The Financial Crisis of 2008: The Greatest Downturn in the U.S. Economy Since the Great Depression

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2013
The Financial Crisis of 2008

Introduction

On September 12th, 2008 the president of the Federal Reserve Bank of New York, Timothy Geithner, called the heads of the major investment banks on Wall Street to determine the future of the United States economy. Big name CEOs like James Dimon (JP Morgan), Lloyd Blankfein (Goldman Sachs), John Mack (Morgan Stanley), Vikram Pandit (CitiGroup), and John Thain (Merrill Lynch) were called upon to determine the future of a competing firm, Lehman Brothers. It is important to note that at that point in time, it wasn’t immediately apparent that the entire economy rested on the quick actions of the American investment banks and the U.S. Treasury Secretary, Henry Paulson. Lehman Brothers, headed by Richard Fuld, was the fourth largest investment bank at the time and is still the largest investment bank to have ever failed.

The financial crisis of 2007-2009 was originally instituted by a decline in the value of the housing market, causing a burst in the housing bubble. This issue was exacerbated by the overleveraging of companies through deregulation and abuse of moral hazard. Banks and insurers would continue to lend out and insure high risk products. The reason this crisis was much more severe than those of 1987 and 2001 (and so close to that of the Great Depression) was because of the lack of credit. The interconnectedness of companies and the financial system in general made this problem a global issue. Companies that were liquid and perfectly healthy, like General Electric, would not be able to operate because clearinghouses, like JP Morgan, were unable to lend to them, causing operations to halt and debt to accumulate. Subprime mortgage defaults played a huge factor in the recession of 2008 due to the misuse and misappropriations of financial instruments and greed of Wall St. This coupled with the poor handling of credit default swaps and the fall of some of the biggest companies in the
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world like Bear Stearns, AIG, Fannie Mae, Freddie Mac, and of course, Lehman Brothers made for one of the largest financial crises since the Great Depression.

The Great Depression and Great Recession shared enormous similarities. Austrian economists point towards central bank intervention in inflationary and lending policies as the main cause. Others note the presence of fear in the market after the burst of a market “bubble”, causing a decline in the availability of credit that halts the ability for businesses to function. The one thing that is for certain is that the likes of the recent financial crisis had not been seen for decades.

The Causes of the Crisis

The housing market was booming and as far as most analysts knew, it was going to continue to rise for the foreseeable future. The Great Recession of 2008 cannot be discussed without first analyzing the housing market preceding it and the bubble that truly broke the banks. From 1990 to 1997, the growth of the housing market was very low, only growing 8.3% total in those seven years. After 1997, the growth was exponential. There was a 132% growth in the housing market in the nine years that followed, and by 2006 the housing market was at its ultimate peak (Holt 120-129). The value of homes from 1997-2003 indicated that economically, homes were a sound investment and their value represented their worth well. After 2003 and 2004, the prices no longer matched the actual value of the houses (Levin & Wachter 1182).

The housing bubble began in the early 1990s, as Fannie Mae and Freddie Mac, two government-sponsored institutions, purchased mortgages that followed their strict
underwriting guidelines. These government-sponsored entities (GSE’s) would then find capital market investors to purchase the securities that they issued in order to diversify the risk and minimize the credit risk (Levin & Wachter 1188). What arose from these practices is the ultimate downfall of transparency in the market. Because Fannie and Freddie were companies that the government had sponsored, the ultimate belief was that the securities being sold were government backed and virtually riskless. Investors no longer needed or cared about the default risk on the mortgages, but only wanted to know about the convexity risk of the securities. Convexity risk deals with the changes in the mortgage backed securities’ market price when there is a change in the yield of the securities. With the high standards and underwriting practices, it was extremely easy to truthfully assess the risk in the market (Levin & Wachter 1189). In the late 1990s, investment banks started issuing the same types of mortgage-backed securities (MBS) for themselves, understanding that they could gauge huge profits. This is when banks started to loan to unconventional and nonprime borrowers (Levin & Wachter 1190). These institutions capitalized on the soon-to-be lowest interest rates in history.

The United States economy was in recovery after the Dot-Com bubble burst and subsequently on September 11, 2001, the United States was attacked by a terrorist organization. After the falling of the World Trade Center buildings, chaos plagues the streets of New York City—a city thought to be the center of all economic activity in the world. The week following the attacks on the United States was one that left the markets in shock.
The Dow-Jones Industrial Average took a catastrophic hit, as can be seen by Figure 1. The Dow plummeted over a thousand points over the course of a week. This unthinkable act started a small recession in 2001. During the recession of 2001, the Federal Reserve expanded their yearly growth in the M2 monetary aggregate which rose as high as 10% and flattened out at around 8% growth. The Fed also actively reduced the federal funds rate (White 116). The Federal Funds rate was decreased from around 6.5% to around 1.8% in early 2002, and again to 1% by June of 2003 (Holt 120-129). With interest rates being the lowest it had ever been in 2001, there was overindulgence in refinancing. This refinancing was of prime origination, meaning that it was extremely safe and that homebuyers were just trying to secure lower mortgage rates. By 2003, refinancing rose to around 72% (Levin & Wachter 1192). Interest rates remained low in accordance to foreign investments as well. The US banks kept mortgage rates low in order to keep foreign cash flowing into the country, which caused an influx in Chinese and Japanese investments of low risk yield (Holt 120-129). What was truly startling was that the real Federal funds rate was negative during that period, meaning that an
investment that could keep up with inflation was gaining profits for the individual solely because of the cheap interest that was being accumulated (White 116).

Adding to the issue was the U.S. government, which during the Bush Administration had set up promises to the American people that owning your own home was a basic right. The U.S. Department of Housing and Urban Development (HUD) had mandated for “affordable housing” and had used Fannie Mae and Freddie Mac to “accelerate the creation of a market for securitized subprime mortgages” (White 116). Frank Nothaft, Chief Economist of Freddie Mac stated, “I don’t foresee any national decline in home price values. Freddie Mac’s analysis of single family houses over the last half century hasn’t shown a single year when the national average housing price has gone down” (Holt 125). With cheap interest rates and relaxed regulation in mind there became a rise in private-label securities – securities issued by banks and not agencies like Fannie Mae or Freddie Mac. These forms of lending had not been prevalent in the past and were subject to no regulation. The way they function was to not guarantee any payments of interest and principal, meaning that those who invested were now bearing both the credit and interest rate risk (Levin & Wachter 1190). Financial institutions were getting compensation based on the fees driven by the volume of mortgages they financed. With interest rates being the lowest it had ever been in 2001, there was overindulgence in refinancing. This refinancing was of prime origination (meaning that it was extremely safe and that homebuyers were just trying to secure lower mortgage rates), and by 2003, refinancing rose to around 72% (Levin & Wachter 1192). As the pool of prime borrowers ceased to need financing, the institutions had to expand and subsequently reduce their underwriting standards (Levin & Wachter 1184).
As can be seen from Figure 2, the first mortgage boom occurred from 2001-2003. After this refinancing had occurred for prime borrowers, there was a precedent set by the mortgage industry to keep earnings as high as they had been during those three years. What followed was a second mortgage boom that relaxed on the quality and underwriting standards that had been done for those before. A massive influx in Alt-A and subprime borrowers grew from the lax standards (Levin & Wachter 1194). Throughout the next few years more and more investment vehicles started to plague the mortgage market, including adjustable rate mortgages, payment-option mortgages, interest-only mortgages, etc. These new types of mortgages were approved on the basis that the buyer could pay the initial teaser rate as opposed to previously when buyers were assessed on their ability to pay the rates throughout the term of the product (Levin & Wachter 1200). The structure that had been created by private institutions mirrored that of a pyramid scheme. The growth of mortgage credit continued to inflate housing prices, which in turn was used to underwrite more mortgages. The

more borrowers that entered the market allowed for the inflation of housing to continue, and it was because of this that loan institutions continued to lend to those with worse and worse credit. The rise of housing prices ensured that those subprime borrowers could continue to refinance and keep their rates as low as possible (Levin & Wachter 1201). As the loan pool dried up, the housing prices became unmanageable and the rates on those home mortgages skyrocketed to the point where it became fiscally responsible to just leave the home.

Wall Street’s true ingenuity came out of its more complex instruments that allowed for them to bypass any standards set by the industry and country. One way they did this was through the use of adjustable rate mortgages. An adjustable rate mortgage was essentially a mortgage whose rates were determined by benchmark rates, like that of LIBOR or the housing price index. ARM’s were tools that transferred interest rate risk from the institution to the individual. These types of mortgages become more creative like in the cases of option ARMs which allowed the borrower to choose what to pay off in the mortgage. The borrower could select to pay off the interest, the principal, or any combination of both (Holt 124). In 2001, the nonteaser adjustable rate mortgages were around 5.84%, while the 3-year fixed-rate mortgages were at 6.97%. Three years later, the gap had widened to a difference of around 2% (White 118). Figure 3 represents the change of adjustable rate mortgages from December of 1992 to December of 2012.
Figure 3 represents that the adjustable rate had a rapidly growing spread from the 30 year FRM. The spread from 2000s had been near 0%. Its largest gap was in December of 2003, being around 3% difference. During this period, normal Americans were being offered much smaller percentages of repayment than that of fixed mortgages. People were able to afford houses that they were previously not able to. As the housing price index increased, the ARM continued to grow and become closer to the 30 year fixed rate mortgage (FRM). The initial Rate of an ARM was considered to be much lower, but as the index that it relied on increased its percentage, so did the ARM. Soon, a one-year ARM would have a gap of 2% between the initial value and the indexed value. As the index kept rising, so did the rates of adjustable-rate mortgages. This made the ARMs have a much higher percent than that of the fixed rate.
mortgages. The low (teaser) rates ran out on the mortgages as the value of the houses decreased. As can be seen by the initial interest rate versus the fully indexed one, the difference in percentage became astronomical once fully indexed by the bank.

![Figure 4: Mishkin, Frederic. The Economics of Money, Banking, and Financial Markets. Chart. 10th ed. New York: Pearson, 2012. 1-622. eBook.](image)

The value of houses could no longer be sustained artificially by the constant barrage of credit availability. Figure 4 shows the decline of the housing market over a timeline of seven years. Peak prices were reached by the middle of 2006. From mid-2006 to the end of 2006 the prices of homes in the United States fell by 2% and subsequently, foreclosure rates increased by 43%. Then by the end of 2007, the foreclosure rate increased by 75%. Fixed rate mortgages increased by 55% for prime borrowers and by 80% for subprime borrowers. ARMs increased by 400% for prime and 200% for subprime. The flooding of houses on the market further lowered the housing prices (Holt 127). In the consumer sense, once someone couldn’t pay their loans, they had to sell their house, causing a sudden increase of supply in the housing market. This increase in supply led to the further devaluation of houses across the country and in turn led to
more defaults. From 2007 to 2010, homelessness had increased by 20% (Foscarinis 519). Due to the residual effects of the burst of the housing bubble, around 1.6 million people had to utilize emergency or transitional shelter sponsored by the government in 2010 (Foscarinis 516). The inflation and bursting of the housing bubble can be blamed on many reasons, the most important of which is the relaxed standards and subprime lending efforts across all institutions.

The reduction of risk is of the utmost importance to large investment banks, especially to those with hundreds of billions of dollars on their balance sheet. One of the main ways banks can reduce their risk is through the use of credit default swaps. Credit default swaps, or CDS’s, are essentially insurance contracts on the possibility of default for a given debt instrument (Stulz 74). These contracts are highly unregulated, and are one of the reasons for the collapse of the financial system in 2008. The origins of a credit default swap dates back to the late 1980s where JP Morgan created a contract that protected them from the Exxon Valdez oil spill. At the time, it was thought to be one of the most ground-breaking financial instruments, due to its high utility. Alan Greenspan described the idea as innovative primarily because it lays off “…all the risk of highly leveraged institutions…on stable American and international institutions” (United Nations 33). The inherit risk of having a credit default swap was in its construction. Although a CDS contract may seem like an insurance contract, the buyer of the contract does not necessarily have to have any exposure or economic connection with the product. Virtually, anybody could insure the same product or asset, leading to the CDS being of much greater value than the debt outstanding (Stulz 74).
A credit default swap is an instrument that the buyer makes periodic payments to the seller and is then protected in case of a default. The CDS gets triggered if there is a failure in payment on a given asset. This failure can be regarding interest, principal, or even as simple as announcing that you will suspend payments. Critics of credit default swaps assess that “even though CDSs operate like insurance contracts, they are not classified as such and thus escape insurance regulation. CDS contracts are thus exempt from regulation that requires the presence of an insurable interest...and that the insurer holds adequate reserves based on actuarial risk” (United Nations 34). This means that the sellers of credit default swaps had no real checks and balances on the distribution of their specific products. To combat the risk factor, sellers of CDS’s use other instruments to hedge their risk. The practice of hedging, which is used to reduce risk of a position by diversifying other positions, had turned into banks gambling with their depositor’s money. As the CDS market grew, the financial sector became increasingly volatile. In 2004, the CDS market was only made up of $6 trillion in liabilities. By June of 2008, it had risen to a whopping $57 trillion, the largest rise the market had ever seen. Subsequently, the CDS market went down by $16 trillion in the same year, acting as a catalyst to the downfall of the economy (Stulz 78). With such a large drop in CDS’s in such a short time, it was evident that the value of these assets were dropping rapidly and that the entire system was about to collapse. An important piece of information to understand is that the credit default swap market did not have any impact on mortgage defaults or disappearing liquidity. A credit default swap’s value, with regards to its increasing liability on the buyer, increases in value when defaults occur (Stulz 81). So as defaults continued to grow in the housing market, the credit
default swaps continued to trigger and those who were the buyers had exponentially increased their debt overnight.

One of the biggest issues regarding credit default swaps is that the contracts are meant to transfer risk from the seller to the buyer. In theory, it makes sense because it allows for those who are better equipped to deal with higher risk to deal with it and creates certain efficiency in the market. A common misconception during that time was that a credit default swaps removes risk from a company’s balance sheet. And although this may seem true, it does not remove the risk in the system (United Nations 35). Credit default swaps inherently reduce transparency because of the constant transfers of risk as the contract is sold. The loss of transparency increases counterparty risk, which in turn increases the volatility of the prices. The prices remain volatile because the spread continues to grow, from the increased counterparty risk. Once this occurs, the domino effect is exacerbated and the market prices get affected, which again creates more volatility. During the years leading up to the recession, it became clear that large banks and those who dealt with the credit default swap market were no assessing the risk properly, and did not truly practice due diligence (United Nations 35).

The Failing Businesses

The American International Group (AIG) has been the epicenter of controversies regarding the crisis of 2008. AIG is a multinational insurance corporation that has been operating since the early 1900s. As a holding company, AIG’s vast variety of subsidiaries not only deals in traditional insurance products like life and health insurance, but also with nontraditional products, namely the credit default swaps (Sjostrom 945). During the years
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following up to the crisis, AIG’s position in the credit default swap market grew exponentially. From 2001 to 2008, the CDS market grew from $918.9 billion to $54.6 trillion, with AIG holding a position of $526 billion in their respective portfolio (Sjostrom 944). AIG also held over $600 billion of their gross exposure in credit derivatives, 14% of which was held in sub-prime mortgages. Before understanding the vast amounts of damage done by the failing of the American International Group, it is important to understand how they securitized their mortgages and credit default swaps.

AIG securitized the swaps and created collateralized debt obligations (CDOs). CDOs are asset-backed securities that contain different risk classes separated into “tranches”. AIG sold CDOs in two large tranche classes, one being super senior risk and the other being the rest of the risk classes. In theory, there were many tranches ranging from AAA (extremely safe) to CCC (extremely risky) (Sjostrom 952). The way these products are securitized starts with a borrower getting lending from a lender. The lender then takes the mortgages that they lent and sell the contracts to an issuer institution that arranges them in special purpose vehicles (SPV). The special purpose vehicles are the ones who divide the securities into different tranches. The issue with the tranches is that some AAA tranche securities are not backed by AAA rated assets. The creditworthiness is given based on the fact that in the higher tranche, the assets will get paid back first with regards to the payments of all of the outstanding debt (Sjostrom 953-954). Although all of these are backed by assets, there is no telling truly what assets make it into the SPV, only that the lender has taken into account the risks and will divvy up the tranches accordingly. The SPV then pays out the tranches with collective loan payments that it receives
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(Sjostrom 954). Those who invest in the super senior tranche will be paid first, followed by the ratings going down to junk grade.

AIG held such a large position in these securities and swaps due to the international regulations, known as the Basel Accords. Under such accords, lenders had to set aside a certain amount of collateral to cover the losses that could potentially occur. Credit default swaps allowed AIG (and other financial institutions) to unload their risk onto another firm. This reduces the amount of risk on a balance sheet which in turn reduces the amount of capital requirements that the firm needs to post. This practice is a legal way for banks to use the capital requirements it should be posting to purchase more positions in the market (Sjostrom 956). AIG was making a great deal of money by writing CDS’s due to their risk models that outlined how the housing market would not go into decline, and that the securities would rarely, if ever, default. If the analysis of the models held true, the contracts would expire and AIG could freely collect the premium payments without any repercussions. A senior executive in AIG recognized these securities as “free money” because of the little risk it posed to the business. As we can see looking back, this was not the case.

Leading up to September of 2008, AIG was hemorrhaging money through losses on the credit default swaps. The failing housing market was triggering the swaps by the thousands that were once thought of as a stable investment. AIG’s main issue was not the losses on the swaps, but their lack of liquidity for credit purposes. AIG had $80 billion wrapped up in their shareholders equity, half of which was invested in insurance operations and could not be liquidated to meet their collateral calls (Bradford 2). Also due to regulations in the United
States regarding usage of policyholder surplus, AIG was only able to take up to 10% of the surplus in any year. Without the ability to have more liquid capital available from their profits, AIG suffered greatly.

The crash and subsequent bailout of AIG acted as a great blow to the economy, adding to the domino effect of a failing financial system. This graph shown below shows the progressive downfall of AIG and the points where the thriving business suddenly crashed:

Figure 5 shows how throughout the year of 2008, there was a steady declined, followed by a huge drop in the month of September. The drop in the month of September was due mainly to their lack of liquidity and inability to post the increased amounts of collateral. Most of their CDO’s collateral values were based on notational value and the market value. So as the value decreased, there was a larger gap of collateral that had to be posted (AIG Bailout 960). As AIG’s CDO’s continued to trigger, Standard’s & Poor’s was required to lower AIG’s credit rating, forcing AIG to post an extra $14.5 billion in collateral. In order to try to gather the necessary collateral, AIG had to try and raise money. AIG Investments was involved in a securities lending program that loaned securities from other companies (usually in order to sell short). When news of the failures of AIG and of the write-downs from the rating agencies reached the companies they were lending with, many of them had decided to return the securities and get their collateral back. This forced AIG to transfer billions into the program to pay the borrowers back (AIG Bailout 961). Because AIG was not able to secure a deal with any of the private equity firms, S&P downgraded AIG by 3 notches to BBB while Moody’s and Fitch downgraded them by 2 notches to A2 and A respectively (The AIG Bailout 962). Because all of the major credit agencies followed suit on September 15, the morning after, AIG was forced to declare bankruptcy (Bradford 1).

With AIG hanging in the wind, it would only be a short time until Lehman Brothers and other financial institutions would go bankrupt, causing a global economic catastrophe like that of the Great Depression. In order to combat this, the government provided AIG with $85 billion in loans, which secured a 79.9% equity stake. AIG was forced to pay interest at 8.5% above the 3-month LIBOR rate (or 11.4%) which would provide difficult for years to come (Bradford 2).
The only thing that was certain was that AIG was alive and well, able to function, and finance its day-to-day operations. The New York Federal Reserve came out with a study in 2012 explaining why the bailout of AIG was completely necessary. They explained that policyholders were going to cash in their insurance policies and annuities, taking the penalties, but furthering the downfall of the company. AIG would have to meet billions of dollars’ worth of obligations. Also, pension plans would have to write down their AIG-related assets that would in turn reduce the value of the pensions, harming the everyday American citizen. Probably the most devastating blow would have been that commercial and investment banks would take catastrophic losses on all the debt that AIG held, straining the banks’ abilities to create liquidity in the market (United States). Lack of credit towards homeowners and businesses would have frozen up the economy and been the reason for hundreds of thousands of job losses and business failures.

At the heart of the collapse were the mortgage giants Fannie Mae and Freddie Mac. Their ultimate downfall began a domino effect that put a scare in the market and helped to bring down firms like Lehman and AIG. Fannie Mae was created in 1938 to buy mortgages in secondary market and sell them as securities. In 1968, it was privatized with a congressional charter. Freddie Mac was created in 1970 to give support for the secondary mortgage market (Thompson 17). Around the same time, the Reinvestment Act of 1977 increased lending to inner cities. The act forced banks to open up branches in low income areas and required banks to hold a certain percent of their portfolios within those communities (Fannie Mae & Freddie Mac 1). In 1992 the Federal Housing Enterprises Financial Safety and Soundness Act mandated that the Department of Housing and Urban Development (HUD) set targets from Fannie and
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Freddie for minority and lower-income housing (Thompson 17). Then in 1999, the Clinton administration increased the necessary minimum ratios of loan portfolios for low income areas by Fannie Mae. In order to maintain high profits, Fannie Mae had to lessen the credit requirements on mortgages that it purchased in order to keep the ratio at the standard level (Fannie Mae & Freddie Mac 1). The way firms worked was by purchasing mortgages in exchange for mortgage-backed securities and/or cash. Fannie Mae and Freddie Mac never made loans to the consumer. Banks used these two firms in order to transfer the responsibility of the mortgage contracts, allowing for the ability to issue more subprime loans (Fannie Mae & Freddie Mac 2). Fannie and Freddie borrowed below market rates consistently and central banks bought their debt much the same as they would buy Treasury bonds (Thompson 17). In 2004, HUD mandated again that they must increase their purchases of subprime and Alt-A loans and securities. As Fannie and Freddie continued to purchase these, there became much more speculation in the market and exacerbated the trading of derivatives and credit default swaps on subprime loans (Thompson 18). During the first three quarters of 2008, Fannie and Freddie were responsible for 80% of the new mortgages. By mid-2008, Fannie and Freddie controlled about 90% of the secondary mortgage market and about half of the entire mortgage market (Thompson 18). Because Fannie and Freddie were getting such great rates, they continued borrowing enormous amounts ($5.4 trillion in securities and debts outstanding).

The inherit downfall of Fannie Mae and Freddie Mac was in its issuance of credit qualities and underwriting practices through algorithms. Fannie would take mortgage loans and separate them into the different risk classes and sell those off. Financial firms benefited greatly because Fannie would assume all of the risk on the loan if the consumer did not pay the
principal (Fannie Mae & Freddie Mac 2). Both institutions were run poorly and sometimes illegally. An example of the illegality was when Freddie Mac was fined 3.8 million for illegal campaign contributions (Thompson 18). The Office of Federal Housing Enterprise Oversight has noted that between 1998 and 2004, Fannie Mae had overstated their reported income by more than $10 billion on purpose with certain accounting practices. This resulted in a $400 million fine (Thompson 19). There was little to no regulation of the two firms, and even through tireless efforts of certain US congressmen and senators, no bill was ever effectively passed that would create a regulator. The Finance Reform Act of 2007 gave some regulation to Fannie and Freddie, but didn’t allow it to touch their mortgage-backed-securities portfolio. The Housing and Economic Recovery Act of 2008 allowed the setting of capital requirements for the two but gave a virtually unlimited line of credit from the treasury (Thompson 19). When housing prices dropped, so did the stock prices of Fannie and Freddie. Within a year, the value of the two companies had deteriorated by 90% (Fannie Mae & Freddie Mac 3). Because of HUD, Fannie and Freddie continued to loosen their oversight on subprime mortgages, and with the lack of regulation, Fannie and Freddie continued to increase the amount of debt they held. Once the housing bubble burst, Fannie and Freddie would go bankrupt. China held about $376 billion of debt in the housing market and about 10% of their national GDP was in Fannie and Freddie stock (Thompson 18). If Fannie Mae and Freddie Mac had failed, there would have been a detriment to the international economy, seeing as China and Japan had such a large stake in the companies. The US government was forced to take over Fannie and Freddie to help lessen the blow the economy would take. Unfortunately, the market conditions were so detrimental that Bear Stearns would soon face the brink of bankruptcy.
During the height of its reign, Bear Stearns had remained a top five investment bank in the industry, and had operated as a maverick in its field for over 85 years (Ryback 3). Of all of the Bear Stearns subsidiary businesses, 45% of their total revenues came from their fixed-income business which specifically dealt with mortgage securitization (March 280). A report on Bear Stearns had stated that the company “…was the second-biggest prime broker in the country, with a 21% market share in 2006, trailing Morgan Stanley’s 23% (March 280).” The reason Bear was able to operate with such swiftness was because of the lack of regulation in the financial services industry. The Gramm Leach Bliley Bill, which was passed in 1999, allowed financial holding companies to participate in investment banking services (including selling securities and insurance products). It was the bill to overturn the infamous Glass-Steagall Act that had been enacted in 1933 to prevent banks from trading for themselves. Glass-Steagall is famously known for separating the banking giant JP Morgan into two firms, one being the commercial bank, JP Morgan, and the other being the investment bank, Morgan Stanley. This act had allowed Bear Stearns to go virtually unsupervised and unregulated (Ryback 3). In order to keep up with much stronger companies like Goldman Sachs and Morgan Stanley, Bear Stearns had to stay ahead of the curve and deal with much riskier positions than other companies. Bear had been so innovative that they were one of the first to securitize subprime mortgages in order to gain a large market share, even when the economic outlook was poor (Ryback 3). Bear Stearns had a very interesting profitability model when dealing with mortgage securitization. Bear vertically integrated their mortgage business, meaning that they dealt directly with mortgage originators and even dealt in distributing mortgages. They then bundled these mortgages and securitized them, gaining profits for every transaction (March 280). By
2006, they had underwritten over $36 billion in CDO’s and were one of the top underwriters of private label MBS’s for the decade.

High-Grade Structured Credit Strategies Fund, a subsidiary of Bear Stearns Asset Management, held a large position of derivative instruments backed by home mortgages. This sector proved to be extremely profitable up until the decline of the housing market in 2006 (Ryback 7). Many scholars point at Bear Stearns (and many other failing banks during that time) leverage ratio as one of their main downfalls. By 2008, Bear held a large leverage ratio of 36 to 1. Bear’s balance sheet contained about $395 billion in assets, $11.1 billion in equity, and $13.4 trillion in derivative instruments (Ryback 5). The decline of Bear was seen in early 2007 when it had lost $3 million in defaults that occurred within 90 days of their origination. Even with such information and blowback, Bear continued to expand their mortgage business which was contrary to other firms in the industry in 2007 (March 281). By June of 2007, Bear Stearns’ funds were so highly leveraged that they were hemorrhaging billions of dollars. Investors saw that these funds were taking extreme losses and began liquidating their stakes in Bear Stearns. Eventually, Merrill Lynch seized $850 million in collateral, but took a massive loss due to the lack of market interest (Ryback 7). By the second quarter of 2007, Bear Stearns’ hedge fund had failed (March 280). Soon after, the treasurer of Bear Stearns feared that the credit agencies would downgrade their credit rating. And as most banks operate in short-term overnight borrowing, this would cost Bear millions in increased rates. As their leverage ratio increased to 38 to 1, Bear was forced to assume unethical accounting practices by selling some of its assets to another organization and then buy the same assets back at the beginning of the next quarter. This move is a widely accepted way to adhere to credit agency standards (March
As their Alt-A and highly risky assets continued to weigh on their balance sheet, the SEC began threatening Bear that if it did not reduce their exposure, the company’s credit rating would be downgraded (March 282). By November of 2007, Standard & Poor’s downgraded Bear Stearns’ a full notch, to A rating (Ryback 7). This downgrade had begun the ultimate demise of the company. With this, the company had to increase its collateral, forcing it to sell off more of its assets at discounted prices to remain solvent. Large hedge funds were withdrawing billions of dollars from the firm by mid-2008. Bear continued to keep large amounts of cash on hand in order to keep the perception of high liquidity to other firms in the markets. Unfortunately Moody’s downgraded the mortgage-back securities that were issued by a Bear Stearns subsidiary. A week after, credit default swaps’ payments jumped by around 50%, showing that the market was betting Bear would soon become insolvent (Ryback 10). “On Wednesday, January 30, 2008, Treasurer Upton reported an internal accounting error that showed Bear Stearns to have less than $5 billion in liquidity.” When news of this had spread to the SEC, the SEC required daily reporting of Bear’s liquidity (March 286).

The run on Bear Stearns accelerated quickly. In March of 2008, Bear had to pay $1.1 billion in margin calls to appease people who wanted to take their money out of dealing with the firm. Later that week, Bear Stearns had run out of cash (March 288).
Figure 6: "March 2008: The Fall of Bear Stearns." FINRM. n. Chart.  

Figure 6 shows the liquidity of Bear Stearns from late February of 2008 to March of 2008. What’s truly surprising about these figures is the quickness that Bear Stearns ran out of liquid capital to stay afloat as a company. Within four days, Bear Stearns lost around $16 billion in liquidity, which lead to the firm to near bankruptcy and have to ultimately approach JP Morgan & Chase. The swiftness of the loss of liquidity affirmed the seriousness of panic and that the run on the bank was warranted. By the middle of March, Bear Stearns was completely illiquid and had asked JP Morgan for a $30 billion credit line, something that JP did not accept. It was Jamie Dimon’s contention that JP would not help Bear Stearns without direct government intervention. The government agreed to loan $12.9 billion to Bear on behalf of JP Morgan. Subsequently, Standard & Poor’s downgraded Bear Stearns’ credit rating to BBB with Moody’s following suit. The downgrade took such a staggering hit on Bear that if they did not find a firm to buy their business before the Asian markets opened on Sunday, Bear Stearns would go
bankrupt (March 289). It was at this point that JP Morgan was asked by the government to help buy Bear Stearns. The New York Federal Reserve proposed to buy up the toxic assets, in a similar way that Lehman Brothers would propose to do later that year. A new company, Maiden Lane LLC, would be formed and contain the toxic assets of Bear. The Fed would then purchase up to $28.82 billion of the firm and have JP Morgan take responsibility for the first $1.15 billion of losses. By that Sunday, a deal for the takeover of Bear Stearns had ended and JP Morgan would purchase the entire firm for $2 a share. News of this kept Bear open for a few more days, until the final price of $10 a share was established, with the Fed taking over a majority of the burden of purchase (Ryback 13). Ultimately, Bear Stearns collapse was due to their exposure in their mortgage portfolio and their high leverage ratios. This caused a lack of liquidity and when there was a run on the bank (by their repo lenders and customers) the company could no longer remain solvent. The fall of Bear Stearns served as a precursor to what would happen to Lehman next.

Tens of thousands of people lost their jobs after the fall of one of the biggest banks in the world, Lehman Brothers. Lehman’s biggest issue was being highly involved in the derivatives and issuances of securities closely tied with subprime mortgages. Months before their subsequent demise, Lehman had been a top dog on Wall Street, and was making earnings rivaling that of Goldman Sachs, which had been the profit making king on Wall Street. Lehman acquired mortgage lenders BNC Mortgage and Aurora Loan Services, along with three other mortgage lenders in 2004. The housing market was on the up and up and Lehman had experienced a 56% increase in revenues from their capital markets, with net income around $4 billion in 2007 (Case Study). Lehman was growing at an aggressive rate by making major plays
in the securitization market. The bank had a knack for originating and securitizing loans in especially “high risk areas like commercial real estate, leveraged lending, and private equity” (FDIC Quarterly 1). At the height of its growth, Lehman stocks were at $86. Over the course of the next few months, the value of the stock started to fizzle, sometimes down as much as 21% in a day (Sorkin 10). A large issue with Lehman was that it was an overleveraged company, having a ratio of total assets to shareholder equity of about 31. The interconnectedness of all of the banks and mortgage companies exacerbated the decline. When Bear Stearns went on its downward spiral, Lehman shares plummeted by 48%. The Bear Stearns collapse left Lehman at the forefront as the next most vulnerable investment bank. After many failed attempts at getting investors, Lehman posted a $2.8 billion loss in the second quarter of 2008 (FDIC Quarterly 2). With little to no short-term creditors allowing Lehman to borrow more money, Lehman stocks continued to plummet 45% more, to values as low as $10 (Case Study). Lehman identified that their commercial real estate portfolio was the source of the toxicity on their balance sheet. With the Korean Development Bank, Lehman developed a deal to take their real estate portfolio and other toxic assets and spin them off into a company called “SpinCo” while leaving a “Clean Lehman” to be bought up by KDB. It is unclear the real reasons why KDB never finished the deal although many believe it to be because of the deteriorating world economy (FDIC Quarterly 2). Over the course of the next month, Lehman had contacted firms like Berkshire Hathaway, Metlife, and Investment Corporation of Dubai. All efforts were futile and Lehman was facing their ever-increasing liquidity issue (FDIC Quarterly 2). It was at this point that Lehman needed a helping hand by the only two companies that showed a little bit of interest, Bank of America and Barclays PLC.
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So on that dark weekend in September of 2008, the heads of the banks piled in a room in the New York Federal Reserve to establish how they were going to deal with Lehman. The interconnectedness of the banks had once again continued the domino effect. If Lehman were to fall, Merrill Lynch would be next, and Morgan Stanley soon after. All of this was due to the large losses of being involved in risky real estate deals (Karnitschnig, Deborah Solomon, Liam Pleven, and Jon E. Hilsenrath). Both companies were looking at the Federal government to help bigger banks swallow their banks with helping capital, like they did to J.P. Morgan with Bear Sterns. Ultimately, Barclays did not and could not act in time, due to their national laws forcing the company to let shareholder’s vote on any amount of money it were to invest in Lehman. Because of this and the lack of interest from any other bank, Lehman brothers declared Chapter 11 bankruptcy (Wearden, David Teather, and Jill Treanor). The failure of Lehman sent shockwaves throughout the market, and AIG felt a destroying blow, leading to the government being forced to buy a majority share of the company.

Government Response

In order to combat the crisis, immediate action had to be taken by the United States government. As explained earlier, the most basic ways the government intervened was through financial assistance packages delivered to banks to keep them liquid. The Troubled Asset Relief Program was a program that delivered capital injections into major banks and corporations by buying up preferred stock so they could continue to lend money, unfreeze credit, and continue their day-to-day operations (Sorkin 337). The largest payment of the TARP disbursement was of $130 billion in purchasing megabank equity. This included the payments
of Bank of America: $25 billion; Citigroup: $25 billion; Goldman Sachs: $10 billion; JP Morgan: $25 billion; Morgan Stanley: $10 billion; State Street: $10 billion; Wells Fargo $25 billion (Sorkin 337). Many other banks were given billions of dollars for the same purpose. The theory behind delivering every megabank a TARP payment was that if one large bank was singled out, the market would know who the weakest of them was, and that bank would ultimately fail. Along with TARP, the treasury secretary Hank Paulson had commercial and investment banks merge in order to use the commercial bank deposits to pay the margin calls required by the investment banks. The result of this included Bank of America acquiring Merrill Lynch for approximately $50 billion (Wearden, David Teather, and Jill Treanor), Mitsubishi taking a 20% stake in Morgan Stanley for $9 billion (Sorkin 311), and Berkshire Hathaway taking a 10% stake in Goldman Sachs for roughly $5 billion (Susanne Craig, Matthew Karnitschnig, and Aaron Lucchetti).

With addition to TARP, the Federal Reserve instituted a policy called quantitative easing. Quantitative easing is when the Federal Reserve buys back treasury bonds from the biggest banks in the financial sector (McLean). As the Federal Open Market Committee pushed the federal funds rate target lower they also bought out hundreds of billions of dollars of assets (mortgage backed securities and treasury securities). The Fed reduced the funds rate from 5.25% to 2% during the 2008 crisis. When Lehman bankrupted and AIG got bailed out, the FED lowered it down to 1%. With the increasing defaults and panics from different companies, the fed lowered the funds rate once again to lower than .25% (December 2008) (Ricketts 1). QE1 (November 2008), the Fed had bought more than $1 trillion of mortgage-backed securities and treasuries. Many economists feel that without the QE initiative there would have been a
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depression instead of just a recession (McLean). The theory behind quantitative easing is that with a large-scale asset purchase, the values of certain securities go up, due to their scarcity. As the value of treasury securities go up the interest rates fall. This means that business can borrow more cheaply, thus impacting favorably job creation and economic activity. And in March of 2009, the Fed bought $1.25 trillion in mortgage backed securities, $200 billion of Fannie Mae/Freddie Mac debt, and $300 billion in treasury securities (Ricketts 2). Some critics say that because QE increases the monetary base, there could be huge inflation. The capital reserves of banks account for a large part of the money supply. If banks lend more, due to the availability of cheap capital, then there would be such a large increase in the money supply, continuing the rate of inflationary acceleration. Quantitative easing is still in effect today and has been offsetting any negative residual effects of the crisis of 2008.

The largest change to the financial industry was through legal changes in the financial sector by the senate. After the worst of the crisis had hit the economy, action was set forth to bring justice and new law to the banking industry. It was with this that Senators Chris Dodd and Barney Frank proposed and set forth the Dodd–Frank Wall Street Reform and Consumer Protection Act. Under this act there are many new regulations and additions to current policies. A study in 2010 by the illustrious law firm Morrison & Foerser broke down the legal jargon of the Dodd-Frank and summarized it for what the bill truly would change. The study started off by explaining that the Dodd-Frank bill created the Financial Stability and Oversight Council whose purpose is to identify any risk to the US financial system due to the interconnectedness of financial companies (Morrison & Foerser 4). This council will also serve as a medium to discuss and analyze emerging market developments, providing annual reports.
for congress to see their progress. One important part of this new council is that it will recognize different financial institutions and subject them to new standards set forth by the Federal Reserve, including market utilities, clearing, and settlement activities (Morrison & Foerser 5). Federal Reserve regulation has become a large theme in the Dodd-Frank Act with the Fed now being in charge of regulation for thrift holding companies, banks, and federal thrifts. With this new law, they can now create and enforce any rule they deem necessary to keep stability in the market (Morrison & Foerser 6).

In response to the “too big to fail” aspect of the banking industry, the bill addresses how banks and bank holding companies are prohibited from proprietary trading and may not invest in hedge funds and private equity funds. In addition to this, large banking institutions must submit “living wills” and they must be updated regularly (Morrison & Foerser 7). A “living will” is a document that banks now use as a blueprint in a situation where a bank failure might occur. The situation with regards to Lehman’s failure hovered around the CEO’s inability to capitalize on deals that could have saved thousands of jobs in the bank and kept stability in the marketplace. Banks now map out a pre-determined and binding plans that allows the government to liquidate the company if it isn’t deemed credible anymore.

The Dodd-Frank Act also deals with securitization reform to combat the issue of creation of any type of security a bank sees as profitable. The bill requires the securitizer (which could be a bank or financial institution) to hold at least five percent of the security value. There also must be an available disclosure on compensation for those who securitized the loans (Morrison & Foerser 9). When dealing with banks, shareholders must approve the compensation of the
executive officials (Morrison & Foerser 23). This section of the bill puts responsibility on the originators of the asset backed securities to disclose their practices regarding risk and asset or data level detail. In the most basic sense, security originators must perform and submit due diligence to their regulators (Morrison & Foerser 9). This section also deals with the credit rating agencies. Their involvement in the crisis was mainly on the misalignment of appropriate credit ratings. They will now have to give a regular report on credit ratings, representations and warranties and how they are similar to those same ratings in similar issuances.

Another aspect that came out of the Dodd-Frank reform is that of swap dealers. Credit default swaps played a huge role in the downfall of the economy. Organizations that fall into the definition of “Swap Dealers” and “Major Swap Participants” (MSPs) must register as such and will be subject to the regulations and rules that of those swap participants (Morrison & Foerser 13). Certain swaps must be cleared now if the regulator deems that that type of swap needs to be cleared. It could be a single swap or any group or class of swaps (Morrison & Foerser 12). The Fed and the applicable regulators will set capital requirements and variation margin requirements for the swap dealers and major swap participants. One of the most monumental changes is the attempt to remove moral hazard regarding swaps. Swap dealers must disclosure to non-swap dealer and non-MSP counterparties of the risks and characteristics of the swaps and any incentives you may have for selling it. It also must not have a conflict of interest in connection with the swap. The dealers must now act “in the best interest of” the client and the dealing institution must prove to the regulator that those dealers are qualified representatives (Morrison & Foerser 13). An issue with this specific section of the bill is that swaps are still not considered insurance contracts and will not be regulated under insurance
laws. Multiple individuals or business can still purchase a swap on the same product, which is where the main issues with credit default swaps lied.

The most infamous section of the Dodd-Frank Act is the section dealing with the Volcker Rule. This rule explains that banks can no longer engage in proprietary trading or own/sponsor/have interest in a hedge fund or private equity fund. Proprietary trading is the running of a trading account of the banking entity or nonbank financial company in any transaction to purchase or sell a security, derivative or contract of a commodity or option. If a nonbank financial company does participate in proprietary trading, they will be asked for much larger capital requirements. Banks can however invest in a fund they offer, provided that they must seek external investors within a year of the starting date, and the investment cannot exceed over 3% of the total ownership interest (Morrison & Foerser 19). With all of these new rules and regulations, the US government hopes that no more issues will arise in the financial market attributed to corporate greed and lack of responsibility.

The Great Depression Comparison

Many scholars argue that some of the failed policies and scenarios of the recent financial crisis mirror those public policies that were used during the Great Depression. “The Roaring 20s” was a time where there was an extremely large increase in industrial production, including the automobile, petroleum, manufactured, and raw goods industries. Even through this time of extreme prosperity and massive growth, there were no decreases in prices like there should have been through the production amounts during that time. The reason the prices did not decrease is because of the inflationary positions set forth by the Federal Reserve.
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The Fed did this through the expansion of credit, which during that time meant to buy around $1 billion in gold (Lonto 2). Leading up to the Great Depression, the Federal Reserve kept interest rates low, indicating projection of future growth. The real economic growth during this time was 4.4%. A decade later, the Fed raised the interest rates, drawing back many investments in the economy. Also, there was a large tax raised by President Hoover in 1932 (Folsom). After the crash of the stock market in the late 20s, the Fed continued to inflate the economy. With the election of Herbert Hoover, there became many new reforms to combat the Depression. The Fed lowered discount rates, extended credit, and also instituted the new Glass-Steagall Act. The Glass-Steagall act as discussed earlier did separate investment and commercial banks, but also allowed for the Fed to use treasury bills as collateral, which allowed for easy access of credit (Lonto 3). President Hoover had record spending on public works to combat the Depression. He also instituted the first federal welfare program and invested largely in federally-funded farmer programs. President Roosevelt’s New Deal continued Hoover’s legacy. Roosevelt created the Agricultural Adjustment Act, a program that paid farmers to not produce crops. Roosevelt also instituted a large bailout to the banks in hope of delivering credit into the market and giving faith back to the masses. Subsequently, there was an unemployment rate of 25% (Folsom). In the Austrian School of Economics, there is a theory of a business cycle that states grave consequences based on government intervention. The theory explains that there will be an unfavorable reaction to growth in banking credit through central banking policies. The interest rates then are kept so low that a bubble occurs and people stop saving as much as they should (Mahoney).
Personal savings was at an all-time low preceding the recession of 2008, as can be seen by Figure 7. The figure shows the personal savings of American consumers for 50 years. Highlighted in the Figure 7 are the times where this country was in a recession, and as is seen by just looking at the graph, recessions are preceded by times where there is a much lower personal savings rate. Just like during the time of the Depression, people continued to spend more and more and left very little for saving. The Great Depression followed the Austrian cycle through its constant lowering of the interest rates and the creation of available credit. The inflation coupled with the other issues of the declining strength of the economy created a disaster that hit the country hard. Keeping true to the Austrian theory of economics, the intervention of the government in this case was detrimental to the economy (Lonto 4).
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The Great Recession had a lead-up very similar to that of the Depression of the 1930s. As discussed earlier, the housing bubble had been exacerbated through government-backed securities (especially in the case of Fannie Mae and Freddie Mac). With the government pouring money into the housing market, poor investments took form within the private sector. And just like the market crash of 1929, the attacks of September 11\textsuperscript{th} put a fear in the marketplace, pushing the prices of the market down 7.1% (Lonto 5). There was a large push by the Bush administration for homeownership and the easy availability for mortgages fueled the economy (like that of the “Roaring 20s”), but eventually created toxic assets, as previously discussed (Folsom). In the section regarding the housing bubble, I had discussed the inflation and federal funds rate. Just like that of the Depression, the funds rate was continuously reduced until it reached record lows while inflation grew at a steady pace. Another similarity between the two periods is that President Obama’s stimulus bill totaling $787 billion was extremely similar to that of Roosevelt’s New Deal plans. Obama’s “jobs bill” and universal health care plans became very expensive and could have had detrimental effect to the economy. Obama also saw an increase in unemployment from 8% to 10% just like during the Roosevelt administration (Folsom). The final major similarity occurs with the real estate market. The Great Depression was preceded by an increase in real estate lending and investment banking. This was due to a boom in the real estate market, as it had exponentially increased in such a short period of time (Geewax). This resembles the policies set forth by George Bush via the HUD, creating a bubble in real estate lending.
Conclusion

There is no singular factor that caused the downfall of the American economy. The domino effect from the failing of the biggest companies in the United States led to a recession that didn’t stop until 2009 and whose effects can still be felt today. A main cause of it all was the pursuit of the “American Dream” and true carelessness by all parties: buyers, sellers, and regulators. With mortgage lenders lending out to people who couldn’t afford to pay and banks securitizing these mortgages and selling them as CDOs, it had seemed that everyone was making too much money. The deregulation of credit default swaps in 2000 was a big underlying factor, because as mortgage giants like Fannie Mae and Freddie Mac were giving out loans by the billions, insurance companies like the American International Group was ready to swap the risk and collect their high premiums. Ultimately, the downturn of the housing market left millions homeless and jobless. The failure of great banks like Lehman Brothers and Bear Sterns led to their cheap acquisition and interbank mergers. Large banks became megabanks and a disastrous crisis was ultimately averted by time and taxpayer dollars. The common theme in bank failures is the lack of credit, causing a halt in production of normal goods and services. The constant interference through government policies seems to have mended the wound little by little, but very well could have prolonged the effects of the recession. With similarities matching that of the Great Depression, it remains unclear whether government intervention truly helps or hurts in the long run. The only certainty now is that without changing fundamental practices in the financial sector, a crisis like this is bound to happen again.
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