

# Lessons Learned from the Financial Crisis

What happened and where are we now?

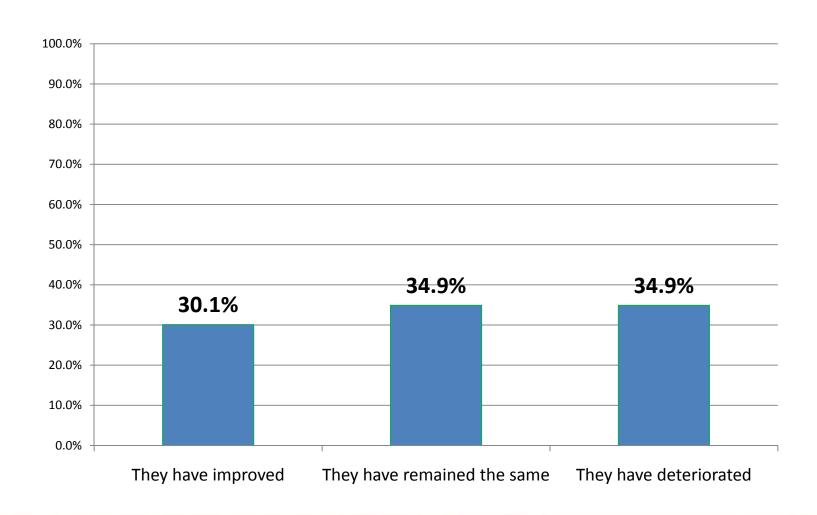
Julie L. Stackhouse Senior Vice President



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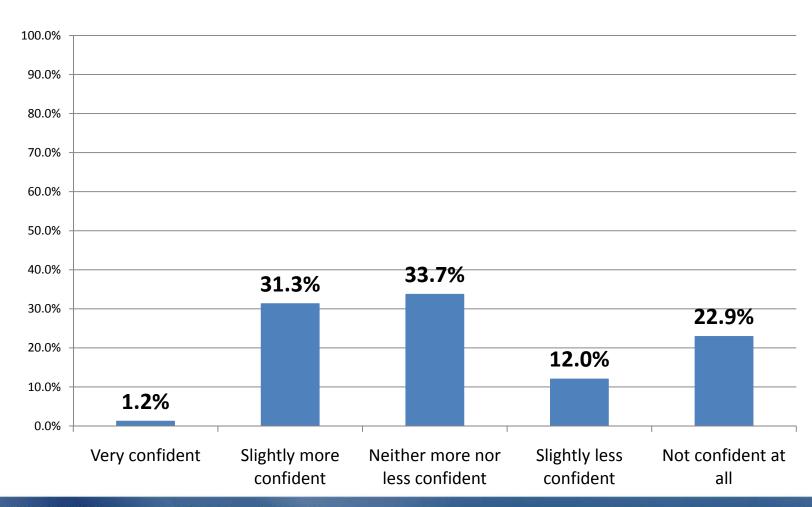
Pre-event poll question

Although the Great Recession officially ended in June 2009, there are still many lingering issues in the U.S. economy. How have your economic circumstances changed since June 2009?



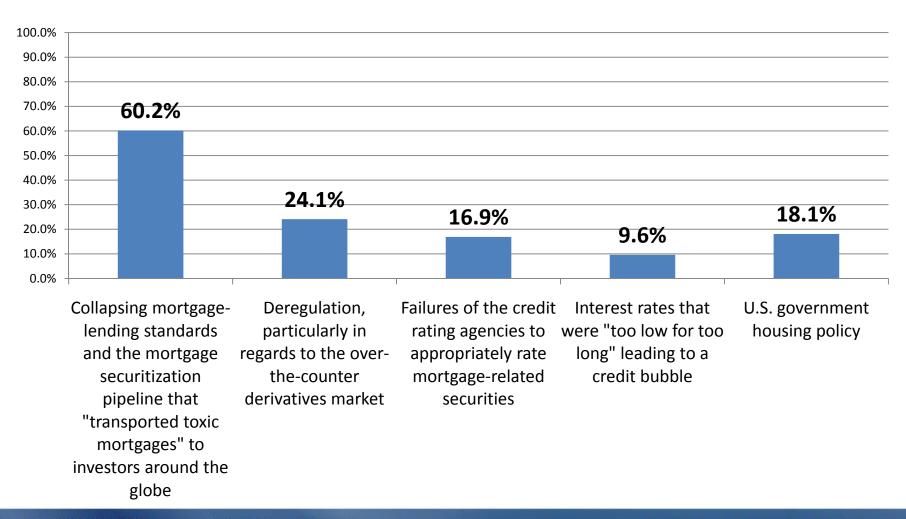
#### Pre-event poll question:

The financial crisis led to the passage of sweeping legislation in June 2010 that overhauled many aspects of our financial regulatory system. As a result of the changes, how confident are you that the U.S. can avoid or at least lessen the impact of future shocks to our financial system?



#### Pre-event poll question

In the aftermath of the financial crisis, Congress convened a Financial Crisis Inquiry Commission to study the causes of the financial and economic crisis in the U.S. Which of these causes was most significant in your opinion?



### We've learned a little about you. Now let's talk about the Federal Reserve!

The Fed is the Central Bank of the United States. It was founded by Congress in 1913 to provide the nation with a safer, more flexible, and more stable monetary and financial system. Over the years, its role in banking and the economy has expanded. Today, the Federal Reserve's duties fall into four general areas:

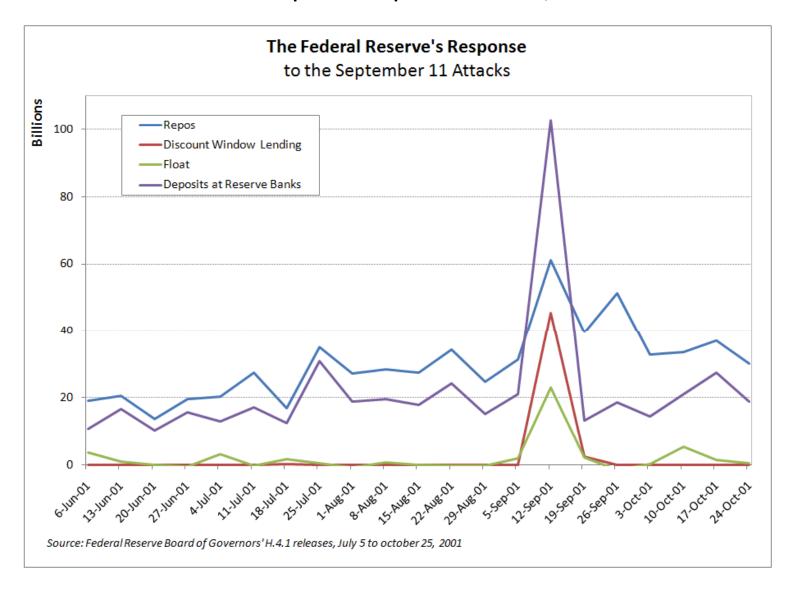
Conducting the nation's monetary policy by influencing the monetary and credit conditions in the economy in pursuit of maximum employment, stable prices and moderate long-term interest rates

Supervising and regulating banking institutions to ensure the safety and soundness of the nation's banking system and to protect the rights of consumers

Maintaining the stability of the financial system and containing systemic risk that may arise in financial markets

Providing financial services to depository institutions, the U.S. government, and foreign official institutions, including playing a major role in operating the nation's payments system

#### An example: September 11, 2001.



The Federal Reserve also played a major role in addressing the financial crisis of 2008.

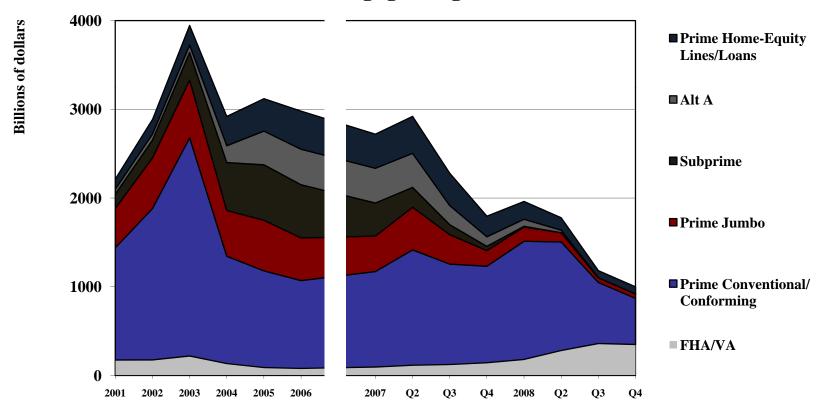
"The financial crisis that gripped the United States last fall\* was unprecedented in type and magnitude. It began with an asset bubble in housing, expanded into the subprime mortgage crisis, escalated into a severe freeze-up of the interbank lending market, and culminated in intervention by the United States and other industrialized countries to rescue their banking systems."

Congressional Oversight Report on the Troubled Asset Relief Program, December 9, 2009

<sup>\*</sup> Reference is to the fall of 2008

## Let's look back at what happened. Favorable mortgage rates made it easier to purchase a home.

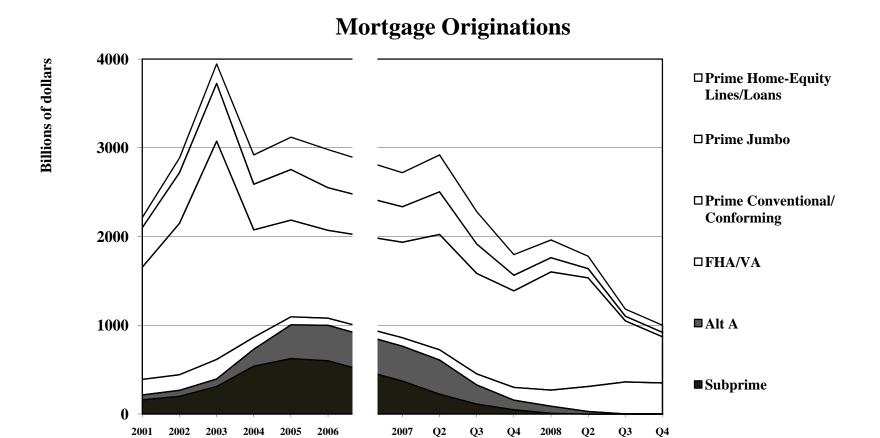
#### **Mortgage Originations**



Quarterly figures for 2007 and 2008 expressed at an annual rate.

Source: Inside Mortgage Finance, January 30, 2009

### And new nontraditional mortgage products made it easier for less creditworthy individuals to get a mortgage.



Quarterly figures for 2007 and 2008 expressed at an annual rate. Source: Inside Mortgage Finance, January 30, 2009

### Subprime mortgages were high risk.

	Subprime Mortgages – 2005-2006 Vintages	
> 78%	Subprime mortgages with adjustable rates (including hybrids)	
40%	Subprime mortgages with reduced documentation	
98%	Combined loan-to-value ratio	
55%	Share of subprime mortgages that were cashout refinances	
90%	Share of subprime mortgages originated through broker or wholesale channel	

Source: Mortgage Bankers Association, CoreLogic

### The mortgages were transformed into securities, making the risk difficult to see.

Mortgages were pipelined through mortgage companies

 Mortgage companies specializing in these obligations originated volumes of mortgages for sale to investment banks.

Mortgages were transformed into "mortgagebacked securities"

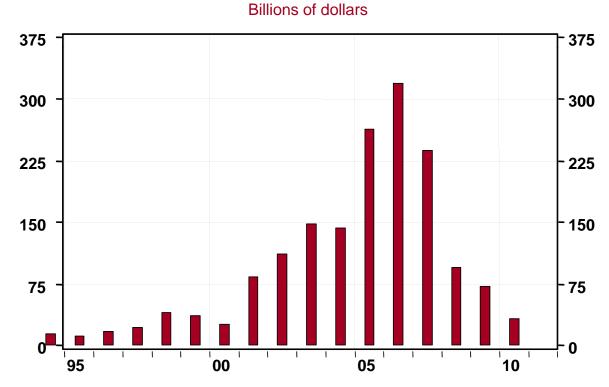
- The mortgages were grouped into payment and risk "tranches" and sold as "collateralized mortgage obligations."
- Sometimes, other assets or enhancements were added to the collateralized mortgage obligation to create a "collateralized debt obligation."
- Sometimes, the risk was hedged through use of "credit default swaps."

The U.S. "spread the risk"

• The securities were sold to investors around the world or held in the trading books of investment banks.

Cash-out refinance options and home equity loans also accelerated and reduced the amount of equity in the home.

Total Home Equity Cashed Out in Freddie Mac Mortgage Refinances

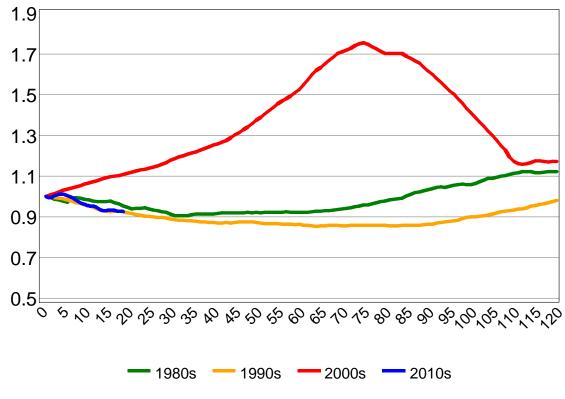


Source: Federal Home Loan Mortgage Corporation / Haver Analytics

### Easy credit fueled demand for houses, causing prices to rise at an unsustainable pace, especially in 2005 and 2006.

#### **Loan Performance House Price Index (HPI)**

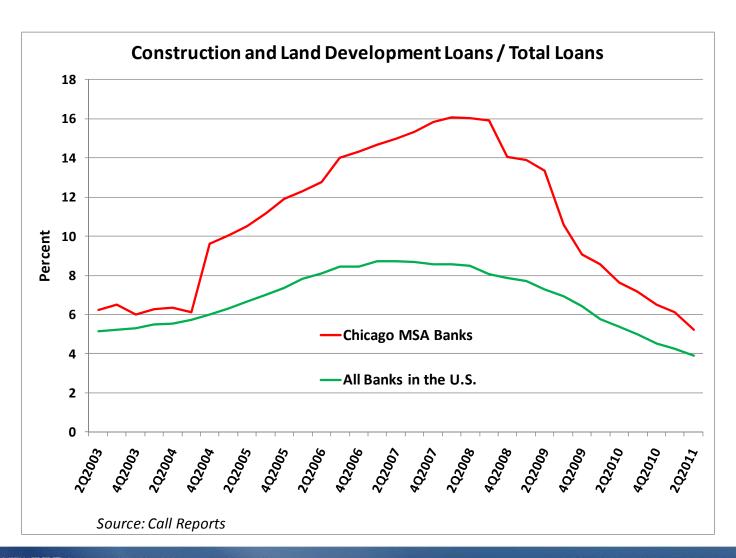
Nominal Loan Performance HPI (including distress sales), deflated by Core Consumer Price Index Index = 1 at Start of Decade



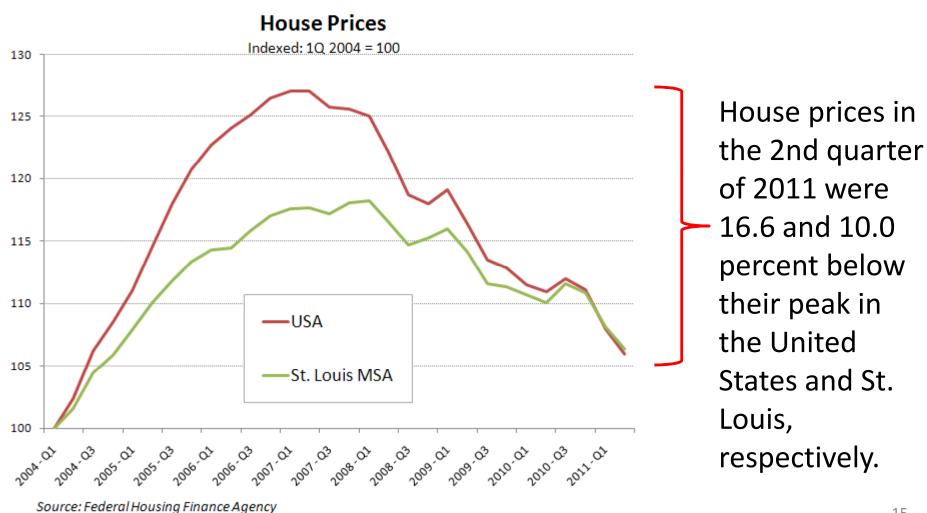
Months into Decade (120 Months in a Decade)

Source: BLS and Loan Performance/ Haver Analytics

#### Bank lending followed the housing boom.



#### And then, house prices began to fall.

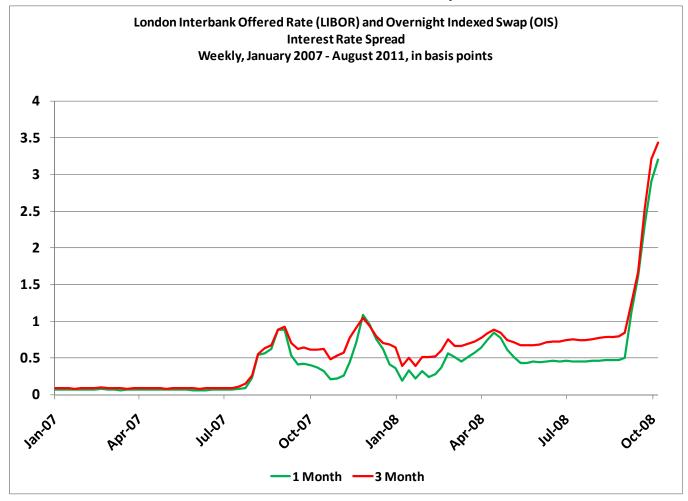


Rapidly accelerating losses led to a "run" in financial markets.

"Fear in the financial markets, which had been building, evolved into a full-blown panic in September, 2008. During a remarkable 19-day stretch, the federal government took over the two largest players in the mortgage market, allowed a large investment bank to go bankrupt, bailed out one of the world's largest insurance companies, and steered a major financial institution through the largest bank failure in U.S. history."

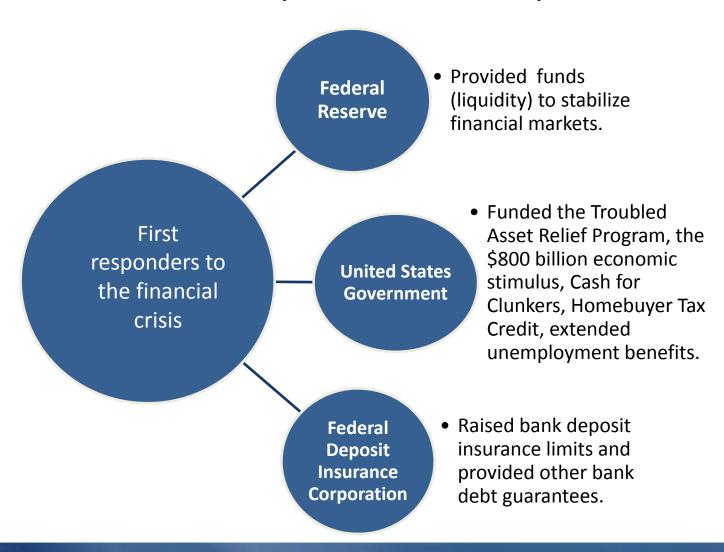
Congressional Oversight Report on the Troubled Asset Relief Program, December 9, 2009

### By September 2008, the country faced the most significant financial crisis since the Great Depression.

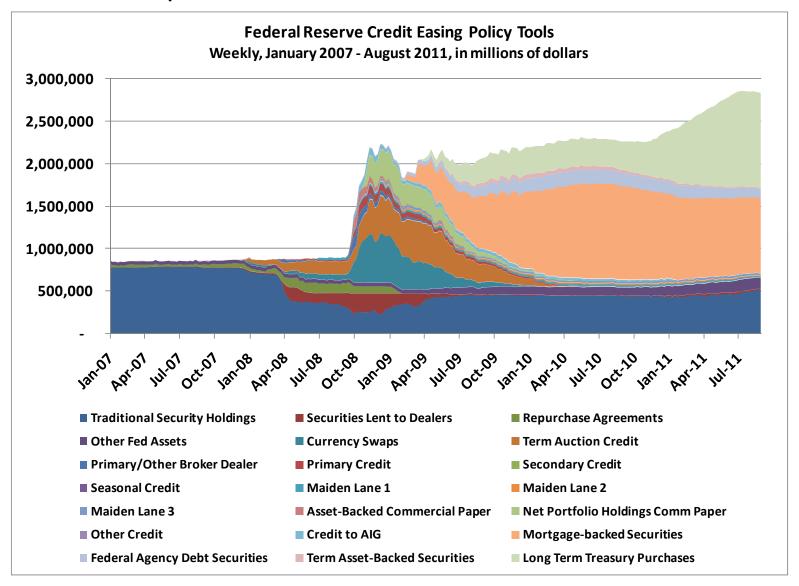


Source: British Bankers Associations and Reuters

#### The crisis required a massive response.



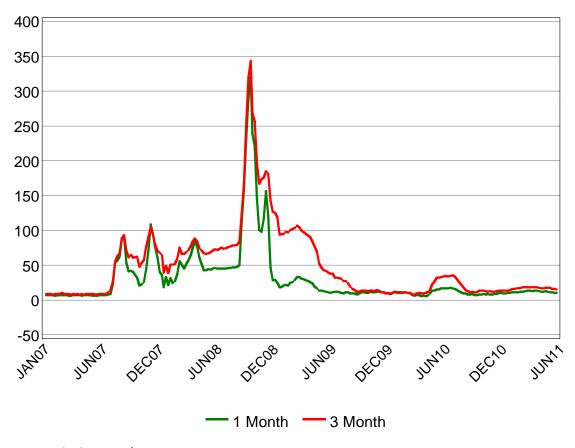
#### A picture of the Federal Reserve's actions.



Source: Federal Reserve Board

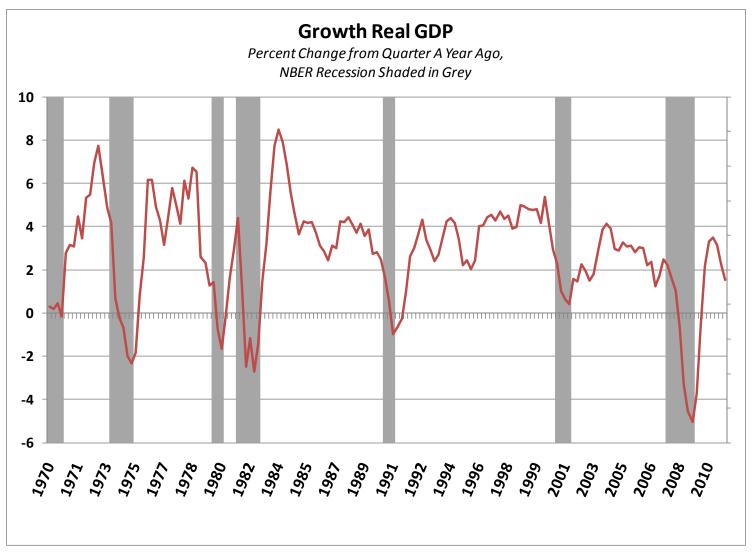
#### While these actions avoided a collapse of the financial system...

London Interbank Offered Rate (LIBOR) and Overnight Indexed Swap (OIS)
Interest Rate Spread
Weekly, January 2007 - August 2011, in basis points



Source: British Bankers Associations and Reuters

#### we did not avoid a "Great Recession."



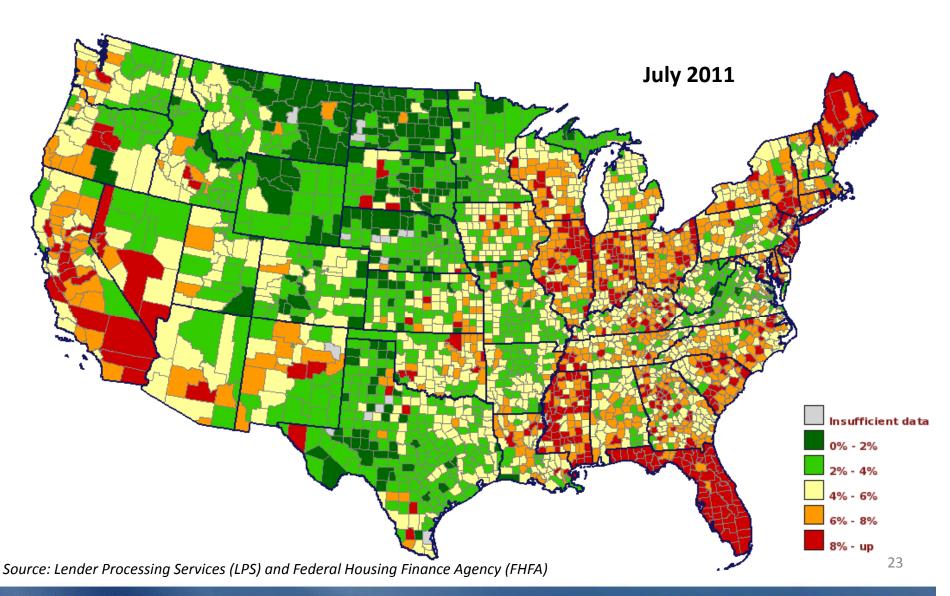
Source: Bureau of Economic Analysis

#### Home prices have collapsed in some markets.

Geographic Area	Market Peak	Market Trough	Peak to Current Percent Decline
Boston	November 2005	April 2009	15.6
Chicago	March 2007	April 2011	32.0
Denver	March 2006	February 2009	10.9
Las Vegas	April 2006	June 2011	59.2
Los Angeles	April 2006	May 2009	37.8
Miami	May 2006	February 2011	49.8
New York City	May 2006	March 2011	23.1
San Diego	March 2006	May 2009	38.6
San Francisco	March 2006	May 2009	38.9
Washington, D.C.	March 2006	March 2009	27.9

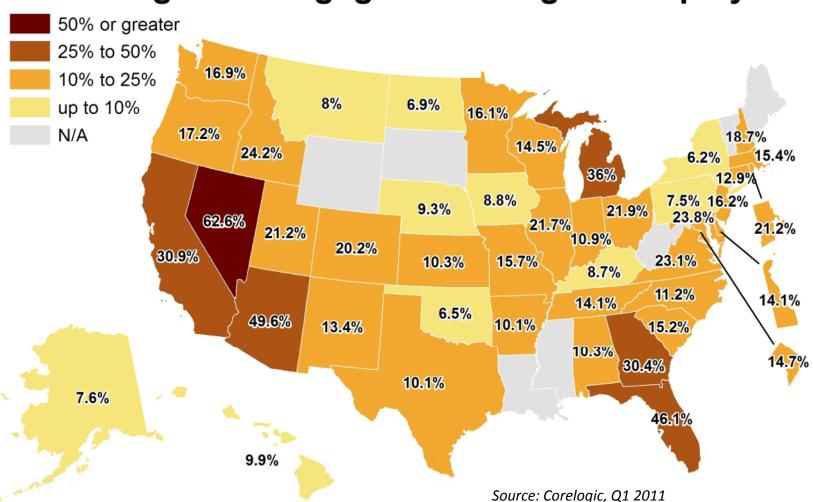
Source: Case-Shiller, through August 2011 release

Challenges remain in the housing market.
Seriously delinquent or in-foreclosure mortgages are backlogged and must work through the pipeline.



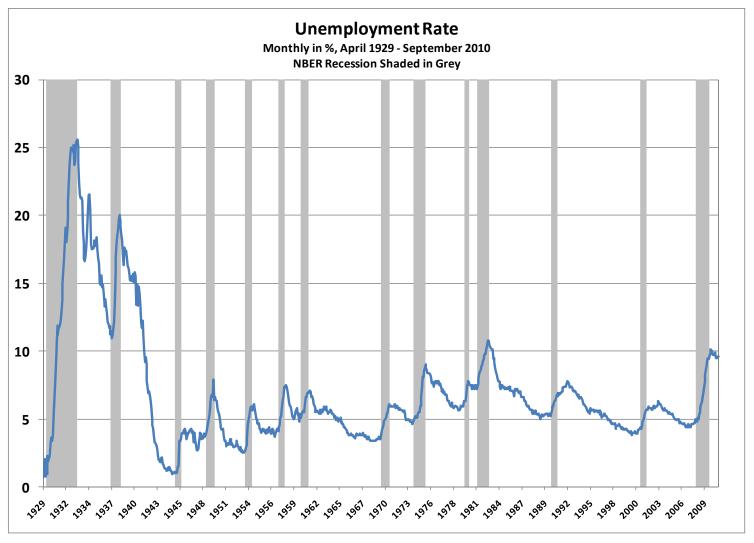
#### Many households face negative equity positions.

### Percentage of Mortgages with Negative Equity



24

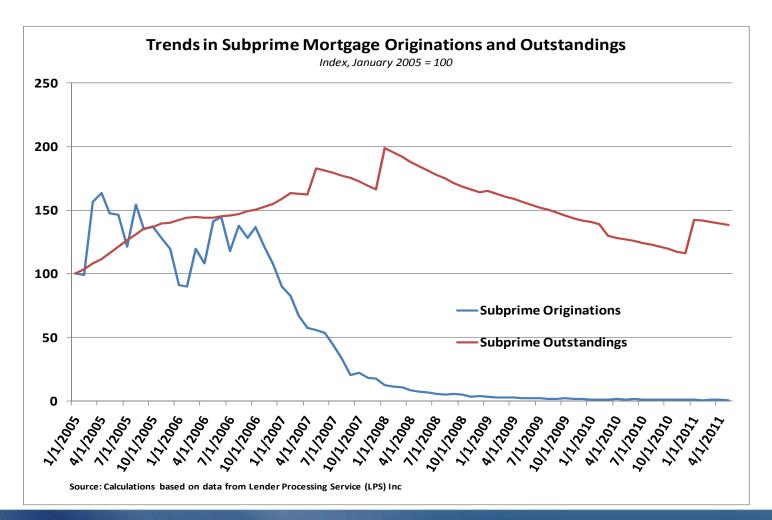
#### Unemployment remains undesirably high.



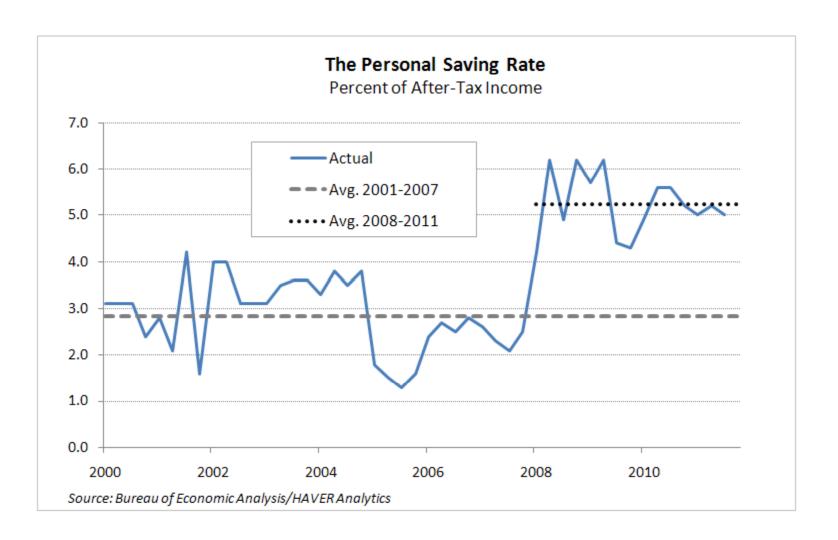
Source: Bureau of Labor Statistics

Gray bars indicate recession periods

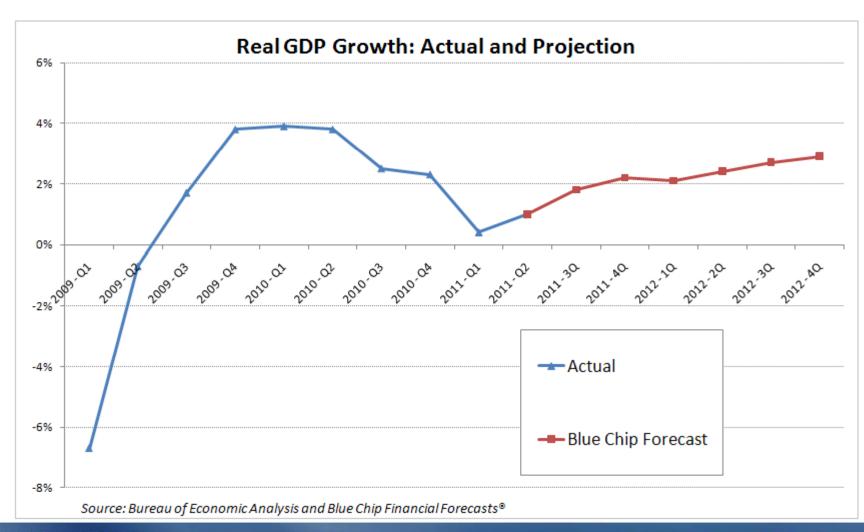
On the other hand, mortgage financing options have quickly corrected. The subprime mortgage market has largely disappeared.



#### And savings rates have shown signs of rebound.

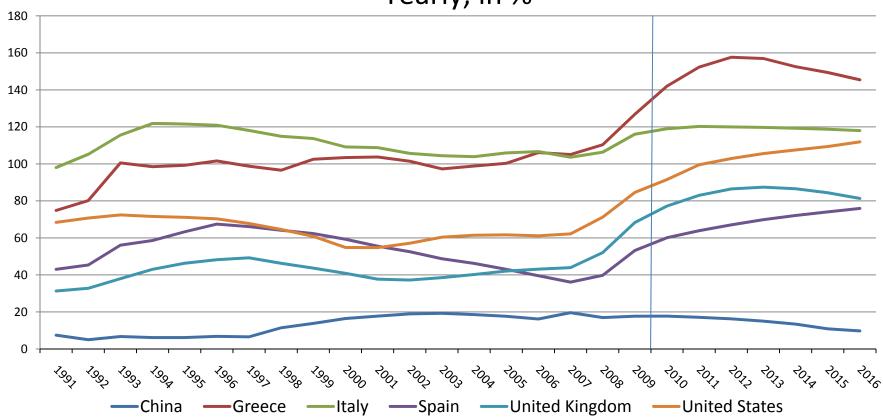


#### What challenges lie ahead?



#### What challenges lie ahead?

## Gross Government Debt-to-GDP Yearly, in %



Source: International Monetary Fund

#### The perspective of Fed Chairman Bernanke

"The growth fundamentals of the United States do not appear to have been permanently altered by the shocks of the past four years. It may take some time, but we can reasonably expect to see a return to growth rates and employment levels consistent with those underlying fundamentals."

Jackson Hole, Wyoming, August 26, 2011

#### What have we learned?

High levels of debt, uncertain ability of borrowers to repay debt, and an expectation that housing prices will always increase (among other factors) created a comfort level that was misguided.

Spreading risk outside of the insured banking system and use of "insurance" policies such as credit default swaps did not result in risk diversification. Risk needs to be understood across all parts of the financial system – banks and nonbanks. The Dodd-Frank Act provides a means to do so.

Choices made in the short-run may have long-run consequences that need to be carefully considered.

#### Questions tonight will be taken by:

- Julie Stackhouse
- Dr. William Emmons, Assistant Vice President and Economist
- Dr. Silvio Contessi, Economist
- Mary H. Karr, Senior Vice President and General Counsel