

# **FINANCIAL CRISIS IN THE USA 2008-2009**

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## **Abstract**

High consumption, low savings rates in the U.S. and significant amounts of foreign money flowing into the U.S. from fast-growing economies in Asia and oil-producing countries combined with low U.S. interest rates from 2002-2004 and resulted in easy credit conditions, which fueled both housing and credit bubbles. Loans were easy to obtain and consumers assumed an unprecedented debt load. As part of the housing and credit booms, the amount of financial agreements called mortgage-backed securities (MBS) greatly increased. Share in GDP of US financial sector have increased 4% to 8% from 1980 to 2000.

Such financial innovation enabled institutions and investors around the world to invest in the U.S. housing market. As housing prices declined, major global financial institutions that had borrowed and invested heavily in subprime MBS reported significant losses. Defaults and losses on other loan types also increased significantly as the crisis expanded from the housing market to other parts of the economy.

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.<sup>1</sup>

The financial crisis of 2008-2009 began in 2007 when a loss of confidence by investors in the value of MBS in the United States resulted in a liquidity crisis. The crisis in real estate,

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<sup>1</sup> Fed Chairman Ben Bernanke January 2009 speech

banking and credit in the United States had a global reach, affecting a wide range of financial and economic activities and institutions.

The TED spread, the difference between the interest rates on interbank loans and short-term U.S. government debt ("T-bills"), an indicator of perceived credit risk in the general economy, spiked up in July 2007, remained volatile for a year, then spiked even higher in September 2008, reaching a record 4.65% on October 10, 2008. In September 2008, the crisis deepened, as stock markets worldwide crashed and entered a period of high volatility, and a considerable number of banks, mortgage lenders and insurance companies failed in the following weeks.

After the subprime debacle triggered the crisis, large financial institutions in the United States and Europe faced a credit crisis and a slowdown in economic activity. The crisis rapidly developed and spread into a global economic shock, resulting in a number of European bank failures, declines in various stock indexes, and large reductions in the market value of equities and commodities. Moreover, the de-leveraging of financial institutions further accelerated the liquidity crisis and caused a decrease in international trade.

World political leaders, national ministers of finance and central bank directors coordinated their efforts to reduce fears, but the crisis continued.

The US Federal Reserve announced it was making available the extra funding to overnight and longer-term money markets in September 2008. In a joint statement, the European Central Bank, the Bank of Japan, the Bank of England, the Bank of Canada and Swiss National Bank pledged they would continue to work closely together and will take appropriate steps to address the ongoing pressures.<sup>2</sup>

The fear of the recession in the U.S. economy which would lead a global recession resulted in serious measures taken by most of the countries' government. In order to increase trust in

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<sup>2</sup> Central Banks Act to Calm Markets, Financial Times, September 18, 2008

markets, a substantial amount of capital injected into financial markets by the United States Federal Reserve, Bank of England and the European Central Bank.

The Emergency Economic Stabilization Act of 2008 enacted on October 3, 2008, in the President Bush period, authorized the United States Secretary of the Treasury to spend up to US\$700 billion to purchase distressed assets, especially mortgage-backed securities, and make capital injections into banks.

The American Recovery and Reinvestment Act of 2009 enacted on February 17, 2009, in the President Obama period, was intended to provide a stimulus to the U.S. economy in the wake of the economic downturn. The measures are nominally worth \$787 billion. The Act includes federal tax cuts, expansion of unemployment benefits and other social welfare provisions, and domestic spending in education, health care, and infrastructure, including the energy sector.

Economists expect a shrinking in the U.S. economy in 2009. But they forecast that it will start to grow slowly in 2010 again. However, they worry that the recovery might not be sustained if unemployment rate and national debt continue increasing.

In our opinions, the major cause of this crisis is the over indebtedness of U.S. household. Therefore, the crisis can not be averted by the policy prompting consumption.

## **INTRODUCTIONS:**

In 2008–2009 much of the industrialized world entered into a deep recession sparked by a financial crisis that had its origins in reckless lending practices involving the origination and distribution of mortgage debt in the United State. Sub-prime loans losses in 2007 exposed other risky loans and over-inflated asset prices. With the losses mounting, a panic developed in inter-bank lending. The precarious financial situation was made more difficult by a sharp increase in oil and food prices.

The exorbitant rise in asset prices and associated boom in economic demand is considered a result of the extended period of easily available credit, inadequate regulation and oversight, or increasing inequality. As share and housing prices declined, many large and well established investment and commercial banks in the United States and Europe suffered huge losses and even faced bankruptcy, resulting in massive public financial assistance. A global recession has resulted in a sharp drop in international trade, rising unemployment and slumping commodity prices. Social unrest and political changes have appeared in the wake of the crisis.

In December 2008, the National Bureau of Economic Research (NBER) declared that the United States had been in recession since December 2007, and several economists expressed their concern that there is no end in sight for the downturn and that recovery may not appear until as late as 2011. The recession is considered the worst since the Great Depression of the 1930s. The unemployment rate has been increasing since September 2008.

This study is about the series of financial market events, starting 1980s, which were the proximate cause of weakening of the U.S. economy and a series of factors caused the U.S. financial system to become increasingly fragile. Measures adopted by US government to avert ongoing financial crisis and their effects will be discussed in the following parts of this article. And we will mention some presumptions and opinions.

# **I. EVENTS THAT LED TO THE FINANCIAL CRISIS**

## ***A. Subprime Mortgage Crisis***

### **1. Subprime Mortgages Loans and Crisis**

The subprime mortgage crisis is an ongoing financial crisis triggered by a dramatic rise in mortgage delinquencies and foreclosures in the United States, with major adverse consequences for banks and financial markets around the globe.

Subprime mortgage is a type of mortgage that is normally made out to borrowers with lower credit ratings. As a result of the borrower's lowered credit rating, a conventional mortgage is not offered because the lender views the borrower as having a larger-than-average risk of defaulting on the loan. Lending institutions often charge interest on subprime mortgages at a rate that is higher than a conventional mortgage in order to compensate themselves for carrying more risk.

Two decades ago subprime borrowers would typically have been denied to get a credit, because lenders were restricted by many laws that prevented them from charging rates high enough to compensate them for the risk. However, the adoption of the Depository Institutions Deregulatory and Monetary Control Act in 1980 and the Tax Reform Act of 1986 in United States eliminated rate caps and made subprime lending more feasible for lenders and making the subprime a more attractive source of financing.

The subprime mortgage sector has grown tremendously since 1980s. The share of subprime mortgage to total originations moved from a 5% in 1994 to a 20% in 2006. The average difference in mortgage interest rates between subprime and prime mortgage declined from 2.8% in 2001 to 1.3% in 2007. In other words, the risk premium required by lenders to offer a subprime loan declined. Lenders also offered incentives to borrowers.

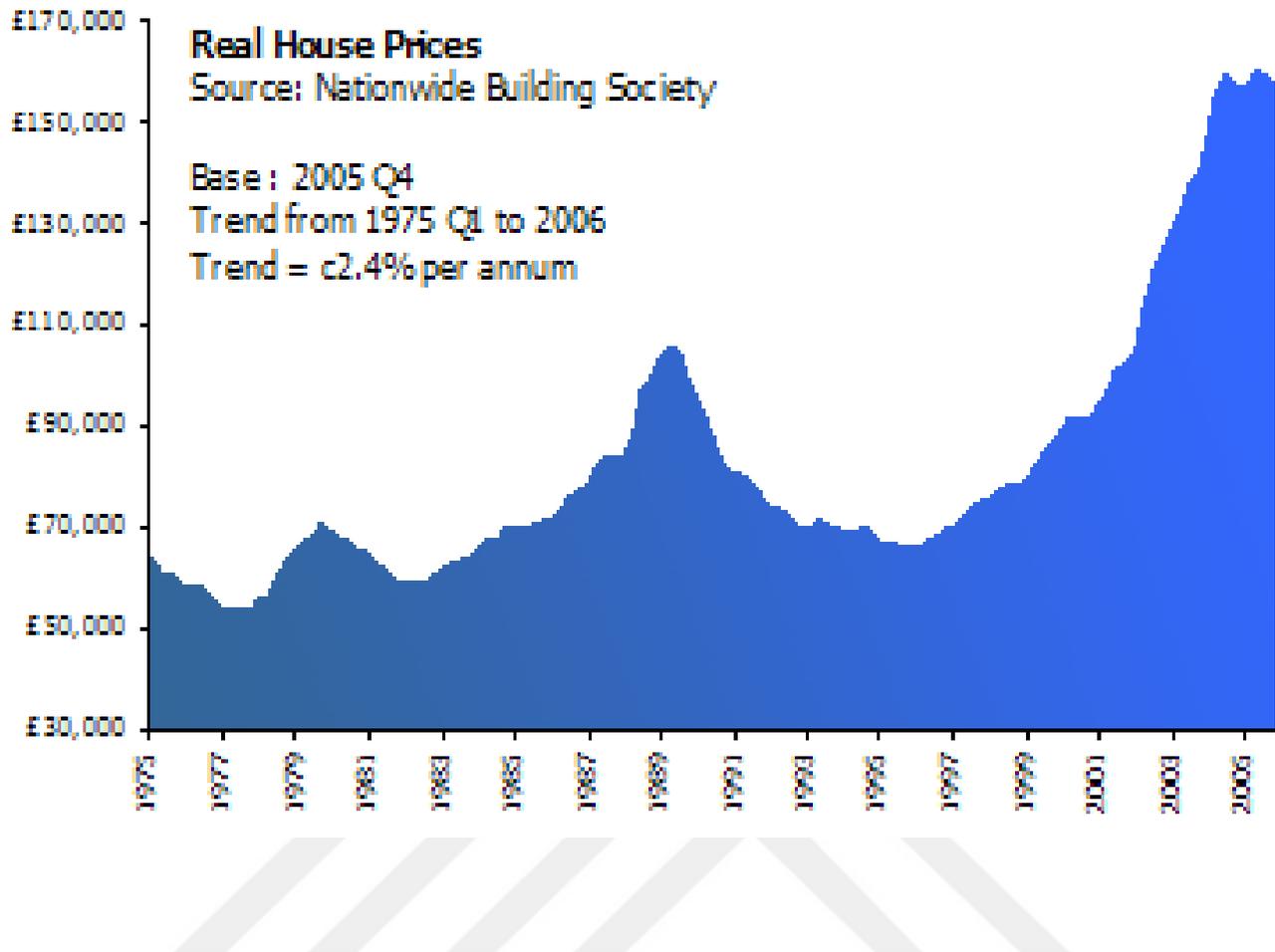
In 1982, Congress passed the Alternative Mortgage Transactions Parity Act (AMTPA), which allowed non-federally chartered housing creditors to write adjustable-rate mortgages.

Because of the weakness of the recovery from the 2001 recession, Federal Reserve Board continued to cut interest rates (Greenspan put). Fixed-rate mortgages and other interest rates hit 50-year lows. On February 23, 2004, to further fuel the housing market, Federal Reserve Board Chairman Alan Greenspan suggested that homebuyers were wasting money by buying fixed rate mortgages instead of adjustable rate mortgages (ARMs)<sup>3</sup>. This was peculiar advice at a time when fixed rate mortgages were near 50-year lows, but even at the low rates of 2003 homebuyers could still afford larger mortgages with the adjustable rates available at the time. After this adjustable-rate mortgages increased. Approximately 80% of U.S. mortgages issued in recent years to subprime borrowers were adjustable-rate mortgages.

Low interest rates created easy credit conditions and fueled a housing market boom and encouraging debt-financed consumption. The USA home ownership rate increased. Subprime lending was a major contributor to this increase in home ownership rates and in the overall demand for housing, which drove prices higher. Between 1997 and 2006, the price of the typical American house increased by 124%. This housing bubble resulted in quite a few homeowners refinancing their homes at lower interest rates, or financing consumer spending by taking out second mortgage secured by the price appreciation. USA household debt as a percentage of annual disposable personal income was 127% at the end of 2007, versus 77% in 1990.

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<sup>3</sup> [http://www.usatoday.com/money/economy/fed/2004-02-23-greenspan-debt\\_x.htm](http://www.usatoday.com/money/economy/fed/2004-02-23-greenspan-debt_x.htm)



On the other hand, U.S. financial sector developed a new method to use the same money as loan in many instances. When financial institutions can not the financing for all the mortgages that they originate, they sell the mortgages secondary market. A mortgage-backed security (MBS) is an asset-backed security or debt obligation that represents a claim on the cash flows from mortgage loans, most commonly on residential property.

First, mortgage loans are purchased from banks, mortgage companies, and other originators. Then, these loans are put together into pools. This is done by government agencies, Government- sponsored enterprise (GSEs), and private entities. Mortgage-backed securities represent claims on the principal and payments on the loans in the pool, through a process known as Securitization. These securities are usually sold as bonds, but financial innovation has created a variety of securities that derive their ultimate value from mortgage pools.

The traditional mortgage model involved a bank originating a loan to the borrower/homeowner and retaining the credit (default) risk. With the advent of securitization, the traditional model has given way to the "originate to distribute" model, in which banks essentially sell the mortgages and distribute credit risk to investors through mortgage-backed securities. Securitization meant that those issuing mortgages were no longer required to hold them to maturity. By selling the mortgages to investors, the originating banks replenished their funds, enabling them to issue more loans and generating transaction fees. This may have created moral hazard and increased focus on processing mortgage transactions rather than ensuring their credit quality.

Securitization accelerated in the mid-1990s. The total amount of mortgage-backed securities issued almost tripled between 1996 and 2007, to \$7.3 trillion. The securitized share of subprime mortgages (i.e., those passed to third-party investors via MBS) increased from 54% in 2001, to 75% in 2006.

Increasing home ownership has been the goal of several presidents including Roosevelt, Reagan, Clinton and G.W.Bush. In 1995, the government sponsored enterprises like Fannie Mae began receiving government tax incentives for purchasing mortgage backed securities which included loans to low income borrowers.

Thus began the involvement of the Fannie Mae and Freddie Mac with the subprime market. In 1996, The United States Department of Housing and Urban Development set a goal for Fanny Mae and Freddie Mac that at least 42% of the mortgages they purchase issued to borrowers whose household income was below the median in their area. This target was increased to 50% in 2000 and 52% in 2005. By 2008, the Fannie Mae and Freddie Mac owned, either directly or through mortgage pools they sponsored, \$5.1 trillion in residential mortgages, about half the total U.S. mortgage market.

Credit rating agencies played an important role at various stages in the subprime crisis. They have been highly criticized for understating the risk involved with mortgage backed securities (MBS). Credit rating agencies issued ratings on structured products without having enough information on assets underlying the product. For a variety of reasons, credit rating agencies did not accurately measure the risk inherent with this financial instrument or understand its impact on the overall stability of the financial system. Higher ratings were justified by various credit enhancements including overcollateralization (pledging collateral in excess of debt issued), credit default insurance, and equity investors willing to bear the first losses.

Also mortgage insurance has facilitated the development of secondary mortgage markets. Insurance company, investment bank and other financial institutions made credit default swaps contracts which are insurance contracts in order to protect bondholders or MBS investors from the risk of default. Failure mortgages have to be paid with these insurers. The buyer of an insured mortgage needed know only the financial strength and credibility of the insurer instead of the financial strength and credibility of the mortgage issuer.

Financial institutions such as investment banks and hedge funds, which are also known as the shadow banking system, played increasingly important role in financial system's fragility in addition to other factors. These institutions had become as important as commercial banks in providing credit to the U.S. economy, but they were not subject to the same regulations. These institutions had also assumed significant debt burdens while providing the loans to mortgage markets and did not have a financial cushion sufficient to absorb large loan defaults or MBS losses.

There were a lot of participants in mortgage markets like thrift institutions, commercial banks, life insurance companies and pension funds, government-sponsored enterprises (GSEs) holders of government and private pools of mortgage-backed securities, mortgage insurers and others.

When U.S. house prices began to decline in 2006-07, refinancing became more difficult and as adjustable-rate mortgages began to reset at higher rates, mortgage delinquencies soared. Between Q3 2007 and Q2 2008, rating agencies lowered the credit ratings on \$1.9 trillion in MBS. Financial institutions felt they had to lower the value of their MBS and acquire additional capital so as to maintain capital ratios. Securities backed with subprime mortgages, widely held by financial firms, lost most of their value. A lot of people lost their homes, while a lot of lenders and brokers earned their commissions and fees by making the loans, and then passed the risk to the next guy by selling the doomed loans to Wall Street and institutional buyers. The result has been a large decline in the capital of many banks and USA government sponsored enterprises, tightening credit around the world.

Michael W. Perry told his peers at the Mortgage Bankers Association's annual convention in Chicago in late 2006 "We all should be proud as an industry. We have created an enormous amount of wealth for Americans. Ultimately, putting people in a home they cannot stay in is not a business we should be in," The cost of that wealth however turned out to be very pricy and led to serious of financial troubles in the years to come.

## **2. Ponzi scheme**

What is Ponzi scheme? The scheme is named after Charles Ponzi, who became notorious for using the technique after emigrating from Italy to the United States in 1903. Ponzi did not invent the scheme, but his operation took in so much money that it was the first to become known throughout the United States.

A Ponzi scheme is a fraudulent investment operation that pays returns to investors from their own money or money paid by subsequent investors rather than from any actual profit earned. The Ponzi scheme usually offers returns that other investments cannot guarantee in order to entice new investors, in the form of short-term returns that are either abnormally high or

unusually consistent. The perpetuation of the returns that a Ponzi scheme advertises and pays requires an ever-increasing flow of money from investors in order to keep the scheme going.

The system is destined to collapse because the earnings, if any, are less than the payments. Usually, the scheme is interrupted by legal authorities before it collapses because a Ponzi scheme is suspected or because the promoter is selling unregistered securities. As more investors become involved, the likelihood of the scheme coming to the attention of authorities increases.

First cause of current economic crisis is greed. Subprime mortgage loans are like Ponzi scheme. As long as house prices increase and new player access to house market, everything keep going good and everyone keep earning. Over the years, mortgage lenders lend money to people who couldn't afford their mortgages. But they did it anyway because there was nothing to lose. These lenders were able to charge higher interest rates and make more money on subprime loans. If the borrowers default, they simply seized the house and put it back on the market. On top of that, they were able to pass the risk off to mortgage insurer or package these mortgages as mortgage-backed securities.

Everything was great when houses were selling and their values went up every month. Lenders made it easier to borrow money, and the higher demand drove up house values. Higher house values means that lenders could lend out even bigger mortgages, and it also gave lenders some protection against foreclosures. All of this translates into more money for the lenders, insurers, and investors.

Unfortunately, many borrowers got slammed when their adjustable mortgage finally adjusted. When too many of them couldn't afford to make their payments, it causes these lenders to suffer from liquidity issue and to sit on more foreclosures than they could sell. Mortgage-backed securities became more risky and worth less causing investment firms like Lehman Brothers to suffer. Moreover, insurers like AIG who insured these bad mortgages also got in

trouble. The scheme worked well, but it reverses course and is now coming back to hurt everyone with a vengeance.

### ***B. Monetary Policy and Money Supply***

A contributing factor caused the financial system to become increasingly fragile in U.S. was the Federal Reserve's lowering of interest rates early in the decade. From 2000 to 2003, the Federal Reserve lowered the federal funds rate target from 6.5% to 1.0%. This was done to soften the effects of the collapse of the dot-com bubble and of the September 2001 terrorist attacks, and to combat the perceived risk of deflation.

The dot-com bubble was a speculative bubble covering roughly 1995–2001 during which stock markets in Western nations saw their value increase rapidly from growth in the new internet sector and related fields.

September 11th, 2002 became a true shock for the industry and after the terrorist attacks the FED started dropping interest rates in the hope for quick recovery. In 2003 homebuyers discovered that very ordinary paychecks could now buy extraordinary homes.

The Fed believed that interest rates could be lowered safely primarily because the rate of inflation was low; but it disregarded other important factors that made the economy more fragile.

This action of Fed increased money supply and gave rise to 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.

There was a lot of money to lend or borrow for financial institutions, individuals, investors, companies and others. Therefore they invested these funds on these complex and opaque credit instruments by not considering the risks of these instruments.

On the other hand, it was said that the Fed's interest rate policy during the early 2000s was misguided, because measured inflation in those years was below true inflation, which led to a monetary policy that contributed to the housing bubble and credit boom.<sup>4</sup> Lower interest rate than inflation rate means lower real interest rate than zero, which means no borrowing cost sparking credit boom.

According to Ben Bernanke, now chairman of the Federal Reserve, it was capital or savings pushing into the United States, due to a world wide "saving glut", which kept long term interest rates low independently of Central Bank action.

In addition to all these, Federal Reserve actions caused moral hazard. In 1998 The Federal Reserve Bank of New York's rescue of Long-Term Capital Management<sup>5</sup> encouraged large financial institutions to believe that the Federal Reserve would intervene on their behalf if risky loans went sour because they were "too big to fail." This contributed to credit boom.

The Fed then raised the Fed funds rate significantly between July 2004 and July 2006. From 2004 to 2006, the Federal Reserve increased the federal funds rate target from 1% to 5.5%.

This contributed to an increase in 1-year and 5-year ARM rates, making ARM interest rate resets more expensive for homeowners and started to payment troubles and also contributed to an increase in other mortgage rates, deflating of the housing bubble and causing to begin subprime mortgage crisis.

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<sup>4</sup> Richard W. Fisher, President and CEO of the Federal Reserve Bank of Dallas

<sup>5</sup> A U.S. hedge fund which used trading strategies such as fixed income arbitrage, statistical arbitrage and pairs trading, combined with high leverage.

This was also contributed to liquidity crisis and credit crunch. The general availability of loans or credit reduced and the conditions required to obtain a loan from the banks was suddenly tightened. The abrupt end of the credit boom has had widespread financial and economic ramifications.

### ***C. Financial Institutions Debt Burden and Financialization***

The financial system was vulnerable because of intricate and highly-leveraged financial contracts and operations, a U.S. monetary policy making the cost of credit negligible therefore encouraging such high levels of leverage<sup>6</sup>, and generally a "hypertrophy of the financial sector" (financialization).

Financialization may be defined as the increasing dominance of the finance industry in the sum total of economic activity, of the stock market as a market for corporate control in determining corporate strategies, and of fluctuations in the stock market as a determinant of business cycles. Share in GDP of US financial sector have increased 4% to 8% from 1980 to 2000.

Many financial institutions, investment banks in particular, issued large amounts of debt during 2004–2007, and invested the proceeds in (MBS), essentially betting that house prices would continue to rise, and that households would continue to make their mortgage payments. Borrowing at a lower interest rate and investing the proceeds at a higher interest rate is a form of financial leverage. This is analogous to an individual taking out a second mortgage on his residence to invest in the stock market. This strategy proved profitable during the housing boom, but resulted in large losses when house prices began to decline and mortgages began to default. Beginning in 2007, financial institutions and individual investors holding MBS also

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<sup>6</sup> Leverage generally refers to using borrowed funds or debt so as to attempt to increase the returns to equity. In macroeconomics, a key measure of leverage is the debt to GDP ratio.

suffered significant losses from mortgage payment defaults and the resulting decline in the value of MBS.

A 2004 SEC decision related to the net capital rule allowed USA investment banks to issue substantially more debt, which was then used to purchase MBS. Over 2004-07, the top five US investment banks, Lehman Brothers, Bear Stearns, Merrill Lynch, Morgan Stanley and Goldman Sachs, each significantly increased their financial leverage which increased their vulnerability to the declining value of MBSs. These five institutions reported over \$4.1 trillion in debt for fiscal year 2007, about 30% of USA nominal GDP for 2007. Further, the percentage of subprime mortgages originated to total originations increased from below 10% in 2001-2003 to between 18-20% from 2004-2006, due in-part to financing from investment banks.

Financial innovation facilitated the bundling of subprime mortgages into mortgage-backed securities or collateralized debt obligations for sale to investors and developed a form of credit insurance called credit default swaps.

The usage of these products expanded dramatically in the years leading up to the crisis. They vary in complexity and the ease with which they can be valued on the books of financial institutions. Certain financial innovation may have the effect of circumventing regulations, such as off-balance sheet financing that affects the leverage or capital cushion reported by major banks. For a variety of reasons, market participants did not accurately measure the risk inherent with this innovation or understand its impact on the overall stability of the financial system.

U.S. households and financial institutions became increasingly indebted or overleveraged during the years preceding the crisis. This increased their vulnerability to the collapse of the housing bubble and credit crunch and worsened the ensuing economic downturn.

## **II. EVENTS OF THE FINANCIAL CRISIS**

### ***A. Events in 2008***

#### **1. From January to September 2008**

During 2008, three of the largest U.S. investment banks went bankrupt (Lehman Brothers) or were sold (Bear Stearns and Merrill Lynch). These failures augmented the instability in the global financial system. The remaining two investment banks, Morgan Stanley and Goldman Sachs, opted to become commercial banks, thereby subjecting themselves to more stringent regulation.

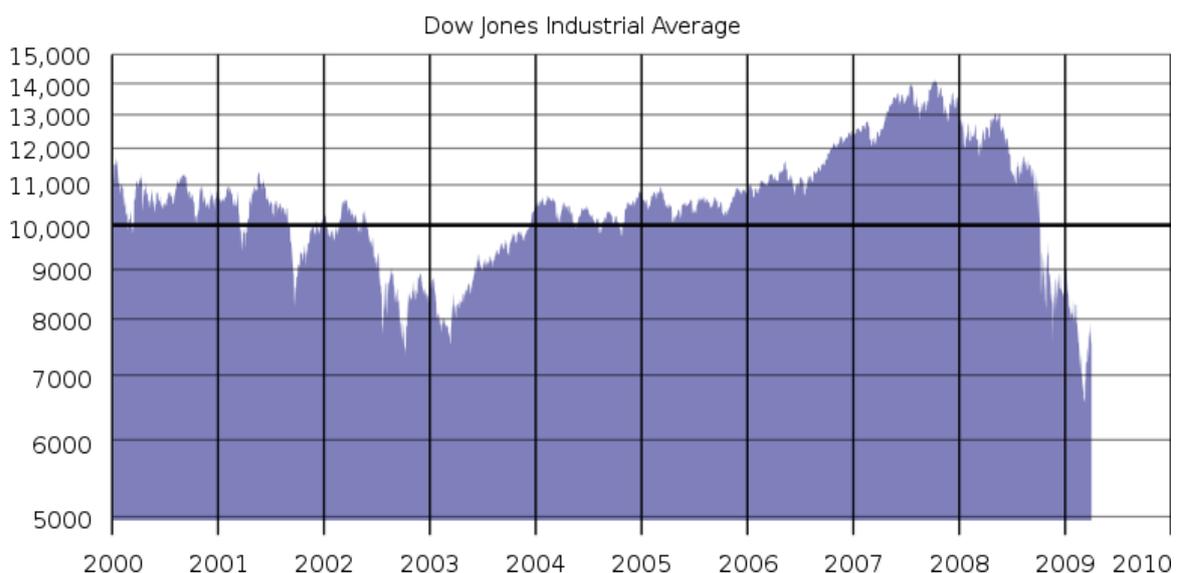
January 2008 was an especially volatile month in world stock markets, with a surge in implied volatility measurements of the US-based S&P 500 index, and a sharp decrease in non-U.S. stock market prices on Monday, January 21, 2008 (continuing to a lesser extent in some markets on January 22). Some headline writers and a general news columnist called January 21 “Black Monday” and referred to a "global shares crash," though the effects were quite different in different markets.

There were several large Monday declines in stock markets world wide during 2008, including one in January, one in August, one in September, and another in early October. As of October 2008, stocks in North America, Europe, and the Asia-Pacific region had all fallen by about 30% since the beginning of the year. The Dow Jones Industrial Average had fallen about 37% since January 2008.

One of the first victims was Northern Rock, a medium-sized British bank. On 14 September 2007, the Bank sought and received a liquidity support facility from the Bank of England. This in turn led to investor panic and a bank run in mid-September 2007. On 22 February 2008, Northern Rock bank was nationalized by the British Government, (having failed to find a private sector buyer). Northern Rock’s problems proved to be an early indication of the troubles that would soon befall other banks and financial institutions.

The Bear Stearns Companies, Inc., one of the largest global investment banks and securities trading and brokerage firms, collapsed and were subjected to distress sale to JP Morgan Chase in March 2008. Bear Stearns pioneered the securitization and asset-backed securities markets, and as investor losses mounted in those markets in 2006 and 2007, the company actually increased its exposure, especially the mortgage-backed assets that were central to the subprime mortgage crisis. In March 2008, the Federal Reserve Bank of New York provided an emergency loan to try to avert a sudden collapse of the company. The company could not be saved, however, and was sold to JPMorgan Chase for as low as ten dollars per share, a price far below the 52-week high of \$133.20 per share, traded before the crisis, although not as low as the two dollars per share originally agreed upon by Bear Stearns and JP Morgan Chase. The collapse of the company was a key prelude event to the risk management meltdown of the Wall Street investment bank industry in September 2008, and the subsequent global financial crisis and recession.

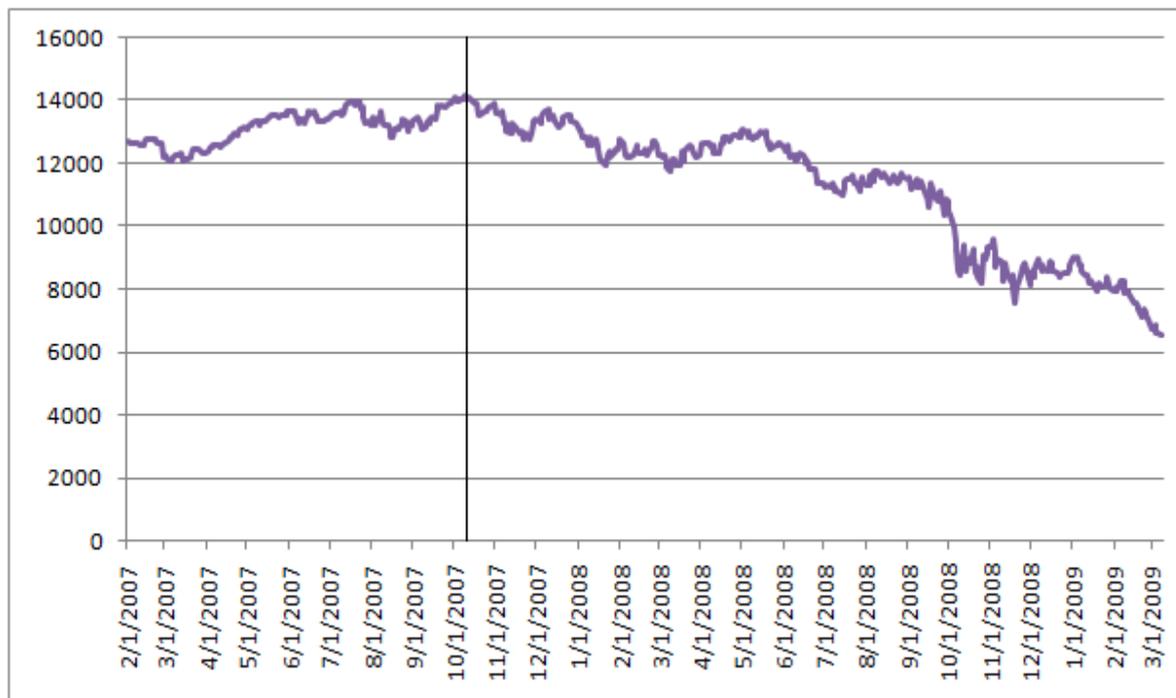
The US bear market of 2007–2009 was declared in June 2008 when the Dow Jones Industrial Average<sup>7</sup> had fallen down 20% from its October 11, 2007 high.<sup>8</sup>



<sup>7</sup> DJIA Industrial Average is an index that shows how top 30 companies stocks have traded.

<sup>8</sup> [http://en.wikipedia.org/wiki/Dow\\_Jones\\_Industrial\\_Average](http://en.wikipedia.org/wiki/Dow_Jones_Industrial_Average)

## 2007-2009 The U.S. Bear Market<sup>9</sup>

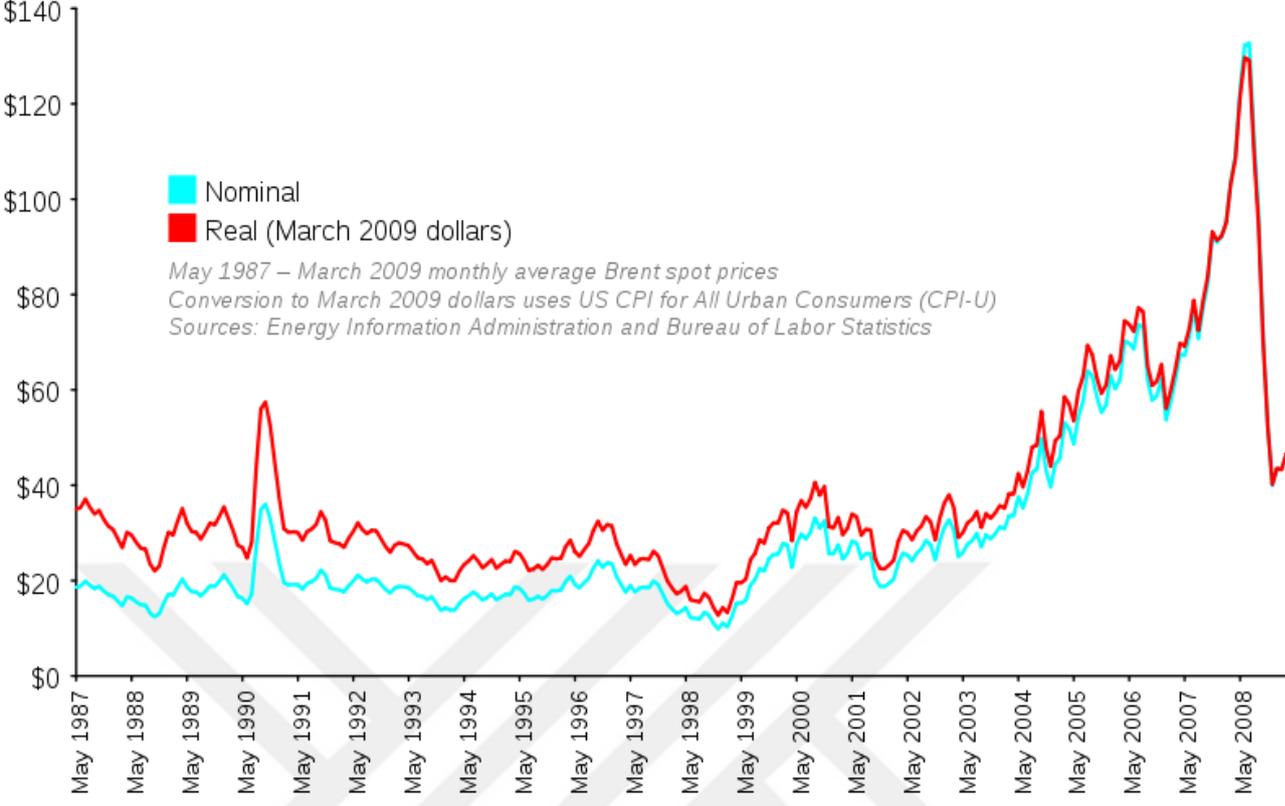


Bank of America Corporation bought Countrywide Financial Corporation on July 1, 2008. This acquisition gave the bank a substantial market share of the mortgage business, and access to Countrywide's expertise, technology, and employees for servicing mortgages. The acquisition was seen as preventing the potential of bankruptcy for Countrywide. Countrywide, however, denied that it was close to bankruptcy. Countrywide was providing mortgage servicing for nine million mortgages valued at \$1.4 trillion USD as of December 31, 2007. However, Countrywide was under FBI investigation due to possible fraud in home loans and mortgages, therefore Bank of America stated that by 2009 they will only be "officially" affiliated to Countrywide.

Oil prices peak at \$147 per barrel as money fled housing and stock assets toward commodities  
July, 2008

<sup>9</sup> [http://en.wikipedia.org/wiki/Bear\\_market#Bear\\_market](http://en.wikipedia.org/wiki/Bear_market#Bear_market)

Brent barrel petroleum spot prices, May 1987 – March 2009.



After August 2008, the crisis reached a critical stage, characterized by severely contracted liquidity in the global credit markets and insolvency threats to investment banks and other institutions.

### 2. September 2008

In September 2008, the crisis deepened, as stock markets worldwide crashed and entered a period of high volatility, and a considerable number of banks, mortgage lenders and insurance companies failed in the following weeks.

On September 7, The United States director of the Federal Housing Finance Agency (FHFA), James B. Lockhart III, announced his decision to place two United States Government sponsored enterprises (GSEs), Fannie Mae (Federal National Mortgage Association) and Freddie Mac (Federal Home Loan Mortgage Corporation), into conservatorship run by FHFA.

United States Treasury Secretary Henry Paulson took actions to ensure the financial soundness of those two companies.

Lehman Brothers filed for Chapter 11 bankruptcy protection on September 15, 2008. The bankruptcy of Lehman Brothers is the largest bankruptcy filing in U.S. history with Lehman holding over \$600 billion in assets.

The Dow Jones closed down just over 500 points on September 15, 2008, at the time the largest drop by points in a single day since the day following the attacks on September 11, 2001.

On September 15, 2008, Bank of America announced its intentions to purchase Merrill Lynch & Co., Inc. in an all-stock deal worth approximately \$ 50 billion, about 86% of the Bank of America stock price at close. Merrill Lynch was at the time within days of collapse, and the acquisition effectively saved Merrill from bankruptcy. Around the same time Bank of America was reportedly also in talks to purchase Lehman Brothers, however a lack of government guarantees caused the bank to abandon talks with Lehman. Lehman Brothers filed for bankruptcy the same day Bank of America announced its plans to acquire Merrill Lynch.

The beginning of the week was marked by extreme instability in global stock markets, with dramatic drops in market values on Monday, September 15, and Wednesday, September 17.

The large insurer American International Group (AIG), which insured obligations of various financial institutions through the usage of credit default swaps, suffered a liquidity crisis following the downgrade of its credit rating. The basic CDS transaction involved AIG receiving a premium in exchange for a promise to pay money to party A in the event party B defaulted. However, AIG did not have the financial strength to support its many CDS commitments. AIG could not find lenders willing to save it from insolvency, and requested

that The Federal Reserve created a credit facility. On the evening of September 16, 2008, the Federal Reserve Bank's Board of Governors announced that the Federal Reserve Bank of New York had been authorized to create a 24-month credit-liquidity facility from which AIG could draw up to \$85 billion in exchange for a 79.9% equity interest, and the right to suspend dividends to previously issued common and preferred stock.

On September 16, the Reserve Primary Fund, a large money market mutual fund, lowered its share price below \$1 because of exposure to Lehman debt securities. This resulted in demands from investors to return their funds as the financial crisis mounted. By the morning of September 18, money market sell orders from institutional investors totaled \$0.5 trillion, out of a total market capitalization of \$4 trillion, but a \$105 billion liquidity injection from the Federal Reserve averted an immediate collapse.

On Sunday, September 21, the two remaining US investment banks, Goldman Sachs and Morgan Stanley, with the approval of the Federal Reserve, converted to bank holding companies, a status subject to more regulation, but with readier access to capital.

On September 25, Washington Mutual, the nation's largest savings and loan, was seized by the Federal Deposit Insurance Corporation and most of its assets transferred to JP Morgan Chase. Wachovia, one of the largest US banks, was reported to be in negotiations with Citigroup and other financial institutions.

Stocks fell dramatically on September 29 in Europe and the US despite infusion of funds into the market for short term credit. In the US the Dow dropped 777 points (6.98%), the largest one-day point-drop in history (but only the 17th largest percentage drop). By the end of the day, the Dow suffered the largest drop in the history of the index. The S&P 500 Banking Index fell 14% on September 29 with drops in the stock value of a number of US banks generally considered sound, including Bank of New York Mellon, State Street and Northern Trust; three Ohio banks, National City, Fifth Third, and KeyBank were down dramatically.

### **3. October 2008**

On October 3 it was reported that Wachovia had rejected the previous offer from Citigroup in favor of acquisition by Well Fargo, resulting in a legal dispute with Citigroup.

On Wednesday, October 8, the European Central Bank, Bank of England, Federal Reserve, Bank of Canada, Swedish Riskbank and Swiss National Bank all announced simultaneous cuts of 0.5% to their base rates at 11:00 UTC. Shortly afterwards, the Central Bank of the People's Republic of China also cut interest rates. On October 8 there were sharp losses on stock markets worldwide with a loss of over 9% in Japan. Trading was suspended in Russia and Indonesia after steep morning losses. In the United States, following the funds cut by the Federal Reserve, stocks were volatile, finishing down. On October 8 the Federal Reserve loaned AIG \$37.8 billion, in addition to the previous loan of \$85 billion.

On Thursday, October 9, the one-year anniversary of the Dow's peak, the cost of short term credit rose while there were heavy losses in the United States stock market; the Dow dropped below 8600, reaching a five year low. It was the first time since August 2003 that the Dow closed below 9000; losses were moderate in Europe. The following day, Friday, October 10, there were large losses in Asian and European markets.

On Friday, October 10, stock markets crashed across Europe and Asia. London, Paris and Frankfurt dropped 10% within an hour of trading and again when Wall Street opened for trading. Global markets have experienced their worst weeks since 1987 and some indices, S&P 500, since the Wall Street Crash of 1929.

On October 10, within the first five minutes of the trading session on Wall Street, the Dow Jones Industrial Average plunged 697 points, falling below 7900 to its lowest level since March 17, 2003. Later in the afternoon, the Dow made violent swings back and forth across the breakeven line, toppling as much as 600 points and rising 322 points. The Dow ended the day losing only 128 points, or 1.49%. Trading on New York Stock Exchange closed for the

week with the Dow at 8,451, down 1,874 points, or 18% for the week, and after 8 days of losses, 40% down from its record high October 9, 2007. Trading on Friday was marked by extreme volatility with a steep loss in the first few minutes followed by a rise into positive territory, closing down at the end of the day. In S&P100 some financial corporate showing signals upwards also. President George W. Bush reassured investors that the government will solve the financial crisis gripping world economies.

The bonds of the bankrupt Lehman Brothers were auctioned on Friday, October 10. They sold for a little over 8 cents on the dollar. Many of the bonds of Lehman Brothers were insured with credit default swaps. Apprehension that payments to the holders of Lehman bonds might severely damage the firms or hedge funds which issued the swaps proved unfounded, despite anticipated claims estimated to be several hundred billion dollars, as countervailing claims canceled each other out resulting in only 5.2 billion dollars changing hands.

On October 11, The Dow Jones Industrial Average caps its worst week ever with its highest volatility day ever recorded in its 112 year history. Over the last eight trading days, the DJIA has dropped 22% amid worries of worsening credit crisis and global recession. Paper losses now on US stocks now total \$8.4 trillion from the market highs last year.

On Wednesday, October 15, the London stock exchange FTSE 100 fell substantially, surrendering over 314 points to slip down 7.16 percent. The losses precipitated more losses in the U.S., as the DJIA suffered its largest drop in terms of percentage since 1987, falling over 733 points. The NASDAQ plunged almost eight and a half percent, and the Standard&Poor collapsed down over nine percent.

On Friday, October 24, stock markets plummeted worldwide amidst growing fears among investors that a deep global recession is imminent if not already settled in. The panic was partly fueled by remarks made by Alan Greenspan that the crisis is "a once-in-a-century credit tsunami" and by comments made by Gordon Brown during a speech, admitting essentially that

Great Britain is already in recession mode. Following the trend, the US stock markets also fell sharply on opening and ended with the Dow Industrial Index down 312 points. Friday and Saturday (October 24 and 25) the 7th Asia-Europe Meeting was held in Beijing with the European Union meeting Asian states in an attempt to discuss a common approach ahead of the Emergency International Meeting that is scheduled to take place in Washington on November 15. No specific recommendations to solve the crisis were developed.

On Tuesday, October 28, stocks rose dramatically worldwide in anticipation of rate cuts by central banks. In the U.S. the Dow Industrial Average rose 10.8%, closing at over 9000. On Wednesday, October 29, markets in the U.S. closed down slightly despite announcement by the Federal Open Market Committee of a reduction in the federal funds rate 50 points to 1 percent. Markets in the U.S. were up Thursday and Friday, closing up for the week, cutting losses to the Dow Industrial Average during October to 17%, down 30% for the year.

JP Morgan Chase, the largest bank in the United States, announced that it would work with homeowners who demonstrate a willingness to pay their mortgages by reducing interest payments or principal. Counseling centers are planned for troubled areas. Washington Mutual, and EMC Mortgage Corporation, a loan servicing company, acquired by JPMorgan, will be included. Bank of America has announced a similar program, as has Countrywide Financial as the result of a court settlement.

#### **4. November 2008**

On Thursday November 13, the DJIA marked another dramatic session, with the index (opening at 8,282.66) that after a mixed start tumbled again below the 8,000 mark (to a low of 7,965.42) but then reversed the trend and gained more than 900 points (fourth largest daily swing ever) in less than three hours closing at 8,835.25 with a net gain of more than 550 points (third largest ever).

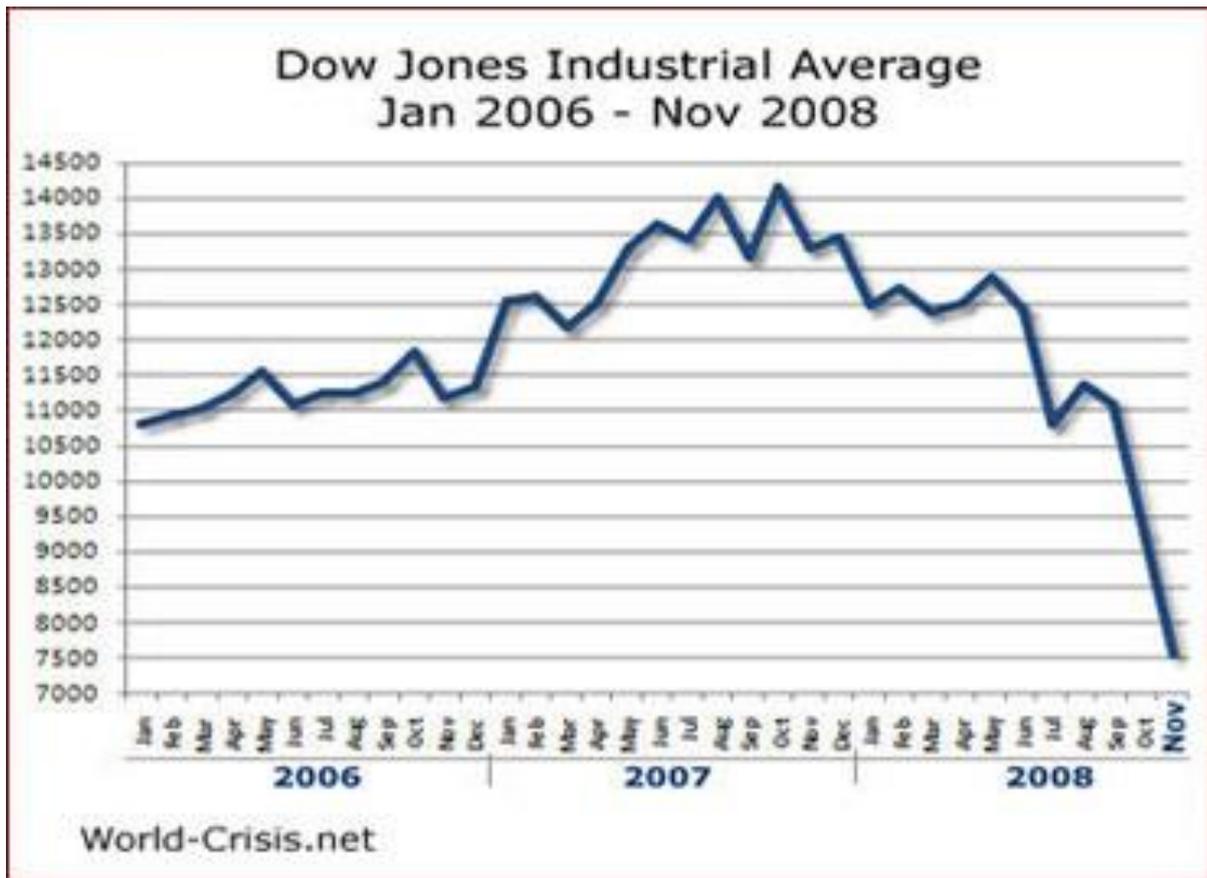
On Wednesday, November 19, the DJIA fell sharply by 427.47 points or 5.07%, closing below 8,000 points for the first time since March 2003. United States financial stocks led the way with Citigroup showing a 23% drop. The UK FTSE 100 fell by about the same percentage, closing just above 4000. The BBC Global 30, combining Europe, Asia and North America in a single index, fell by 5.1%.

On Thursday, November 20 the Dow Jones Industrial Average dropped 445 points in the last minutes of the trading session, closing at 7,552, the lowest point in six years. Shares in Citigroup plummeted another 26%, and shares of other major US financial institutions dropped by more than 10%.

On Friday, November 21 the Dow Jones Industrial Average recovered about half of the loss for the week and closed above 8,000; however, stocks of Citibank, Bank of America, and J.P. Morgan Chase continued to decline. It was unclear whether the drop in the value of Citigroup stock to under \$4 reflected financial weakness of the bank or what rescue plan could be crafted. One theory for the disappointment of investors was that the failure of the Treasury to purchase toxic mortgage related securities held by the bank left billions of unrealized losses on the books. Citigroup continues to hold \$20 billion in mortgage-related securities, currently valued at a substantial discount.

As of the week of November 16 stock losses in United States markets during 2008 as measured by the S&P 500 were equivalent to those suffered in 1931, over 50%. Total losses during the Great Depression exceeded 80% but that was over a three year period.

Dow Jones Industrial Average (DJIA) touches recent low point of 7,507 points



Friday, November 21 and Monday, November 24 marked the DJIA's largest two-session gain since October 1987. The Dow gained 891.10 points, 11.8%, bringing it to a close at 8,443.39 points.

### **5. December 2008**

On December 1, the National Bureau of Economic Research officially declared that the U.S. economy had entered recession in December 2007, a full year earlier. (See late 2000s recession)

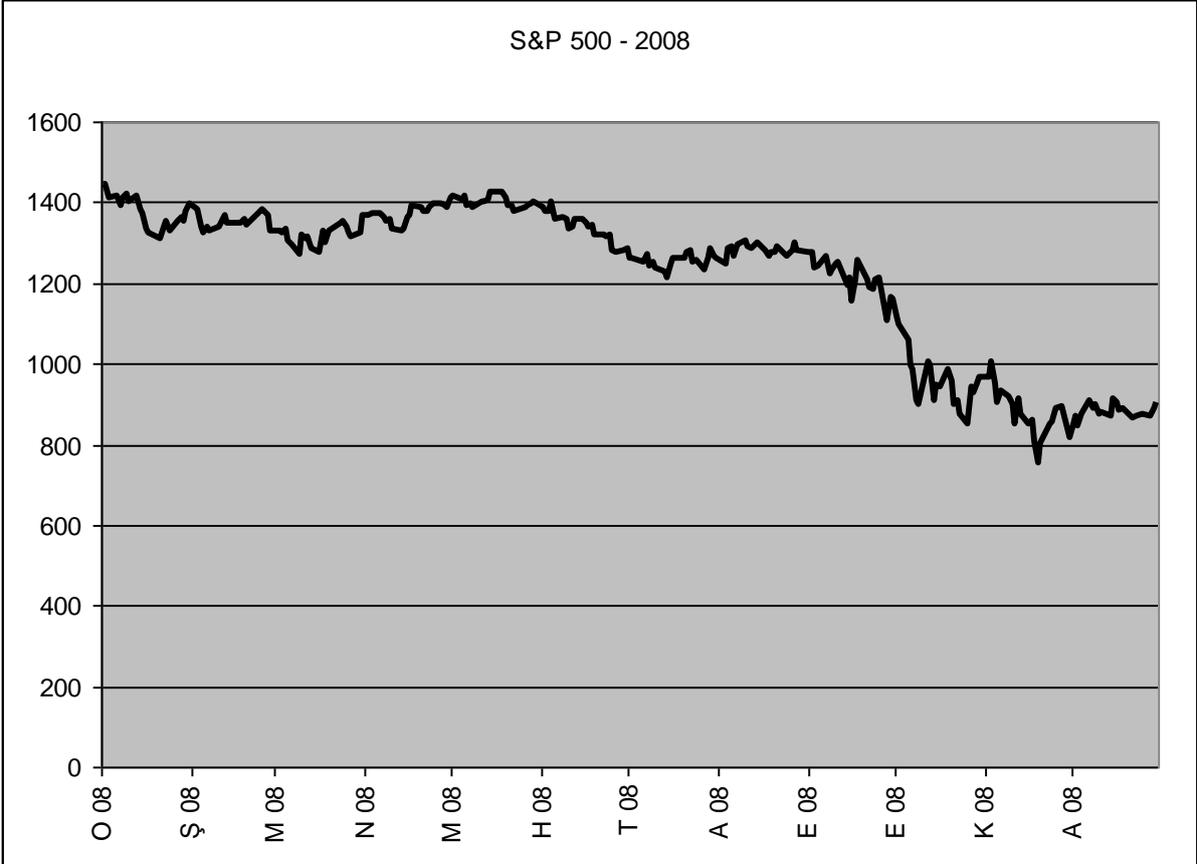
The Labor Department said that the US lost 533,000 jobs in November 2008, the biggest monthly loss since 1974. This raised the unemployment rate from 6.5% to 6.7%.

On December 11, the FBI announced the arrest of Bernard Madoff in a Ponzi scheme which totaled \$50 billion by Madoff's own estimate, and which was soon found to affect banks, individuals, and charities in the U.S. and Europe.

After 5 positive days, on December 1 the S&P 500 fell 80 points to 816, down 9%. Financial stocks in the S&P 500 fell 17%. The Dow Jones Industrial Average closed at 8149 with a drop of 679 points 7.7% down. Oil fell below \$50 a barrel in New York Trading. The General Accounting Office released a report that claims that the Oversight of the Troubled Assets Relief Program requires additional actions to ensure "integrity, accountability, and transparency".

On December 22, US industry leaders asked the Federal Reserve for assistance un-freezing the commercial real estate market, which has not securitized any loans in the last six months of 2008.

The table below shows the collapse of S&P 500 through 2008.

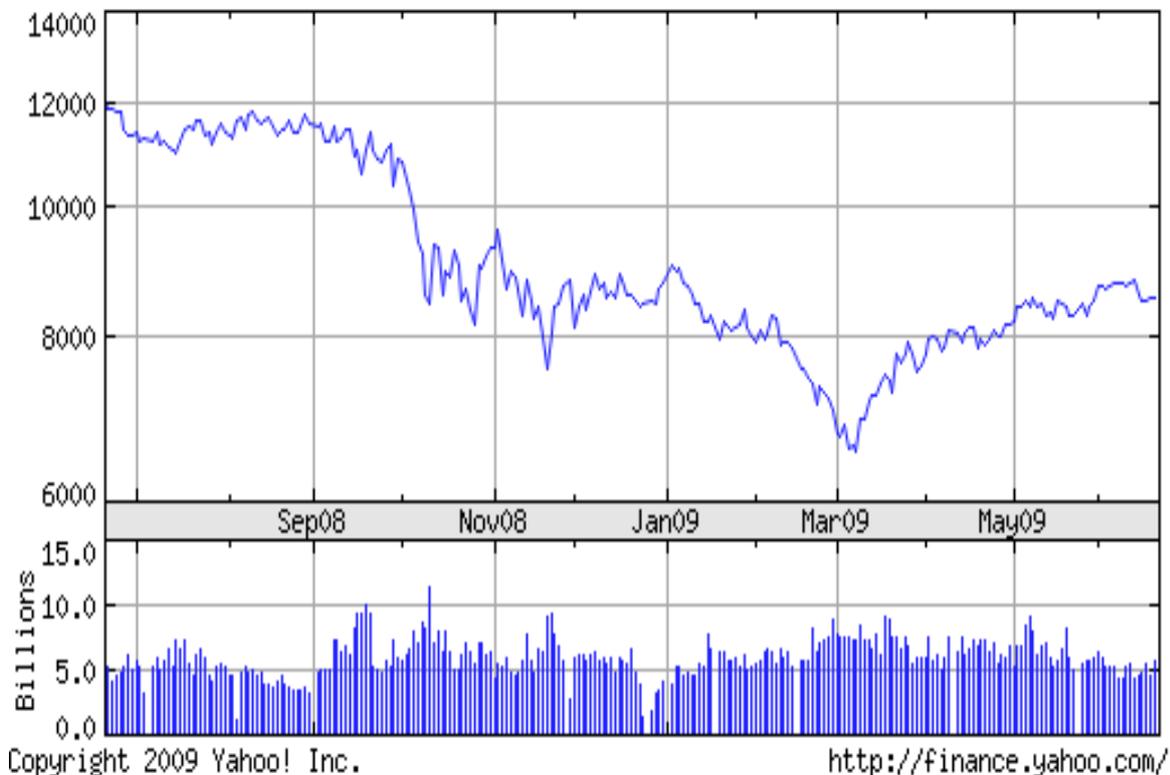


## B. Events in 2009

The two month period from January 1-February 27 represented the worst start to a year in the history of the S&P 500 with a drop in value of 18.62%. By March 2, the Dow Jones Industrial Average Index had dropped more than 50% from its summer 2008 peak. The decline has been compared to that of the 1929 Great Depression, which was 53% between September 1929 and March 1931.

By March 9, 2009, the Dow had fallen to 6440, a percentage decline exceeding the pace of the market's fall during the Great Depression and a level which the index had last seen in 1996. On March 10, 2009, a countertrend Bear Market Rally began, taking the Dow up to 8500 by May 6, 2009. Financial stocks were up more than 150% during this rally. By May 9, financial stocks had rallied more than 150% in just over two months.

DJ INDU AVERAGE (DOW JONES & CO  
as of 19-Jun-2009



S&P 500 INDEX (STANDARD & POOR)  
as of 19-Jun-2009



On February 2009, JP Morgan Chase, Citigroup and Bank of America Corp. formally announce a temporary moratorium on residential foreclosures. The moratoriums will remain in effect until March 6 for JPMorgan and Bank of America, until March 12 for Citigroup.<sup>10</sup>

Immediately after the Dow fell to 6440 on March 9, 2009, which was a percentage decline exceeding the pace of the market's fall during the Great Depression and a level which the index had last seen in 1996.

Citigroup which had toxic mortgage assets also was affected by the decline in stock markets on March 9. The stock price of Citigroup fell down to 1.05 dollars which was a 95% decline compared to its price of October 1, 2008, 23 dollars. And, it was expected that Citigroup could loss more because car and credit card loans might not be paid back due to widening crises.

The decline in stock market on March 9 hit not only financial institutions but also companies operating in other sectors. This showed that the crisis could affect all economic activities. Therefore, measurements taken by government and companies should provide to deal with not only toxic mortgage assets but also slowdown in economic activities.

<sup>10</sup> <http://online.wsj.com/article/SB123454524404184109.html>

### **III. EFFECTS OF THE CRISIS**

#### ***A. General Financial Effect***

The crisis in real estate, banking and credit in the United States had a global reach, affecting a wide range of financial and economic activities and institutions, including the:

- Overall tightening of credit with financial institutions making both corporate and consumer credit harder to get;
- Financial markets (stock exchange and derivative markets) that experienced steep declines;
- Liquidity problems in equity funds and hedge funds;
- Devaluation of the assets underpinning insurance contracts and pension funds leading to concerns about the ability of these instruments to meet future obligations;
- Increased public debt public finance due to the provision of public funds to the financial services industry and other affected industries, and the
- Devaluation of some currencies (Icelandic crown, some Eastern Europe and Latin America currencies) and increased currency volatility,

#### ***B. Effects on the Basic Economic Data***

##### **1. Effects on Real Gross Domestic Product**

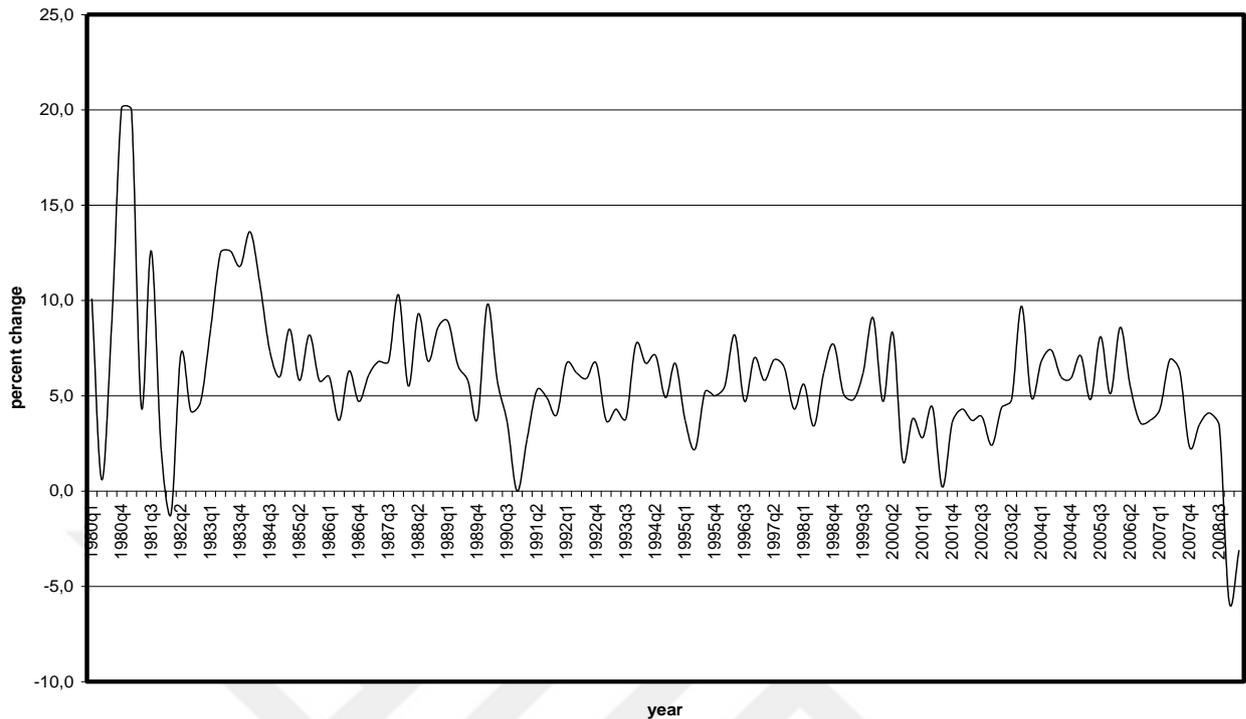
The U.S. real gross domestic product<sup>11</sup> decreased at an annual rate of 5.7 percent in the first quarter of 2009, (that is, from the fourth quarter to the first quarter), according to preliminary estimates released by the Bureau of Economic Analysis. In the fourth quarter, real GDP decreased 6.3 percent.<sup>12</sup>

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<sup>11</sup> The output of goods and services produced by labor and property located in the United States

<sup>12</sup> <http://bea.gov/newsreleases/national/gdp/gdpnewsrelease.htm>

GDP Percent Change Based On Current Dollars 1980-2009

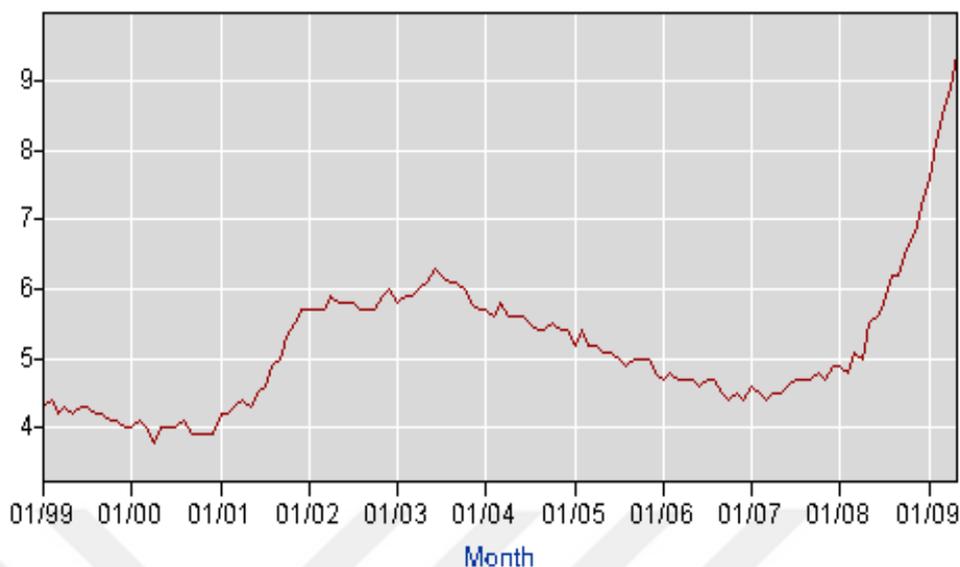


## 2. Effects on Unemployment Rate

The unemployment rate continued to rise, increasing from 4.9 to 9.4 percent from December 2007 to May 2009. The number of unemployed persons increased by 787,000 to 14.5 million in May 2009, and the unemployment rate rose to 9.4 percent. Since the start of the recession in December 2007, the number of unemployed persons has risen by 7.0 million, and the unemployment rate has grown by 4.5 percentage points.<sup>13</sup> During the last four month of 2008 when the financial crises peaked, 2.6 million jobs were lost and from January 2009 to May 2009, 2.921 million jobs have lost.

<sup>13</sup> <http://www.bls.gov/news.release/empsit.nr0.htm>

### US Unemployment Rate 1999-2009<sup>14</sup>



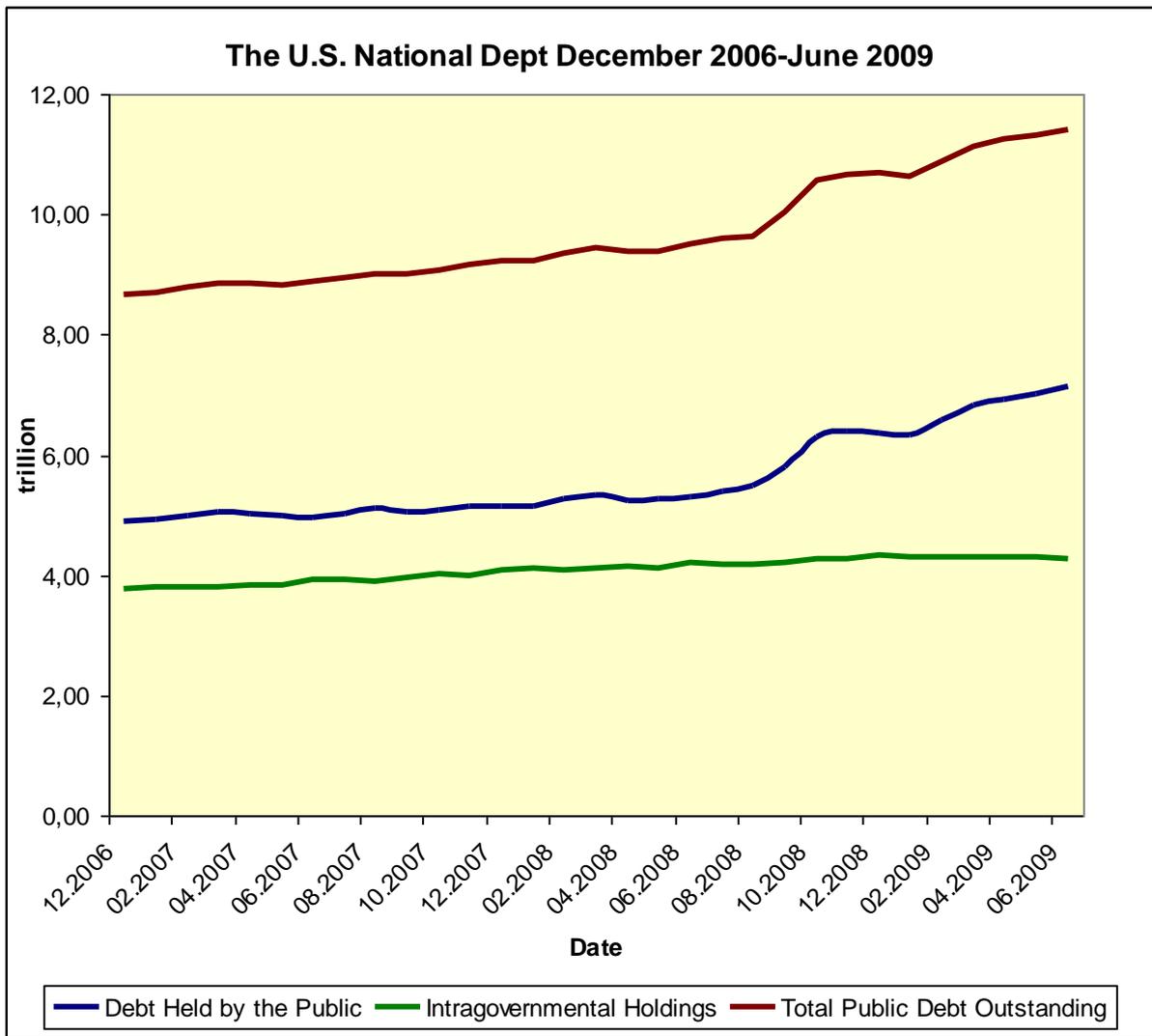
### 3. Effects on National Debt

The U.S. National Debt is above \$11-trillion for the first time ever. To be exact, the outstanding public debt as of 25 June 2009 is \$11,412,524,666,526.73 Divide it by the U.S. population and it comes up to over \$37,000 in debt for every U.S. man, woman and child.

Total public debt increased more rapidly after September 2008 when the crisis deepened as can be seen at the table below. Funds transferred by U.S. Treasury to companies being in financial straits or bankruptcy and transferred as part of bailout plans during the crisis process have a major role in the rapid public debt increase.

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<sup>14</sup> <http://www.bls.gov/>



### ***C. Effects on Real Sector***

The crisis hits not only financial institutions but also companies having operations in other sectors.

October sales of cars and light trucks in the United States fell precipitously in 2008 when compared with sales in October 2007, with General Motors falling 45%, Ford falling 30%, Chrysler falling 35%, Toyota falling 23%, Honda falling 25%, and Nissan falling 33%. Much of the falloff in sales was attributable to customers being unable to arrange financing.<sup>15</sup>

<sup>15</sup> The New York Times, November 3, 2008, Automakers Report Grim October Sales by BILL VLASIC and NICK BUNKLEY

Eventually, GM emerged from Chapter 11 bankruptcy reorganization on July 10, 2009. It is now majority owned by the United States Treasury and Canadian governments. On April 30, 2009 Chrysler LLC filed for Chapter 11 bankruptcy protection.

Except for Wal-Mart, which posted a slight gain, retail sales were off during October 2008 as compared with October 2007 in the United States with some moderate priced stores reporting double digit decreases.<sup>16</sup>

October retail sales were down 4.1% from October 2007 and down 2.8% from September 2008 with sales of cars and auto parts leading the way with a 23.4% decline from October 2007, and a 31.9% decline from September 2008.<sup>17</sup>

According to the figure released by the Commerce Department on October 13, 2009, retail sales in the United States fell a seasonally adjusted 1.5 percent in September 2009. Car sales plunged 10.4 percent last month but, excluding autos retail sales rose 0.5 percent. The 1.5 percent drop in retail sales in September followed a 2.2 percent surge in August, which was revised down from an initial estimate of 2.7 percent. The Commerce Department said retail sales in September were still 5.7 percent below the same month in 2008.<sup>18</sup>

#### ***D. Effects on the other country***

The crisis which began on October 2007 and deepened on September 2008 in United State, started to show affects all around the world. A lot of countries' stock markets went through the distressing days.

Stock markets of many developed and underdeveloped countries showed deep fluctuations. And, on March 10, 2009 stock markets declined deeply.

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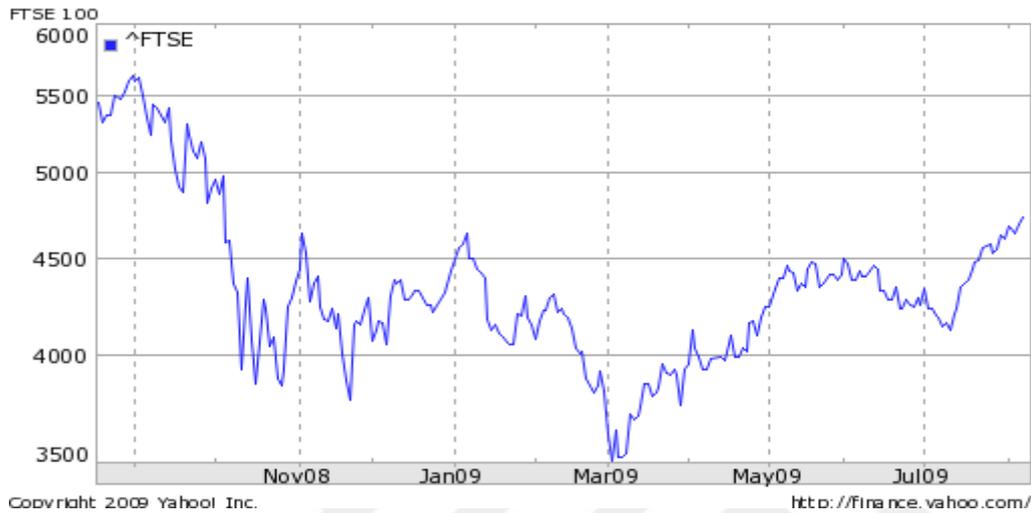
<sup>16</sup> The New York Times, November 6, 2008, Retailers See a Broad Slowdown Ahead of Holidays by STEPHANIE ROSENBLOOM

<sup>17</sup> The New York Times, November 14, 2008, A Record Decline in October's Retail Sales by Jack Healy.

<sup>18</sup> [http://news.xinhuanet.com/english/2009-10/15/content\\_12234738.htm](http://news.xinhuanet.com/english/2009-10/15/content_12234738.htm)

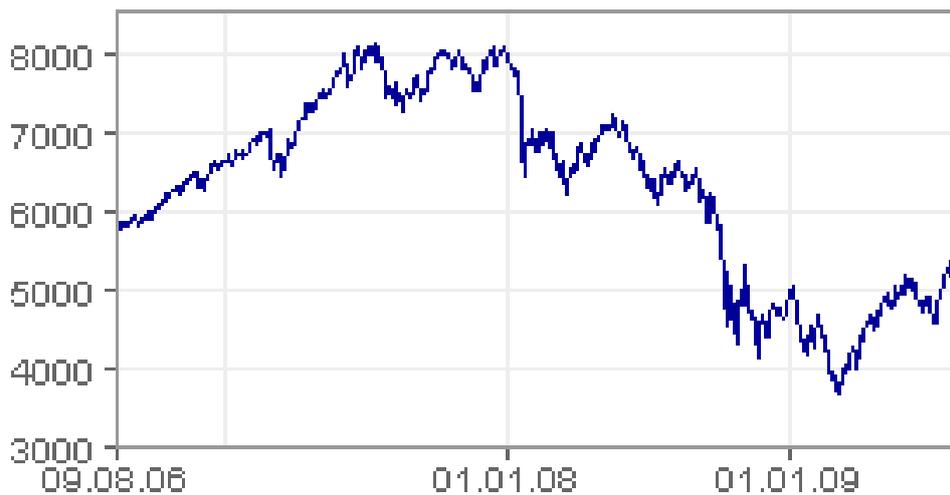
Motions of the FTSE 100 index that is a major indicator of the finance markets of the United Kingdom, in this process are showed below. The sudden collapse of that happened on March10, 2009 is apparent in the chart.

### August 2008-August 2009 FTSE 100 Index<sup>19</sup>



Motions of the DAX 30 index that is a major indicator of the finance markets of Germany, in this process are showed below.

### August 2006- August 2009 DAX 30 Index



Motions of the CAC 40 index that is a major indicator of the finance markets of France, in this process are showed below.

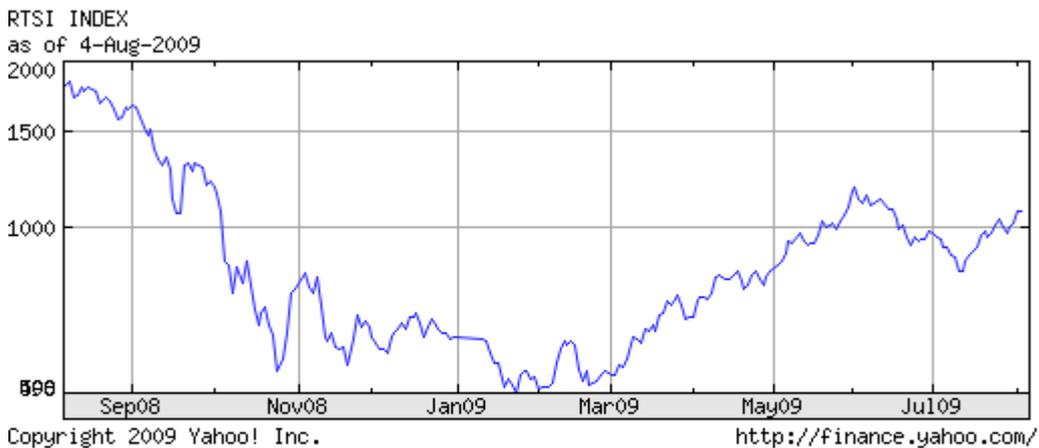
<sup>19</sup> Tablo [finance.yahoo.com](http://finance.yahoo.com) adresinden alınmıştır.

### August 2008-August 2009 FTSE 100 Index<sup>20</sup>



As seen in the chart below, RTS index, that is an important index of the stock market of Russia, reacted to the crisis more seriously. The stock market of Russia which was established in 1995 is more vulnerable to the crisis because of its shallowness. Indexes of in stock market of Russia declined more than % 20 many times during the process which began on September, 2008. As a result, transactions in the stock market suspended for a while after deep declines.

### August 2008- August 2009 FTSE 100 Index<sup>21</sup>



<sup>20</sup> Tablo [finance.yahoo.com](http://finance.yahoo.com) adresinden alınmıştır.

<sup>21</sup> Tablo [finance.yahoo.com](http://finance.yahoo.com) adresinden alınmıştır.

On October 6, 2008, Security Exchange of Iceland declared that it temporarily suspended the stock transactions of six financial institutions, including three biggest bank of Iceland, in order to protect investors' interests while waiting for a government announcement on its plans.<sup>22</sup>

Stock Markets of many underdeveloped countries experienced the same events and various measures were taken against the crises in these countries.



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<sup>22</sup> <http://news.bbc.co.uk/2/hi/business/7654257.stm>

## **IV.MEASURES TO PREVENT THE CRISIS AND THEIR EFFECTS TO THE MARKET**

The subprime mortgage crisis reached a critical stage during September 2008, characterized by severely contracted liquidity in the global credit markets and insolvency threats to investment banks and other institutions. In response, the U.S. government announced a series of comprehensive steps to address the problems, following a series of "one-off" or "case-by-case" decisions to intervene or not such as the \$85 billion liquidity facility for American International Group on September 16, the federal takeover of Fannie Mae and Freddie Mac, and the bankruptcy of Lehman Brothers.

By the morning of September 18, money market sell orders from institutional investors totalled \$0.5 trillion, out of a total market capitalization of \$4 trillion, but a \$105 billion liquidity injection from the Federal Reserve averted an immediate collapse. On September 19 the U.S. Treasury offered temporary insurance (akin to FDIC insurance of bank accounts) to money market funds. Toward the end of the week, short selling of financial stocks was suspended by the Financial Services Authority in the United Kingdom and by the Securities and Exchange Commission in the United States. Similar measures were taken by authorities in other countries. Some restoration of market confidence occurred with the publicity surrounding efforts of the Treasury and the Securities Exchange Commission.

It was realized that measurements of case-by-case could not enough to solve problems and to prevent the crisis while The U.S. economy was drifting to recession. Therefore, U.S. government start to take all U.S. economy oriented actions known as bailout plans. But it was even not enough due to the fact that the crisis affected all around the world. It was vital that all countries should take into action together simultaneously.

The government of the United States, as authorized by the Emergency Economic Stabilization Act, announced plans to infuse funds into banks by purchasing equity interests in them, in

effect, partial nationalization, as done in Britain. The Treasury secretary Henry M. Paulson Jr. met Friday, October 9, 2008 in Washington with world financial leaders. A meeting of international financial leaders hosted by President Bush at the White House in Washington is planned on Saturday, October 11, 2008 to attempt to coordinate global response to the financial crisis. The annual meetings of both the International Monetary Fund and World Bank were scheduled to be held in Washington over that weekend.

As meetings proceeded with global financial leaders in Washington on Saturday, October 11, the United States government announced a change in emphasis in its rescue efforts from buying illiquid assets to recapitalizing banks, including strong banks, in exchange for preferred equity; and purchase of mortgages by Fannie Mae and Freddie Mac. These remedies can be put into effect quicker than the prior plan which was estimated to take a month to set into operation.

### ***A. Emergency Economic Stabilization Act of 2008***

The Emergency Economic Stabilization Act of 2008, commonly referred to as a bailout of the U.S. financial system, is a law enacted in response to the Global financial crisis of 2008–2009 authorizing the United States Secretary of the Treasury to spend up to US\$700 billion to purchase distressed assets, especially mortgage-backed securities, and make capital injections into banks. Both foreign and domestic banks are included in the bailout. The Act was proposed by Treasury Secretary Henry Paulson during the global financial crisis of 2008.

On October 3, 2008 the House voted 263-171 to enact the bill into law. President Bush signed the bill into law within hours of its congressional enactment, creating a \$700 billion Troubled Assets Relief Program (TARP) to purchase failing bank assets.

The purpose of the plan was to purchase bad assets, reduce uncertainty regarding the worth of the remaining assets, and restore confidence in the credit markets.

Troubled assets are defined as

A- Residential or commercial mortgages and any securities, obligations, or other instruments that are based on or related to such mortgages, that in each case was originated or issued on or before March 14, 2008, the purchase of which the Secretary determines promotes financial market stability;

B- any other financial instrument that the Secretary, after consultation with the Chairman of the Board of Governors of the Federal Reserve System, determines the purchase of which is necessary to promote financial market stability, but only upon transmittal of such determination, in writing, to the appropriate committees of Congress.

In short, this allows the Treasury to purchase illiquid, difficult-to-value assets from banks and other financial institutions. The targeted assets can be collateralized debt obligations, which were sold in a booming market until 2007 when they were hit by widespread foreclosures on the underlying loans. Trouble Assets Relief Program (TARP) is intended to improve the liquidity of these assets by purchasing them using secondary market mechanisms, thus allowing participating institutions to stabilize their balance sheets and avoid further losses.

The Act requires financial institutions selling assets to TARP to issue equity warrants (a type of security that entitles its holder to purchase shares in the company issuing the security for a specific price), or equity or senior debt securities (for non-publicly listed companies) to the Treasury. In the case of warrants, the Treasury will only receive warrants for non-voting shares, or will agree not to vote the stock. This measure is designed to protect taxpayers by giving the Treasury the possibility of profiting through its new ownership stakes in these institutions. Ideally, if the financial institutions benefit from government assistance and recover their former strength, the government will also be able to profit from their recovery.

Another important goal of TARP is to encourage banks to resume lending again at levels seen before the crisis, both to each other and to consumers and businesses. If TARP can stabilize bank capital ratios, it should theoretically allow them to increase lending.

In order to qualify for this program, the Treasury required participating institutions to meet certain criteria, including:

- (1) ensuring that incentive compensation for senior executives does not encourage unnecessary and excessive risks that threaten the value of the financial institution;
- (2) required clawback of any bonus or incentive compensation paid to a senior executive based on statements of earnings, gains or other criteria that are later proven to be materially inaccurate;
- (3) prohibition on the financial institution from making any golden parachute payment to a senior executive based on the Internal Revenue Code provision;
- (4) agreement not to deduct for tax purposes executive compensation in excess of \$500,000 for each senior executive.

On September 19, 2008, when news of the bailout proposal emerged, the U.S. stock markets surged by approximately 3%. Foreign stock markets also surged, and foreign currencies corrected slightly, after having dropped earlier in the month. The value of the U.S. dollar dropped compared to other world currencies after the plan was announced. Mortgage rates increased following the news of the bailout plan.

The banks agreeing to receive preferred stock investments from the Treasury include Goldman Sachs Group Inc., Morgan Stanley, J.P. Morgan Chase & Co., Bank of America Corp. (including Merrill Lynch), Citigroup Inc., Wells Fargo & Co., Bank of New York Mellon and State Street Corp. The Bank of New York Mellon is to serve as master custodian overseeing the fund.

As of 2009, the U.S. Treasury has not yet released an official list of TARP recipients (though it periodically announces recipients in batches). News organizations ProPublica and the New York Times have kept lists of the recipients based on Treasury and individual institution announcements. Beneficiaries of TARP include:<sup>23</sup>

- American International Group (AIG) : \$69.8 billion
- Bank of America : \$52.5 billion - Bank of America, NA : \$6 billion
- Freddie Mac : \$50.7 billion
- General Motors : \$50.4 billion - GM Supplier Receivables LLC : \$2.3 billion
- Citigroup : \$50 billion - CitiMortgage : \$1.1 billion
- Fannie Mae : \$44.9 billion
- Wells Fargo : \$25 billion - Wells Fargo Bank, NA : \$2.4 billion
- Chrysler : \$14.9 billion – Chrysler Receivables SPV LLC : \$1 billion

## **B. American Recovery and Reinvestment Act of 2009**

The American Recovery and Reinvestment Act of 2009 is an economic stimulus package enacted by the 111th United States Congress in February 2009. The bill was signed into law on February 17 by President Obama.

The Act of Congress was based largely on proposals made by President Barack Obama and was intended to provide a stimulus to the U.S. economy in the wake of the economic downturn. The measures are nominally worth \$787 billion. The Act includes federal tax cuts, expansion of unemployment benefits and other social welfare provisions, and domestic spending in education, health care, and infrastructure, including the energy sector. The Act also includes numerous non-economic recovery related items that were either part of longer-term plans (e.g. a study of the effectiveness of medical treatments) or desired by Congress (e.g. a limitation on executive compensation in federally aided banks). The government action is much larger than the Economic Stimulus Act of 2008, which consisted primarily of tax rebate checks.

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<sup>23</sup> <http://bailout.propublica.org/main/list/index>

## V. FUTURE FORECAST AND CONCLUSION

Real gross domestic product decreased at an annual rate of 0.7 percent in the second quarter of 2009, (that is, from the first quarter to the second quarter), according to the "third" estimate released by the Bureau of Economic Analysis. In the first quarter, real GDP decreased 6.4 percent.<sup>24</sup>

Gross Domestic Product (GDP)<sup>25</sup>



*Real GDP growth is measured at seasonally adjusted annual rates.*

U.S. Bureau of Economic Analysis

Last updated: Wednesday, September 30, 2009

As can be seen at the table above, the U.S. economy recovered slowly in the second quarter of 2009.

<sup>24</sup> <http://www.bea.gov/newsreleases/national/gdp/gdpnewsrelease.htm>

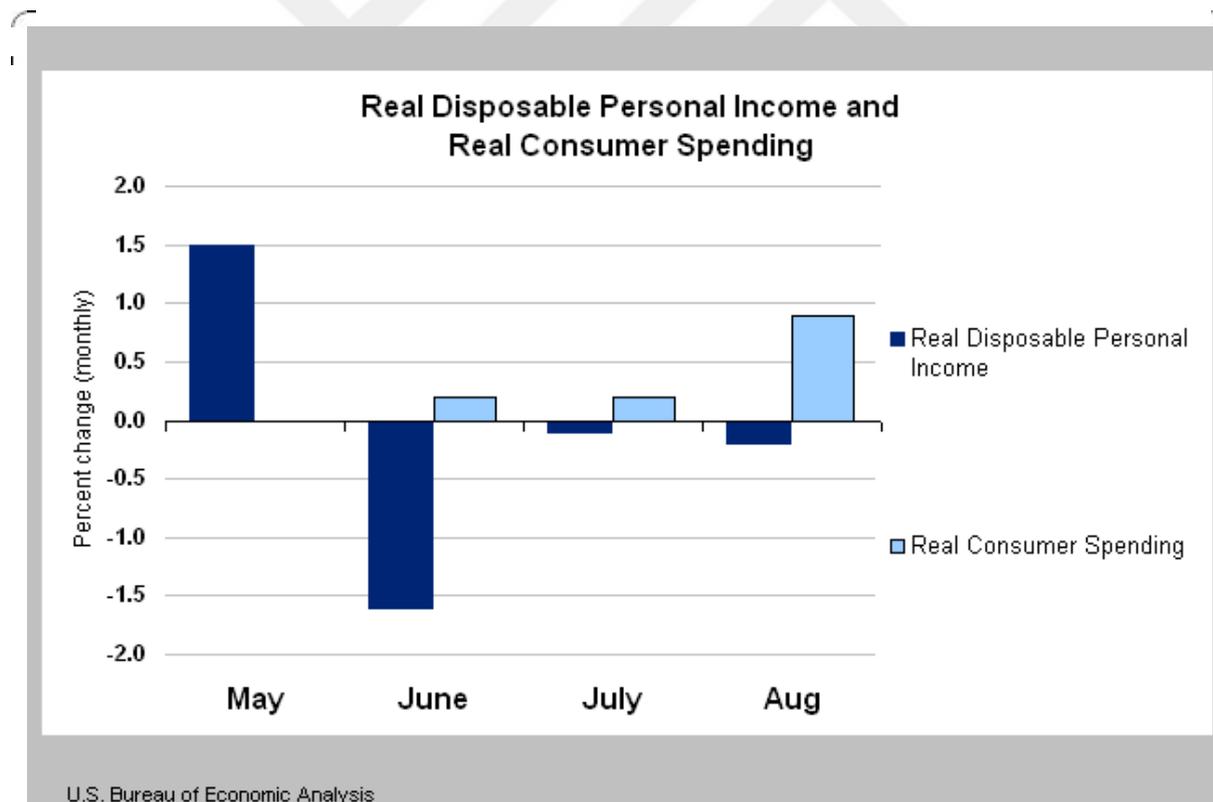
<sup>25</sup> <http://www.bea.gov/>

Economists expect the U.S. economy will grow about 3 percent in the third quarter this year. However, they worry that the recovery might not be sustained if consumers remain reluctant to spend.<sup>26</sup>

Because consumer spending reflects about 70 percent of economic activity, it is the critical indicator of U.S. economic activity. Therefore, economists watch it carefully.

According to the Bureau of Economic Analysis, personal consumption expenditures (PCE) increased \$129.6 billion, or 1.3 percent in August, 2009.<sup>27</sup> New car and truck purchases were the leading contributor, reflecting the effects of the federal CARS (“cash for clunkers”) program.

Personal Income: Real Disposable Income and Real Consumer Spending<sup>28</sup>



Last updated: Thursday, October 1, 2009

<sup>26</sup> [http://news.xinhuanet.com/english/2009-10/15/content\\_12234738.htm](http://news.xinhuanet.com/english/2009-10/15/content_12234738.htm)

<sup>27</sup> <http://www.bea.gov/newsreleases/national/pi/pinewsrelease.htm>

<sup>28</sup> <http://www.bea.gov/>

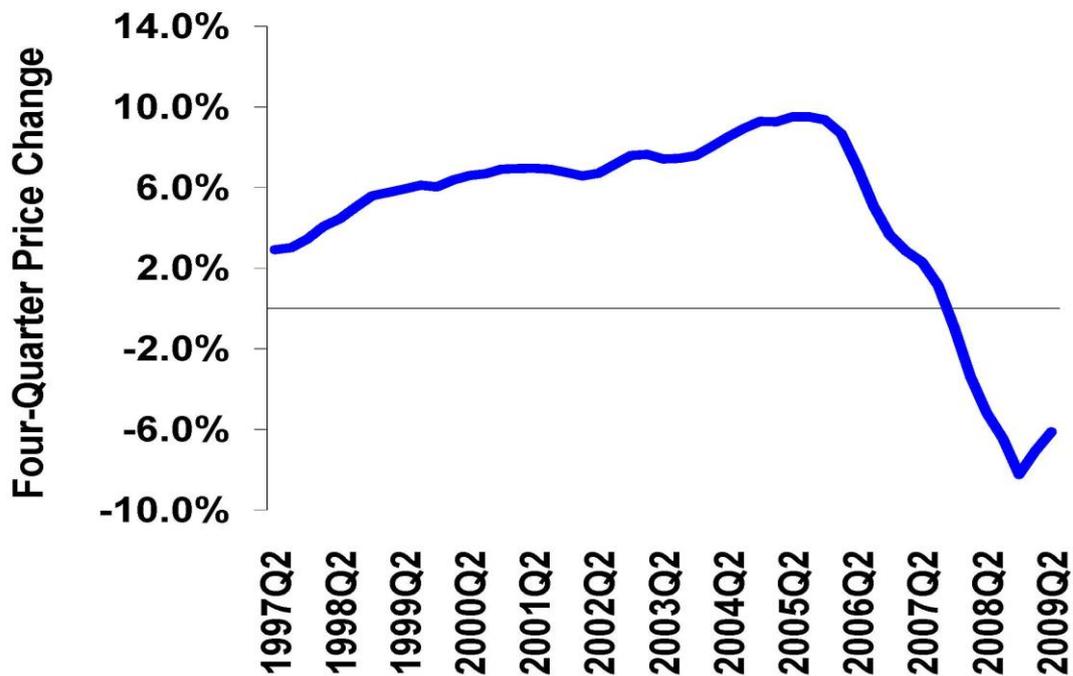
The important indicator of consumer spending is retail sales. On September 15, 2009, The Commerce Department said total retail sales jumped 2.7% in August, 2009, compared with July's revised decline of 0.2%. Economists surveyed by Briefing.com predicted August sales increased 2%. Sales excluding autos and auto parts rose 1.1%, compared to a 0.6% decrease in July. Economists expected a gain of 0.4% in August sales, excluding auto purchases.<sup>29</sup> Most retail sales materialized above to expectations in August, 2009.

The amount of spending for house purchase is especially important indicator for economists, because it is biggest part of consumer expenditures. In order to assess spending for house purchase, housing prices should be invigilated for a couple of reasons. One it is the biggest asset for many American families and if housing prices keep falling, it is harder for them to borrow, their less wealthy and more of them will be susceptible to foreclosure. For banks and other financial institutions housing prices is key to the value of the loans and mortgage backed securities on their books. The weaker housing prices get the more losses they have there and the less willing they are to lend new loans that we need to get the economy going again. And third, the more housing prices fall, the less willing builders are to build new houses and that means fewer jobs. The problem is that the demand for housing remains weak and the supply of housing remains very strong and that means prices keep falling. The economy can not fully recover until housing prices stop falling and that day has not arrived yet.

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<sup>29</sup> [http://money.cnn.com/2009/09/15/news/economy/retail\\_sales\\_august/index.htm](http://money.cnn.com/2009/09/15/news/economy/retail_sales_august/index.htm)

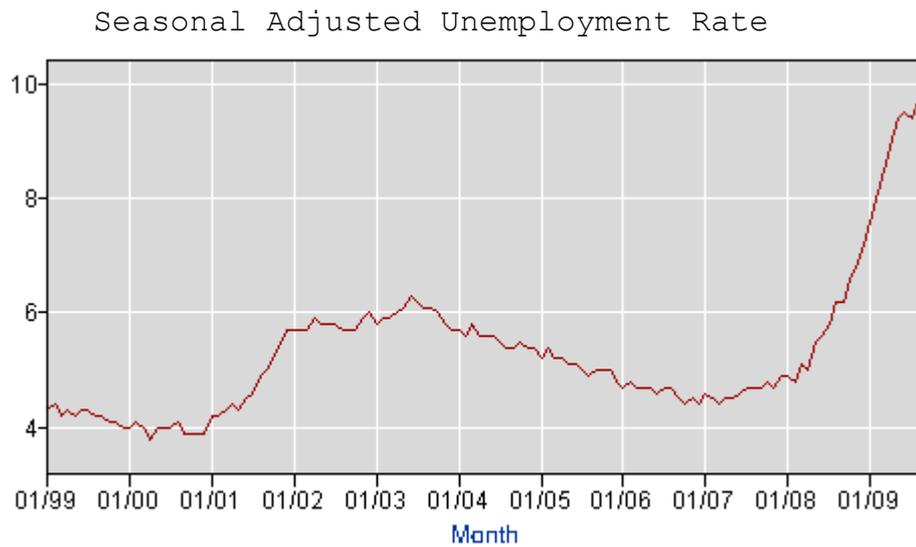
House Price Index<sup>30</sup>



As can be seen at the table above, housing price started to increase. If it is considered with GDP growth and retail sales rise, it could be said that the U.S. economy will recover. But unemployment rate is continuing climb and U.S. has still a great amount of national debt causing dollar to weaken.

Unemployment rate is 9.8% in September, 2009 in U.S.A and it is expected to rise. National debt is about to 12 trillion in October, 2009. The budget deficit for fiscal year 2009, which ended Sept. 30, came in at a record \$1.42 trillion, more than triple the record set just last year. In addition, future deficits are currently projected to total \$9.1 trillion in the coming decade.

<sup>30</sup> <http://www.fhfa.gov/Default.aspx?Page=14>



If the increasing of unemployment rate could not put back and national debt is continuing to rise, sustainable economic growth might not be provided.

The major cause of this crisis is the over indebtedness of U.S. household. Therefore, the crisis can not be averted by the policy prompting consumption.

# VI. EFFECTS ON TURKIYE

Turkiye economy was also affected by global crisis. As seen below, Turkiye stock market known as Istanbul Stock Exchange started to decrease when the crisis deepened in the U.S. on September 2008. But Turkiye stock market did not affected on March, 2009 collapse similarly.



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