slow the rate at which our balance sheet can shrink. We are monitoring the maturity composition of our balance sheet closely and do not expect a significant problem in reducing our balance sheet to the extent necessary at the appropriate time.

Importantly, the management of the Federal Reserve's balance sheet and the conduct of monetary policy in the future will be made easier by the recent congressional action to give the Fed the authority to pay interest on bank reserves. In principle, the interest rate the Fed pays on bank reserves should set a floor on the overnight interest rate, as banks should be unwilling to lend reserves at a rate lower than they can receive from the Fed. In practice, the federal funds rate has fallen somewhat below the interest rate on reserves in recent months, reflecting the very high volume of excess reserves, the inexperience of banks with the new regime, and other factors. However, as excess reserves decline, financial conditions normalize, and banks adapt to the new regime, we expect the interest rate paid on reserves to become an effective instrument for controlling the federal funds rate.

Moreover, other tools are available or can be developed to improve control of the federal funds rate during the exit stage. For example, the Treasury could resume its recent practice of issuing supplementary financing bills and placing the funds with the Federal Reserve; the issuance of these bills effectively drains reserves from the banking system, improving monetary control.

Longer-term assets can be financed through repurchase agreements and other methods, which also drain reserves from the system. In considering whether to create or expand its programs, the Federal Reserve will carefully weigh the implications for the exit strategy. And we will take all necessary actions to ensure that the unwinding of our programs is accomplished smoothly and in a timely way, consistent with meeting our obligation to foster full employment and price stability.

### **Stabilizing the Financial System**

The Federal Reserve will do its part to promote economic recovery, but other policy measures will be needed as well. The incoming Administration and the Congress are currently discussing a substantial fiscal package that, if enacted, could provide a significant boost to economic activity. In my view, however, fiscal actions are unlikely to promote a lasting recovery unless they are accompanied by strong measures to further stabilize and strengthen the financial system. History demonstrates conclusively that a modern economy cannot grow if its financial system is not operating effectively.

In the United States, a number of important steps have already been taken to promote financial stability, including the Treasury's injection of about \$250 billion of capital into banking organizations, a substantial expansion of guarantees for bank liabilities by the Federal Deposit Insurance Corporation, and the Fed's various liquidity programs. Those measures, together with analogous actions in many other countries, likely prevented a global financial meltdown in the fall that, had it occurred, would have left the global economy in far worse condition than it is in today.

However, with the worsening of the economy's growth prospects, continued credit losses and asset markdowns may maintain for a time the pressure on the capital and balance sheet capacities of financial institutions. Consequently, more capital injections and guarantees may become necessary to ensure stability and the normalization of credit markets. A continuing barrier to private investment in financial institutions is the large quantity of troubled, hard-to-value assets that remain on institutions' balance sheets. The presence of these assets significantly increases uncertainty about the underlying value of these institutions and may inhibit both new private investment and new lending. Should the Treasury decide to supplement injections of capital by removing troubled assets from institutions' balance sheets, as was initially proposed for the U.S. financial rescue plan, several approaches might be considered. Public purchases of troubled assets are one possibility. Another is to provide asset guarantees, under which the government would agree to absorb, presumably in exchange for warrants or some other form of compensation, part of the prospective losses on specified portfolios of troubled assets held by banks. Yet another approach would be to set up and capitalize so-called bad banks, which would purchase assets from financial institutions in exchange for cash and equity in the bad bank. These methods are similar from an economic perspective, though they would have somewhat different operational and accounting implications. In addition, efforts to reduce preventable foreclosures, among other benefits, could strengthen the housing market and reduce mortgage losses, thereby increasing financial stability.

The public in many countries is understandably concerned by the commitment of substantial government resources to aid the financial industry when other industries receive little or no

assistance. This disparate treatment, unappealing as it is, appears unavoidable. Our economic system is critically dependent on the free flow of credit, and the consequences for the broader economy of financial instability are thus powerful and quickly felt. Indeed, the destructive effects of financial instability on jobs and growth are already evident worldwide. Responsible policymakers must therefore do what they can to communicate to their constituencies why financial stabilization is essential for economic recovery and is therefore in the broader public interest.

Even as we strive to stabilize financial markets and institutions worldwide, however, we also owe the public near-term, concrete actions to limit the probability and severity of future crises. We need stronger supervisory and regulatory systems under which gaps and unnecessary duplication in coverage are eliminated, lines of supervisory authority and responsibility are clarified, and oversight powers are adequate to curb excessive leverage and risk-taking. In light of the multinational character of the largest financial firms and the globalization of financial markets more generally, regulatory oversight should be coordinated internationally to the greatest extent possible. We must continue our ongoing work to strengthen the financial infrastructure--for example, by encouraging the migration of trading in credit default swaps and other derivatives to central counterparties and exchanges. The supervisory authorities should develop the capacity for increased surveillance of the financial system as a whole, rather than focusing excessively on the condition of individual firms in isolation; and we should revisit capital regulations, accounting rules, and other aspects of the regulatory regime to ensure that they do not induce excessive procyclicality in the financial system and the economy. As we proceed with regulatory reform, however, we must take care not to take actions that forfeit the economic benefits of financial innovation and market discipline.

Particularly pressing is the need to address the problem of financial institutions that are deemed "too big to fail." It is unacceptable that large firms that the government is now compelled to support to preserve financial stability were among the greatest risk-takers during the boom period. The existence of too-big-to-fail firms also violates the presumption of a level playing field among financial institutions. In the future, financial firms of any type whose failure would pose a systemic risk must accept especially close regulatory scrutiny of their risk-taking. Also urgently needed in the United States is a new set of procedures for resolving failing nonbank institutions deemed systemically critical, analogous to the rules and powers that currently exist for resolving banks under the so-called systemic risk exception.

### **Conclusion**

The world today faces both short-term and long-term challenges. In the near term, the highest priority is to promote a global economic recovery. The Federal Reserve retains powerful policy tools and will use them aggressively to help achieve this objective. Fiscal policy can stimulate economic activity, but a sustained recovery will also require a comprehensive plan to stabilize the financial system and restore normal flows of credit.

Despite the understandable focus on the near term, we do not have the luxury of postponing work on longer-term issues. High on the list, in light of recent events, are strengthening regulatory oversight and improving the capacity of both the private sector and regulators to detect and manage risk.



Finally, a clear lesson of the recent period is that the world is too interconnected for nations to go it alone in their economic, financial, and regulatory policies. International cooperation is thus essential if we are to address the crisis successfully and provide the basis for a healthy, sustained recovery.

### Footnotes

1. A basis point is one-hundredth of a percentage point.
2. Board of Governors of the Federal Reserve (2008), "FOMC Statement and Board Approval of Discount Rate Requests of the Federal Reserve Banks of New York, Cleveland, Richmond, Atlanta, Minneapolis, and San Francisco," press release, December 16. [Return to text](#)
3. Primary dealers are broker-dealers that trade in U.S. government securities with the Federal Reserve Bank of New York. The New York Fed's Open Market Desk engages in trades on behalf of the Federal Reserve System to implement monetary policy. [Return to text](#)
4. Detailed information about the Federal Reserve's balance sheet is published weekly as part of the H.4.1 release. For a summary of Fed lending programs, see [Forms of Federal Reserve Lending to Financial Institutions](#) (229 KB PDF)

## **2. Troubled Asset Relief Program (TARP)**

### **What is Tarp?**

TARP, Troubled Asset Relief Program, is a government plan issued in the Emergency Economic Stabilization Act, (EESA) which allowed the treasury to buy out troubled assets and security backed mortgages from banks.

## What is Tarp?

U.S. Department of the Treasury Website

TARP is the Troubled Asset Relief Program, created to help stabilize the financial system during the financial crisis of 2008. It was authorized by Congress through the [Emergency Economic Stabilization Act of 2008 \(EESA\)](#), and is overseen by the Office of Financial Stability at the U.S. Department of the Treasury.



### History

TARP was a critical part of the government's efforts to combat the worst financial crisis since the Great Depression. The crisis began in the summer of 2007 and gradually increased in intensity and momentum the following year. A series of major financial institutions, including Countrywide Financial, Bear Stearns, IndyMac, Fannie Mae and Freddie Mac failed. Then, on September 15, 2008, Lehman Brothers filed for bankruptcy. As Lehman fell, the remaining major investment banking firms in this country teetered on the edge of collapse as their funding sources were squeezed.

Every major financial institution was threatened, and they tried to shore up their balance sheets by shedding risky assets and hoarding cash. The day after Lehman fell, the stock market dropped 500 points and there were signs of a generalized run on America's financial system.

Beginning in 2007, the Treasury Department, the Federal Reserve, the Federal Deposit Insurance Corporation (FDIC), and other federal government agencies undertook a series of emergency actions to prevent a collapse of the country's financial system and the dangers that would pose to consumers, businesses, and the broader economy. However, the severe conditions our nation faced required additional resources and authorities. Therefore, in late September, the Bush Administration proposed EESA and, with bi-partisan support in Congress, it was enacted into law on October 3, 2008.

The purpose of EESA was to promote the stability and liquidity of the financial system through the authorization of TARP and other measures. But TARP was only part of the government's response to the crisis. In 2008 and 2009, Treasury, the Federal Reserve and the FDIC put in place a comprehensive set of emergency programs to stabilize the financial sector and the economy. These actions included purchasing mortgage-backed securities to help keep interest rates low, broad-based guarantees of transaction accounts at banks and money market funds, liquidity facilities provided by the Federal Reserve, and support for Fannie Mae and Freddie Mac. And in 2009, Congress passed the American Recovery and Reinvestment Act (ARRA) at the urging of President Obama, to help create and save jobs, spur economic activity, and invest in long-term growth.

By the middle of 2009, the government's coordinated response to the financial crisis had stabilized the financial system and resulted in significantly lower borrowing rates for businesses, individuals, and state and local governments. Companies were able to fund themselves in private

markets by issuing equity and long-term debt. The value of the savings of Americans had begun to recover. And the U.S. economy began to grow.

While Congress authorized \$700 billion for TARP, Treasury utilized far less than that. In fact, TARP's lifetime cost is now estimated to be approximately \$37.4 billion, most of which will be attributable to the program's efforts to help struggling homeowners avoid foreclosure. As of February 28, 2014, cumulative collections under TARP, together with Treasury's additional proceeds from the sale of non-TARP shares of AIG, exceed total disbursements by almost \$15 billion.

### **What Did TARP Do?**

TARP was a critical part of the government's efforts to combat the worst financial crisis since the Great Depression. It included a comprehensive set of measures in five key areas:

#### **Auto Industry**

TARP helped prevent a collapse of the American auto industry, saving more than a million American jobs. Treasury implemented specific programs under TARP to prevent uncontrolled liquidations in the industry that would have had catastrophic impacts on not only the auto manufacturers but their suppliers, dealers, and the surrounding communities.

#### **Bank Investment Programs**

Treasury launched five programs under TARP to stabilize America's banking system and ensure that banks were adequately capitalized. Treasury has already recovered funds in excess of the amount originally invested in banks, and taxpayers are now seeing a positive return on this investment.

#### **Credit Market Programs**

Availability of credit is critical for small businesses to grow and for consumers to make home improvements, buy a new car, or send their children to college. Treasury implemented three programs to restart the flow of credit to meet the critical needs of small businesses and consumers.

#### **Housing**

Treasury took action to reduce the number of foreclosures and help preserve homeownership. The TARP housing programs were not meant to prevent all foreclosures but to focus on helping struggling homeowners keep their homes and reduce the spillover effects of foreclosures on neighborhoods, communities, the financial system, and the economy.

#### **Investment in American International Group (AIG)**

Treasury took action to help prevent the collapse of AIG, the world's largest conventional insurance provider at the time, because its failure in during the financial crisis would have had a devastating impact on our financial system and economy. The decision was an important factor in helping prevent an economic collapse and further losses of American jobs. Today, Treasury is moving to wind down its stake in AIG and recover the taxpayers' investment.

TARP helped stabilize the financial system so that it is in a much stronger position to support economic growth. Treasury has already made substantial progress in recovering taxpayer dollars and exiting its investments. Firms that received assistance through TARP have repaid taxpayers faster than anyone had originally anticipated. As a result, the overall cost of the program is expected to be approximately \$37.4 billion – significantly lower than the \$700 billion originally authorized. For more information on the estimated lifetime cost of TARP, see [Where Did the Money Go?](#)

Treasury's authority to make investments under TARP ended on October 3, 2010. Since then, Treasury has moved swiftly to replace temporary government support with private capital, while continuing to help struggling homeowners avoid foreclosure. As of February 28, 2015, cumulative collections under TARP, together with Treasury's additional proceeds from the sale of non-TARP shares of AIG, exceed total disbursements by almost \$15 billion. (Treasury has recovered \$441.7 billion or 103.4% of the disbursed amount when the \$17.6 billion of non-TARP AIG funds collected is included.)

Today, because of TARP and other critical measures to combat the fallout from the financial crisis, including the American Reinvestment and Recovery Act and actions taken by the Federal Reserve and Federal Deposit Insurance Corporation, our economy is growing again. Businesses are adding jobs. Private investment is returning. We still have more work ahead to repair the damage caused by the crisis, but the economy is healing and gradually getting stronger.

### **What You Haven't Heard About TARP**

Looking back, it's clear that TARP played a critical role in stabilizing the financial system during a period of historic crisis and has helped put our country on the path to economic recovery – at a fraction of the initiative's original projected cost.

With all the myths you've likely heard about TARP, though, sometimes the truth gets lost in the shuffle. Here are the facts:

### **TARP Helped Prevent a Second Great Depression**

Independent experts have estimated that TARP, along with the government's other responses to the financial crisis, saved nearly 8.5 million American jobs, helping to prevent the recession from turning into another Great Depression. Economists Alan Binder and Mark Zandi estimated that without TARP and the other government interventions, U.S. real GDP would be 11.5 percent lower, and the unemployment rate would have peaked at 16.5 percent. They wrote that the federal government's policies "[probably averted what could have been called Great Depression 2.0.](#)"

### **TARP Helped Main Street Banks and Small Businesses**

TARP invested in more than 450 small and community banks. Moreover, lending by banks with less than \$1 billion in assets that received TARP funds has grown more than by those that did not. And because small banks are a crucial source of credit for small businesses, TARP assistance for main street banks is helping provide the financing that small businesses need to expand and create jobs.

### **TARP Protected U.S. Manufacturing Jobs by Helping to Save the American Auto Industry**

In the 12 months before President Obama took office, American auto companies lost hundreds of thousands of jobs, sales plunged 40 percent, and liquidation was a very real possibility. TARP investments in GM and Chrysler, as well as the hard decisions made by those companies in order to adapt and compete in the 21st century, have helped turn the industry around and save more than a million jobs. Since GM and Chrysler have emerged from bankruptcy, the U.S. auto industry has added more than 500,000 jobs – the strongest growth in more than 10 years – and all of the big three auto companies are now operating at a profit.

### **TARP Provided Immediate Relief to Struggling Homeowners**

Treasury established several programs under TARP to stabilize the housing market. Since 2009, the Administration's Making Home Affordable Program (MHA) has helped more than two million families permanently modify their mortgages or receive other assistance. These families have typically saved more than \$500 each month. This program has also changed the industry by setting new standards for successful mortgage modifications and consumer protection, thereby helping millions more. And, in June 2014, [Treasury announced it will extend the program to December 31, 2016.](#)

### **TARP is Now Expected to Cost a Fraction of the \$700 Billion Originally Authorized**

Substantial increases in TARP repayments and declines in expected TARP expenditures have dramatically reduced the projected cost of the program. Treasury and the Office of Management and Budget (OMB) now project that the lifetime cost of TARP will be approximately \$37.4 billion – significantly less than the \$700 billion originally authorized. And overall, the government -- including measures taken by the FDIC and Federal Reserve -- [is expected to at least break even on its financial stability programs and may even realize a positive return.](#)

### **We Are Getting Our Money Back – and Faster than Expected**

As of February 28, 2015, cumulative collections under TARP, together with Treasury's additional proceeds from the sale of non-TARP shares of AIG, exceed total disbursements by almost \$15 billion. (Treasury has recovered \$441.7 billion or 103.4% of the disbursed amount when the \$17.6 billion of non-TARP AIG funds collected is included.) And the Administration remains committed to passing a Financial Crisis Responsibility Fee to make sure taxpayers are fully repaid for any remaining costs of TARP.

### **TARP is Winding Down**

The authority to invest money through TARP ended on October 3, 2010. Since then, Treasury has focused on winding down TARP programs as quickly as possible, while ensuring financial stability and maximizing returns to the taxpayer.

### **No More TARPs**

President Obama and Treasury Secretary Geithner worked tirelessly with Congress to enact the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), which addresses the regulatory shortcomings that contributed to the 2008 financial crisis and made TARP necessary. That law safeguards consumers and investors, helps the government to better monitor and limit risk, and provides new tools to break up and wind down firms whose imminent failure could threaten the health of the economy. [More about Wall Street Reform.](#)



**Unprecedented Transparency.**

Treasury has published hundreds of reports on TARP investments, including TARP Transaction Reports; Monthly Reports to Congress; Dividend and Interest reports; Making Home Affordable<sup>®</sup> Program reports; and numerous other disclosure documents, all of which are publicly available and posted on this website in the [Reports Section](#).

To see how Treasury has invested and recovered TARP funds over time please visit the interactive [TARP Tracker](#).

## Where Did the Money Go?

U.S. Department of the Treasury Website

Congress originally authorized \$700 billion for TARP, but subsequent legislation, including the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) passed in 2010, amended EESA, capping the total purchase and guarantee authority under TARP at \$475 billion.

Treasury used the TARP authority to make investments, loans and asset guarantees and purchases in or from a range of financial institutions. In exchange for this assistance, Treasury, on behalf of the taxpayer, received financial instruments including equity securities (preferred stock, common stock and warrants), debt securities and additional notes from these companies. Treasury expects that the vast majority of the funds disbursed through TARP will be recovered.

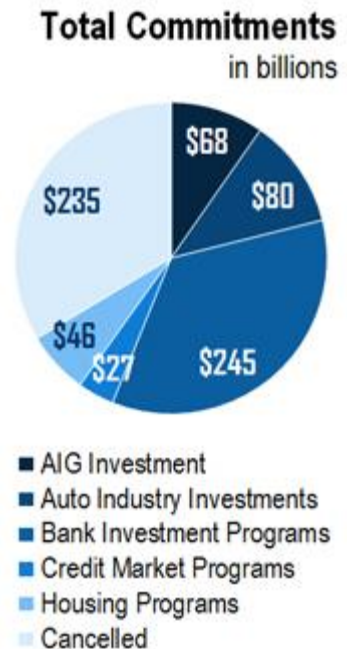
### *Lifetime Cost of the Programs*

Treasury's latest quarterly estimate of TARP's lifetime cost as reflected in the February 2015 Monthly Report to Congress, developed in consultation with the Office of Management and Budget, is \$37.4 billion, which is largely attributable to our efforts to help struggling homeowners deal with the housing crisis. Unlike TARP's investment programs, the funds committed for TARP's housing programs were not intended to be recovered.

As of February 28, 2015 cumulative collections under TARP, together with Treasury's additional proceeds from the sale of non-TARP shares of AIG, exceed total disbursements by almost \$15 billion. (Treasury has recovered \$441.7 billion or 103.4% of the disbursed amount when the \$17.6 billion of non-TARP AIG funds collected is included.)

***All recovered funds are deposited in the U.S. Treasury and go to reducing the national debt.***

In order to ensure that the TARP program does not add to the deficit, EESA requires the President to propose a way to recoup any outstanding TARP costs from the financial industry. Consistent with this requirement, President Obama has called for a Financial Crisis Responsibility Fee that would require the largest and most highly levered Wall Street firms to pay back taxpayers for the extraordinary assistance provided by the government.



## Bank Investment Programs

U.S. Department of the Treasury Website

### Program Purpose and Overview

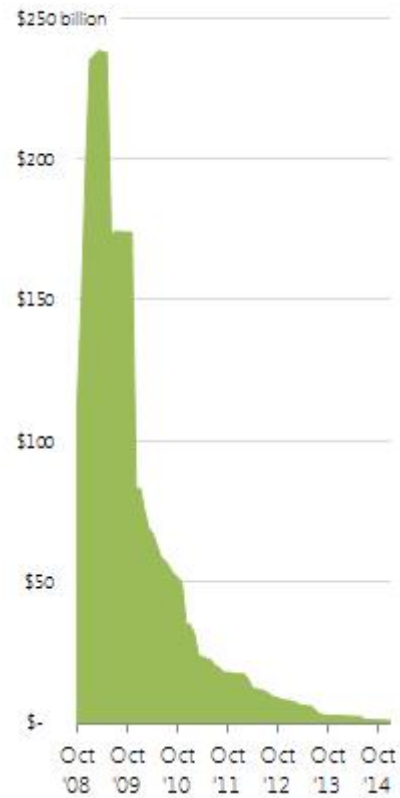
Treasury invested approximately \$245 billion across five distinct bank programs. Each of these programs was established to accomplish different goals as part of the overall effort to stabilize America's banking system.

Treasury has already recovered an amount that is greater than what was invested in banks under TARP. Taxpayers began to see a positive return on their bank investments in March 2011. Every additional dollar that is recovered from TARP's bank investments represents an additional return for the taxpayers.

### Key Facts

- TARP bank investment programs succeeded in helping to stabilize the banking system.
- TARP funds were invested in both large and small banking institutions.
- TARP's bank programs earned significant positive returns for taxpayers. As of February 28, 2015, Treasury has recovered \$274.8 billion through repayments and other income -- \$29.7 billion more than the \$245.1 billion originally invested.
- No more taxpayer money is being invested in banks under TARP. The final investment under the Capital Purchase Program (CPP) – the largest bank program under TARP – was made in December 2009. Treasury is now focused on recovering TARP funds in a manner that maximizes returns for the taxpayers and promotes America's financial stability.

**Bank Investment Programs**  
Outstanding Principal



### Banking Programs at a Glance

- [Asset Guarantee Program \(AGP\)](#)  
Under the Asset Guarantee Program (AGP), the government supported institutions whose failure would have caused serious harm to the financial system and the broader economy.
- [Supervisory Capital Assessment Program \(SCAP\) & Capital Assistance Program \(CAP\)](#)  
Treasury worked with federal banking regulators to develop a comprehensive “stress test,” known as the Supervisory Capital Assessment Program (SCAP), to determine the

health of the 19 largest bank holding companies. This proved to be a critical step to restore confidence in the financial system and get credit flowing again.

- **Capital Purchase Program (CPP)**

The Capital Purchase Program (CPP) was launched to stabilize the financial system by providing capital to viable financial institutions of all sizes throughout the nation.

- **Community Development Capital Initiative (CDCI)**

Treasury created the Community Development Capital Initiative (CDCI) on February 3, 2010, to help viable certified Community Development Financial Institutions and the communities they serve cope with effects of the financial crisis.

- **Targeted Investment Program (TIP)**

Treasury established the Targeted Investment Program (TIP) in December 2008. The program gave the Treasury the necessary flexibility to provide additional or new funding to financial institutions that were critical to the functioning of the financial system.

## 10 Reasons Why Public Policies Rescued the U.S. Economy

By Christine Weller  
Center For American Progress Website  
May 29, 2012

Many conservatives argue that our economy can flourish only when the federal government gets out of the private sector's way. Many progressives counter that in our free market system, there are times when the government needs to step in to protect the common good and ensure there is broad-based economic growth. This debate defines our politics today.

Americans of all political persuasions, however, should agree that quick and decisive government action was necessary between 2008 and 2010 to avoid a second Great Depression and to help our economy recover from the deepest recession since the 1930s. After all, the evidence is clear that three acts of Congress signed by two successive presidents between 2008 and 2010 led to the end of the Great Recession of 2007–2009 and the subsequent economic recovery. Specifically:

- The Troubled Asset Relief Program of 2008 rescued our financial system from almost certain meltdown, saving the U.S. financial system at the brink of disaster
- The American Recovery and Reinvestment Act of 2009 helped us avoid the feared second Great Depression and kickstarted renewed economic growth
- The Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 strengthened the fledgling economic recovery by cutting the payroll tax and continuing extended unemployment insurance benefits

This column will detail the top 10 reasons why these three key government interventions in the economy were successful. But first, let's briefly recount the reasons why such government action was necessary in the first place.

Remember the situation in 2008? Our economy, employment, and Wall Street were all about to go off the cliff. The time between then and now was marked by a sharp economic contraction alongside massive job losses and steep stock market losses—followed by slow, at times uneven, but still steady recoveries in economic growth and the labor and financial markets. Federal government policies had a lot to do with making sure that the deep dive was not lengthier, and



A road sign reading "Putting America to Work" and "Project Funded by the American Recovery and Reinvestment Act" is seen along Route 120 in Waukegan, Illinois. The Recovery Act, along with the Troubled Assets Relief Program, payroll tax cuts, and extended unemployment benefits, all helped boost economic recovery. SOURCE: AP/Jim Prisching.

that the recovery happened sooner than it otherwise would have. The labor market, the economy, and financial markets are clearly on the mend. This is a far cry from the situation in 2008.

The Troubled Asset Relief Program in 2008, the American Recovery and Reinvestment Act of 2009, and the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 successively helped the U.S. economy turn itself around. These three measures came at crucial times when the economy was facing the prospect of experiencing serious damage unless policymakers took decisive, targeted, and quick actions.

The Troubled Asset Relief Program was enacted in October 2008 so that the federal government could use \$700 billion to stabilize the struggling financial system. Much of the first half of that money was spent injecting cash into troubled banks during the final months of 2008, ensuring that our financial system did not collapse. The American Recovery and Reinvestment Act was enacted in February 2009, implementing a series of tax cuts and spending measures that totaled \$787 billion for almost two years through the end of 2010. Additional unemployment insurance and Social Security benefits started to flow almost immediately due to the Recovery Act, while it took until the summer of 2009 for infrastructure spending to start. Congress then enacted new payroll tax cuts and continued extended unemployment insurance benefits in December 2010 as the Recovery Act's benefits ran out.

The result: Financial markets, the economy, and the labor market started to improve quickly after each measure had been passed and money started coming to key struggling markets. These three policy measures did exactly what they were meant to do—policymakers acted to avoid worsening economic conditions.

To be sure, these policy interventions could have been more effective and efficient if they had delivered a stronger bang for their buck. The Troubled Asset Relief Program could have included more help for struggling homeowners. The Recovery Act could have included more infrastructure spending, and the payroll tax cuts and extended unemployment insurance benefits could have been decoupled from wasteful tax cuts for the rich. None of this extra help for our economy and workers was possible, though, because of conservative opposition to more effective and efficient policy interventions.

Still, the Troubled Asset Relief Program saved the financial system from implosion. While one can legitimately question the design of the program, whether the benefits from it were fairly shared, and whether the funds were used as efficiently as possible for the long run, there's little question that it did benefit the economy. The Recovery Act certainly prevented another Great Depression. And the payroll tax cuts and extended unemployment insurance benefits continue to strengthen the economic recovery today.

Here's a rundown of the 10 ways recent economic and financial data show that each of these three policy measures worked as intended, beginning with the Troubled Asset Relief Program, then the Recovery Act, then the most recent payroll tax cuts and extended unemployment insurance benefits.



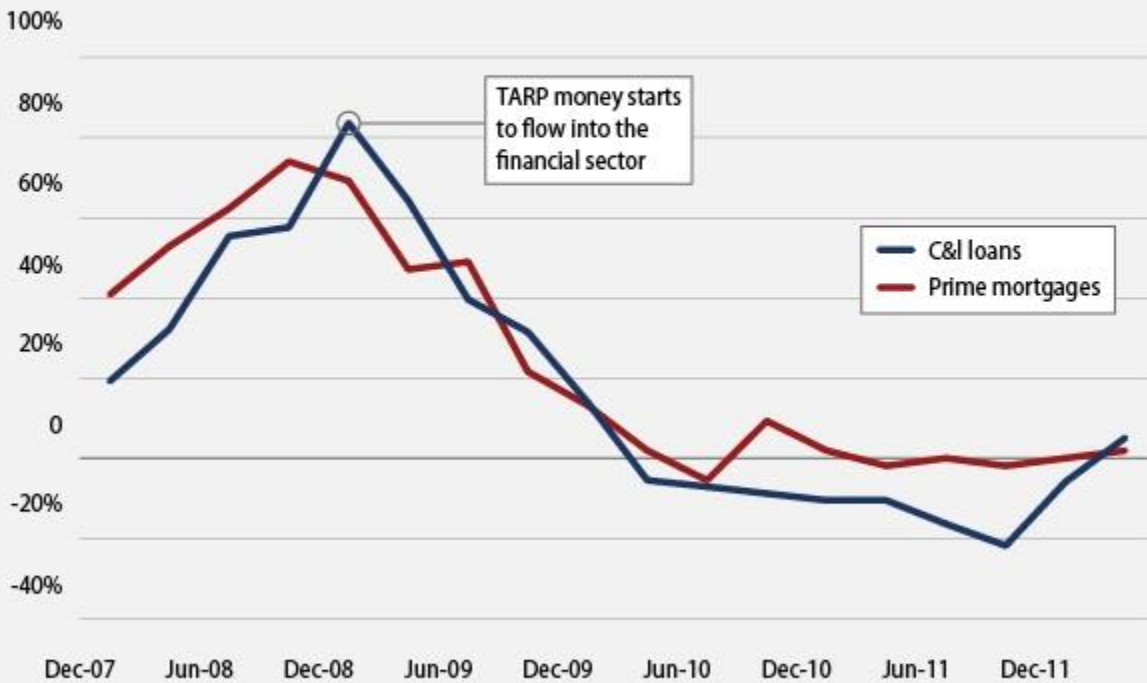
## Loan tightening eased with the introduction of the Troubled Asset Relief Program

FIGURE 1

### Bank loans rebound

Loan tightening for commercial and industrial (C&I loans) and prime mortgages, December 2007-April 2012

Net share of senior loan officers indicating loan tightening (In percent)

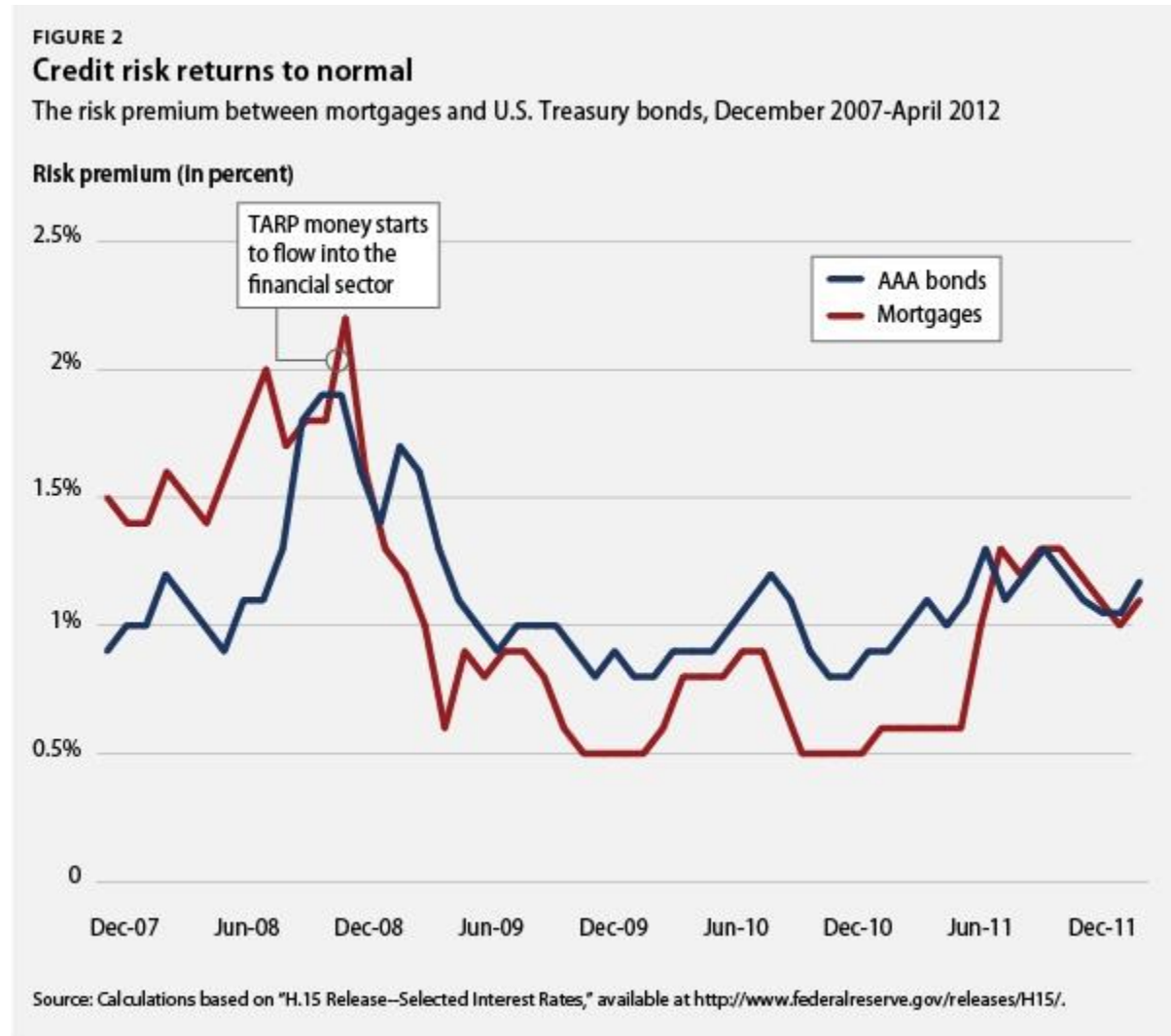


Source: Board of Governors of the Federal Reserve System, "Senior Loan Officer Opinion Survey on Bank Lending Practices" (2012), available at <http://www.federalreserve.gov/boarddocs/snloansurvey/201205/fullreport.pdf>.

A peak net high of 83.6 percent of senior loan officers indicated that they were tightening lending standards for commercial and industrial loans in the fourth quarter of 2008, up from 19.2 percent in the fourth quarter in 2007. This ratio fell continuously throughout 2009. The senior loan officer ratio is an indirect but telling measure of how easy or hard it is for businesses and households to get a loan from a bank.

Similarly, a net 69.2 percent of senior loan officers indicated tightening prime mortgage standards in the fourth quarter of 2008, up from 40.8 percent in December 2007, before falling to 24.1 percent in the fourth quarter of 2009. Banks first tightened lending standards in the face of the worst financial crisis since the Great Depression and started to ease lending standards after the Troubled Asset Relief Program stabilized the U.S. financial sector.[1] Business and mortgage credit markets became less tight immediately following TARP.

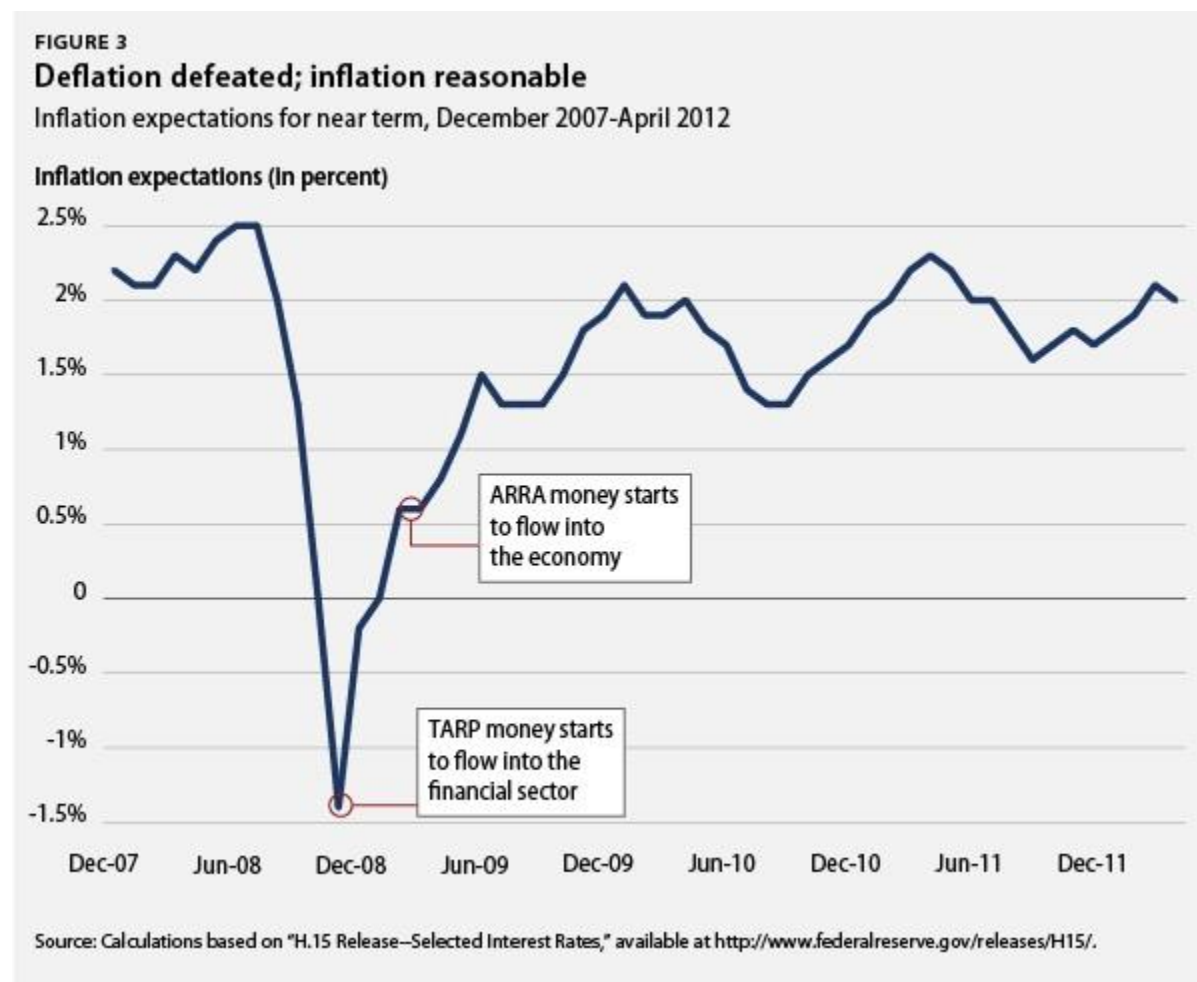
## Interest rates ease shortly after the Troubled Asset Relief Program is enacted



The additional interest rate—the so-called risk premium—charged on mortgages above the interest rate on risk-free U.S. Treasury bonds rose to a peak of 2.2 percent in December 2008, up from 1.5 percent in December 2007, when the Great Recession started. The difference fell back to 1.6 percent by January 2009 after Troubled Asset Relief Program money flowed into credit markets. This risk premium hovers typically around 1 percent during normal economic times.

The risk premium on corporate bonds went from 0.9 percent in December 2007 to a peak of 1.9 percent in December 2008, before falling to 1.6 percent in January 2009. The risk premium first went up as lenders became worried about the state of other banks, and it fell back down as the Troubled Asset Relief Program provided much-needed backing to struggling banks.[2] Homeowners and businesses had to pay less for their loans as financial market risk declined due to the success of the program.

## The specter for deflation disappeared after the passage of the Troubled Asset Relief Program and the Recovery Act



Falling inflationary expectations hold the danger that they can lead to deflation—an economy in which prices fall. Deflation makes a recession much worse because businesses and consumers hold back on major purchases as they expect prices to fall. The U.S. economy had to contend with the specter of deflation in the fall of 2008 and winter of 2009; then the passage of the Troubled Asset Relief Program and the Recovery Act put people's mind a little at ease.

In December 2008 the expected inflation rate for the coming five years stood at -0.24 percent, based on the difference between inflation-protected U.S. Treasury bonds and noninflation-protected Treasury bonds, down from 2.2 percent in December 2007—indicating that deflation was a real fear among investors. The difference between so-called Treasury Inflation Protected Securities and Treasury bonds of the same maturity is what gauges the expected inflation rate for the specific maturity—in this case five years. Inflationary expectations exceeded 1 percent again by May 2009 and reached 1.9 percent by December 2009.[3] Modest expected price increases—around 2 percent—will lead businesses to invest more and consumers to spend more than they otherwise would have, while lower price increases will give them pause on their spending.

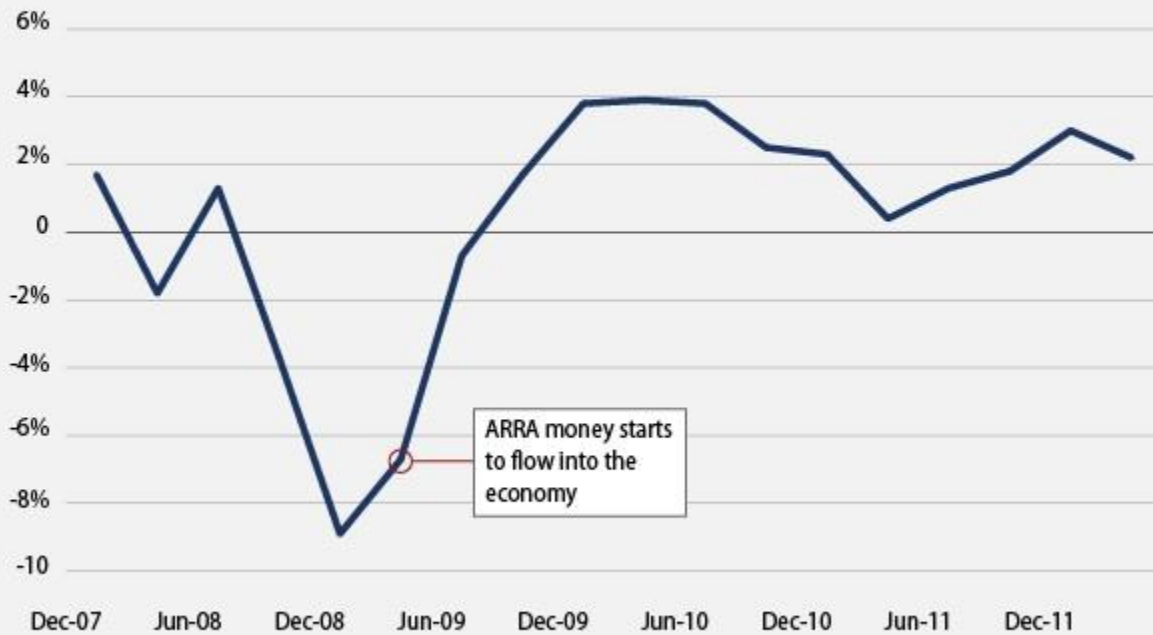
## Economic growth prospects brightened with the passage of the Recovery Act

FIGURE 4

### A recovery economy

Economic growth, December 2007–April 2012

Annualized quarterly GDP growth (In percent)



Source: Data taken from Bureau of Economic Analysis, *National Income and Product Accounts*.

Expectations about future economic growth matter for actual growth—businesses will invest more, banks will lend more, and consumers will spend more than they otherwise would have if they think the economy will improve faster. The nonpartisan Congressional Budget Office increased its growth projections for 2010—the first full year after enactment of the Recovery Act—from 1.5 percent in January 2009 to 2.9 percent in March 2009.[4] And sure enough, economic activity picked up quickly.

The economy had declined in three out of the four quarters of 2008, and annual inflation-adjusted economic growth in the first quarter of 2009 was -6.7 percent. But with the enactment of the Recovery Act in the second quarter of 2009, our economy fell by only 0.7 percent in that quarter as government spending began. Then, in the third and fourth quarters of 2009, the economy grew by 1.7 percent and 3.8 percent, respectively, in large measure because the tax cuts and spending measures enacted under the Recovery Act started to flow into people's and businesses' pockets.[5]

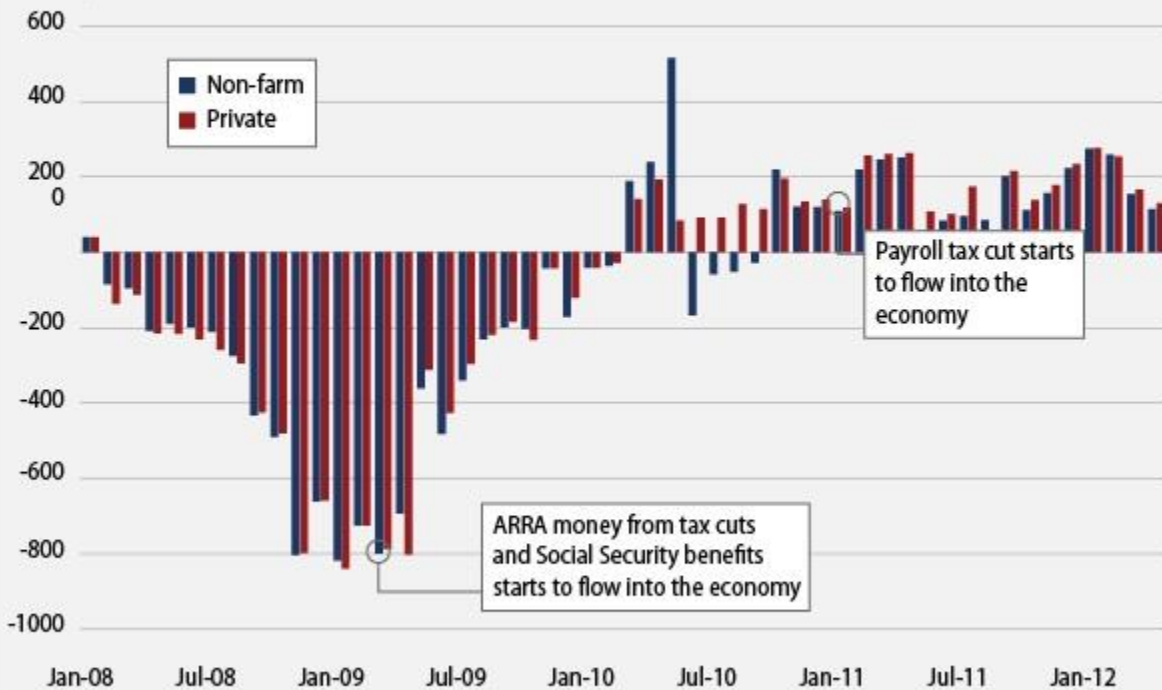
## Job losses quickly abated due to Recovery Act spending

FIGURE 5

### Boosting jobs growth

Annualized quarterly change in the jobs lost and gained, January 2008-April 2012

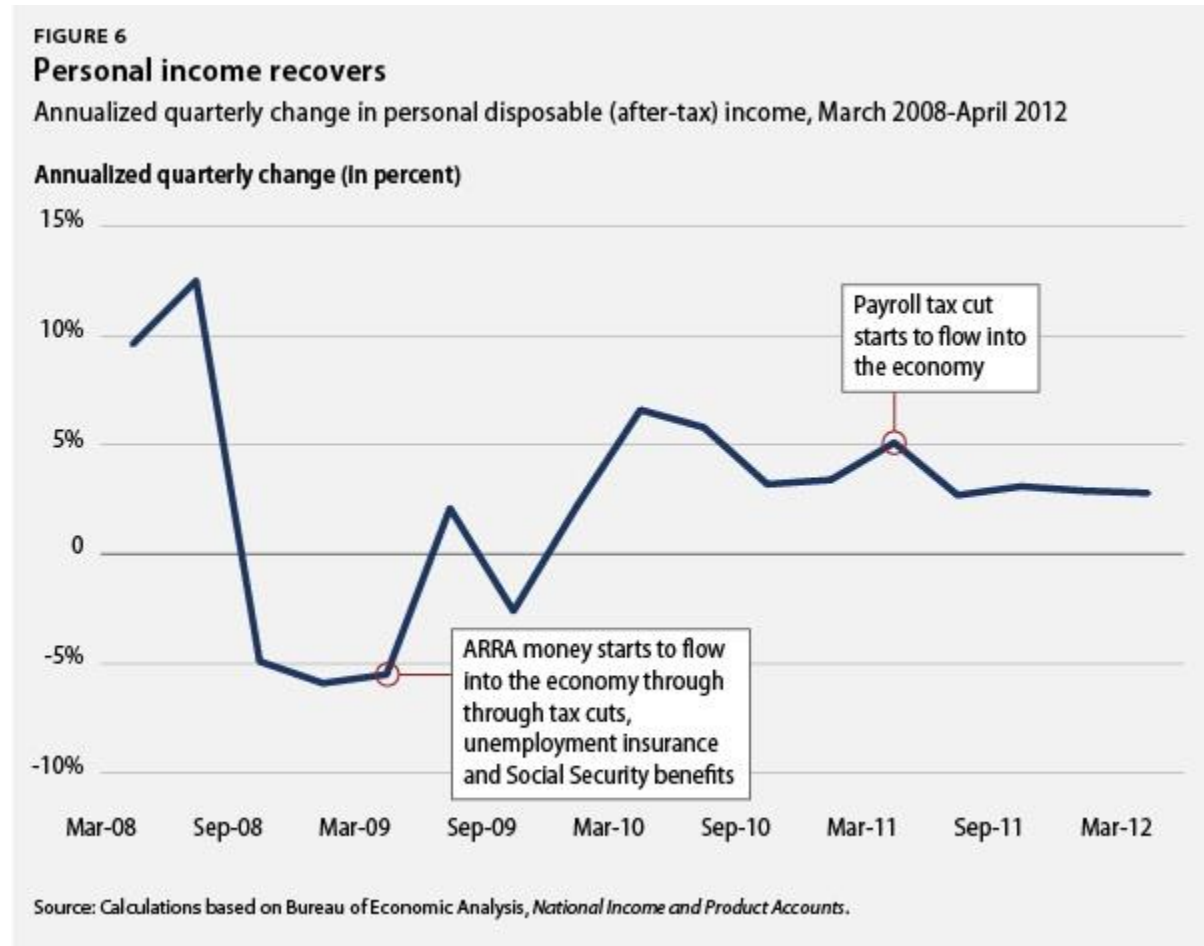
Monthly job changes (In thousands)



Source: Calculations based on Bureau of Labor Statistics, *Current Employment Statistics*.

Job losses dropped by 82.3 percent, from an average of 780,000 jobs lost in the first three months of 2009 when the law was passed to 138,000 per month in the final three months of 2009.[6] Private-sector job losses decreased by 83.2 percent—from 784,000 on average to 131,000—during the same period. The first quarter of 2009 marked the period of the steepest job losses of the Great Recession and a clear turning point in the labor market.[7]

## Personal disposable incomes started to rise again with help from the Recovery Act



Personal disposable after-tax income fell from the middle of 2008 to the first quarter of 2009, as people lost their jobs in droves. Personal disposable incomes rose again in the second quarter of 2009 due to higher unemployment insurance benefits, larger Social Security payments, and lower personal taxes, all of which were part of the Recovery Act. This quickly helped struggling families.[8]

Families ended up with more money in their pockets, thanks to immediate spending under the new law, even though job losses continued at the same time. But other measures in the Recovery Act that took a little more time to boost consumer spending consequently helped improve employment prospects by putting more money into people's pockets.



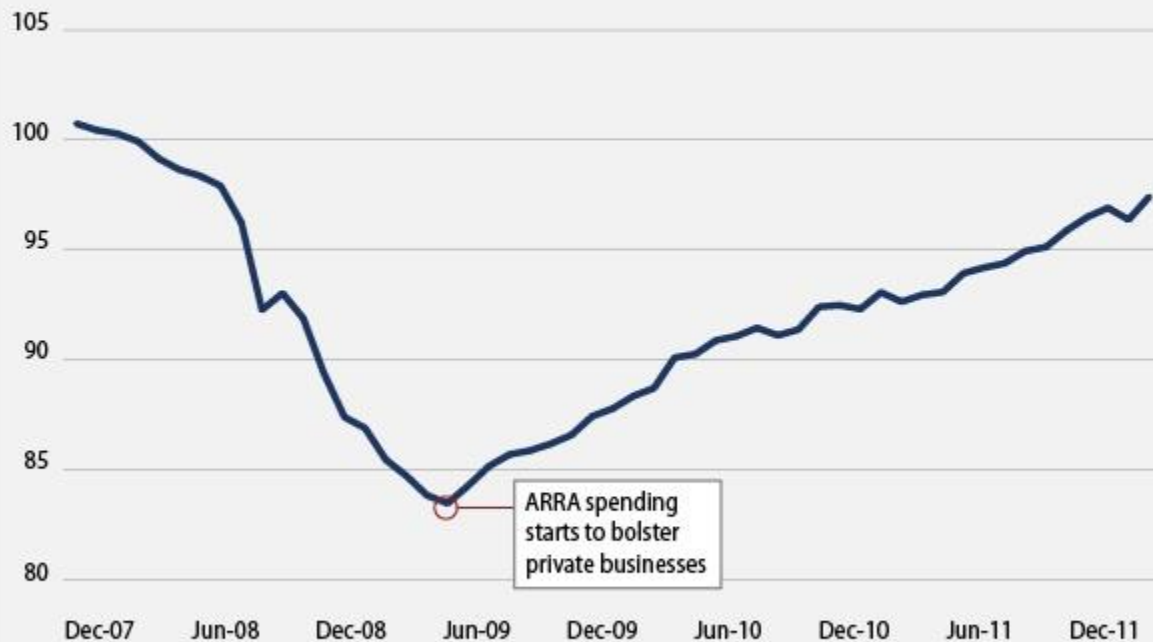
## Industrial production turned around with infrastructure spending spurred by the Recovery Act

FIGURE 7

### Rebounding manufacturing

Industrial production, December 2007-April 2012

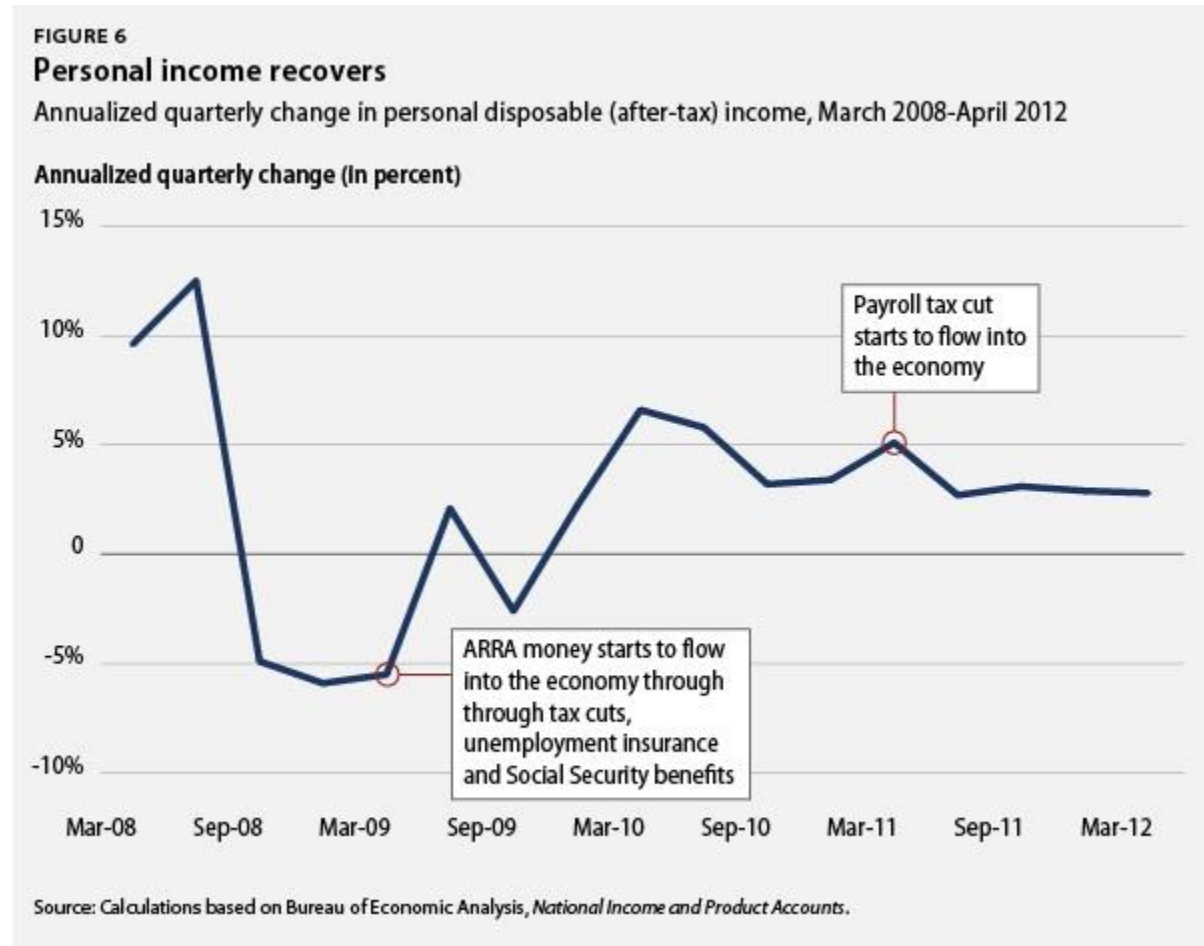
Industrial production(Index)



Source: Calculations based on "Industrial Production and Capacity Utilization – G-17," available at <http://www.federalreserve.gov/releases/g17/default.htm>.

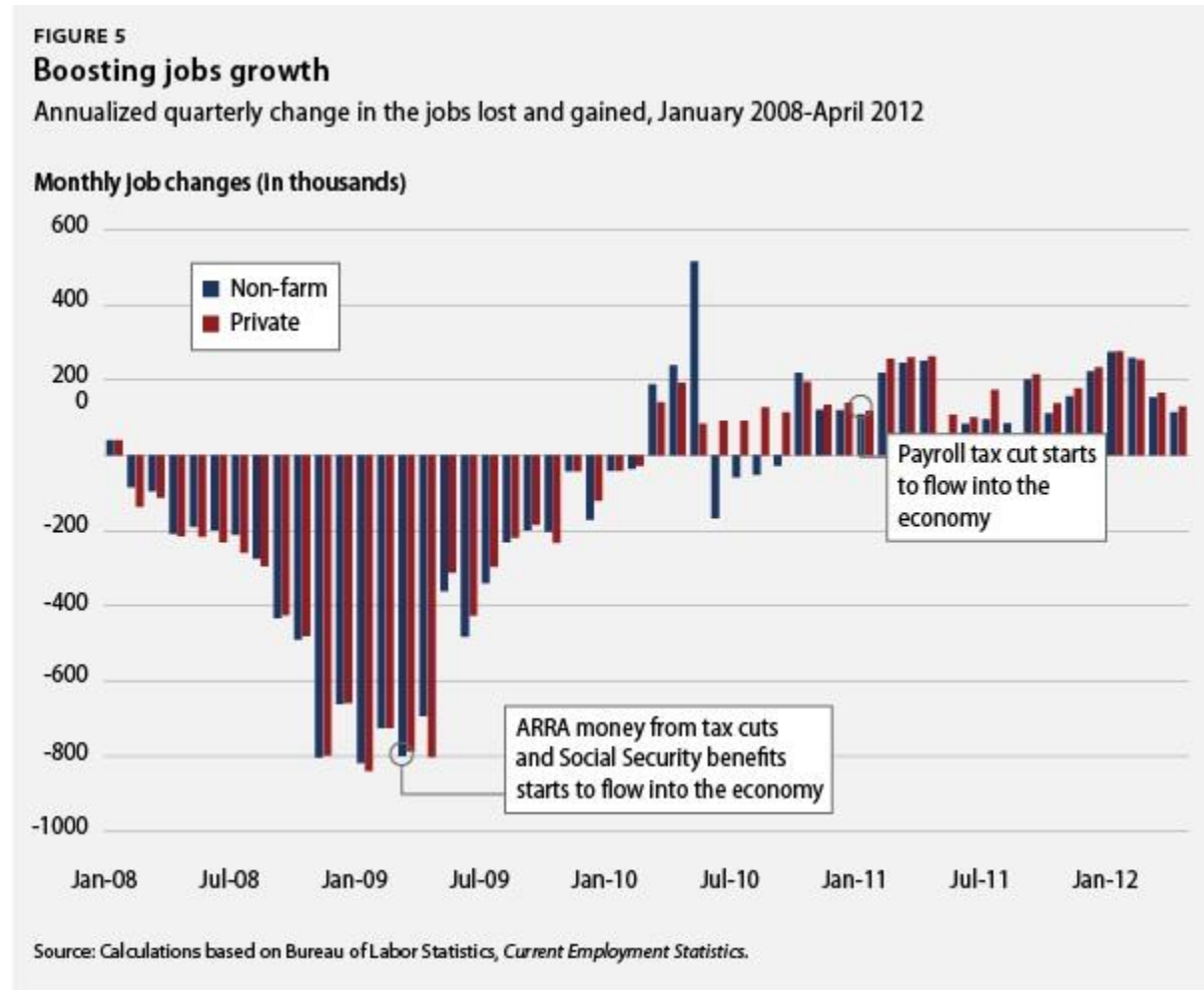
Industrial production—the output of manufacturing and utilities—declined consistently from December 2007 to June 2009. Industrial production started growing again in July 2009, when infrastructure spending from the Recovery Act started to flow into the economy. Industrial production was 3.7 percent larger in December 2009 than in June 2009, after having grown consistently for six months.[9]

## After-tax income grew more quickly following the payroll tax cut



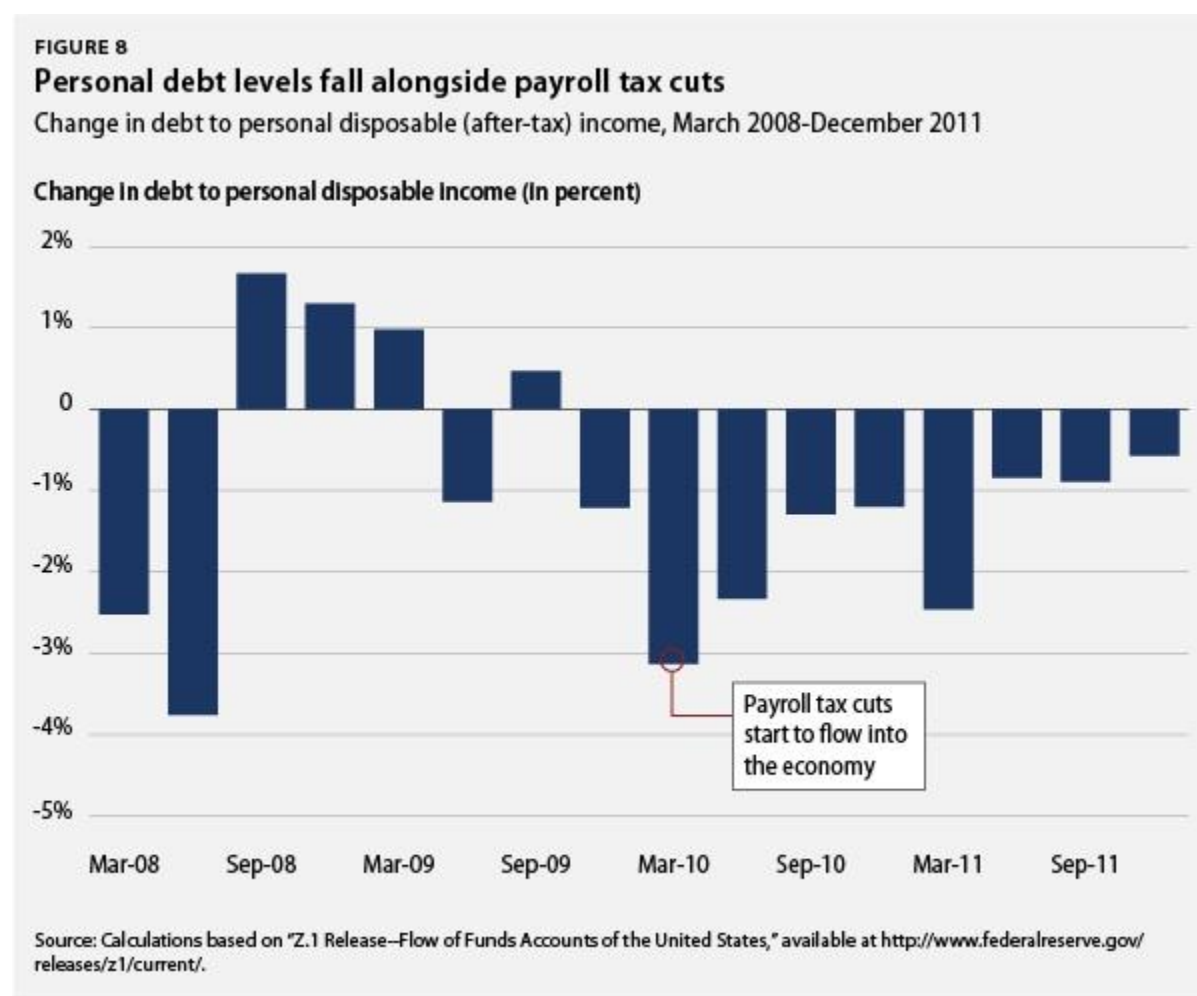
After-tax income expanded by 1.3 percent in the first quarter of 2011, immediately after the payroll tax cut in addition to an extension of extended unemployment insurance benefits was passed—the fastest growth rate since the second quarter of 2010.[10] The payroll tax cut put more money in people’s pockets, as the labor market continued to add new jobs at a slow pace. The additional money thus quickly strengthened an economic recovery that was trying to find its footing, helping to further boost jobs growth.

## Job growth accelerated with the payroll tax cut



Indeed, the labor market added an average of 192,000 jobs each month during the first three months of 2011, up from 154,000 jobs in the preceding three months. The payroll tax cut injected some additional momentum into a weak labor market.[11]

## Household debt burdens fell more quickly with the payroll tax cut



Households had more money in their pockets and used some of the additional money to reduce their crushing debt burdens. The ratio of total household debt to after-tax income fell by 2.5 percentage points in the first quarter of 2011, more than twice as fast as in the fourth quarter of 2010 and faster than in any quarter of 2010.[12]

These 10 reasons why quick and decisive action on the part of the federal government turned an anticipated second Great Depression into the tough but steady economic recovery we are experiencing today are grounded in solid economic data. There is plenty of room for debate about the extent to which the government should be involved in the everyday workings of the economy, but there is absolutely no reason to second guess why our economy is not mired in a prolonged, 1930s-like depression. In this case, thoughtful government policies did the trick, just as they were supposed to.

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## Endnotes

[1] The net percentage is the difference between the share of loan officers indicating tightening standards minus the share of loan officers indicating easing lending standards. A positive number shows that more loan officers tightened loan standards than eased them, while a negative number shows that more loan officers eased loan standards than tightened them. See: Board of Governors of the Federal Reserve System, “Senior Loan Officer Opinion Survey on Bank Lending Practices” (2012), available at <http://www.federalreserve.gov/boarddocs/snloansurvey/201205/fullreport.pdf>.

[2] Calculations based on: “H.15 Release—Selected Interest Rates,” available at <http://www.federalreserve.gov/releases/H15/>. Mortgage interest rates are for conventional mortgages. Bond rates are for AAA-rated corporate bonds.

[3] Inflation expectations are the interest rate difference between nominal five-year U.S. Treasury bonds and inflation-indexed five-year Treasury bonds. Comparisons of Treasury bonds with other maturities show similar trends. Calculations based on: “H.15 Release—Selected Interest Rates.”

[4] The Congressional Budget Office incorporated new growth data for 2008 and 2009, which showed that the recession was worse than initially thought. See: Congressional Budget Office, “Budget and Economic Outlook” (2009); Congressional Budget Office, “A Preliminary Analysis of the President’s Budget and an Update on CBO’s Budget and Economic Outlook” (2009). The actual inflation-adjusted economic growth rate for 2010 was 3 percent. See: Bureau of Economic Analysis, *National Income and Product Accounts* (Department of Commerce, 2012). The improved outlook for 2010 also compensated for a worse-than-previously projected recession. CBO reduced the growth rate for all 2009 from -2.2 percent in January 2009 to -3 percent in March 2009. But CBO projected a growth rate of -1.5 percent from December 2008 to December 2009 both in January 2009 and in March 2009. The changes from December to December can stay the same, even if the total year growth rates fall if the economy is forecast to go into a deeper recession and then recover more quickly in 2009. That is, CBO projected that the Recovery Act would quickly contribute to growth in the second half of 2009, thus overcoming the sharper expected decline in the first half of the year. Quarterly growth projections, though, are not available.

[5] Data taken from: Bureau of Economic Analysis, *National Income and Product Accounts*.

[6] Calculations based on: Bureau of Labor Statistics, *Current Employment Statistics* (Department of Labor, 2011). The bullet point reports three-month averages since monthly job changes tend to be fairly volatile. Monthly job changes, though, show the same trend as quarterly averages.

[7] Calculations based on Bureau of Labor Statistics, *Current Employment Statistics*.

[8] The effect of lower taxes and other social spending on raising personal disposable incomes are more noticeable in the second quarter of 2009 than afterward. Taxes didn’t fall further and

other social spending did not increase more in the subsequent quarters. Instead taxes stayed low and social spending, other than Social Security, health care, and unemployment insurance, stayed high. Social Security and unemployment insurance payments increased as more people retire and collected unemployment insurance benefits throughout the rest of 2009. Calculations based on: Bureau of Economic Analysis, *National Income and Product Accounts*.

[9] Calculations based on: “Industrial Production and Capacity Utilization – G-17,” available at <http://www.federalreserve.gov/releases/g17/default.htm>.

[10] Calculations based on: Bureau of Economic Analysis, *National Income and Product Accounts*.

[11] The labor market weakened again in the subsequent three months due to the economic uncertainty associated with the negotiations over the federal debt ceiling—the maximum amount the federal government can borrow without congressional approval. See, for instance: Scott Lilly, “Creating Unemployment: How Congressional Budget Decisions are Putting Americans out of Work and Increasing the Risk of a Second Recession” (Washington: Center for American Progress, 2011), available at [http://www.americanprogress.org/issues/2011/10/creating\\_unemployment.html](http://www.americanprogress.org/issues/2011/10/creating_unemployment.html); Michael Ettlinger and Michael Linden, “Default Dangers amid Slowing Economy: Latest Economic Growth Figures Highlight Cost of Debt Limit Standoff,” Center for American Progress, July 29, 2011, available at [http://www.americanprogress.org/issues/2011/07/default\\_dangers.html](http://www.americanprogress.org/issues/2011/07/default_dangers.html).

[12] Calculations based on: “Z.1 Release—Flow of Funds Accounts of the United States,” available at <http://www.federalreserve.gov/releases/z1/current/>. For more details on the links between after-tax income, deleveraging, and economic growth, see: Christian E. Weller, “Lending a Hand to the Maxed-Out Consumer: Congress Should Extend the Payroll Tax Holiday,” Center for American Progress, December 13, 2011, available at [http://www.americanprogress.org/issues/2011/12/payroll\\_tax.html](http://www.americanprogress.org/issues/2011/12/payroll_tax.html); Christian E. Weller, “Unburdening America’s Middle Class: Shrinking Families’ Debt Burden Faster is Imperative for Strong, Sustained Economic Growth” (Washington: Center for American Progress, 2011).

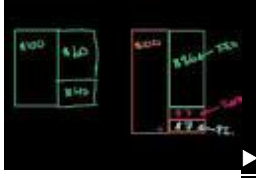


## Video Links:

Great Set of Videos Explaining Geithner's Plan and who it impacts:

[Geithner plan 1 | Geithner Plan | Khan Academy](#)

Overview of the **Geithner Plan** and the problem it is supposed to solve



[Geithner plan 2 | Geithner Plan | Khan Academy](#) ..

Discusses difficulties the banks created for the financial industry.



[Geithner plan 3 | Geithner Plan | Khan Academy](#)

Explains how banks could transfer risk exposure.



[Geithner plan 4 | Geithner Plan | Khan Academy](#)

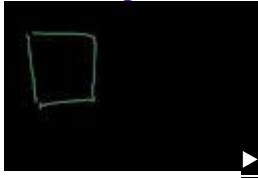
Explains how banks can have good upside and little downside.



[Geithner plan 5 | Geithner Plan | Khan Academy](#)



[Geithner plan 6: A better solution - Khan Academy](#)



**3. Regulatory Actions After the Recession:** After recession in 2008, government passed Dodd-Frank regulation and established Consumer Financial Protection Bureau (CFPB)

## **Brief Summary of the Dodd-Frank Wall Street Reform and Consumer Protection Act**

United States Senate Banking Committee  
July 1, 2010

Create a Sound Economic Foundation to Grow Jobs, Protect Consumers, Rein in Wall Street and Big Bonuses, End Bailouts and Too Big to Fail, Prevent Another Financial Crisis.

Years without accountability for Wall Street and big banks brought us the worst financial crisis since the Great Depression, the loss of 8 million jobs, failed businesses, a drop in housing prices, and wiped out personal savings.



The failures that led to this crisis require bold action. We must restore responsibility and accountability in our financial system to give Americans confidence that there is a system in place that works for and protects them.

We must create a sound foundation to grow the economy and create jobs.

### **HIGHLIGHTS OF THE LEGISLATION**

#### **Consumer Protections with Authority and Independence:**

Creates a new independent watchdog, housed at the Federal Reserve, with the authority to ensure American consumers get the clear, accurate information they need to shop for mortgages, credit cards, and other financial products, and protect them from hidden fees, abusive terms, and deceptive practices.

Real Life example:

- CFPB has created a number of finance tools for average consumer for example: Paying for College, helps parent estimate cost of attending a specific school. It takes into account the financial aid a student has received.
- CFPB goes after banks which are cheating consumers. Has fined banks for misrepresenting services
- Consumers can complain about banks on its website

### **Ends Too Big to Fail Bailouts:**

Ends the possibility that taxpayers will be asked to write a check to bail out financial firms that threaten the economy by: creating a safe way to liquidate failed financial firms; imposing tough new capital and leverage requirements that make it undesirable to get too big; updating the Fed's authority to allow system-wide support but no longer prop up individual firms; and establishing rigorous standards and supervision to protect the economy and American consumers, investors and businesses.

Real Life example:

- If there is a financial crisis like in 2008, government can't bail out banks. Banks are required to come up with a plan to liquidate themselves in an orderly manner, in case of a crisis.

### **Advance Warning System:**

Creates a council to identify and address systemic risks posed by large, complex companies, products, and activities before they threaten the stability of the economy.

### **Transparency & Accountability for Exotic Instruments:**

Eliminates loopholes that allow risky and abusive practices to go on unnoticed and unregulated – including loopholes for over-the-counter derivatives, asset-backed securities, hedge funds, mortgage brokers and payday lenders.

Real Life example:

- Regulation prohibits banks that serve consumers like us from risking money with high risk investment (where losses can be very high).

### **Executive Compensation and Corporate Governance:**

Provides shareholders with a say on pay and corporate affairs with a non-binding vote on executive compensation and golden parachutes.

### **Protects Investors:**

Provides tough new rules for transparency and accountability for credit rating agencies to protect investors and businesses.

### **Enforces Regulations on the Books:**

Strengthens oversight and empowers regulators to aggressively pursue financial fraud, conflicts of interest and manipulation of the system that benefits special interests at the expense of American families and businesses.

### **Strong Consumer Financial Protection Watchdog:**

## The Consumer Financial Protection Bureau

- Independent Head: Led by an independent director appointed by the President and confirmed by the Senate.
- Independent Budget: Dedicated budget paid by the Federal Reserve system.
- Independent Rule Writing: Able to autonomously write rules for consumer protections governing all financial institutions – banks and non-banks – offering consumer financial services or products.
- Examination and Enforcement: Authority to examine and enforce regulations for banks and credit unions with assets of over \$10 billion and all mortgage-related businesses (lenders, servicers, mortgage brokers, and foreclosure scam operators), payday lenders, and student lenders as well as other non-bank financial companies that are large, such as debt collectors and consumer reporting agencies. Banks and Credit Unions with assets of \$10 billion or less will be examined for consumer complaints by the appropriate regulator.
- Consumer Protections: Consolidates and strengthens consumer protection responsibilities currently handled by the Office of the Comptroller of the

## Too Big Not to Fail

The Economist  
February 18, 2012

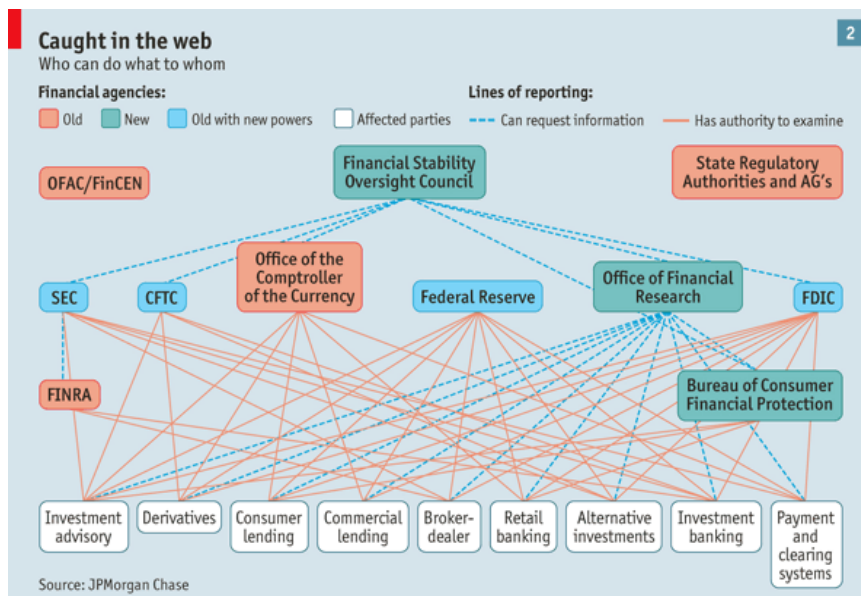
SECTIONS 404 and 406 of the Dodd-Frank law of July 2010 add up to just a couple of pages. On October 31st last year two of the agencies overseeing America's financial system turned those few pages into a form to be filled out by hedge funds and some other firms; that form ran to 192 pages. The cost of filling it out, according to an informal survey of hedge-fund managers, will be \$100,000-150,000 for each

firm the first time it does it. After having done it once, those costs might drop to \$40,000 in every later year.

Hedge funds command little pity these days. But their bureaucratic task is but one example of the demands for

fees and paperwork with which Dodd-Frank will blanket a vast segment of America's economy. After the crisis of 2008, finance plainly needed better regulation. Lots of institutions had turned out to enjoy the backing of the taxpayer because they were too big to fail. Huge derivatives exposures had gone unnoticed. Supervisory responsibilities were too fragmented. Dodd-Frank, named after its co-sponsors, Senator Chris Dodd and Congressman Barney Frank, attempted to address these issues (section 404 is one of those aimed at excessive risk exposure). But there is an ever-more-apparent risk that the harm done by the massive cost and complexity of its regulations, and the effects of its internal inconsistencies, will outweigh what good may yet come from it.

The law that set up America's banking system in 1864 ran to 29 pages; the Federal Reserve Act of 1913 went to 32 pages; the Banking Act that transformed American finance after the Wall Street Crash, commonly known as the Glass-Steagall act, spread out to 37 pages. Dodd-Frank is 848 pages long. Voracious Chinese officials, who pay close attention to regulatory developments elsewhere, have remarked that the mammoth law, let alone its appended rules, seems to have been fully read by no one outside Beijing (your correspondent is a tired-eyed exception to this



### Plethora of Government Agencies regulating Banks

**SEC:** Security and Exchange Commission; Enforces Federal Banking Laws

**CFTC:** Commodities and Futures Trading Commission; Regulates Options and Futures

**FINRA:** Financial Authority Regulatory Authority; Securities regulators that protect investors

**FDIC:** Federal Deposit Insurance Corporation; Insures our deposits in banks

**OFAC/FinCEN:** Office of Foreign Asset Control; Enforces Economic and Trade Sanctions



rule). And the size is only the beginning. The scope and structure of Dodd-Frank are fundamentally different to those of its precursor laws, notes Jonathan Macey of Yale Law School: “Laws classically provide people with rules. Dodd-Frank is not directed at people. It is an outline directed at bureaucrats and it instructs them to make still more regulations and to create more bureaucracies.” Like the Hydra of Greek myth, Dodd-Frank can grow new heads as needed.

Take the transformation of 11 pages of Dodd-Frank into the so-called “Volcker rule”, which is intended to reduce banks' ability to take excessive risks by restricting proprietary trading and investments in hedge funds and private equity (Paul Volcker, a former chairman of the Federal Reserve, has argued that such activity contributed to the crisis). In November four of the five federal agencies charged with enacting this rule jointly put forward a 298-page proposal which is, in the words of a banker publicly supportive of Dodd-Frank, “unintelligible any way you read it”. It includes 383 explicit questions for firms which, if read closely, break down into 1,420 subquestions, according to Davis Polk, a law firm. The interactive Volcker “rule map” Davis Polk has produced for its clients has 355 distinct steps.



### **Boom time for lawyers**

“I fear that the recently proposed regulation to implement the Volcker rule is extraordinarily complex and tries too hard,” Sheila Bair, a former head of the Federal Deposit Insurance Company (FDIC), told Congress in December. A notable pre-crisis critic of regulatory gaps, she now believes that in this case “regulators should think hard about starting over again with a simple rule.” Her comments were made before the Commodity Futures Trading Commission (CFTC), the fifth federal agency involved, issued its own proposal on proprietary trading on January 17th. That one is 489 pages long.

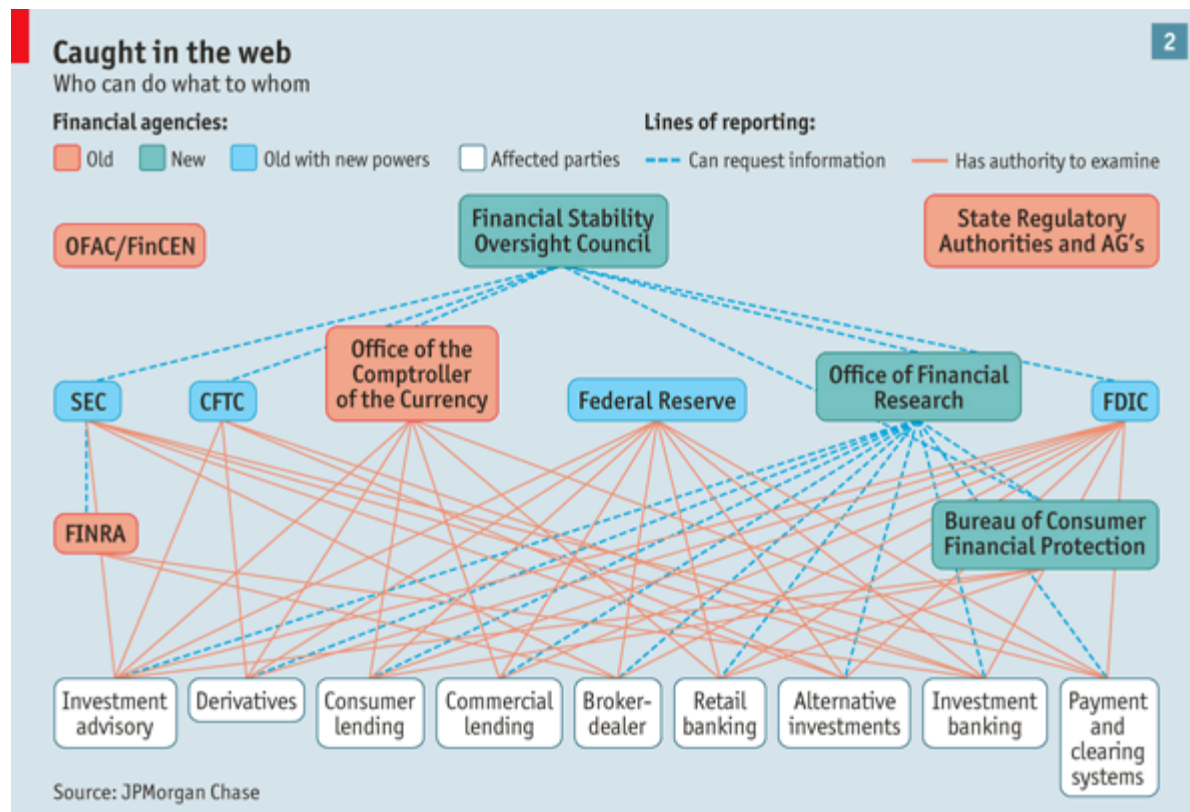
When Dodd-Frank was passed, its supporters suggested that tying up its loose ends would take 12-18 months. Eighteen months on, those predictions look hopelessly naive. Politicians and officials responsible for Dodd-Frank are upbeat about their progress and the system's prospects, at least when speaking publicly. But one banker immersed in the issue speaks for many when he predicts a decade of grind, with constant disputes in courts and legislatures, finally producing a regime riddled with exceptions and nuances that may, because of its complexity, exacerbate systemic risks rather than mitigate them.

For the same reasons that bankers are worried, lawyers are rubbing their hands. For many of America's most prominent law firms helping companies to cope with Dodd-Frank is a vital service to clients, a lubricant for the American economy and a great new business. Daily updates on Dodd-Frank from Davis Polk and Morrison & Foerster have become as important to many on Wall Street as newspapers. Their popularity looks set to endure: according to Davis Polk only 93 of the 400 rule-making requirements mandated by Dodd-Frank have been finalised. Deadlines have been missed for 164 (see chart 1). And litigation is just beginning.

On July 22nd 2011 the United States Court of Appeals for the District of Columbia upheld a challenge by two trade groups to a Dodd-Frank-related rule on shareholder voting put forward by the Securities and Exchange Commission (SEC); the court found that the rule was backed by insufficient or faulty economic analysis of costs and benefits. On December 2nd, another case on similar grounds was filed in a Washington, DC, district court by two securities-industry trade groups, this time against the CFTC, concerning restrictions on derivative holdings. If that court, too, finds for the plaintiffs expect a deluge of further suits.

Along with requiring oodles of contestable rules, Dodd-Frank mandates 87 studies on big and small issues, ranging from the impact of drywall on mortgage defaults to the causes of the financial crisis. Once again, deadlines have been missed and progress is limited: 37 studies have yet to be completed. The ones that have been finished have received little public attention; trying to drink from the rule-making fire hose leaves little time for absorbing the output of the reporting one. Some of the reports seem to reach odd conclusions. A report from the FDIC contends that had Dodd-Frank been in effect four years ago, Lehman Brothers' creditors would have received 97 cents on the dollar; one expert on the case calls this ludicrous. The problem is not that the reports are necessarily wrong, but that no one is scrutinising them.





Another product of Dodd-Frank is a plethora of new government powers and agencies (see chart 2) with authority over areas of the American financial system and economy affecting veterans, students, the elderly, minorities, investor advocacy and education, whistle-blowers, credit-rating agencies, municipal securities, the entire commodity supply chain of industrial companies, and more. Quite a lot have tasks already done by others—frustrating the act's worthwhile objective of consolidating fragmented pre-crisis supervision. A new office within the Treasury department is intended to forecast and head off disasters—already a goal of research groups at the 12 regional Federal Reserve Banks, the Federal Reserve Board, the president's Council of Economic Advisers and numerous federal agencies, not to mention universities, think-tanks and private firms.

If the roles of many of these Dodd-Frank entities are overly familiar, their funding—which often skirts constitutional requirements for congressional approval—is more exotic. The new research bureau in the Treasury will be entitled to the proceeds of a new tax on banks. The new Consumer Financial Protection Bureau (CFPB) will be funded by the Fed.

But the really big issue that Dodd-Frank raises isn't about the institutions it creates, how they operate, how much they cost or how they are funded. It is the risk that they and other parts of the Dodd-Frank apparatus will smother financial institutions in so much red tape that innovation is stifled and America's economy suffers. Officials are being given the power to regulate more intrusively and to make arbitrary or capricious rulings. The lack of clarity which follows from the sheer complexity of the scheme will sometimes, perhaps often, provide cover for such capriciousness.



For example, the new CFPB will have latitude to determine what type of financial products can be provided to which consumers and at what cost, as well as the right to pursue institutions for acting in an “abusive” fashion (a term with no legal definition). Requirements for “living wills” that encompass hypothetical business plans have to be pored over by regulators; “stress tests” insert government assumptions deep into the decisions banks make about their capital. Such tests are not new to Dodd Frank. But the befuddling form the act gives such ideas unintentionally opens a path to much more state interference.

### **Dodd-Frankenstein's monsters**

Another problem with complexity is that it encourages efforts to game the system by exploiting the loopholes it inevitably creates. Take the simple matter of nomenclature. Anticipating the Volcker rule, bank departments previously using the word “proprietary” have been dropped, renamed or quietly shifted to sheltered corners. The shadow banking system existed before the crisis, but expect it to grow as some financiers decamp to companies that evade Dodd-Frank's definitions.

The fees banks can charge for debit cards are being sharply reduced, but other retailers with similar products have received a waiver, courtesy of the so-called Durbin amendment (named after a Democratic senator, Dick Durbin). Consequently the payment industry may be in the early stages of a rule-driven and otherwise unlooked-for transformation with no rationale in efficiency or safety. The bank-remittance business, which was also selectively hit with new rules, is facing a similar shake-up. The governments of Japan, Canada and the European Union have had their hackles raised by the fact that American federal and municipal bonds will be exempt from the Volcker rule, however it is put into practice, whereas their own bonds will not. Goldman Sachs's chief financial officer, David Viniar, has said that inefficiencies in the market resulting from Volcker could make trading more profitable—which was hardly the point.

### **Paying up**

There could well be unintended consequences at the level of the employee, too. Last August the SEC opened an office mandated by Dodd-Frank that is dedicated to examining whistle-blower complaints. It collected 334 reports in its first seven weeks; no one will say how many have come forth since, but many more are expected the better known the office gets. This may sound welcome. But Dodd-Frank's provisions for massive payments to the whistle-blowers—of up to 30% of any monetary sanctions collected on the basis of their report—will make the SEC route more attractive than using companies' own processes, and may thus make corporate governance less effective.

For their part manufacturers seem largely unaware that a provision in Dodd-Frank concerning the extraction of minerals from in and around the Congo will mean that they will have to begin filing information on their entire supply chain to the SEC. This is officially estimated to affect 1,000-5,000 companies at a cost of \$71m. The US Chamber of Commerce thinks it will affect hundreds of thousands. The National Association of Manufacturers estimates it will cost \$9 billion-16 billion. Conflict minerals are a disturbing issue. They were not one of the causes of the global financial crisis.

The overall cost of all this—both directly to public and private institutions and indirectly to the markets—is staggering. At the same time as banks are sacking employees in operating roles, they are adding swarms to cope with various requests from government agencies and other new filings, all to avoid violating rules that may never come into existence and temporary measures that may be rescinded. That is without looking at losses in terms of business not done. Loans that might not fit into a category favoured by regulators are being trimmed or withdrawn.

Jamie Dimon, JPMorgan Chase's boss, reckons the direct costs to his bank, America's largest, will be \$400m-600m annually. “Additional regulations resulting from the Dodd-Frank act may materially adversely affect BB&T's business, financial condition or results of operations,” said one regional bank in its recent annual filing to the SEC. Other institutions are said to be in the process of drafting similar statements, or, at the least, planning to acknowledge the costs in the conference calls that surround quarterly earnings.

Banks are trading below book value. Low valuations make it hard for banks to raise the capital that would allow them to lend more, as politicians would like. This state of affairs is in part due to the condition of the economy. And the reasonable goal of restricting banks from taking private risks with socialised consequences may in some cases reduce their value. But it is hard to find a banker or analyst who doesn't privately attribute a lot of the low valuation to the unnecessarily harsh impact of current regulations.

Inevitably, banks themselves are adding to the costs with a vast lobbying effort. SIFMA, a financial industry trade association, says it has 5,490 people dealing with various subcommittees, almost all devoted to Dodd-Frankery. And there are quieter attempts to blunt the act's provisions or redirect them to the advantage of one set of financial institutions or another. The Occupy Wall Street crowd, with its emphasis on government-business collusion, would be enraged if it knew.

But most bankers are reluctant to discuss the law in public, and will do anything to avoid commenting on regulators. This is in part due to the risk that, given the industry's low public esteem, complaining would be inflammatory and counterproductive, perhaps also bringing with it regulatory retribution. A few also see the possibility of gaining an edge: some well established banks consider themselves better able to handle the costs than smaller or newer ones, particularly those that don't have cushy relationships with regulators. Others, according to the head of one large bank, are quiet only because they do not understand the scope of the changes.

### **Back to the drawing board**

All of which leads to the question of what Dodd-Frank has actually achieved. More information on America's derivatives markets will be available to regulators than was previously the case, though how much will be useful is debatable. A new (untested) insolvency procedure is now in place for firms like AIG, which lacked an alternative to bankruptcy or bail-out before the crisis. But the heavy lifting on higher capital requirements for banks is being done internationally via the Basel 3 process. And Dodd-Frank has hardly touched Fannie Mae and Freddie Mac, the two big government-sponsored lending entities that received the largest bail-outs in 2008, and which are more important in the housing markets than ever.



The muddle stands in sharp contrast to the aftermath of earlier legislation. The banking-reform act of 1864 consolidated America's fragmented currency system and enabled Abraham Lincoln to finance the civil war. The period of reregulation between 1933 and 1940 reserved a safe harbour for commercial banks, which were backed by federal deposit insurance but didn't attract speculative capital because of caps on the rate of interest that could be paid. Risk was left to investment banks and asset-management firms, tempered by abundant requirements for disclosure and a shift in where the burden of proof lay in litigation, from plaintiffs to defendants.

Even Dodd-Frank's creators can bring no similar clarity to its intentions. In 2009 Mr Frank attempted to frame the new law's goals under four heads: securitisation, compensation, liquidation and systemic risk. But in a single speech his ambitions overflowed to consumer protection and the reform of ratings agencies, too. Ambition is often welcome; but in this case it is leaving the roots of the financial crisis under-addressed—and more or less everything else in finance overwhelmed.

**Correction:** The direct annual cost to JPMorgan Chase of these regulations is not going to be \$400 billion-600 billion as we first wrote. A figure between \$400m and \$600m is rather closer to the mark. This was corrected on February 17th 2012.

#### 4. Ben Bernanke's Role as Fed Chairman

### This is How History Should Judge Ben Bernanke

By Neil Irwin  
Washington Post  
January 3, 2013



The chairman, for a few weeks longer. (Photo by Andrew Harrer/Bloomberg)

*On Friday afternoon, Ben Bernanke will address the American Economic Association annual meeting in Philadelphia with a speech on "The Changing Federal Reserve: Past, Present, Future". It also amounts to something of a valedictory, coming less than a month before he leaves office. He will be speaking to an audience of academic economists, which of course Bernanke was before his time as a policymaker began in 2003. Here is our story from last month exploring Bernanke's legacy.*

When Ben Shalom Bernanke finishes his workday and walks out the doors of the Federal Reserve's white marble building on Constitution Avenue for the last time on Jan. 31, he will also be walking into history.

He has guided the nation's economy — and its central bank — through as tumultuous a period as it has faced in its hundred years of history. He will leave behind an utterly transformed institution. And whatever happens in the decades to come, he will be one of the most important shapers of economic policy of the 21<sup>st</sup> century.



Bernanke will take the stage for what is expected to be his final news conference Wednesday afternoon. There is one question that he cannot really be expected to answer: How, Mr. Chairman, will history judge you?

I have spent the better part of the last seven years scrutinizing everything Ben Bernanke has said and done, first as a Washington Post reporter covering the Fed, then as [author of a book](#) on Bernanke and his fellow central bankers, then as an economic columnist for The Post. At one point, I was pretty sure I had identified his favorite necktie — the one he had worn for a New York Times magazine cover shoot and at a few high-profile congressional appearances in a row.

So, how will history judge him? This is my best attempt at an answer.

### **A novice's communication slip**

It's easy to forget now, but when Bernanke became Fed chair in early 2006, he was a relative novice on the world stage. His two predecessors, Paul Volcker and Alan Greenspan, each had spent decades at the highest levels of economic policymaking. Bernanke had spent less than three years as a Fed governor, seven months as the top White House economist and two terms as a member of the Montgomery Township, N.J., board of education.

Bernanke had to remake himself from an academic with a shaggy beard and tan dress socks into a high-powered Washington operator. There were some hiccups along the way.

It feels like an eternity ago, but the most damaging episode of Bernanke's early Fed tenure came in the spring of 2006. He said in congressional testimony that the Fed could pause its interest rate increases, which led markets to skyrocket. Bernanke hadn't been intending to signal a policy change, and when CNBC host Maria Bartiromo asked him whether markets had interpreted him correctly at the White House Correspondent's Dinner that weekend, Bernanke, thinking the conversation to be off-the-record, said, "No." Bartiromo reported the conversation on-air, prompting an 80-point selloff in the Dow.



The Federal Reserve chair as he looked when he first arrived in Washington from Princeton. (Source: Federal Reserve)

It was a luxury of the age, perhaps, that the minor screw-up seemed like such a big deal. There were 247 articles in major media outlets tracked by Nexis that month, many of them speculating about Bernanke's failure as a communicator.

But, in a strange way, it may have been good for him to get that trial over with early in his tenure. For someone who had never been in the center of a media maw, it may have helped him become more inured to the inevitable attacks that would come later, when the stakes were far higher. In interviews with many of the people who worked with him closely through this period,

I have heard again and again of how they watched him become more savvy, more cynical, more accustomed to the petty hypocracies that accompany public service.

In the early days of his chairmanship, aides told me, Bernanke seemed bewildered that lawmakers who were warm and supportive of him in private meetings would then excoriate him in public hearings. By the time the financial crisis rolled around, he was unfazed.

Oh, and he hasn't returned to the carnival that is the White House Correspondents' Dinner since then.

### **The subprime warnings**

Another serious knock on Bernanke's performance as chair is the Fed's handling of the blossoming subprime mortgage crisis that had its earliest tremors in his second year as chairman. He famously [said in March 2007](#) that "the impact on the broader economy and financial markets of the problems in the subprime market seems likely to be contained."

Of course, they were anything but contained. An epic housing bubble had emerged by the middle of the last decade, propped up by trillions of dollars in mortgages that never should have been issued. The question in assessing Bernanke, though, is what he could have and should have done differently in 2006 and 2007 that could have reduced the severity of the crisis, or even prevented it altogether.

This has a more mixed answer. The Federal Reserve he inherited was imbued with the *laissez-faire* approach to financial regulation favored by his predecessor, Alan Greenspan. The Fed had largely avoided using its powers to protect consumers to rein in subprime mortgage lending, though it started ramping up that effort under Bernanke (too little, too late, we know now).

The most significant thing that Bernanke might have done to reduce the impact of the crisis would have been to insist on much tougher bank supervision at the start of his tenure. Some of the things now in the Fed's standard regulatory toolkit — stress-testing the balance sheets of large banks for what might happen amid a recession and home price decline, taking a hard line against off-balance sheet risks that clever bankers might engineer — would have helped reduce the severity of the crisis a great deal.

And, above all, if the Fed had insisted on higher capital ratios for major banks, it would have left the financial sector with more capacity to withstand losses from bad mortgage lending, perhaps even avoiding the need for bailout and the near-collapse of the financial system.

Bernanke did not have the power to enact those changes on his own; bank supervision happens through collaboration with many agencies, along with international regulators. And the idea of radically more aggressive regulation of banks was far from the mainstream in 2006. The banks and their lobbyists would have screamed bloody murder; Bernanke would have been isolated from other U.S. and global regulators and the Bush administration; and it's not at all certain he could have pulled it off.

But it is also true that he did not see the grave peril facing the global economy clearly enough to try.

## **Crisis time**

Then, there's the crisis, which in the popular conscience erupted in the fall of 2008 but really started in August of 2007, when the money markets first froze up amid mounting losses on mortgage-related securities.

The consensus view of this time — embedded in multiple books, magazine profiles and comments by high officials — is this: Ben Bernanke and the Federal Reserve rescued the U.S. and global economies from the abyss and prevented a second Great Depression, exhibiting courage and creativity that made us all better off.

The consensus view is correct.

There were many aspects of the governments' crisis response, some of which Bernanke didn't have much to do with. The bank bailout known as TARP was requested by the George W. Bush Administration, passed by Congress and carried out by the Treasury Department. The 2009 fiscal stimulus was designed by the Obama administration and lawmakers.

But it was the efforts of Bernanke and the Federal Reserve that played as large a role as any in stopping the economic free-fall that characterized the U.S. economy five years ago. Bernanke pushed his colleagues and subordinates to create an ever-expanding list of novel programs to use the Fed's limitless supply of money to backstop one market after another. Commercial paper, money market mutual funds, mortgage-backed securities, credit card lending: You name a financial vehicle, and by early 2009, the Federal Reserve under Bernanke's watch was doing something to support it.

At one point, the New York Fed created a table to help people keep track of each of these programs, its structure and goals. It occupied an entire legal-sized piece of paper, in tiny type.

While headlines in the United States focused on the Fed's role in unpopular bailouts of Bear Stearns and AIG, its broader role as lender of last resort of the global financial system dwarfed them. For example, the Fed undertook swap lines with other global central banks, helping ensure that banks around the world could get access to dollars. The Bear Stearns bailout was \$30 billion, AIG was \$85 billion. The swap lines peaked at \$580 billion.

The most common knock on Bernanke's crisis performance was his failure (along with Treasury Secretary Hank Paulson and then-New York Fed chief Timothy Geithner) to prevent the Lehman Brothers bankruptcy that started it all. It's a fair criticism, except for this: I have interviewed enough people and read enough internal e-mails from that period to conclude that no one at the time had come up with a plan to resolve Lehman that was legal and actionable.

The Lehman failure wasn't a case of Bernanke and his fellow officials facing a choice and deciding wrong. They weren't able to come up with a better option. And at the time, the will— of the Bush administration, Congress and the American people — for further bailouts was at its breaking point. If they had found a way to save Lehman, soon enough there would have come another breaking point, with another institution on the brink and deep-seated demand to let it fall.

Then there was Bernanke's symbolic role as the even-tempered, wise, calm in the storm. Geithner has called him the "Buddha of central bankers," and never was that more true than in late 2008 and early 2009. When Paulson needed someone to help him persuade Congress of the necessity of the TARP bank bailout, someone driven by concern for the country's well-being rather than by helping out Wall Street fatcats, Bernanke was by his side. When Geithner had a difficult start to his time as Treasury secretary and the nation needed credible reassurance that things would be okay, Bernanke appeared on "60 Minutes" with a performance that provided just that.

Bernanke came to office as a shy, low-profile academic who wanted to take away some of the mystique of the imperial Fed chairmanship of the Greenspan era. But when the nation most needed him to take the lead in a very public way, he rose to the challenge.

### **The long road back**

When Bernanke was confirmed for a second term as chairman in January 2010, it looked like his remaining time in office would be devoted to unwinding the unconventional programs that he established in his first term of crisis response.

It wasn't.

The recovery that began in 2009 proved, again and again, to be weak, halting and uncertain. Perhaps this should have been expected, given the historical track record of post-financial crisis recoveries. But Bernanke and his Fed colleagues made the analytical error of repeatedly predicting stronger growth just around the corner, which has still not arrived.

What Bernanke did in response to the frustratingly slow recovery will shape his ultimate legacy as significantly as did his crisis response.

Inside and outside the Fed, there was by 2010 a deep sense of crisis fatigue, a sense that all the things that the Fed and other policymakers were doing to try to stimulate growth wasn't doing any good, and might have been doing harm. Congress was locked in partisan battles, taking any action from fiscal authorities off the table. Bernanke could have sat on his hands, as well, concluding: "Well, we did our best. What happens to the economy next is outside our control."

Instead, he looked to his reservoir of academic knowledge to ask what the Fed could do to help things. Where in late 2008 Bernanke was focused on preventing the Great Depression, from 2010 on, the Fed faced a different historical antecedent: Japan in the 1990s.

Bernanke as an academic had argued that Japan's policymakers needed to be much more aggressive to stop a cycle of deflation and stagnant growth from setting in. With the United States on the precipice of the same sort of economy in 2010 — inflation was falling well below the Fed's 2 percent target, and growth was weak — Bernanke guided his colleagues toward an unpopular policy that became known the world over as "QE2," the second round of quantitative easing.

He did it again in 2012, and the program of bond-buying appears likely to continue well beyond his own chairmanship. When Bernanke became chairman in 2006, there was \$811 billion in

reserve bank credit on the Fed's balance sheet. The crisis response drove that up to \$2.2 trillion by the time his second term began. He will leave office with a Fed balance sheet exceeding \$4 trillion, the result of five years of money-printing.

So, has it worked? The answer depends on what you mean by "worked."

Inflation is still below the Fed's target, running in the low 1 percent range. Predictions of high inflation from the programs' critics have not materialized. The stock market and other financial instruments have risen dramatically in value during the easing programs, helped in no small part by a gush of money pumped out by the Fed. Some markets — for farmland in middle America, emerging market bonds — have even flirted with bubble territory, helped along by Bernanke's money printing.

Growth is a different story. The repeated monetary jolts from the Fed's easy money policies have been enough to help prevent a double-dip recession but haven't created the kind of robust growth that Bernanke and his colleagues would hope for. The unemployment rate is down dramatically — from 9.5 percent in mid-2010 to 7 percent today — though that has come in significant part because people have been dropping out of the labor force.

### **History will decide**

This time eight years ago, as Alan Greenspan went off into the relaxing existence of six-figure lecture fees and seven-figure book advances, he was as universally and enthusiastically praised as a public figure can be. His 17-year chairmanship had aligned almost perfectly with a period of unprecedented economic expansion and low inflation. Just two years later, a darker picture emerged: Under the Greenspan Fed, an epic credit bubble had been building, the collapse of which devastated the global economy.

All of which is a long way of saying: Assessing Ben Bernanke requires a healthy level of intellectual modesty, because his legacy will depend on things we can't yet know. So far, the evidence points to the Fed's post-crisis role as having been helpful and constructive. But for the ultimate answer, we'll have to wait and see.

Will the unwinding of his QE policies, to be carried out by a Janet Yellen Fed, be a smooth process in which growth returns, unemployment falls and the central bank can exit from half a decade of zero interest rates and a \$4 trillion balance sheet without sparking a new crisis? Can the Fed handle the immense task it has been given under the Dodd-Frank Act, to act as an all-purpose guardian of the financial system? Bernanke will not be around to carry them out, but the answers will shape whether he is a hero or villain of history.

But whatever the answers to those questions, you can say this about Ben Bernanke. At a time when there was a sense of economic despair across the country, when official Washington was immersed in a kind of fatalism, unwilling to take on the hard task of trying to coax growth out of a stagnant economy, he was different. He didn't have the perfect tools for the job, but he searched his academic knowledge of how economies work, and used what he did have to try to put America's jobless back to work.

Bernanke's chairmanship has been a fight for the idea that good policy can make people's lives better, and he has exhibited the courage to take risks to make it so. For that alone, he deserves our thanks.



## Fed Chairman Ben Bernanke's Take on the Economy

Transcript: 60 Minutes Interview  
Ben Bernanke Takes on Economy  
December 3, 2010

**Chairman Ben Bernanke:** The unemployment rate is just not going down. Unemployment is just about the same as it was in mid-2009, when the economy started growing. So, that's a major concern. And it looks that at current rates, that it may take some years before the unemployment rate is back down to more normal levels.

**Scott Pelley:** We lost about eight million jobs from the peak. And I wonder how many years you think it will be before we get all those jobs back?

**Bernanke:** Well, you're absolutely right. Between the peak and the end of last year, we lost eight and a half million jobs. We've only gotten about a million of them back so far. And that doesn't even account the new people coming into the labor force. At the rate we're going, it could be four, five years before we are back to a more normal unemployment rate. Somewhere in the vicinity of say five or six percent.

Four or five years. And Bernanke told "60 Minutes" something else that makes that even more painful.

**Bernanke:** The other aspect of the unemployment rate that really concerns me is that more than 40 percent of the unemployed have been unemployed for six months or more. And that's unusually high. And people who are unemployed for such a long time, their skills erode. Their attachment to the labor force diminishes and it may be a very, very long time before they find themselves back in a normal working position.

Bernanke was appointed in 2006 by President Bush and reappointed by President Obama. He grew up in Dillon, S.C., the son of a drugstore owner. He studied economics at Harvard and MIT and chaired the economics department at Princeton.

Pelley met Bernanke Tuesday (Nov. 30) in the Thompson Library on the campus of The Ohio State University. He was in Columbus on one of his frequent trips to hear how people are coping with the economy.

Earlier in the day he heard from the CEOs of Ford and IBM but also from small business owners who told him they were having trouble getting financing from banks.

**Pelley:** The major banks are racking up profits in the billions. Wall Street bonuses are climbing back up to where they were. And yet, lending to small businesses actually declined in the third quarter. Why is that?

**Bernanke:** A lot of small businesses are not seeking credit, because, you know, because their business is not doing well, because the economy is slow. Others are not qualifying for credit,

maybe because the value of their property has gone down. But some also can't meet the terms and conditions that banks are setting.

**Pelley:** Is this a case of banks that were eager to take risks that ruin the economy being now unwilling to take risks to support the recovery?

**Bernanke:** We want them to take risks, but not excessive risks. We want to go for a happy medium. And I think banks are back in the business of lending. But they have not yet come back to the level of confidence that, or overconfidence, that they had prior to the crisis we want to have an appropriate balance.

Bernanke's first interview ever as Fed chairman came in 2009 shortly after the panic.

It was then that he gave "60 Minutes" and Scott Pelley a rare opportunity to see the Federal Reserve headquarters in Washington, D.C.

Last month, Bernanke announced the Fed's intent to buy \$600 billion in U.S. Treasury securities, which is supposed to have the effect of lowering rates on long term loans for things like cars and homes.

Bernanke wanted to emphasize that these are the Fed's own reserves. It's not tax money. It does not add to the federal deficit.

**Pelley:** What did you see that caused you to pull the trigger on the \$600 billion, at this point?

**Bernanke:** It has to do with two aspects. The first is unemployment. The other concern I should mention is that inflation is very, very low, which you think is a good thing and normally is a good thing. But we're getting awfully close to the range where prices would actually start falling.

**Pelley:** Falling prices lead to falling wages. It lets the steam out of the economy. And you start spiraling downward.

**Bernanke:** Exactly. Exactly.

That's deflation and that's what happened in the Great Depression.

**Pelley:** How great a danger is that now?

**Bernanke:** I would say, at this point, because the Fed is acting, I would say the risk is pretty low. But if the Fed did not act, then given how much inflation has come down since the beginning of the recession, I think it would be a more serious concern.

Critics of Bernanke's Federal Reserve have the opposite worry: they say the \$600 billion and holding down interest rates could overheat the recovering economy, causing prices to rise out of control.

**Pelley:** Some people think the \$600 billion is a terrible idea.

**Bernanke:** Well, I know some people think that but what they are doing is they're looking at some of the risks and uncertainties with doing this policy action but what I think they're not doing is looking at the risk of not acting.

**Pelley:** Many people believe that could be highly inflationary. That it's a dangerous thing to try.

**Bernanke:** Well, this fear of inflation, I think is way overstated. We've looked at it very, very carefully. We've analyzed it every which way. One myth that's out there is that what we're doing is printing money. We're not printing money. The amount of currency in circulation is not changing. The money supply is not changing in any significant way. What we're doing is lowering interest rates by buying Treasury securities. And by lowering interest rates, we hope to stimulate the economy to grow faster. So, the trick is to find the appropriate moment when to begin to unwind this policy. And that's what we're gonna do.

**Pelley:** Is keeping inflation in check less of a priority for the Federal Reserve now?

**Bernanke:** No, absolutely not. What we're trying to do is achieve a balance. We've been very, very clear that we will not allow inflation to rise above two percent or less.

**Pelley:** Can you act quickly enough to prevent inflation from getting out of control?

**Bernanke:** We could raise interest rates in 15 minutes if we have to. So, there really is no problem with raising rates, tightening monetary policy, slowing the economy, reducing inflation, at the appropriate time. Now, that time is not now.

**Pelley:** You have what degree of confidence in your ability to control this?

**Bernanke:** One hundred percent.

**Pelley:** Do you anticipate a scenario in which you would commit to more than \$600 billion?

**Bernanke:** Oh, it's certainly possible. And again, it depends on the efficacy of the program. It depends on inflation. And finally it depends on how the economy looks.

**Pelley:** How would you rate the likelihood of dipping into recession again?

**Bernanke:** It doesn't seem likely that we'll have a double dip recession. And that's because, among other things, some of the most cyclical parts of the economy, like housing, for example, are already very weak. And they can't get much weaker. And so another decline is relatively unlikely. Now, that being said, I think a very high unemployment rate for a protracted period of time, which makes consumers, households less confident, more worried

about the future, I think that's the primary source of risk that we might have another slowdown in the economy.

**Pelley:** You seem to be saying that the recovery that we're experiencing now is not self-sustaining.

**Bernanke:** It may not be. It's very close to the border. It takes about two and a half percent growth just to keep unemployment stable. And that's about what we're getting. We're not very far from the level where the economy is not self-sustaining.

The debate on Capitol Hill this week is over whether to extend the Bush tax cuts, which would likely increase the budget deficit.

Bernanke wouldn't answer that question directly, but he certainly made one thing clear: he told us cutting the budget deficit must be done he said but it shouldn't be done right now.

**Bernanke:** We need to pay close attention to the fact that we are recovering now. We don't want to take actions this year that will affect this year's spending and this year's taxes in a way that will hurt the recovery. That's important. But that doesn't stop us from thinking now about the long term structural budget deficit. We're looking at ten, 15, 20 years from now, a situation where almost the entire federal budget will be spent on Medicare, Medicaid, Social Security, and interest on the debt. There won't be any money left for the military or for any other services the government provides. We can only address those issues if we think about them now.

Bernanke makes a point of remaining silent on specific proposals that Congress might consider, so we were surprised when he did offer up a big idea for making the economy grow.

**Bernanke:** Cleaning up the tax code, for example. The tax code is very inefficient. Both the personal tax code and the corporate tax code. By closing loopholes and lowering rates, you could increase the efficiency of the tax code and create more incentives for people to invest.

Recently, Bernanke has been facing hostility from the most conservative members on Capitol Hill. Some are calling for reducing the Fed's role. But Bernanke understands that his job is not a popularity contest.

**Pelley:** How concerned are you about the calls that you're beginning to hear on Capitol Hill that would curb the Fed's independence?

**Bernanke:** Well, the Fed's independence is critical. The central bank needs to be able to make policy without short term political concerns. In order to do what's best for the economy. We do all of our analysis, we do all of our policy decisions based on what we think the economy needs. Not based on when the election is or what political conditions are.

Like many economists, Bernanke believes it was the Federal Reserve itself that instrumental in causing the Great Depression with its tightfisted monetary policies.

So, he did exactly the opposite. In the panic of 2008, the Fed put up \$3.3 trillion. And just this past week, the Fed revealed who got emergency help.

It turns out there were 21,000 transactions - including loans and purchases - with financial firms including Citigroup, Morgan Stanley, Goldman Sachs, major industrial companies including GE, and even to foreign banks, including the Bank of England. Most all the loans have been paid back.

But it was a historic transfusion of cash in a global system that was bleeding to death. We asked Bernanke what would have happened if the Fed hadn't acted.

**Pelley:** What would unemployment be today?

**Bernanke:** Unemployment would be much, much higher. It might be something like it was in the Depression. Twenty-five percent. We saw what happened when one or two large financial firms came close to failure or to failure. Imagine if ten or 12 or 15 firms had failed, which is where we almost were in the fall of 2008. It would have brought down the entire global financial system and it would have had enormous implications, very long-lasting implications for the global economy, not just the U.S. economy.

But it's also true that the Fed was the regulatory watchdog of the largest banks when crazy lending led the world to crisis.

**Pelley:** Is there anything that you wish you'd done differently over these last two and a half years or so?

**Bernanke:** Well, I wish I'd been omniscient and seen the crisis coming, the way you asked me about, I didn't. But it was a very, very difficult situation. And the Federal Reserve responded very aggressively, very proactively.

**Pelley:** How did the Fed miss the looming financial crisis?

**Bernanke:** There were large portions of the financial system that were not adequately covered by the regulatory oversight. So, for example, AIG was not overseen by the Fed.

**Pelley:** The insurance company.

**Bernanke:** The insurance company that required the bailout, was not overseen by the Fed. It didn't really have any real oversight at that time. Neither did Lehman Brothers, the company that failed. Now, I'm not saying the Fed should not have seen some of these things. One of things that I most regret is that we weren't strong enough in putting in consumer protections to try to cut down on the subprime lending problem. That was an area where I think we could have done more.

**Pelley:** The gap between rich and poor in this country has never been greater. In fact, we have the biggest income disparity gap of any industrialized country in the world. And I wonder where you think that's taking America.

**Bernanke:** It's a very bad development. It's creating two societies. And it's based very much, I think, on educational differences. The unemployment rate we've been talking about. If you're a college graduate, unemployment is five percent. If you're a high school graduate, it's ten percent or more. It's a very big difference. It leads to an unequal society and a society which doesn't have the cohesion that we'd like to see.

**Pelley:** We have talked about how the next several years are gonna be tough years in this country. But I wonder what you think about the ten-year time horizon. Fifteen years. How do things look to you long term?

**Bernanke:** Long term, I have a lot of confidence in the United States. We have an excellent record in terms of innovation. We have great universities that are involved in technological change and progress. We have an entrepreneurial culture, much more than almost any other country. So, I think that in the longer term the United States will retain its leading position in the world. But again, we gotta get there. And we have some very difficult challenges over the next few years.



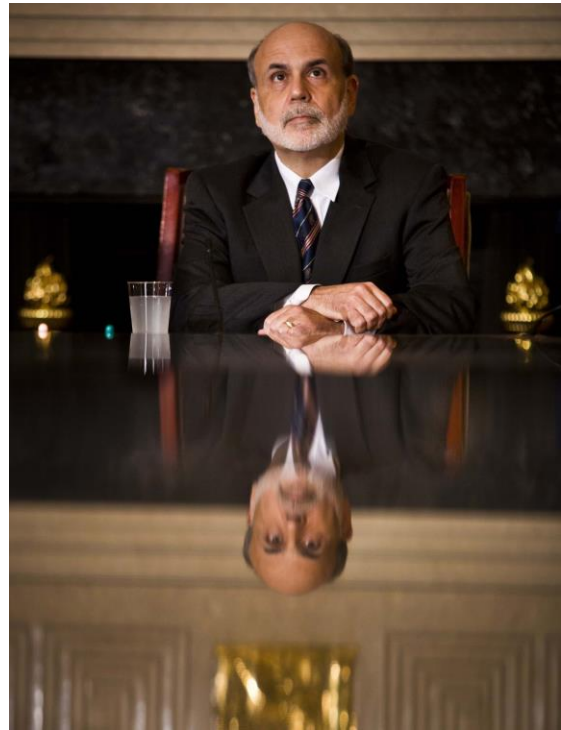
## Under Ben Bernanke, a More Open and Forceful Federal Reserve

By Zachary Goldfarb  
Washington Post  
September 23, 2012

In what might be his final years as chairman of the Federal Reserve, [Ben S. Bernanke](#) is transforming the U.S. central bank, seeking to shed its reclusive habits and make it a constant presence in bolstering the economy.

The new approach would make the Fed's policies more responsive to the needs of the economy — and likely more forceful, because what the Fed is planning to do would be much clearer. A key feature of the strategy could be producing a set of scenarios for when and how the Fed would intervene, which would mark a dramatic shift for an organization that throughout its history has been famously opaque.

Bernanke has already pushed the Fed far along this path. [The central bank this month pledged](#) to stimulate the economy until it no longer needs the help, an unprecedented promise to intervene for years. That's a big change from the Fed's usual role as a curb on inflation and buffer against financial crises.



Federal Reserve Chairman Ben Bernanke.  
(Jeffrey MacMillan/Capital Business)

“It’s a re-imagining of Fed policy,” said John E. Silvia, chief economist at [Wells Fargo](#). “It’s a much more explicit commitment than people had thought about in the past. It’s a much stronger commitment to focus on unemployment.”

As the Fed becomes more forceful and interventionist, it creates new risks for itself. Bernanke’s actions have provoked tough criticism from conservatives in Congress, who have proposed more closely regulating what the Fed can do. The Fed takes pride in its independence, but becoming more interventionist may plunge it deeper into the political maelstrom.

With his new approach, Bernanke is searching for an elixir for a problem that has plagued the Fed’s efforts to help the economy. Each time Fed officials have acted during the recent downturn, the effort has been limited in scope. When the Fed’s program has ended, invariably it has not accomplished enough.

Now, the Fed is saying that it plans to continue stimulating the economy well after the recovery gets strong. The virtually unlimited nature of the pledge means that financial markets will know that the Fed will probably step in whenever growth weakens — and that may have powerful

calming effects on the economy.

“Stating that we expect to keep a highly [stimulative] stance for policy for a considerable time after the recovery strengthens is an important reassurance to households and businesses,” [Charles Evans](#), president of the Federal Reserve Bank of Chicago, said in a speech last week.

Bernanke is also studying the idea of declaring that the Fed will boost the economy until unemployment reaches a specific target or until inflation takes off. Some Fed officials have suggested that the central bank keep on stimulating until unemployment reaches 7 percent or inflation rises to 3 percent; others have proposed Fed action until unemployment reaches 5.5 percent or inflation rises to 2.25 percent.

The Fed’s legal mandate is to minimize unemployment and keep prices stable; the Fed has set a long-term inflation target of 2 percent per year.

While many top Fed officials agree with a far more detailed approach, the Fed has not reached final agreement on which new steps to take. But any measures would build on the Fed’s announcement this month that it will launch a series of open-ended policies to spur job creation. The stimulus comes in the form of a plan to hold interest rates near zero at least through mid-2015 and to buy \$143 billion in mortgage bonds through the end of the year, and then continue the purchases as long as necessary.

“They’ve basically signaled that this time is going to be different,” said Michelle Girard, senior U.S. economist at RBS. “They’re going to keep the foot on the gas until the economy responds.”

The new strategy still carries a number of risks. The most significant is that the Fed’s efforts heat up economic growth in a way that unleashes inflation, which would eat away at middle-class incomes.

“A commitment to provide stimulus beyond the point at which the recovery strengthens and growth increases implies too great a willingness to tolerate higher inflation,” [Jeffrey M. Lacker](#), the president of the Federal Reserve Bank of Richmond, said in a speech last week.

Lacker was the only one of the 12 voting members of the Fed’s governing committee to dissent from this month’s decision.

Despite that dissent, Bernanke’s efforts to remake the Fed dovetails with his efforts to forge a greater consensus among members of the Federal Open Markets Committee.

Bernanke believes that the consensus is especially critical now because the Fed’s promises extend beyond the chairman’s term, which ends in early 2014. Many economists expect Bernanke to step down then after eight grueling years.

Together, the push for the Fed to take a more aggressive stance against unemployment and make decisions by consensus fulfills two longtime goals of Bernanke, one of the preeminent Fed scholars before becoming chairman.

As a college professor, he strongly advocated that central banks not stand idly by during times of high unemployment and argued that more deliberation at central banks can increase the legitimacy and impact of their actions.

But the search for consensus may have also delayed the Fed's actions.

By late July, for instance, Bernanke thought the jobs market was weak, and he was ready to launch a major intervention. At the Fed's meeting July 31 and Aug. 1, Bernanke circulated open-ended language the Fed would later release.

But some of Bernanke's colleagues were not convinced that any new measures would be particularly effective and wondered whether it would be better to save those weapons for a crisis, such as what might happen [if Greece leaves the euro zone](#).

Since the Fed had announced a stimulus in June, Bernanke was willing to wait to do another major stimulus. Instead, the Fed issued statements suggesting that action would be on its way if the economy did not improve.

Over six weeks of lobbying, Bernanke convinced the other committee members that the labor market was extremely weak and that additional action could help. He told them he expected new stimulus to help create 500,000 jobs.

In a bit of cunning, he argued that the open-ended nature of the commitment — which most economists view as highly stimulative — would allow the Fed to pull back if the economy takes off.

The chairman's pursuit of consensus has had costs, according to many economists. These economists, some of whom are close to Bernanke, have excoriated his record as failing to respond vigorously enough to a national crisis of 12.5 million people without jobs.

While left-leaning economists have pressed Bernanke to do more, he has also felt heat from the right to stop intervening in the markets.

Republicans have accused Bernanke of subsidizing the nation's borrowing binge by buying more than a trillion dollars in U.S. government debt since 2008 — a position he has rejected.

**An Interview and Speeches by Dr. Ben Bernanke  
Former Chairman of the Federal Reserve  
3.12.2009 – 12.16.2013**

<http://www.federalreserve.gov/newsevents/speech/bernanke20131216b.htm> -- Concluding Remarks at the Ceremony Commemorating the Centennial of the Federal Reserve Act, 12/16/2013

<http://www.federalreserve.gov/newsevents/speech/bernanke20131216a.htm> -- Opening Remarks at the Ceremony Commemorating the Centennial of the Federal Reserve Act, 12/16/2013

<http://www.federalreserve.gov/newsevents/speech/bernanke20130602a.htm> -- The Ten Suggestions, 6/2/2013

<http://www.federalreserve.gov/newsevents/speech/bernanke20130518a.htm> -- Economic Prospects for the Long Run, 5/18/2013

<http://www.federalreserve.gov/newsevents/speech/bernanke20121001a.htm> -- Five Questions about the Federal Reserve and Monetary Policy, 10/1/2012

<http://www.federalreserve.gov/newsevents/speech/bernanke20100508a.htm> -- Speech at the University of South Carolina's Commencement Ceremony, 5/8/2010

<http://www.federalreserve.gov/newsevents/speech/bernanke20100408a.htm> -- Economic Policy: Lessons from History, 4/8/2010

<http://www.federalreserve.gov/newsevents/speech/bernanke20100203a.htm> -- Swearing-In, 2/3/2010

<http://www.federalreserve.gov/newsevents/speech/bernanke20091207a.htm> -- Frequently Asked Questions, 12/7/2009

<http://www.federalreserve.gov/newsevents/speech/bernanke20090414a.htm> -- Four Questions About the Financial Crisis, 4/14/2009

<http://www.cbsnews.com/news/ben-bernanke-greatest-challenge/> -- 60 Minutes: Ben Bernanke's Greatest Challenge, 3/12/2009

## Results of Crisis Response

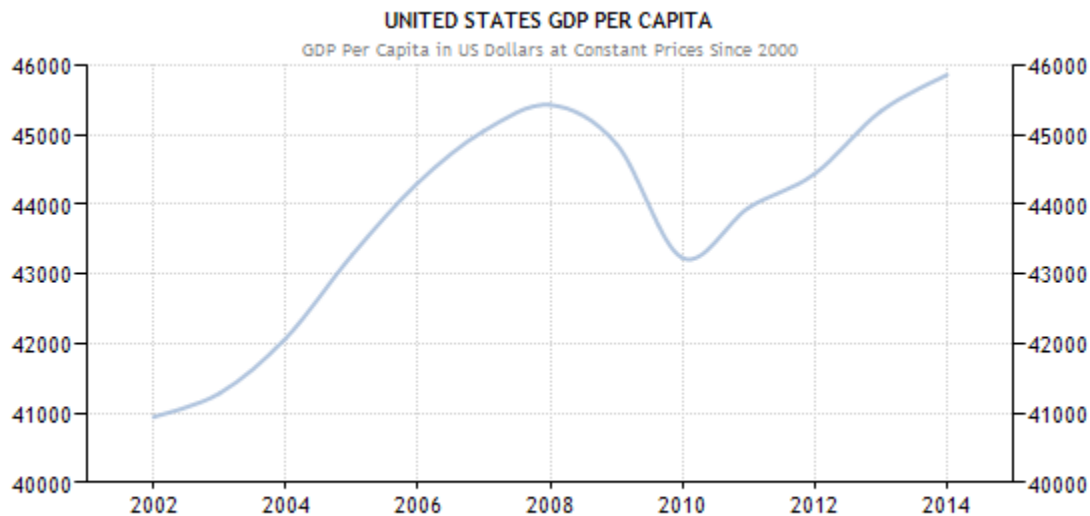
Definition of 'Economic Recovery'  
Investopedia

A period of increasing business activity signaling the end of a recession. Much like a recession, an economic recovery is not always easy to recognize until at least several months after it has begun. Economists use a variety of indicators, including **GDP, inflation, financial markets and unemployment** to analyze the state of the economy and determine whether a recovery is in progress.

“Some confusion commonly results from the use of both leading and lagging indicators in analyzing whether an economic recovery is in progress. Leading indicators, such as the stock market, often rise ahead of economic recovery. This is because stocks are priced based on future expectations. On the other hand, employment is typically a lagging indicator. Unemployment often remains high even as the economy begins to recover because many employers will not hire additional personnel until they are confident there is a long-term need for new hiring.”

**Comparative US Economic Indicators between 2000 and 2014 demonstrate Economic Recovery**

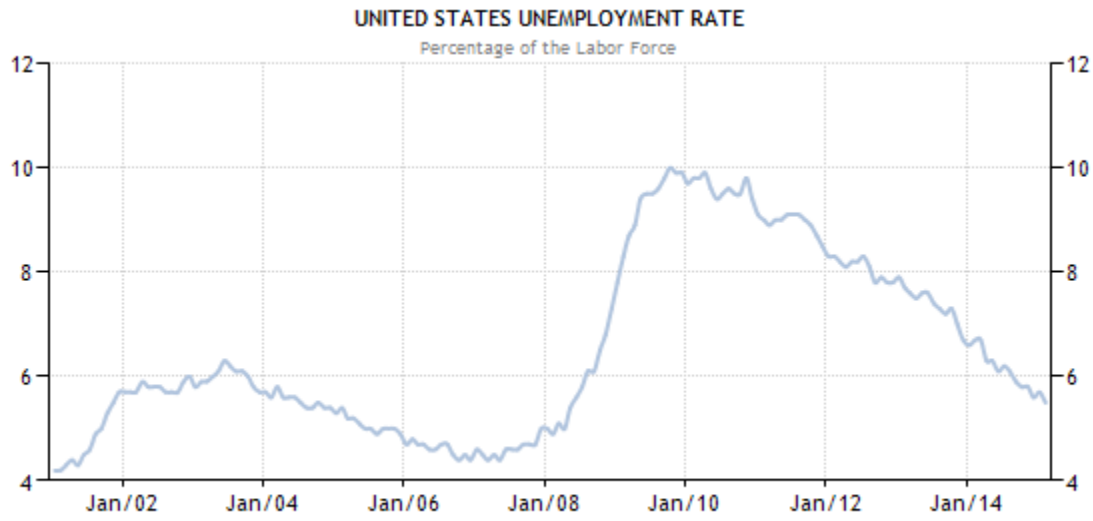
**US GDP per Capita has increased since 2010**



SOURCE: WWW.TRADINGECONOMICS.COM | WORLD BANK

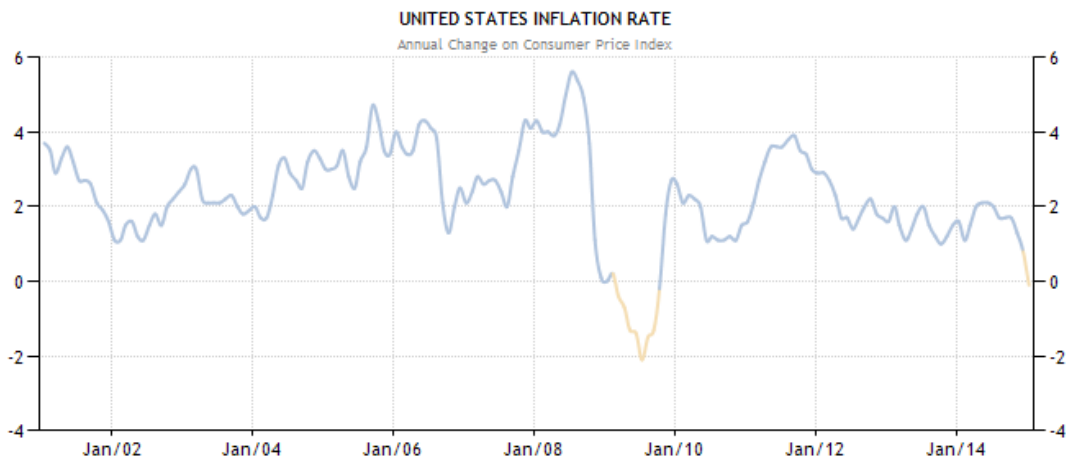
The GDP leading up to 2008 had been steadily increasing to over 45,000. However, the 2008 crash led to a sudden decrease, the lowest point in 2010 being at just above 43,000. Thankfully, GDP has gotten back on track to a steady rise.

## US Unemployment has decreased consistently since peaking in 2010



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF LABOR STATISTICS

## US inflation rate has been reasonable since 2010



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF LABOR STATISTICS

Up until the crash of 2008, the unemployment rates had been decreasing. After the crash, unemployment rates peaked at up to nearly 10%. Unemployment rates have now recovered to less than 6%

Here the inflation rate had an all-time peak going into the 2008 crash at 6%. The Federal Reserve took actions here to stabilize the inflation rates.

## US stock markets have been rising since 2010



The Dow Jones Industrial Average crashed from 14,000 to 6,500. Since the crash, it has steadily surpassed the pre-crash value to now 18,000.



## Further Reading/Resources

### Government Policy and Economic Influences

"U.S. Median Home Price in October Increases to Highest Level Since September 2008, Still 19 Percent Below Peak." *Real Estate Lending Insider*. N.p., 30 Nov. 2014. Web. 02 Feb. 2015.

### Trends in the Market

Julie A. Nelson, Neva Goodwin, and Jonathan Harris. *Macroeconomics in Context*. Armonk, N.Y.: M.E. Sharpe. Inc., 2008.

Blodget, Henry. "The Housing Chart That's Worth 1000 Words." *Business Insider*. Business Insider, Inc, 21 Feb. 2009. Web. 26 Jan. 2015.

### Corporate Governance

Angelova, Joe Weisenthal and Kamelia. "CHART OF THE DAY: Bankers Getting Paid A Lot To Sit On Their Hands And Do Jack Squat." *Business Insider*. Business Insider, Inc, 23 Feb. 2010. Web. 26 Jan. 2015.

Ritholtz, Barry. "Charts for the "Facts of the Economic Crisis" Column | The Big Picture." *The Big Picture*. N.p., 20 Nov. 2011. Web. 25 Jan. 2015.

### Consumer Behavior

"How the Great Recession Has Changed Life in America." *Pew Research Centers Social Demographic Trends Project RSS*. N.p., 30 June 2010. Web. 22 Jan. 2015.

### The Crash

"Resource Center." *Financial Crisis Response In Charts*. U.S. Department of the Treasury, 13 Apr. 2015. Web. 03 Feb. 2015.

## *Chapter III: The Economic Decline & Recovery*

### *Study Questions*

- How did the increased home ownership eventually cause the downfall of the banks?
- How did the Community Reinvestment Act specifically encourage banks to take unhealthy risks?
- What were the general trends of the housing markets over the past 100 years?
- Why do you think so many investors chose the housing market?
- Why do you think risk analysts underestimated the financial markets? What might the history of the housing market tell you about this?
- How did the Recession affect income inequality? In other words, what happened to the social classes?
- Why do you think the hardest hit racial groups had the greatest hope for recovery?
- What influenced the higher quintile (the top household groups) to increase their spending?
- What powers does the fed have?
- Did the fed increase or decrease its influence during the crash and recession?
- What were the actions that the fed took?
- Do you think these were the right actions?
- How do the new regulations protect the average consumer from a banking crisis?
- What are some major challenges discussed in the Economist article?
- The current approach of regulations creates many new agencies to control banking. From your perspective, is this a good approach?
- In what aspects is Ben Bernanke praised in his role during the economic crisis? Why do certain people criticize his role?
- In what ways did Ben Bernanke help reduce harmful effects for the economic crisis?

*Chapter IV:  
An Introduction to Personal  
Financial Literacy for Teens*



Introduction.....	X
Opening and Monitoring Checking Accounts.....	X
Looking for Your First Job.....	X
Learn Budget Basics.....	X
Understanding Taxes.....	X
Investing in Your Future.....	X
Credit Cards.....	X
Understanding Your Credit Score.....	X
Learn About the Power of Compounding.....	X
Be Aware of Fraud and Scams.....	X
Pay Attention to Your Behavior.....	X
Further Reading/Resources.....	X
Study Questions.....	X

*“The earlier that young people can develop basic financial skills, the more likely it is that they will make good financial decisions when they become adults.” – Ben Bernanke*

## Introduction

The U.S. and global financial systems are complicated and rapidly changing. Money affects everyone, just about every day of our lives. All individuals need at least a fundamental understanding of finance and the skills to help ensure sound financial decision-making skills throughout a lifetime. Research data shows that the citizens of the United States lag in knowledge of financial literacy. As we've learned in this curriculum set, this misunderstanding or lack of knowledge can be detrimental to the stability of our economic system. The Echo Foundation, in conjunction with *Ben Bernanke: The Economics of Democracy Curriculum Project*, hopes to begin conversations and provide early guidance and resources to help teachers and students gain a deeper understanding of personal finance.



The high school years are the perfect time to begin learning about personal financial concepts. Financial terms, calculations and products (investments, bank accounts, credit cards, etc.) can be very complicated and difficult to discern – but it's not an excuse to fear or ignore. Good decisions early in life can compound your success; unfortunately, the consequences of mistakes can be devastating. If you begin your understanding as a young adult, and then layer on new knowledge in years to come, you'll develop the decision-making tools to gain confidence when faced with important financial choices. As you age, you'll encounter different experiences – college, career, marriage, insurance, mortgage, children, saving for retirement, etc - all with their own set of concepts, terms and topic.

### Financial literacy is a lifetime learning process.

#### The First Steps In Your Financial Literacy Journey:

1. Open a checking account and monitor your balances and fees.
2. Look for your first job.
3. Learn budget basics. Most importantly, *spend less than you earn!*
4. Understand how Uncle Sam collects taxes and why.
5. Invest in yourself. Make a plan to further your education with college and/or job skill training and do your best to avoid significant student loan debt.
6. Prepare to manage your first credit card.
7. Understand how your credit score is calculated.
8. Learn about the amazing power of compounding.
9. Be aware of sophisticated advertising, marketing and scams.
10. Pay attention to your behavior - social, emotional and psychological factors affect your financial choices.

# Opening and Monitoring Checking Accounts

## Banking Basics: Types of Checking Accounts

### Comparison shop for checking account options

From Bank of America

Depending on where you choose to bank, you'll probably have access to several different kinds of checking accounts.

Before you open a checking account, it's important to do some research and shop around to find the checking account that's right for you and your situation. Here are some of the more common types of checking accounts offered by many banks:



**Student checking:** Student checking account features will vary from bank to bank, but the most common benefits include no minimum balance requirement, free checks, a free debit card, ATM availability and the ability to have your parents transfer money directly into your account.

**Basic checking:** This type of account works well if you use your checking account just to pay bills and a few other expenses. In order to avoid paying a monthly maintenance fee on the account, some banks will require that you use direct deposit or maintain a minimum balance.

**Interest-bearing checking:** With an interest-bearing checking account, you are paid interest on the money in your account. The bank will usually require a minimum deposit to open the account, and you'll likely have to maintain at least that minimum balance to avoid fees.



As you shop for a checking account, be sure to read the fine print and ask questions. Do you have to set up direct deposit, maintain a minimum balance or meet some other condition to avoid monthly fees? Do additional services like bill payments and overdraft protection have additional fees

## Questions to consider as you shop for a checking account:

**Monthly service fee:** How much will the bank charge you to maintain your account?

**Debit card:** Will your checking account come with a debit card, which you can use instead of checks to make purchases?

**ATM charges:** Is there a charge to withdraw money from your bank's ATM? (Bank of America doesn't charge checking customers to access our ATMs.) Is there a minimum number of withdrawals you can make before you are charged? Is there a charge if you withdraw money from another bank's ATM?

**Free checks:** Will the bank charge you for your checks? Will the bank give you one free book of checks then charge for checks after that?

**Minimum balance:** Is a minimum balance required for the type of checking account you are opening? What are the fees if your balance drops below the minimum?

**Check limits:** Will the bank impose a limit on how many checks you're able to write in a month? If so, what are the charges if you go over your check limit?

**Overdraft protection:** Does the bank offer overdraft protection with your checking account? How does it work and what is the cost?

**Availability of funds:** When you deposit a check into your account, will you have same-day access to the funds or will there be a waiting period before your money is available to you?

## Anatomy of a Check

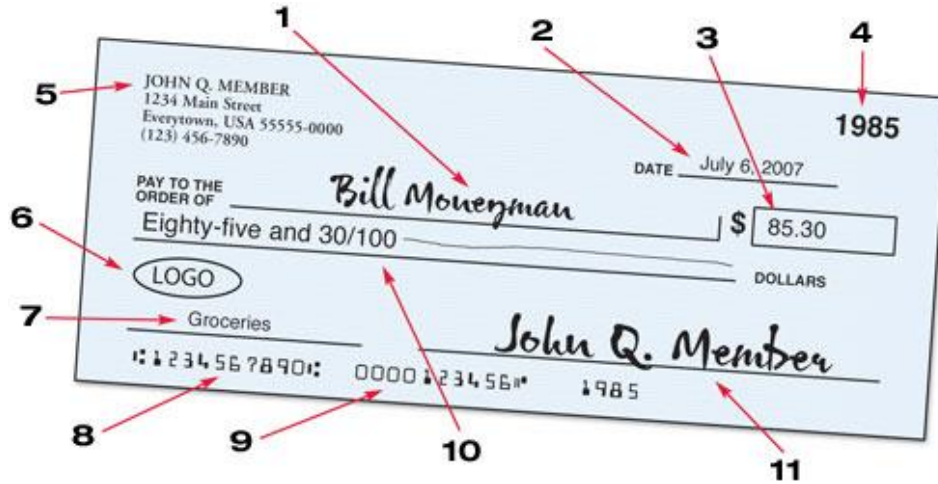


Image Source: [www.elementsofmoney.com](http://www.elementsofmoney.com)

1. Payee - write the name of the person or company you are paying.
2. Date - write the month, day and year the check is written.
3. Enter the dollar amount here.
4. Check number - printed in upper right corner check and also appears in the Magnetic Ink Character Recognition (MICR) line on the bottom of the check;
5. Maker – the person or company who writes the check is pre-printed for I.D. purposes.
6. This identifies your financial institution.
7. The memo line can be used as an optional reminder.
8. The routing number identifies the financial institution of the account and directs funds from there. The routing number is the first grouping in the MICR line and is listed between a vertical line and colon(|:xxxxxxxx|:).
9. Your checking account number at the bank.
10. Legal amount - the dollar amount in words, starting as far to the left as possible. Fill in any remaining space with a line to prevent anyone from changing your amount.
11. Signature line or lines – two or more signatures may be required.



## Understanding Deposit Insurance

The Federal Deposit Insurance Corporation (FDIC) is an independent agency of the United States government that protects the funds depositors place in banks and savings associations. FDIC insurance is backed by the full faith and credit of the United States government. Since the FDIC was established in 1933, no depositor has lost a penny of FDIC-insured funds.

FDIC insurance covers all deposit accounts, including:

- Checking accounts
- Savings accounts
- Money market deposit accounts
- Certificates of deposit

FDIC insurance does not cover other financial products and services that banks may offer, such as stocks, bonds, mutual funds, life insurance policies, annuities or securities.

The standard insurance amount is \$250,000 per depositor, per insured bank, for each account ownership category.

Source: FDIC

## How is a Credit Union Different than a Bank?

From MyCreditUnion.gov

In the United States, credit unions are not-for-profit organizations that exist to serve their members rather than to maximize corporate profits. Like banks, credit unions accept deposits and make loans. But as member-owned institutions, credit unions focus on providing a safe place to save and borrow at reasonable rates. Unlike banks, credit unions return surplus income to their members in the form of dividends.

### Favorable Rates and Customer Service

Fees and loan rates at credit unions are generally lower, while interest rates returned are generally higher, than banks and other for-profit institutions. Credit unions are democratically operated by members, allowing account holders an equal say in how the credit union is operated, regardless of how much they have invested in the credit union.

### Membership Access

Each institution decides who it will serve. In order to join a credit union, potential members must be part of a field of membership, which is typically based on one's employment, community, or membership in an association or organization. Credit unions serve members of modest means. Low-income credit unions provide financial services at reasonable rates in areas that are often underserved by banks.

## NCUA Share Insurance Coverage

Federally insured credit unions are regulated by the National Credit Union Administration and backed by the full faith and credit of the United States government. The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 increased the share insurance coverage on all federally insured credit union accounts up to \$250,000.

## What does “Unbanked” and “Underbanked” mean? How does this effect an individual’s lifestyle?

According to the Federal Deposit Insurance Corp., 17 million Americans are unbanked, meaning they don't have a bank account, while another 51 million are underbanked, which means they supplement their bank account with alternative financial services. These alternatives include money orders, check cashing services, payday loans, pawn shops, tax refund anticipation loans, etc.

### Resources:

- I. [6 reasons to be unbanked or underbanked](#) By Michael Estrin • Bankrate.com
- II. [Interpreting the FDIC Survey of Unbanked and Underbanked Households](#) By Peter Tufano • Harvard Business Review
- III. Spent: Looking for Change is a film about everyday Americans without the financial options most of us take for granted and the movement giving them renewed hope. Presented by American Express. The film is available online for free at [The Young Turks' YouTube channel](#).



# Looking For Your First Job

Teens who have not yet earned a high-school diploma qualify for many part-time jobs. Employers seek candidates with an ability work as a team, reasoning skills and strong communication capabilities.

## Strategies to find teen employment:

- Introduce yourself to small businesses
- Network with friends and neighbors
- Look for seasonal jobs – landscaping, catering, etc.
- Experiment with Temp Agencies – they will occasionally hire students under 18
- Check out healthcare services – hospitals, nursing homes, retirement homes
- Hone your skills – take a babysitting class, First Aid, Excel, PowerPoint, etc. – this may make you more attractive to an employer

## Websites with teen job listings:

- snagajob.com
- usajobs.gov/student jobs
- groovejob.com
- ecojobs.com
- teens4hire.org
- coolworks.com
- summerjobs.com
- coolsummerjobs.com
- recstaffing.com
- myfirstpaycheck.com
- monster.com
- craigslist.com

## Complete a Job Application:




### Know your Social Security number. If you don't have one, you may apply with Social Security Administration

You need a Social Security number to get a job, collect Social Security benefits and get some other government services. But you don't often need to show your Social Security card. **Do not carry your card with you. Keep it in a safe place with your other important papers.**

## Calculate your Federal withholdings on W-4 Form:

The US government requires businesses to withhold, or deduct tax, from your employee pay and remit that tax to the government. The IRS Form W-4 helps the employer determine how much money to withhold based on the number of allowances you calculate. The more allowances you claim on your W-4, the less income tax will be withheld. You will have the most tax withheld if you claim zero allowances.

If you are a student, you may qualify to be **exempt** from paying Federal taxes. Please follow the chart to determine your eligibility.

Link: <a href="#">FORM W-4 Withholding</a>	 <a href="#">FederalFormW-4.pdf</a>
If you are a student, you may qualify for “exempt” from tax withholdings.	Flow Chart for follow and determine if you can claim <b>“EXEMPT” ON FEDERAL TAX FORM</b>  <a href="#">Exemption-Clarification-2015.pdf</a>
Each state also has a W-4 Withholding Form	 <a href="#">NorthCarolinaFormW-4.pdf</a>

## Confirm Employment Eligibility Verification



FORM I-9 U.S. Citizenship and Immigration Services	<a href="#">Form I-9 Employment Eligibility Verification</a>
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Employers are required to use Form I-9 to comply with federal requirements to verify employment eligibility. Every time you start a new job, you’re required to complete [Section One](#) of this form. Your employer completes [Section Two](#) and, in some cases, [Section Three](#).

USCIS produces video for basic explanation. [Click here for video.](#)

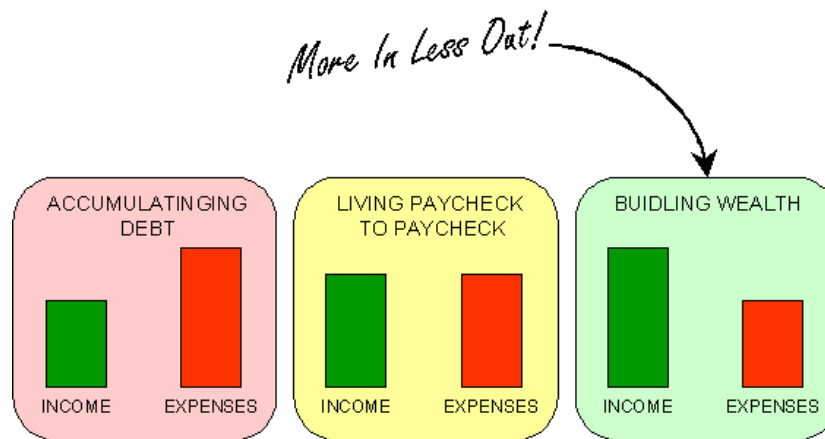


**You may request direct deposit of your employment check directly to your checking account. You'll be asked to complete a form and supply your checking account routing numbers.**

Direct Deposit Form Example: [Sample Direct Deposit Form](#)

See above [1.3 Anatomy of Check](#) to identify routing and checking account information.

# Learn Budget Basics



## Making a Budget

Source: <http://www.moneyandstuff.info/teens.html>

Making a budget is the most important step in controlling your money.

A budget allows you to track your Income (the money that you have) and your Expenses (the money you spend). By writing down your monthly income and expenses, you can see how much money you expect to have for the month and plan for how much you can spend.

## The First Rule of Budgeting

**The first rule of budgeting is simple: Spend less than you earn!**

If you earn \$150 a month from your job, and earn another \$50 from your allowance or birthday money, your income for the month is \$200. If your savings account earns another \$5, your total income is \$205.

Now you know that you have to spend less than \$205 for the entire month.

## Structuring Your Budget

1. Determine your Income. Estimate all “incoming” money, including salary from a job, allowance from your parents, and birthday money.
2. Estimate Required Expenses.

Required expenses include taxes and bills that you must pay. Required bills may include your cell phone bill and gas money to drive to work or school. You should also include payment to your savings in the “Required Expenses” category. Whether you are savings for something

specific (like a car or college) or just tucking money away for the future, it is critical that you get in the habit of paying yourself first! Even a few dollars each month helps build your savings.

### 3. Estimate Discretionary Expenses

After you have paid your Required Expenses, you can use the money left over for some fun! Discretionary Expenses may include clothes, shopping, pizza, video games, gifts and any other expenditures that are considered “optional”.

Review the following Sample Budget, and then make your own monthly budget using the worksheet on page

4. Stay within your budget, pay yourself first, and you will always be in control of your Money and Stuff!

Sample Budget Spreadsheet:



[samplebudgetfortens.pdf](#)





MoneyAndStuff.info

*grab hold  
of your future*

• Rectangular Snip

**Sample Monthly Budget for Teens**

Negative amounts are (in parentheses)

Category	Monthly Budget	Actual Amount	Difference
<b>INCOME:</b>	<b>Estimate Your Income</b>	<b>Your Actual Income</b>	
<b>Wages/Income</b> Paycheck, Allowance, Birthday Money, etc.	\$200	\$210	\$10
<b>Interest Income</b> From Savings Account	\$5	\$4	(\$1)
<b>INCOME SUBTOTAL</b>	<b>\$205</b>	<b>\$214</b>	<b>\$9</b>
<b>EXPENSES:</b>	<b>Estimate Your Expenses</b>	<b>Your Actual Expenses</b>	
<b>Savings</b>			
Savings Account	\$10	\$10	\$0
<b>Bills</b>			
Taxes - From Paycheck	\$30	\$32	(\$2)
Rent/Mortgage	\$0	\$0	\$0
Utilities Electric, Cell Phone, etc.	\$30	\$30	\$0
Groceries/Snacks	\$15	\$12	\$3
<b>Car</b>			
Car Payment	\$0	\$0	\$0
Car Insurance	\$0	\$0	\$0
Gasoline	\$20	\$25	(\$5)
<b>Shopping</b>			
Clothes	\$40	\$35	\$5
Other Shopping	\$10	\$0	\$10
<b>Fun</b>			
Entertainment Movies, Pizza, Video Games, Bowling, etc.	\$20	\$25	(\$5)
Other Expenses Ski Club: \$10	\$10	Ski Club: \$10	\$0
<b>EXPENSES SUBTOTAL</b>	<b>\$185</b>	<b>\$179</b>	<b>\$6</b>
<b>NET INCOME</b> Income Minus Expenses	<b>\$20</b>	<b>\$35</b>	<b>\$15!</b>

# Understanding Taxes

## Taxes 101: Five Basic Ideas

By William Perez

Tax Planning: U.S. Expert

Tax forms can be pretty scary. And sometimes your favorite tax software doesn't make things easier. Fortunately, there's some very basic ideas which can help you understand what taxes are all about.

### Why do we have taxes at all?

The United States has a big budget. We have to pay for things like schools, roads, hospitals, the military, government employees, national parks, and so forth. The only way to pay for these things is for the government to get money from people and companies. People and companies pay a percentage of their income to the government. This is called the income tax. The government taxes our income so it can have enough money to pay for the things we all need.



**Congress** and the **President** of the United States are responsible for writing and for approving the tax laws. The **Internal Revenue Service** is responsible for enforcing the tax law, for collecting taxes, for processing tax returns, for issuing tax refunds, and for turning over the money collected to the **US Treasury**. The Treasury, in turn, is responsible for paying various government expenses. Congress and the President are also responsible for the [federal budget](#). The budget is how much the government plans to spend on various programs and services. When the government spends more money, it must raise more money through taxes. When the government spends less money, it can afford to lower taxes.

### Five Aspects of the Tax System

Everyone is subject to taxation. The amount of taxes you owe is based on your income. You must pay taxes throughout the year on a pay-as-you-go system. People who earn more income have higher [tax rates](#) than those who earn less, this means tax rates get progressively higher the more you earn. You can reduce your taxes by taking advantage of various tax benefits. Finally, it's up to you to take control of your tax situation. Let's look at each of these five aspects of the tax system in more detail.

First of all, every person, organization, company, or non-profit is **subject to the income tax**. "Subject to income tax" means that people and organizations must report their income and

calculate their tax. Some organizations are exempt from tax. But they still have to file a return, and their tax-exempt status could be revoked if the organization fails to meet certain criteria.

Secondly, you are **taxed on your income**. That's the long and the short of it. Income is any money you earn because you worked for it or invested for it. Income includes wages, interest, dividends, profits on your investments, pensions you receive, and so forth. Income does not include gifts. You are not taxed on gifts you receive, such as inheritances and scholarships.

Thirdly, you must **pay your taxes throughout the year**. This is called "pay as you go." For most people, it means your income taxes are taken out of your paycheck and sent directly to the federal government. At the end of the year, you have paid in a certain amount of taxes. If you paid in more than what you owe, the government refunds the amount over what you owed. This is called a **tax refund**. If you haven't paid enough to cover what you owe, then you have a **balance due**. And you must pay this amount due by April 15th of the following year, or the government will charge you interest and penalties on the amount you haven't paid in.





Fourthly, the US tax system is **progressive**. That means that people who make more money have a higher tax rate, and people who make less money have a lower tax rate. Your tax rate will change depending on how much money you made that year. There is a debate over whether our tax rates should be progressive or flat. Politicians who support a [flat tax](#) argue that a single tax rate for everybody will greatly simplify people's lives. Politicians who support progressive tax rates argue that it is unfair to ask a person of modest income to pay the same percentage of their income as a wealthier person.

This idea of fairness is the motivation for all sorts of **tax benefits**. For example, you can reduce your total income if you contribute money to retirement account, such as a 401(k) or IRA plan. There are many other types of tax benefits. Tax benefits are how Congress rewards people for making certain types of decisions. The goal of tax planning is to choose which tax benefits make the most sense for you.

Finally, the income tax system is **voluntary**. That's because people are free to arrange their financial affairs in such a way to take advantage of any tax benefits. Voluntary does not mean that the tax laws don't apply to you. [Voluntary means](#) you can choose to pay less taxes by managing your finances in a way to minimize your taxes.

## Learn about filing your taxes annually

Most residents of the U.S. must file an annual income tax return by April 15 of each year. If you had tax withholdings in excess of your liability (this amount is calculated on Form 1040 or Form 1040EZ), you may receive a refund. Refer to IRS 1040 guidelines for further details.

Form W-2 from your employer	 FORMW-2.pdf
FORM 1040-EZ to IRS	 FORM1040-EZ.pdf

Department of the Treasury - Internal Revenue Service  
**Form 1040EZ** **Income Tax Return for Single and Joint Filers With No Dependents** (2014) **2014** OMB No. 1545-0074

Your first name and initial Last name  
 Your social security number

If a joint return, spouse's first name and initial Last name  
 Spouse's social security number

Home address (number and street), if you have a P.O. box, see instructions. Apt. no.  
 City, town or post office, state, and ZIP code. If you have a foreign address, also complete spaces below (see instructions).

Foreign country name Foreign province/state/county Foreign postal code

**Income**  
 Attach Form(s) W-2 here.  
 Enclose, but do not attach, any payment.

1 Wages, salaries, and tips. This should be shown in box 1 of your Form(s) W-2. Attach your Form(s) W-2. 1

2 Taxable interest. If the total is over \$1,500, you cannot use Form 1040EZ. 2

3 Unemployment compensation and Alaska Permanent Fund dividends (see instructions). 3

4 Add lines 1, 2, and 3. This is your **adjusted gross income**. 4

5 If someone can claim you (or your spouse if a joint return) as a dependent, check the applicable box(es) below and enter the amount from the worksheet on back.  
 You  Spouse  
 If no one can claim you (or your spouse if a joint return), enter \$10,150 if single; \$20,300 if **married filing jointly**. See back for explanation. 5

6 Subtract line 5 from line 4. If line 5 is larger than line 4, enter -0-. This is your **taxable income**. 6

**Payments, Credits, and Tax**  
 7 Federal income tax withheld from Form(s) W-2 and 1099. 7

8a **Earned income credit (EIC)** (see instructions) 8a

b Nontaxable combat pay election. 8b

9 Add lines 7 and 8a. These are your **total payments and credits**. 9

10 **Tax**. Use the amount on line 6 above to find your tax in the tax table in the instructions. Then, enter the tax from the table on this line. 10

11 Health care: individual responsibility (see instructions) Full-year coverage  11

12 Add lines 10 and 11. This is your **total tax**. 12

**Refund**  
 13a If line 9 is larger than line 12, subtract line 12 from line 9. This is your **refund**. If Form 8888 is attached, check here  13a

b Routing number  c Type:  Checking  Savings

d Account number

**Amount You Owe**  
 14 If line 12 is larger than line 9, subtract line 9 from line 12. This is the amount you owe. For details on how to pay, see instructions. 14

**Third Party Designee**  
 Do you want to allow another person to discuss this return with the IRS (see instructions)?  Yes. Complete below.  No

Designee's name Phone no. Personal identification number (PIN)

**Sign Here**  
 Under penalties of perjury, I declare that I have examined this return and, to the best of my knowledge and belief, it is true, correct, and accurately lists all amounts and sources of income I received during the tax year. Declaration of preparer (other than the taxpayer) is based on all information of which the preparer has any knowledge.

Your signature Date Your occupation Daytime phone number

Spouse's signature. If a joint return, both must sign. Date Spouse's occupation

**Paid Preparer Use Only**  
 Print/Type preparer's name Preparer's signature Date

Firm's name Firm's EIN  
 Firm's address Phone no.

Check  if self-employed (PTIN)


For Disclosure, Privacy Act, and Paperwork Reduction Act Notice, see instructions. Cat. No. 11329W Form 1040EZ (2014)

The table below represents the progressive federal tax brackets in U.S. for 2015. The following percentages are applied to your Taxable Income. The Form 1040 is a worksheet that calculates your Taxable Income.

<b>2015 Tax Brackets (for taxes due April 15, 2016)</b>				
<b>Tax rate</b>	<b>Single filers</b>	<b>Married filing jointly or qualifying widow/widower</b>	<b>Married filing separately</b>	<b>Head of household</b>
10%	Up to \$9,225	Up to \$18,450	Up to \$9,225	Up to \$13,150
15%	\$9,226 to \$37,450	\$18,451 to \$74,900	\$9,226 to \$37,450	\$13,151 to \$50,200
25%	\$37,451 to \$90,750	\$74,901 to \$151,200	\$37,451 to \$75,600	\$50,201 to \$129,600
28%	\$90,751 to \$189,300	\$151,201 to \$230,450	\$75,601 to \$115,225	\$129,601 to \$209,850
33%	\$189,301 to \$411,500	\$230,451 to \$411,500	\$115,226 to \$205,750	\$209,851 to \$411,500
35%	\$411,501 to \$413,200	\$411,501 to \$464,850	\$205,751 to \$232,425	\$411,501 to \$439,000
39.6%	\$413,201 or more	\$464,851 or more	\$232,426 or more	\$439,001 or more

## Investing in Your Future

**Plan for your future – see article for discussion of options**

<p><b>What should you do after high school? A look at your post-graduation choices.</b></p> <p>By Mike Hardcastle Teen Advice Expert About.com</p>	 <p>What should you do after high school.pdf</p>
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**Significant student loan debt can be a major burden on your financial future. Knowing how you're going to pay for college or job training is one of the most powerful ways you can set yourself up for success. Review funding options below and seek help from your parents, high school counselors, financial advisors and school admission officers.**



Resource:  
Consumer Financial Protection Bureau  
Visit:  
<http://www.consumerfinance.gov/paying-for-college/>

### Paying for College

Get help to make informed financial decisions about how to pay for college. Start by comparing financial aid offers or understanding student loan repayment options.



Funding options	Description	How to apply	
Free aid	Scholarship	Scholarships are awarded on various criteria, which usually reflect the values and purposes of the donor or founder of the award. Scholarship money is not required to be repaid.	Research online
	Pell Grant	The Federal Pell Grant Program provides need-based grants to low-income undergraduate and certain post-baccalaureate students to promote access to post-secondary education. Grant money is not required to be repaid.	FAFSA/Follow college instructions
	State aid	Most of the state programs are available only to students who attend a college within their state of residence. To be considered for state-based aid, you should consider attending an in-state college.	
	Institutional aid	Many colleges and universities, both public and private, provide grants or scholarships to students to help them pay for all or part of the tuition and fees charged by the institution. This is granted by the specific college the student is attending.	
Self-help	Federal Work Study Program	Students can earn money towards their college education by working part time.	FAFSA/Follow college instructions
	Tuition payment plan	Tuition installment plans can be a reasonable alternative to education loans if you can afford to pay tuition, just not in a lump sum at the start of the semester.	Check with college
First choice student loans	Federal Perkins Loan	A need-based federal student loan for undergraduate and graduate students with an exceptional financial need.	FAFSA/Follow college instructions
	Federal Direct Stafford Loan	Federal student loans available to college and university undergraduate and graduate students who are attending college at least half-time. There are two types of this loan: Subsidized and Unsubsidized.	
Student loans to cover remaining college costs	Federal Direct PLUS Loan for parents	A credit-based federal loan for parents of dependent undergraduate students currently enrolled in post-secondary education. The PLUS Loan allows the parent to borrow money on the student's behalf.	FAFSA/Follow college instructions
	Federal Direct PLUS Loan for graduate or professional students	A credit-based federal loan option for students seeking a graduate and professional degree.	
	Private or alternative loans	Private student loan programs are a credit-based college financing option.	Banks or other lenders

Source: WellsFargo Financial Aid Journey

**Watch the following videos created by Wells Fargo. Mr. Fellows explaining the financial aid journey.**

### Financial Aid Journey in 5 Videos

◀ Previous Next ▶

If you're preparing to apply for college, it's important to understand your financial aid options, and take action early to get the money you'll need for school. These five short videos offer valuable insights on how to pay for college. For more information, download the attached eBook, [Your financial aid journey in 5 steps](#).





# Credit Cards

## Teens and Credit Cards

Source: [http://creditcards.lovetoknow.com/Teen\\_Credit\\_Card\\_Debt\\_Statistics](http://creditcards.lovetoknow.com/Teen_Credit_Card_Debt_Statistics)

By [Donna Sundblad](#)

Controversy surrounds teen credit card use. Some people argue that credit cards teach teenagers to be financially responsible, but teen credit card debt statistics indicate an opposing reality. Providing a teenager with a credit card may actually teach them to be financially irresponsible. Unfortunately, this sad fact makes teens a target of credit card companies. Marketers have effectively convinced many teens and their parents that credit card ownership is like an initiation rite into adulthood.

Statistics show that credit cards do not encourage self-restraint in teens. Some may argue that through the use of credit cards, teenagers don't learn how to say *no* to themselves. Instead, credit cards promote the 'spend now and deal with the consequences later' mindset. Learning to say *no* is an important lesson for teens to learn because without it they may be on the road to incurred debt before they graduate college.

### Evaluating Teen Credit Card Debt Statistics

Since teenagers under the age of 18 **cannot apply for a credit card without their parent's co-signature**, it makes it difficult to pin down statistics pertaining to teens and credit usage precisely. The number of teens that own and use credit cards - and how much debt they owe - can be masked by parental involvement.

### Teen Debt Goes to College

Teens under 18 years-old cannot apply for a credit card without a parent's co-signature, but according to school loan provider, Nellie Mae more than 54 percent of college freshmen carry a credit card. By sophomore year, the percentage of students who own at least one card rises to 92 percent. Nellie Mae also reports that on average, freshmen bring an average of \$1,585 in credit card debt to college.

These statistics are backed up by surveys conducted by Robert Manning, author of *Credit Card Nation: The Consequences of America's Addiction to Credit*. According to his findings, the amount of freshmen entering college with credit cards tripled between 1999 and 2002.



## **Consequences of Teen Credit Card Debt**

Teens don't always realize the reality of excessive interest rates and fees. As credit card debt builds, students may lose out on admission to graduate school, a job, or an apartment because of their damaged credit history.

For some teens, debt can become enough of a burden to cause them to drop out of school. In Robert Manning's book, he estimates 7 to 10 percent of college students will drop out of school because of credit problems. Students buried in credit debt don't see any other way to pay off their debt and are embarrassed to admit to their parents that they can't pay it. Instead, they go out and get a job, work more hours than their class schedule can realistically handle, and grades start to suffer.

## **Training Teens to Budget**

Parents may want to consider getting teenagers acquainted with credit usage at an early age by using one of the many **pre-paid credit cards** designed specifically for teenagers. Since the card is pre-paid by the parents there is no danger of the teenager going over the limit and incurring fees, and the parents can closely monitor how the teen uses the card. This can be a useful learning tool, and is much safer than handing a teenager a credit card and waiting to see what happens. Teaching teenagers about credit usage and budgeting is not a passive task.

## **Budgeting Tips for Teens**

To help teens learn to manage money and live within their means, parents can help them establish a personal budget. Guidelines for parents to help teens curb credit card spending and to live on a budget include:

- Helping them understand how much they have to spend.
- Plan for savings to use in emergency.
- Instead of using a credit card, shop with cash, a debit card or a check most of the time.
- Pay cash for items under \$10 and for eating out.
- Have only one credit card, and if they use it plan to pay off the charges at the end of the month.
- If they cannot control credit card spending-stop using the credit card

## Increased credit card protection for consumers since 2009

### THE WHITE HOUSE

Office of the Press Secretary

FOR IMMEDIATE RELEASE

May 22, 2009

#### **FACT SHEET: REFORMS TO PROTECT AMERICAN CREDIT CARD HOLDERS**

*President Obama signs Credit Card Accountability, Responsibility, and Disclosure Act*

**WASHINGTON** – Today, President Obama signs the Credit Card Accountability, Responsibility, and Disclosure (CARD) Act of 2009, marking a turning point for American consumers and ending the days of unfair rate hikes and hidden fees.



Americans need a healthy flow of credit in our economy, but for too long credit card contracts and practices have been unfairly and deceptively complicated, often leading consumers to pay more than they reasonably expect. Every year, Americans pay around \$15 billion in penalty fees. Nearly 80 percent of American families have a credit card, and 44 percent of families carry a balance on their credit cards. To tackle these problems, the Administration moved swiftly with the Congress to enact reforms.

"With this new law, consumers will have the strong and reliable protections they deserve. We will continue to press for reform that is built on transparency, accountability, and mutual responsibility – values fundamental to the new foundation we seek to build for our economy," President Obama said.

In the Senate and throughout the campaign, President Obama called for measures to strengthen consumer protection in the credit card market. This legislation was made possible by the leadership of Chairman Frank and Representatives Maloney and Gutierrez in the House, and Chairman Dodd, Ranking Member Shelby and Senator Levin in the Senate. It builds on the strong first step taken by the Federal Reserve toward improving disclosures and ending unfair practices.

Details about consumer protection and credit cards:

<http://www.cardhub.com/edu/credit-card-bill-of-rights/>

<http://www.consumerfinance.gov/credit-cards/knowbeforeyouowe/>

## Practice reading a credit card statement

CREDIT CARD STATEMENT				SEND PAYMENT TO Box 1244 Anytown, USA	
<b>ACCOUNT NUMBER</b> 4125-239-412	<b>NAME</b> John Doe	<b>STATEMENT DATE</b> 2/13/09	<b>PAYMENT DUE DATE</b> 3/09/09		
<b>CREDIT LINE</b> \$1200.00	<b>CREDIT AVAILABLE</b> \$1074.76	<b>NEW BALANCE</b> \$125.24	<b>MINIMUM PAYMENT DUE</b> \$20.00		
REFERENCE	SOLD	POSTED	ACTIVITY SINCE LAST STATEMENT	AMOUNT	
483GE7382		1/25	PAYMENT THANK YOU	-168.80	
32F349ER3	1/12	1/15	RECORD RECYCLER ANYTOWN, USA	14.83	
89102DIS2	1/13	1/15	BEEFORAMA REST ANYTOWN, USA	30.55	
NX34FJD32	1/18	1/18	GREAT ESCAPES BIG CITY, USA	27.50	
84RT3293A	1/20	1/21	DINO-GEL GASOLINE ANYTOWN, USA	12.26	
973DWS321	2/09	2/09	SHIRTS 'N SUCH TINYVILLE, USA	40.10	
<b>Previous Balance</b>	<b>(+)</b>	168.80	<b>Current Amount Due</b>		125.24
<b>Purchases</b>	<b>(+)</b>	125.24	<b>Amount Past Due</b>		
<b>Cash Advances</b>	<b>(+)</b>		<b>Amount Over Credit Line</b>		
<b>Payments</b>	<b>(-)</b>	168.80	<b>Minimum Payment Due</b>		20.00
<b>Credits</b>	<b>(-)</b>				
<b>FINANCE CHARGES</b>	<b>(+)</b>				
<b>Late Charges</b>	<b>(+)</b>				
<b>NEW BALANCE</b>	<b>(=)</b>	125.24			
<b>FINANCE CHARGE SUMMARY</b>		<b>PURCHASES</b>	<b>ADVANCES</b>	For Customer Service Call: 1-800-xxx-xxxx	
Periodic Rate		1.65%	0.54%	For Lost or Stolen Card, Call: 1-800-xxx-xxxx	
Annual Percentage Rate		19.80%	6.48%	24-Hour Telephone Numbers	

## Question Excerpt

✖ Remove Excerpt

1. The date of the statement is: \_\_\_\_\_ (Answer Format: 00/00/00)
2. What is the Annual Percentage Rate (APR) for purchases? \_\_\_\_\_%
3. What is the new balance? \$ \_\_\_\_\_
4. What is the previous balance? \$ \_\_\_\_\_
5. How many charges were made during the billing cycle?
6. How many payments were made during this billing cycle? \_\_\_\_\_
7. What is the total amount of the credit line? \$ \_\_\_\_\_
8. What is the total amount of available credit? \$ \_\_\_\_\_
9. What is the total amount of charges made during the current billing period?  
\$ \_\_\_\_\_
10. What is the account number on the statement? \_\_\_\_\_
11. What is the Annual Percentage Rate (APR) for cash advances? \_\_\_\_\_%
12. What is the date for the next payment? \_\_\_\_\_ (Answer Format: 00/00/00)

Source: <http://www.proprofs.com/quiz-school/story.php?title=sample-credit-card-statement>

## Credit Card Mistakes

### 10 worst credit card mistakes

By Kay Bell and Karen Haywood Queen

Source: [creditcards.com](http://creditcards.com)

1. Getting too many
2. Misunderstanding introductory rates
3. Not reading the fine print
4. Choosing a card for the wrong reasons
5. Not rate shopping
6. Making minimum payments
7. Paying your bill late
8. Ignoring your monthly statement
9. Exceeding your credit limit
10. Buying things you don't need



# Understanding Your Credit Score

## Credit History & Credit Score (FICO)

From Teens Guide to Money

We all create a credit history, every day. OK, generally as we get older and have to pay for things ourselves, be it a cell phone, apartment, credit cards. If we get a cell phone, we sign a contract saying we are going to pay our bills. If we pay our bills completely and on time, that becomes part of our credit history. If we are late, that is reported too. Not only does the phone company keep track of that information, but they share it with credit bureaus who keep tabs on all our credit spending, from utility bills to loans to credit cards, and just about everything else you use money for, except for cash.

These Credit Bureaus then assign you a FICO (see below) or credit score. Potential lenders will use this when you want to borrow money in the future, let's say for a car, house or anything else. Lenders will use this history/score to decide if they should lend you money (extend credit). Lenders use this score to calculate how much of a risk they will charge you to borrow money. As we get older we will probably borrow money and then pay it off. This could be a short term loan (such as a telephone bill) or a long term loan (such as a car or college loan). Based on how much credit you owe, how promptly you pay your bills and how much you pay on your bills, credit bureaus will review your history and then issue you a credit score (FIC)). Therefore establishing a good credit history, thereby earning a good credit score, will be critical when you want to borrow money.



### WHAT IS FICO?

When you apply for credit, the lender will want to know what type of risk you are and will pull your credit history or **FICO (Fair Isaac Corporation— credit scoring model)** score.

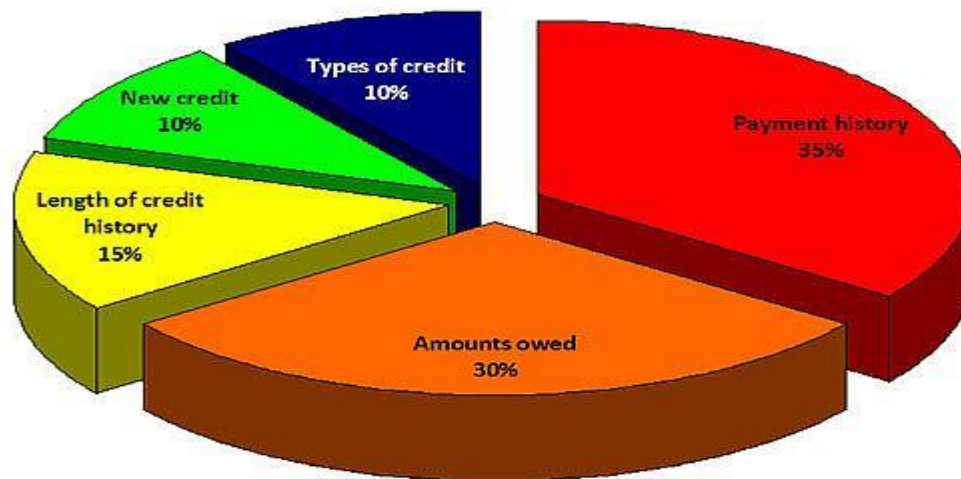
Check out the Website: <http://www.myfico.com/Default.aspx>.

There are three major credit bureaus that monitor your credit history:

- (1) Experian <http://www.experian.com>,
- (2) TransUnion <http://www.transunion.com>
- (3) Equifax [http://www.equifax.com/home/en\\_us](http://www.equifax.com/home/en_us)



Adjustments are made to your credit score by these bureaus as your buying and paying habits change. Your FICO score helps a lender decide what kind of risk you are likely to be. The higher the credit score and the lower the risk, the more likely a lender will extend you credit at a low rate.



### Formula Used To Calculate Your FICO Score

- 35% on your payment history
- 30% on the amount you currently owe lenders
- 15% on the length of your credit history
- 10% on the number of new credit accounts you have opened or applied for (fewer is better)
- 10% on the mix of credit accounts you have (mortgages, credit cards, installment loans, etc.)

### What Does My FICO Score Mean?

FICO scores range from 300 to 850. Here is what they mean to a lender:

- Excellent: Over 750
- Very Good: 720 or more
- Acceptable: 660 to 720
- Uncertain: 620 to 660
- Risky: Less than 620



## Watch videos about making sense of credit reports

Click: [BetterMoneyHabits-Kahn&BOAVideos](#)

*Credit is a privilege, not a right, and if you abuse it, you will lose your ability to get more.*

What's the difference between a credit report and a credit score?

Your credit score and credit report are related, but represent two different views of your credit history.



[Transcript](#) | [Disclaimer](#)



# Learn About the Power of Compounding

## Difference between Simple Interest and Compound Interest

Source: <http://www.moneysmartguides.com/compound-versus-simple-interest>

by Jon Dulin

## The Power of Compounding – Interest Example

Source: <http://content.moneyinstructor.com/992/the-power-of-compounding.html>

Through the power of compounding, a small amount of money over time can grow into a substantial sum. Compounding is an investor's best friend. Investments can increase in value over time – and the longer the time frame, the greater the value. This is achieved through returns that are earned, but not spent. When the return is reinvested, you earn a return on the return and a return on that return and so on. Therefore it is important to start saving early in order to benefit from the power of compounding returns.

### Examples of Compounding

1) This involves calculating interest for terms longer than one year. How it works is that the interest earned on the previous year is worked out and added to the amount invested. So the investor ends up receiving interest on interest already earned. The example below shows how an initial investment of \$1,000 grows to \$31,409 over a period of time.

Year	Principal	Rate of return	Return earned	Principal + return
1	1,000	9%	90	1,090
2	1,090	9%	98	1,188
3	1,188	9%	107	1,295
10	2,172	9%	195	2,367
20	5,142	9%	463	5,604
40	28,816	9%	2,593	31,409

Note that the Principal + return from the first year become the principal for the second year, and that the Principal + return from the second year become the Principal for the third year and so on.

2) **The younger you are when you start investing, the more you will benefit from compounding.** Let's say you begin investing at age 25, putting \$200 a month in a tax-deferred

retirement plan earning 9%. Your friend starts investing in the same plan at 45, but puts away twice as much money as you – \$400 a month.

At age 65, you will both have invested a total of \$96,000, but your investment would have grown to \$884,000, while your friend’s investment would be worth only \$268,000. The reason your investment has grown so much more than your friend’s – even though you both invested the same amount of money – is because of 20 extra years of compounding.

The more you invest and the earlier you start, the more your money has the opportunity to grow

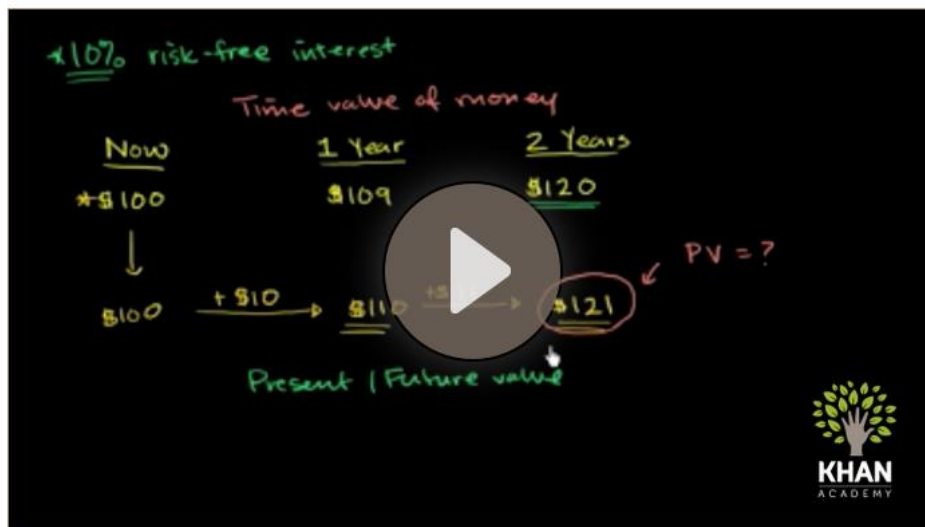


This illustration assumes an annual rate of return of 6%, 12 contributions per year, a savings goal of \$100,000 for a child entering college at age 18, and no withdrawals during the investment period. This information is presented for illustrative purposes only and does not reflect actual performance or predict future results. Account values will fluctuate with market conditions and there is the risk of investment loss.

Source: <https://www.edvest.com/plan/goals.shtml>

## The time value of money

What do you need to make your bank account grow over time? Patience. Find out what the time value of money is and why waiting for interest to add up can lead to a bigger payout down the road.



# Be Aware of Fraud and Scams

## Scams Targeted at Teens



### Common Scams Targeted At Teens

By Janet Fowler | October 09, 2012



The inexperienced and trusting nature of young people is often what causes them to fall victim to scam artists. Some scam artists know how to identify and take advantage of teens and their need to fit in. Also, because teens are often so involved in new technology and web-based interactions, it's no surprise that many scammers have found the Internet to be the optimal environment for preying on teens.

#### Inexpensive Luxury Goods

Have you ever seen ads online for cheap iPhones, electronic gadgets, designer clothes, handbags and other luxury goods being sold at just a fraction of the retail price? Many of these advertisements are simply scams

aimed at unsuspecting individuals who are looking for a good deal. However, these scams don't only exist online. Teens can be

Full Article – Common Scams Targeted at Teens  
By: Janet Fowler



Common Scams Targeted At Teens.pdf

## Terms and Conditions May Apply (2013)

Documentary

*Terms and Conditions May Apply* is a documentary that discusses how corporations and the government utilize the information that users provide when agreeing to browse a website, install an application or purchase goods online.

Movie trailer and more information available at [official website](#).



## *Pay Attention to Your Behavior*

Everyone needs a certain amount of money. Beyond that, we pursue money because we know how to obtain it. We don't necessarily know how to obtain happiness - Greg Easterbrook

### **Money, Thoughts and Behavior**

- What is an early money memory? What money stories did you hear from your parents or grandparents?
- Consider how role-modeling and peer pressure affect spending patterns. Are finances discussed in your family? Are your parents comfortable educating you about money?
- Are you a natural saver or natural spender? Either one is just fine if you do it wisely.
- Have you earned money?
- Imagine what your life will look like in 20 years if you save money.
- Write down 3-5 things that you would like to have one day, either material items or not. These may be both short-term (1-2yr) or long-term goals (3+ years). Money management can help you achieve these goals.

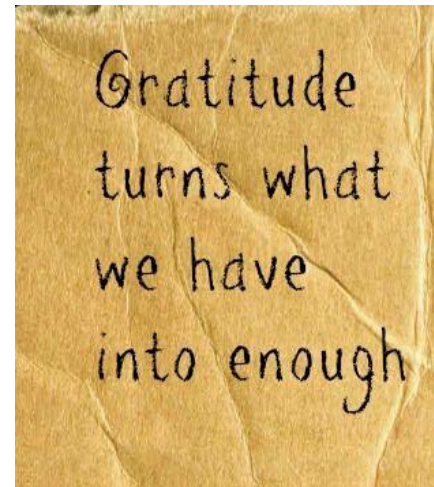
### **TedxMidwest Talk**

Watch: [Mellody Hobson on Financial Literacy, March 2014](#)



## It's an age-old question: Can money buy happiness?

*Can Money Buy You Happiness?* – *Wall Street Journal*  
By Andrew Blackman  
November 10, 2014



**Balanced Money Formula: 50% Needs, 20% Savings, 30% Wants.**

**Apply these percentages to your net income and create your budget.**



From *All Your Worth* by Elizabeth Warren and Amelia Tyagi

- **Needs** are things you *must* pay no matter what: housing, food, utilities, transportation costs, insurance.
- **Wants** are everything else: cable television, restaurant meals, concert tickets, comic books, clothing beyond the basics, etc.
- **Savings** are set aside for the future.

Be mindful of how you are spending. Music, games, clothes, fast food – what categories do these fall into?

## *Further Reading/Resources*

### Federal Government Agencies

Federal Reserve Education  
Federal Depositors' Insurance Corporation: MoneySmart  
Money as you Grow  
JumpStart

### Nonprofit Organizations

Council for Economic Education  
Nefe High School Financial Planning Program  
National Endowment for Financial Education  
Take Charge America

### Financial Services Corporations

Khan Academy  
PriceWaterhouseCooper's Earn Your Future Curriculum  
Visa's Financial Literacy Program: Practical Money Skills for Life



## *Chapter IV: An Introduction to Personal Financial Literacy for Teens Study Questions*

1. Identify three things to ask about when opening a checking account and why they are important to understand.
2. Explain how a debit card is used.
3. Where is the routing number located on a check?
4. How much FDIC government insurance is attached to your deposit account? What does this mean? Will this insurance cover a loss on stock investments?
5. How does a bank differ from a credit union?
6. What are the consequences of not being able to bank at a regulated financial institution?
7. Why does an employee need a Social Security number?
8. How can obtaining your first job help you understand several personal financial topics?
9. Identify and explain the use of three employment forms you'll complete upon starting your first job.
10. What does "Exempt" from paying income taxes mean? When is a student eligible for this status?
11. What do the following terms relating to a personal budget mean?
  - Net Income
  - Discretionary Expense
  - Tax Withholdings
  - Interest Income
12. What does "pay yourself first" mean?
13. List five services the US Government provides through the taxing of citizens.
14. What is a progressive tax system? Review chart and identify the tax rate if your taxable income is \$100,000 and you are a single filer.

15. What is the function of the Internal Revenue Service?
16. Is there an industry or trade that triggers your interest? Talk with your parents and teachers about how you can get some experience working with someone in that field. Research the education path and/or companies providing that good or service.
17. Identify five different ways to fund a post-high school education.
18. When should a young adult obtain their first credit card?
19. Explain the difference between a debit card and credit card.
20. What is the role of the Consumer Financial Protection Bureau?
21. Why is paying the minimum amount due on a credit balance outstanding a bad choice?
22. What are the consequences of making a late payment?
23. What do the following percentages represent?
  - APR
  - Periodic Rate
  - Rate on Advances
24. What is the difference between a credit report and a credit score?
25. What is FICO?
26. Where can you get your credit report? How much does it cost to obtain one report per year?
27. What is amazing about compounding interest?
28. Can you explain the difference between simple vs compound interest?
29. How do “free” social media outlets such as Facebook and Instagram make money to pay their management and employees?
30. What types of advertising impacts teenagers and how can you raise awareness to avoid traps and pitfalls?
31. What strategies can you use to improve your understanding of finances as you grow and mature?