# FINC 402
# Monetary Theory

## Session 13– Financial Crisis

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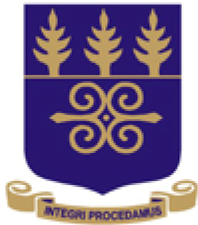



UNIVERSITY OF GHANA

College of Education

**Department of Distance Education**

2017/2018

# Session Overview

By the end of this session students should be able to:

- .Explain financial crisis and how is comes about
- Identify dynamics of financial crisis
- Identify and analyze the causes and effect of the great depression
- Identify and analyze the causes and effect of the 2007-2009 global financial crisis.

# Session Outline

The key topics to be covered in the session are :

- Financial crisis and it dynamics
- The Great Depression
- The 2007-2009 global financial crisis

# Reading List

- Frederic S. Mishkin, The Economics of Money, Banking, and Financial Markets, 7th or 9th edition (Addison Wesley: New York).

- Walsh, Carl E. Monetary theory and policy. MIT press, 2010

Topic One

# FINANCIAL CRISIS

# Financial Crisis

## Response of Monetary Policy to Shocks

- A financial crisis occurs when there is a particularly large disruption to information flows in financial markets, with the result that financial frictions increase sharply and financial markets stop functioning.

# Dynamics of Financial Crisis

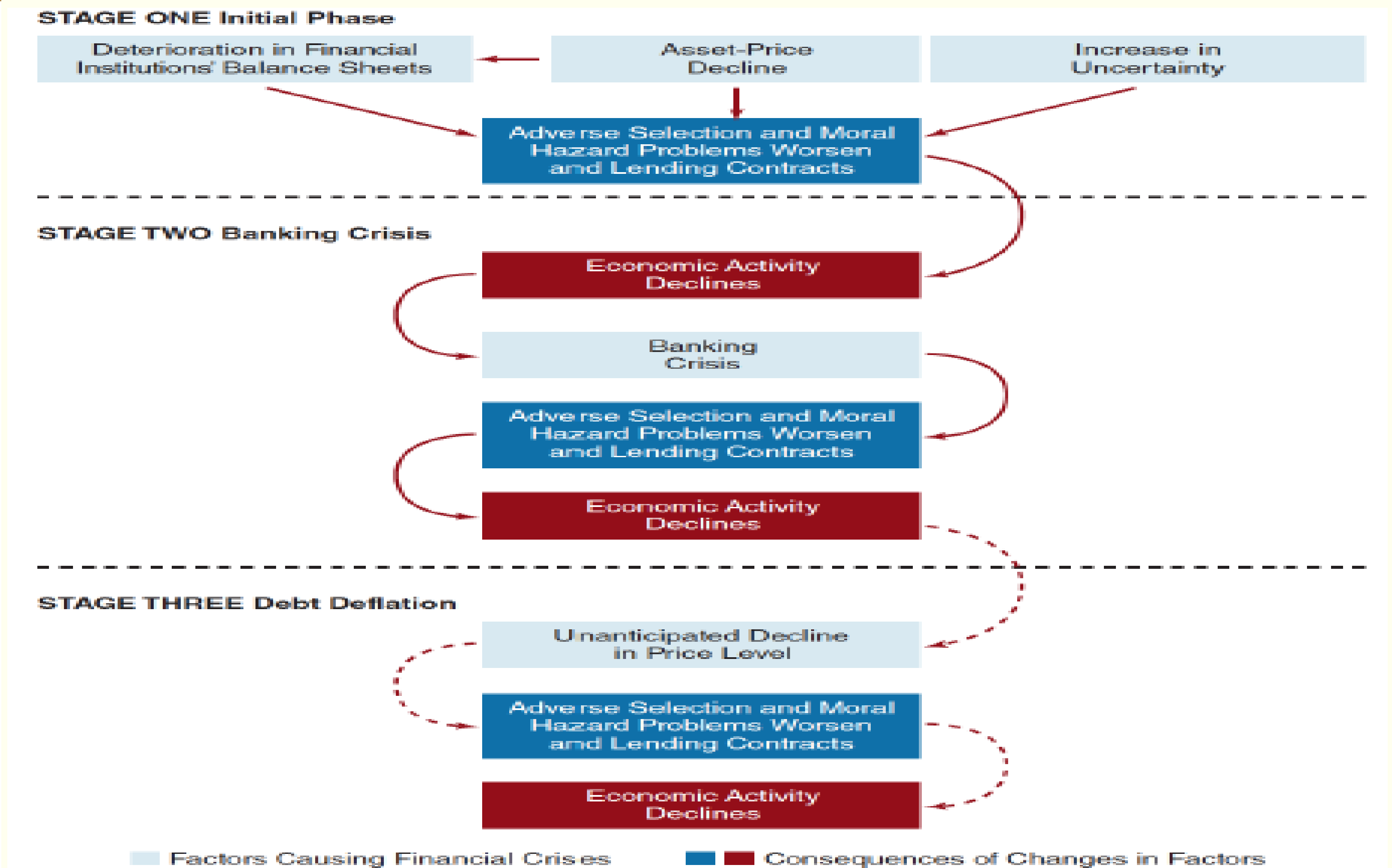
## Stage One: Initiation of a Financial Crisis

- Credit Boom and Bust: Mismanagement of financial
- liberalization/innovation leading to asset price boom and bust
- Asset-price Boom and Bust
- Increase in Uncertainty

## Stage two: Banking Crisis

## Stage three: Debt Deflation

# Figure 1: Sequence of Events in Financial Crisis



# The Mother of All Financial Crisis: The Great Depression

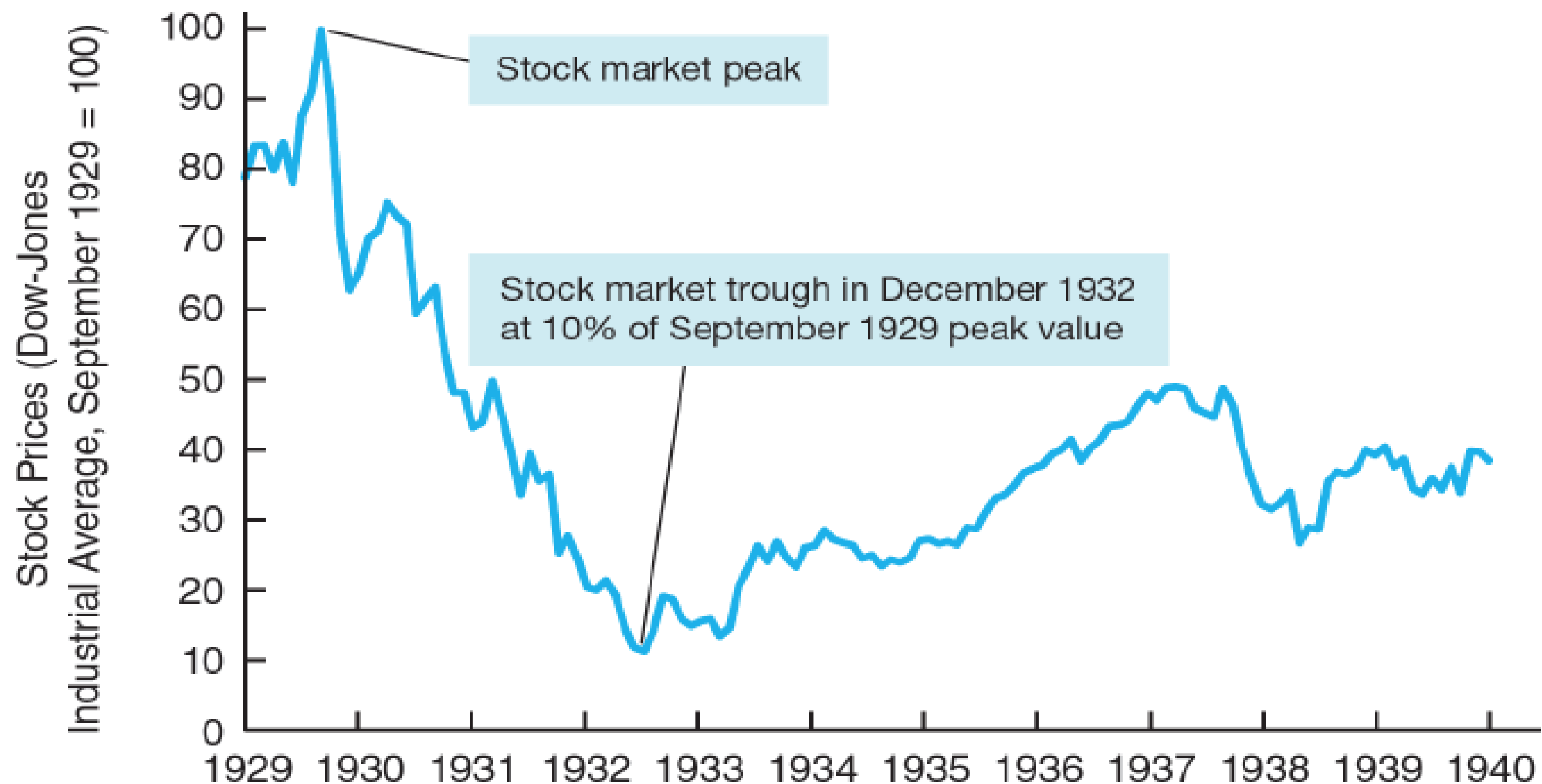
- How did a financial crisis unfold during the Great Depression and how it led to the worst economic downturn in U.S. history?
- This event was brought on by:

  - Stock market crash

  - Bank panics Continuing decline in stock prices

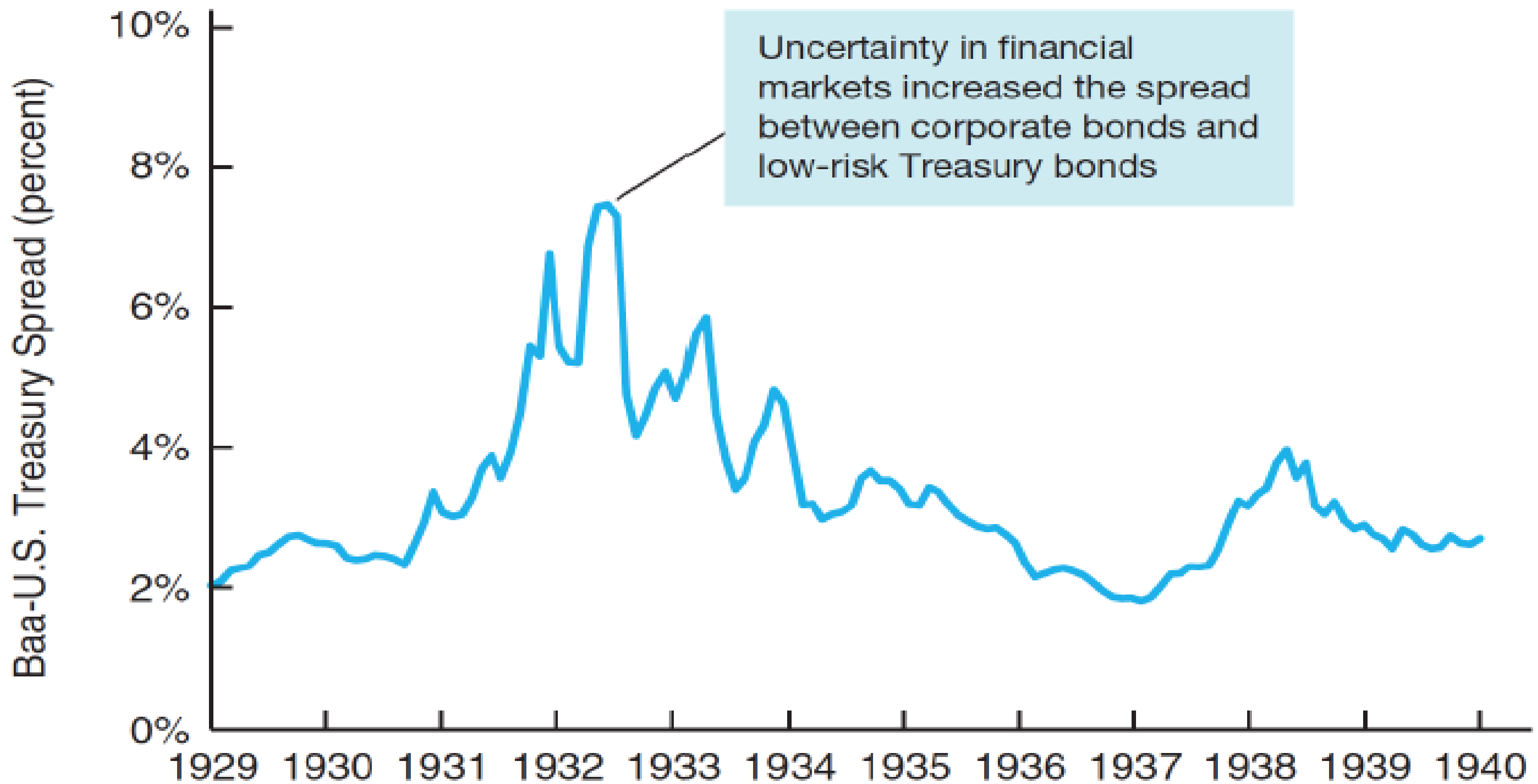
  - Debt deflation

# Figure 2: Stock Price Data During The Great Depression Period




Source: Dow-Jones Industrial Average (DJIA). Global Financial Data: http://www.globalfinancialdata.com/index_tabs.php?action=detailedinfo&id=1165.

# Figure 3: Credit Spread During the Great Depression



Topic Two

# THE GLOBAL FINANCIAL CRISIS OF 2007-2009

# The Global financial Crisis of 2007-2009

- Causes of the 2007-2009 Financial Crisis:

*Financial innovations emerge in the mortgage markets

-Subprime mortgage

-Mortgage-backed securities

-Collateralized debt obligations (CDOs)

- Housing price bubble forms

-Increase in liquidity from cash flows surging to the United States

-Development of subprime mortgage market fueled housing demand and housing prices

# The Global financial Crisis of 2007-2009

**Causes of the 2007-2009 financial crisis**

- Agency problems arise:

  - Originate-to-distribute model is subject to principal-(investor) agent (mortgage broker) problem

  - Borrowers had little incentive to disclose information about their ability to pay

  -Commercial and investment banks (as well as rating agencies) had weak incentives to assess the quality of securities

- Information problems surface
- Housing price bubble bursts

# FYI Collateralized Debt Obligation (CDOs)

- The creation of a collateralized debt obligation involves a corporate entity called a special purpose vehicle (SPV) that buys a collection of assets such as corporate bonds and loans, commercial real estate bonds, and mortgage-backed securities.
- The SPV separates the payment streams (cash flows) from these assets into buckets that are referred to as tranches.

# FYI Collateralized Debt Obligation (CDOs)

- The highest rated tranches, referred to as super senior tranches are the ones that are paid off first and so have the least risk.
- The lowest tranche of the CDO is the equity tranche and this is the first set of cash flows that are not paid out if the underlying assets go into default and stop making payments. This tranche has the highest risk and is often not traded.

# Effects of the 2007-2009 financial Crisis

- After a sustained boom, housing prices began a long decline beginning in 2006.
- The decline in housing prices contributed to a rise in defaults on mortgages and a deterioration in the balance sheet of financial institutions.
- This development in turn caused a run on the shadow banking system.
- Crisis spreads globally

-Sign of the globalization of financial markets

-TED spread (3 months interest rate on Eurodollar minus 3 months Treasury bills interest rate) increased from 40 basis points to almost 240 in August 2007

# Effects of the 2007-2009 financial Crisis

- Deterioration of financial institutions' balance sheets:

  -Write downs

  -Sell of assets and credit restriction

- High-profile firms fail

  -Bear Stearns (March 2008)

  -Fannie Mae and Freddie Mac (July 2008)

  -Lehman Brothers, Merrill Lynch, AIG, Reserve Primary Fund (mutual fund) and Washington Mutual (September 2008)

# Effects of the 2007-2009 financial Crisis

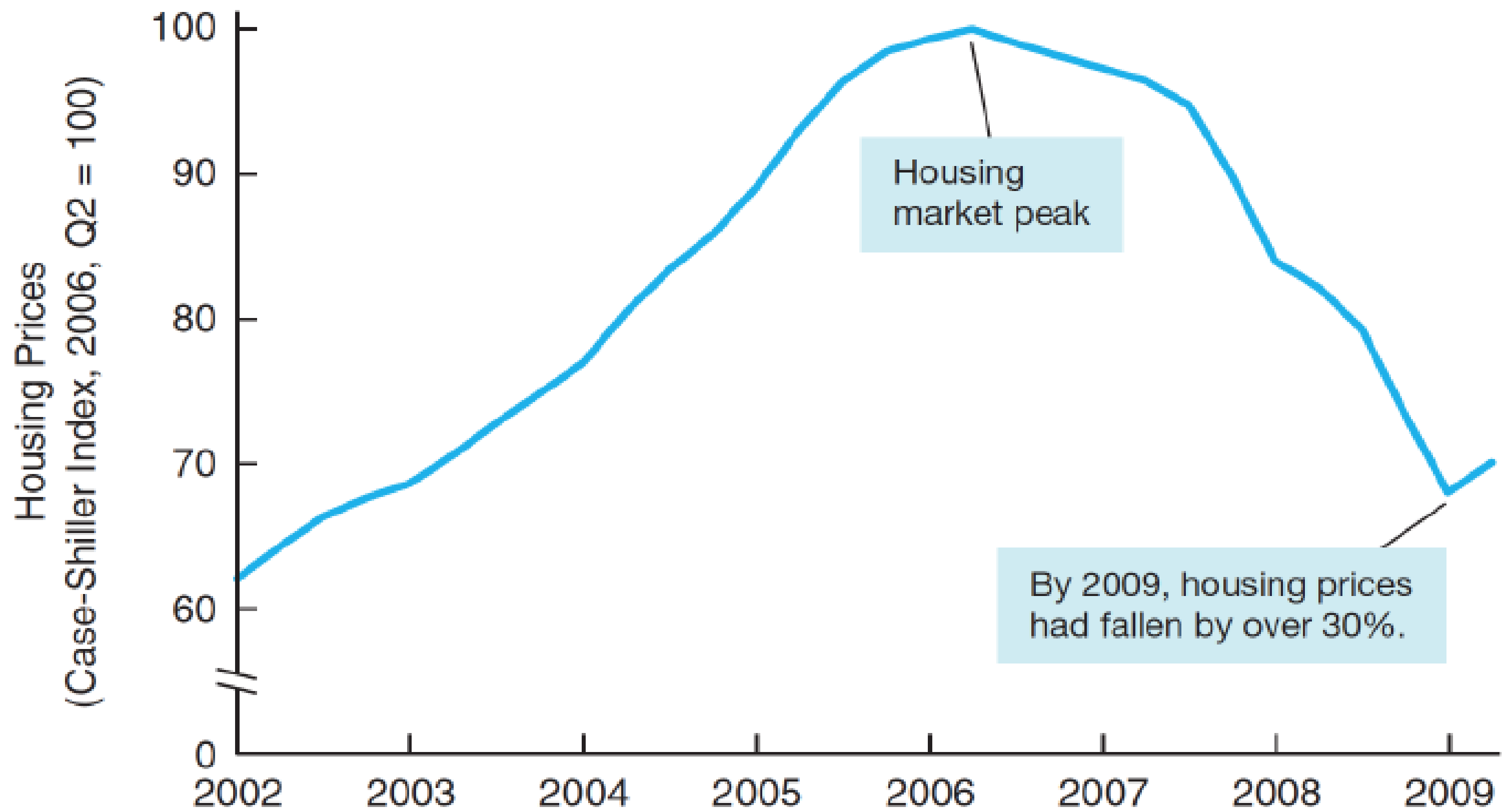
- Bailout package debated

-House of Representatives voted down the $700 billion bailout package on September 29, 2008.

-It passed on October 3, 2008.

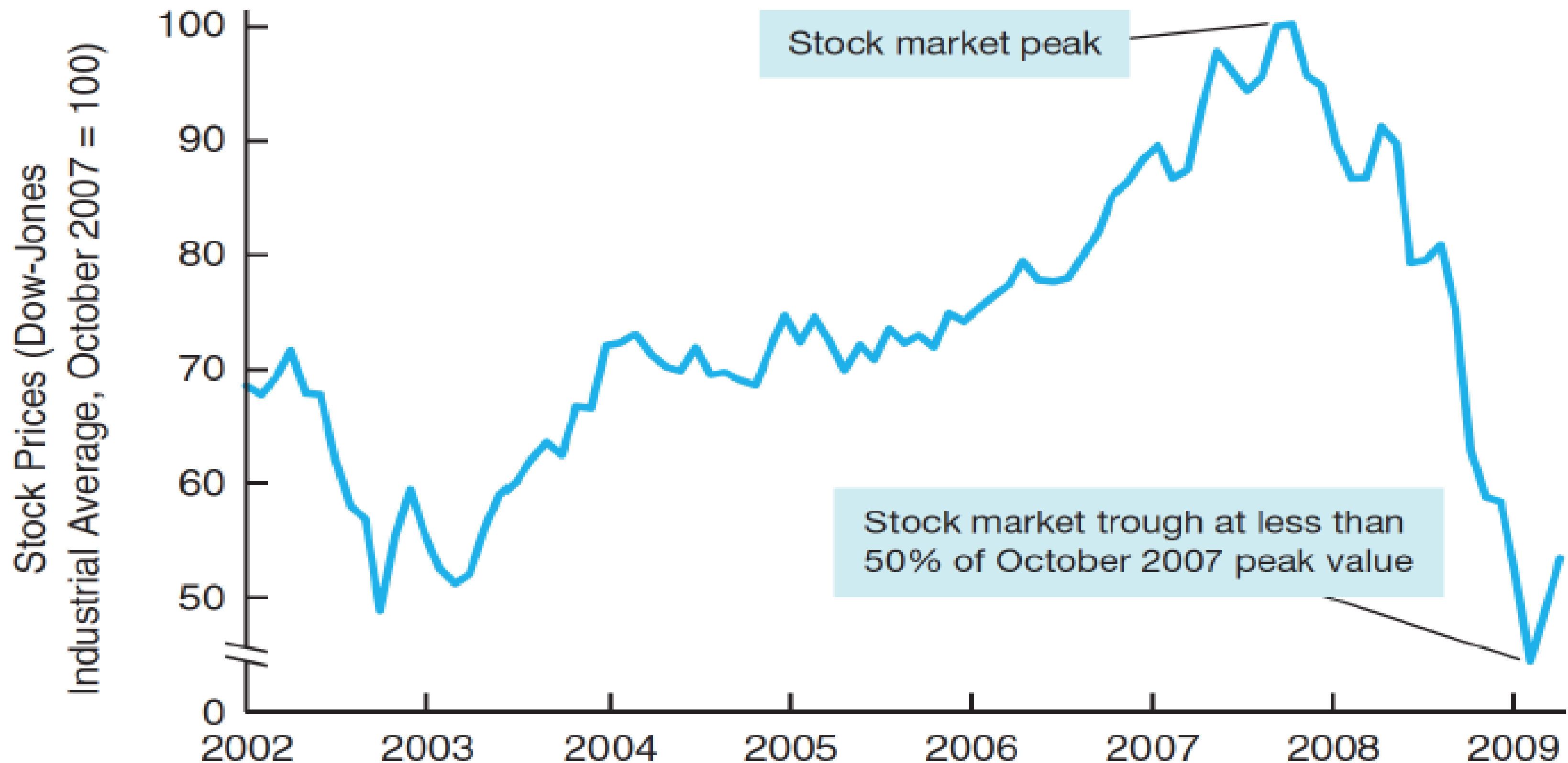
-Congress approved a $787 billion economic stimulus plan on February 13, 2009.

# Figure 4: Housing and the Financial Crisis 2007- 2009




Source: Case-Shiller U.S. National Composite House Price Index from Federal Reserve Bank of St. Louis FRED database: http://research.stlouisfed.org/fred2/.

# Figure 5: Stock Market Prices and the Financial Crisis of 2007-2009




Source: Dow-Jones Industrial Average (DJIA). Global Financial Data: http://www.globalfinancialdata.com/index_tabs.php?action=detailedinfo&id=1165.

# Inside the Fed: Was the Fed to Blame for the Housing Price Bubble?

- Some economists have argued that the low rate interest policies of the Federal Reserve in the 20032006 period caused the housing price bubble.
- Taylor argues that the low federal funds rate led to low mortgage rates that stimulated housing demand and encouraged the issuance of subprime mortgages, both of which led to rising housing prices and a bubble.

# Inside the Fed: Was the Fed to Blame for the Housing Price Bubble?

- Federal Reserve Chairman Ben Bernanke countered this argument, saying the culprits were the proliferation of new mortgage products that lowered mortgage payments, a relaxation of lending standards that brought more buyers into the housing market, and capital inflows from emerging market countries.
- The debate over whether monetary policy was to blame for the housing price bubble continues to this day.

# Global: The European Sovereign Debt Crisis

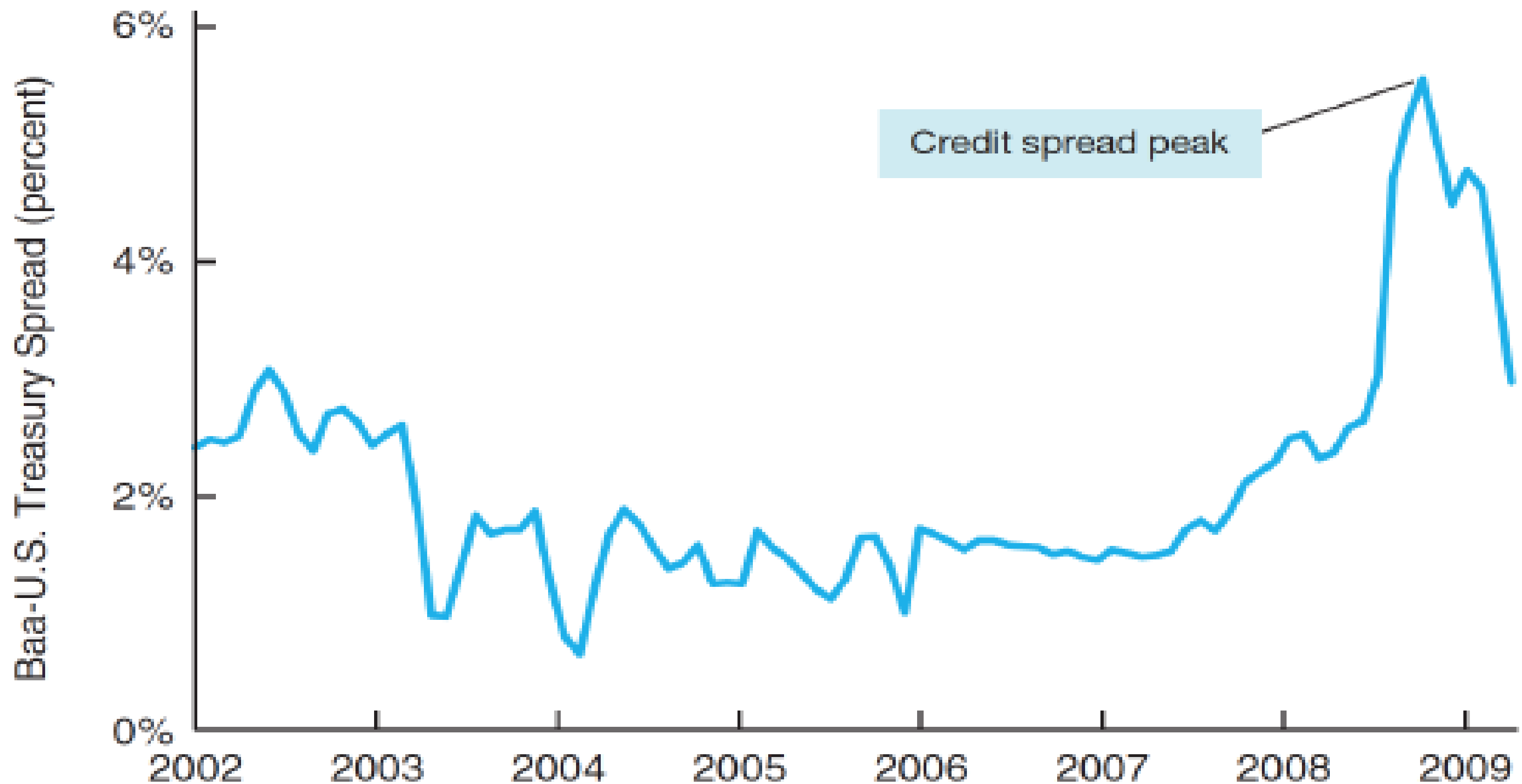
- The increase in budget deficits that followed the financial
- crash of 2007-2009 led to fears of government defaults and a surge in interest rates.
- The sovereign debt, which began in Greece, moved on to Ireland, Portugal, Spain and Italy.
- The stresses created by this and related events continue to threaten the viability of the Euro.

# The Global Financial Crisis of 2007-2009

## Height of the 2007-2009 Financial Crisis

- The stock market crash gathered pace in the fall of 2008, with the week beginning October 6, 2008, showing the worst weekly decline in U.S. history.
- Surging interest rates faced by borrowers led to sharp declines in consumer spending and investment.
- The unemployment rate shot up, going over the 10% level in late 2009 in the midst of the Great Recession, the worst economic contraction in the United States since World War II.

# Figure 6: Credit Spread and 2007-2009 Financial Crisis




Source: Dow-Jones Industrial Average (DJIA). Global Financial Data: http://www.globalfinancialdata.com/index_tabs.php?action=detailedinfo&id=1165.

# Government Intervention and the Recovery

## Short-term Responses and Recovery

- Financial Bailouts: In order to save their financial sectors and to avoid contagion, financial support was provided by many governments to bail out banks, other financial institutions, and even the so-called too-big-to-fail firms that were severely affected by the financial crisis.
- Fiscal Stimulus Spending: To boost their individual economies, most governments used fiscal stimulus packages that combined government expenditure and tax cuts.
- Japan's consecutive stimulus packages, totaling $568 billion, were among the highest during the crisis, but these proved largely ineffective
- European nations showed moderate success.

# Global: Latvia's Different and Controversial Response

- Latvia's independence from the USSR in 1991 and its fiscal policies helped it join the EU, 2004; and the Eurozone, 2014.
- Latvia's economic policies had a low budget deficit and a fixed exchange rate against the Euro.
- In 2007, the country's second-largest bank, Parex Bank, collapsed. Latvia needed ¿7.5 billion to recapitalize and meet external financing requirements.
- Austerity program: citizens voluntarily endured the layoff of 25% of state workers, 40% salary cuts, and social expenditure reductions.
- After a contraction of over 25%, the country's GDP started to grow to its near pre-crisis levels.
- Expansionary Contraction: Success in Latvia, but maybe inapplicable in other countries because of the political motivations involved

# Long-Term Responses

With the individual emergency national bailouts to rescue national economies and financial sectors, global leaders looked to building a more stable and robust global financial system. Steps taken by governments included

- Implement sound macroeconomic policies
- Enhance their financial infrastructure
- Develop financial education and consumer protection rules
- Enact macro and micro prudential regulations.

# Long-Term Responses

- At the international level

  -Proactive globally-binding supervision was designed

  -Financial market discipline enforced

  -Systemic risk managed

- To avoid collective action problems and to ensure that policy actions are mutually consistent with national growth objectives, aggregate plans began to be drafted simultaneously. The first ever of these is the Mutual Assessment Process launched in 2009 by the G20.