"Perspectives on a Crisis: The 2007-2008 Financial Crisis"

An Honors Thesis

by

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Abstract

In 2008, the financial system came to a complete standstill when The Great Recession hit the United States. During the late 2000s, corruption, greed, and stupidity almost caused one of the largest financial crises in United States history due to deregulation and unethical behavior. The event itself is pretty clear, but the details leading up to it can be pretty murky to sift through. As a capstone to my studies at California University of Pennsylvania, I am going to explain the 2008 financial crisis as the events unfolded, but told from three different perspectives: an accounting, a finance, and an economics perspective. Hopefully, a clear explanation of the events leading to the Great Recession will keep others well informed and to be on the lookout for future possible financial catastrophes.

"It is a narrow mind which cannot look at a subject from various points of view." Written in the 1870s, George Eliot's words could not be any more relevant in today's society. In a world where people are driven apart everyday by political and social issues, it is difficult to understand someone else's perspective. Perspective helps people form their opinions. Someone may not fully understand an event, but they will still hold an opinion about it.

Summary

In 2008, the global economy was almost brought to its knees by the largest investment banks in the United States. Systemic risk exploded throughout the financial industry because banks were engaging in moral hazard. Bankers and investors were buying and selling very complex securities they did not fully understand.

The purchase and sale of mortgage-backed securities, credit default swaps, and collateralized debt obligations created a financial panic. The complexities of these securities caused much stress and confusion to the financial system. Overall, an estimated total of $5 trillion was lost in the 2008 financial crisis (McKay, 2015).

Given the complex web of transactions involved with the crisis, it can be very difficult to understand. Scholars and academics are still trying to comprehend all of the details of the events that unfolded in the early 2000s. They're also trying to rationalize the behavior of investors during this time period. Plenty of research has been poured into trying to understand the 2008 financial crisis. A simple explanation of events and the securities involved can help anyone understand how it happened.

In terms of perspective, to better understand why the crisis took place, it helps to look from three different perspectives: an accounting, finance, and an economics perspective. Each field of study has its own opinion on what happened. So, after understanding the events, it helps to view the subject from "various points of view," as Eliot wrote about in the 1870s. Expanding one's knowledge of the financial crisis can also help prevent other economic catastrophes in the future.

Background

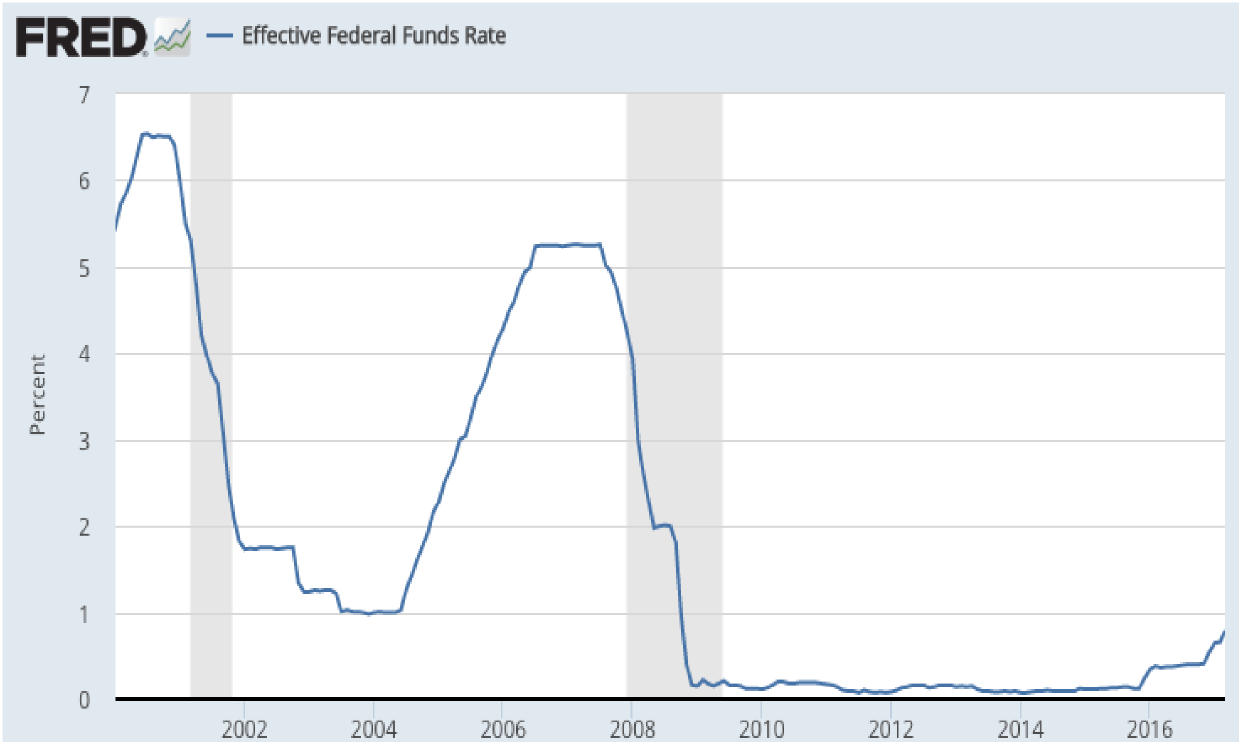
In the mid-to-late 2000s, the United States' economy suffered one of the worst financial crises ever. According to former Federal Reserve Chairman Ben Bernanke, the 2007 financial crisis could have spiraled so far out of control that a new Great Depression would have hit the United States and even spread throughout the rest of the global economy. The question, though, is how did the U.S. economy get to the point where a few bad investments almost brought down an entire global financial system? The answer lies in very complex, convoluted and catastrophic investments bankers made in the early 2000s. To fully understand the reason behind the credit crisis, one must look back to the late 1990s to when things began to fail.

In the late 90s, newly formed tech companies found themselves with venture capitalists throwing large investments to them in order to jump onto the new trend of internet-based companies. Due to financial journalists' poor reporting and overvaluations given to companies by banks, many of these companies started to go bust, and the dot-com bubble was bursting. Stock prices in these companies dropped rapidly, and investors took huge losses on their investments because of this catastrophic bubble.

Investors were given plenty of incentive to invest in these companies due to the relatively low federal funds rate of 4.63 percent set by the Federal Reserve in January 1999. Conservative investors would normally place their money in relatively safe investments like T-Bills and Treasury Bonds, but due to the relatively low interest rates set by the Fed, investors had no incentive to buy into these investments. With the rapid rise of new e-companies, this paved a way for investors to earn a quick gain on their investments.

By the time the bottom fell out during the dot-com bubble in 2000, the economy was starting to recess. During the 2000 recession, the Fed decided to lower its federal funds rate to 3.65 percent in August of 2001. In September, the attacks at the Pentagon and the World Trade Center took place, causing investors and consumers to panic, reducing investing and spending throughout the country. The economy was at a standstill. In order to get markets spending again, Federal Reserve Chairman Alan Greenspan lowered rates even further to an astounding 1.82 percent in December 2001. (See Table 1).

Table 1



A borrowing institution does not have to put up collateral to a lending institution in order to receive the funds. The federal funds rate is set by the Federal Reserve to allow banks and other financial institutions to transfer money from one to another for overnight lending on an uncollateralized basis. To simplify, a neighbor asks someone to park a car in his garage overnight because he needs to borrow it the next morning. However, the lender would not charge a fee to borrow the car overnight.

The Federal Reserve can influence financial institutions' decisions by raising and lowering the discount rate and federal funds rate. By lowering the federal funds rate, the Fed allows banks the freedom to move money back and forth between each other at relatively low costs, allowing borrowers to take more loans at lower interest rates. Also, if the Fed's rates are too low, as was the case in 2001, individual investors will not see a large return on their investment, thus giving investors no incentive to put their money into the Treasury's securities. Banks borrow as much as possible from the Fed with the low discount rates and low federal funds rate. Having these low interest rates, banks have the potential to lend more to borrowers.

When investors saw the large banks on Wall Street earning large sums of money off of the loans they made from the Fed, they wanted to be part of the banks' returns. The large financial institutions such as Lehman Brothers, J.P. Morgan Chase and Bear Sterns all noticed the high demand investors had for the credit boom in the early 2000s. Eventually they began selling off specialized securities called mortgage-backed securities (MBSs) to the interested investors.

In the 1970s, banker Lewis Ranieri had developed the mortgage-backed security to sell to investors. The logic behind the security was simple – mortgages were frequently bought and sold between financial institutions because the buyer can earn the interest off the loans. If banks combined thousands of mortgages into one security to sell, the MBS's yield increases. As long as a mortgage payment is not delinquent, the bond sold would hold its yield. The logic was that borrowers would not default on mortgages. The banking industry's standard requirements for borrowers to acquire a mortgage ranged from good credit scores and steady stream of income to long-term employment and highly valued collateral.

When banks newly acquired mortgages, they were bundled with thousands of others and sold to investors or other banks. The banks would then acquire the interest the borrower paid in addition to the principal. Selling mortgages to others was and still is a common practice of the banking industry.

As of 1975, there were an estimated $8 billion in securitized home mortgages available to investors. Plenty of deregulation had taken place under the Reagan administration, to allow Savings & Loans to take mortgages at a loss and amortize that loss over the life of the mortgage. By 1986, Ranieri was able to grow the $8 billion security from 1975 to over $300 billion in 1986 due to this new loophole in the tax law,

The large demand for these mortgage-backed securities and the limited supply of houses in the United States plummeted until there was a lack of mortgages to bundle together. Financial institutions began to look for new borrowers to take mortgages, package them up and sell them to lenders. Unfortunately, by the late 1980s, banks were handing out subprime mortgages.

The Crisis

A subprime mortgage is a home loan in which the bank takes on extra risk in lending because there is uncertainty if the borrower can repay the loan. To offset the risk, banks have the ability to charge a high interest rate. In essence, it is a loan provided to an individual who might not completely qualify for it, but allows the bank to on extra risk. . The subprime loan was one of the key components of the financial crisis.

To help fill these mortgage-backed securities investors demanded so highly, banks began handing out massive amounts of subprime mortgages to low-income clients, who were most likely uneducated individuals and immigrants. To fill investors' appetites, mortgage brokers were incentivized with huge bonuses to award as many subprime loans as possible. Because no income verification was required, low-income individuals could apply for a mortgage. No documentation to verify credit reports was needed; signing on the dotted line was enough for approval.

Mortgage brokers would target low or middle class neighborhoods advertising easy-to-get loans. Stated income allowed applicants to fabricate income loan applications without any verification, without documentation or paystubs. With interest only loans, the borrower only paid interest on the mortgage for a short term while the principal remained untouched. Debt consolidation enabled borrowers to combine all of their debt, such as credit cards or other loans, on one specific loan.

Even though the banks were aware the loan holders were unqualified individuals, the banker would bundle debts and sell these bundles to a larger bank. Banks would gain leverage from these investments with larger banks, acquiring earnings while taking advantage of unqualified, low-income individuals. Any institution that owned interest in a subprime MBS, owned the risk of defaulted payments. Each party engaging in these transactions was engaging in a practice known as moral hazard.

Mortgage holders were engaging in moral hazard by moving the risk further up the line knowing he would not be on the hook if borrowers defaulted on loans. Moral hazard is the lack of incentive to guard against risk where one is protected from its consequences. The belief that individuals would not default on their mortgages when given bad loans was enough in investors' minds to keep passing the risk to someone else. A ticking time bomb was passing through many different hands, but no one was able to see the clock slowly winding down.

The collateralized debt obligation (CDOs) is a make-up of various asset-backed securities (ABSs), which are then sorted into tranches. In addition to mortgage-backed securities, CDOs were being presented as a viable investment opportunity for investors. Tranche is a French word that means one part of a division or unit. The asset-backed securities that were placed into tranches were sorted based on the bond's credit rating by any of the credit rating agencies. Each of the major rating agencies – Moody's Investors Service, Standard & Poor's (S&P), and Fitch Ratings – have similar bond ratings ranging from AAA, the best and safest bonds in which to invest, to B-, the most toxic bonds that world more than likely default.

Ratings of AAA to B- are examples of tranches. A rating of B- is considerably low. The lower the rating, the more likely the loan was to default. If the loan did default, the investor would have a loss on their investment earnings. If investors needed a high return, they invested in a lower rated tranche. If a safer investment was desired, interest earnings would be lower, but payment would be guaranteed.

Investors who bought into a CDO would be apportioned risk and return based on the tranche in which they wanted to invest. Because B- and below would be the most likely to default, investors who pooled their money in this tranche would receive a much higher interest rate, but they were taking on the risk that the bond would not be paid. Anyone who would purchase from the AAA tranche would receive a much lower interest rate because the risk was much lower. The investors were guaranteed their payments the majority of the time. Investors placed belief in the housing market, believing it was a rock solid investment. In actuality, the housing bubble was about to burst.

The over issuance of subprime mortgages to unqualified borrowers began to implode. Default rates skyrocketed in 2007, when the initial teaser interest rates began to wear. Homeowners now had to start paying upwards of 6 -7 percent on their mortgages – amounts the borrowers could not afford. When mortgage borrowers started defaulting on their payments, they would simply uproot themselves and leave their homes. These homeowners defaulted on their mortgage payments and banks foreclosed on the homes. As foreclosure rates rose in dramatic numbers, the housing supply increased because the banks would return the foreclosed homes to the market. Generally, when the housing supply rises, and the demand for housing either stays constant or increases less than the amount which supply rises, the price in housing falls. Suddenly, current homeowners found themselves underwater because the amount their mortgage was worth was less than the fair market value of their home.

A homeowner's equity in his home is equal to the amount the home is financed for minus the remaining balance on the loan. When homeowners saw the prices of their homes were less than the amount they had financed, they would try and refinance the house. But if the homeowners were not qualified to refinance, some would refuse to pay their monthly payment.

Eventually, as homeowners starting defaulting on their mortgages, the bonds investors were holding started to become more worthless each day. CDOs and other asset-backed securities were starting to take on water more quickly because the bonds that were rated with a B- or lower rating were defaulting with no returns to investors. ABSs were losing the collateral they had, and therefore, their value. Since the housing market was being propped up by bad loans, investors needed to find a new way to earn money on these new financial products.

When investors were out seeking new products, they would come upon a new financial instrument, called a credit default swap (CDS), allowing investors to make money off the high-default rates of the mid-2000s.

In essence, a CDS is insurance a company will pay out if specific mortgages were to default. It is shorting the housing market by betting against the idea that housing prices are solid, and that they will keep rising. The credit default swap makes the beneficiary pay a premium until the time the CDS pays, then, the beneficiary will be paid out the full amount of the insurance coverage. For example, an investor may purchase a CDS worth $1 million, assuming $1 million worth of junk bonds was guaranteed to default, against bonds in a CDO. The investor will then pay a $400,000 premium until the bond defaults, when the insurer will pay $1 million to the beneficiary.

Large investment firms began securing a position with credit default swaps to offset any of the losses they would have from their CDO investments. Eventually, banks started betting against the very system they helped create. One of the biggest risks of the whole financial system, though, was American International Group (AIG).

AIG was one of the largest insurers of CDOs. AIG Financial Products (AIGFP) believed that they would not have to pay beneficiaries due to the rising prices for houses. But the rise in defaults meant AIG would have to start to disburse the insurance on these bad loans to investors. At one point, AIGFP was making 17.5 percent of AIG's revenue (approximately $3 billion) on credit default swaps. By the time the default rates peaked in 2007, AIG was making massive payments to clients, eventually leading to the division to incur $25 billion in losses. AIG's credit rating plummeted forcing the company to post collateral to its creditors causing much financial insecurity for investors. Due to the large nature of AIG, the federal government felt it had an obligation to step in and bail out these large financial institutions, to protect investors around the globe from massive losses.

Legislation

Congress took action by passing the Troubled Asset Relief Program (TARP) in 2008. This program has been one of the most controversial pieces of legislation that was passed in recent history. Typically, individuals have viewed TARP differently, depending on one's political views. The bill was designed to be a loan to the large Wall Street banks. The total loan amount was approximately $787 billion. The money provided to banks was to purchase mortgage-backed securities, provide insurance for troubled assets and buy non-voting equity in the banks.

The money was all eventually paid back in addition to the interest earned on the loan. By the early 2010s, our government had earned back the majority of the loans, except for any money given overseas. In 2011, that money was still outstanding on the Federal Reserve's balance sheet because of foreign countries' own financial crises. After TARP had been passed, and the crisis was averted, Congress passed a new law regarding financial regulation and oversight.

The Dodd-Frank Act was designed to combat any unnecessary risks that banks had previously taken, allowing the government to establish new oversight entities to control the large financial institutions. This act also called for more transparency in the over-the-counter (OTC) market where collateralized debt obligations and credit default swaps had originally been traded. The Securities and Exchange Commission did not regulate OTC markets until this time. The transparency provided by the SEC was to help instill confidence with investors to allow them safety to invest their money again. Finally, as part of the Dodd-Frank Act, financial institutions had more severe capital requirements to meet. Dodd-Frank's effectiveness to regulate the financial markets is still being debated.

Perspectives

The financial crisis was one of the most catastrophic events to hit the modern world. According to Ben Bernanke, this crisis could have ended in the worst financial collapse since the Great Depression. Debate over regulation of large banks and financial institutions continues to this day, and has been a large talking point for economists, investors, and accountants for the past decade.

In the fallout of the financial crisis, the world was shocked with the biggest recession to the global economy since the Great Depression. In the United States, unemployment rates boosted to 10% in 2009 and remained there until the early 2010s. Businesses were unwilling to hire new employees; elderly Americans had to return to work because their retirement funds had dried up; and the banks were starting to slowly pay back the money they were lent out by TARP.

Congress's passage of the Dodd-Frank Act gave consumers hope large "too big to fail" financial institutions would be held more accountable for their actions. Also, consumers could see the transparency of a bank's investments. Investors felt comfortable investing their money back into the economy. The Obama administration passed a stimulus package including tax breaks and special deductions to small businesses, allowing more spending.

Individuals on Main Street may not have completely understood the economic state of the United States, but researches started closely examining the financial industry find the cause of the financial crisis. Experts devised their own opinions on what happened based on their field of study. Viewing the economic crisis from three different perspectives: accounting, finance and economics, it is easier to understand how and why this crisis happened.

Economics

Summary

In economics, Homo economicus describes everyday people as rationally, self-interested human beings. When a person makes a decision, they are doing it to maximize their utility, or happiness. Human beings may not truly maximize their utility, as studied in behavioral economics. Classical economic theory, lately, has been highly criticized because it is not truly realistic when trying to distinguish how an individual maximizes their overall happiness. (Horatiu). Individuals may not possess all information needed to make a decision and work out possible alternatives. Also, the human brain is only capable of performing so many computations to analyze a decision making process. Lastly, people don't have a consistent utility function. Behavioral economics provides realistic insight into how the crisis took place.

Key Points

- Bounded rationality affects individuals' decision-making abilities
- Thinking processes cause changes in the economy
- Six basic deviations from rational decision making

Economic Perspective

According to political scientist Herbert Simon, people will not always maximize their utility function. They will end the decision making process when a good enough solution is made (Horatiu). Experimental studies support this evidence, and it turns out there are plenty of situations when people will not act rationally. Irrational behavior is easily observed in a financial crisis: markets tend to act irrationally and overreact.

When markets overreact to a financial crisis, the economy tends to drop significantly. People hold personal ideologies close, even through crisis, leading to both positive and negative reactions. For example, market prices start to rise, people have the ideology prices will continue to raise forever. When the markets fall, people believe prices will fall forever. At the individual level, a person's thought process will affect him. Looking at decision-making in the aggregate, poor decisions lead to large amounts of immeasurable systemic risk created from bounded rationality.

Bounded rationality is created by non-rational thinking and non-maximizing behavior of the economic individual. According to economists George Akerlof and Robert Shiller:

> The idea that economic crises, like the current financial and housing crisis, are mainly caused by changing thought patterns goes against standard economic thinking. But the current crisis bears witness to the role of such changes in thinking. It was caused precisely by our changing confidence, temptations, envy, resentment, and illusions – and especially by changing stories about the nature of the economy.

Akerlof and Shiller are describing the idea that the economic crisis wasn't just caused by a change in economic patterns, but a change in people's thinking processes. The housing bubble formed not from market forces, but the way people reacted to market forces. When investors saw both a spike in housing and Wall Street firms growing rapidly off of federally borrowed funds, they demanded to invest in the products offered by the large banks. The problem, though, is human behavior was what was really driving the prices of homes up.

People believed they should invest in housing because housing prices would continually rise. In actuality, prices began to rise because people kept investing in housing. Investors believed housing prices would increase, but they actually caused housing prices to increase. The same can be said for those who felt their home was worth less. In some cases, because mortgages were sometimes higher than the prices of homes, homeowners wouldn't make their payments, eventually after foreclosure and market conditions made their home worth less. Expectations are what really drove prices, not the other way around. Consumers drove the change they were expecting.

According to Professor Ian McDonald of the University of Melbourne, the subprime mortgage crisis exposed and exploited six basic deviations from the Homo economicus:

1. Present bias
2. Self-serving bias
3. New era stories
4. Illusionary patterns
5. Reference standards
6. Herding.

1. When someone is offered a subprime mortgage, it exploits that person's present bias. Present bias, also known as hyperbolic discounting, is the idea that people tend to place more value on the present and will undervalue the future, which may leave an individual with instant regret for making a decision. For example, someone chooses to sleep in every morning instead of

going to the gym. After he decides to start going to the gym every morning, he instantly sees the benefits and regrets not doing it sooner. With subprime mortgages, a low-income individual may see the immediate benefit of having a very good loan, but will instantly regret the award when he cannot make payments in the future. With present bias, a person may only see the immediate benefit of making a decision, but regret it further down the line.

2. When an individual wishes to invest in a CDS, they are engaging in self-serving behavior, a tendency to overrate one's abilities. In his paper, McDonald explains 90 percent of drivers think they are above average when it comes to their driving abilities. An overwhelming majority of drivers feel very confident in their driving ability, when that may not really be the case at all. In the context of the housing crisis, banks who noticed a bubble and tried to short the market thought they could exit early to turn a profit. They overrated their ability to read market trends, losing money in the process.

3. The third behavioral factor McDonald mentions is the use of new era stories. Using behavioral analysis, people have the mindset of "Things are good now; a crisis is not going to happen again soon," when they have been far removed from the previous crisis. For example, in the 1980s, housing prices fell. But from the late 90s to the early-to-mid 2000s, borrowers were given the idea that a "new era" of housing had begun: home prices wouldn't fall anymore (even though they just had). Housing crashes were a thing of the past and there was nothing to worry about anymore.

4. The fourth behavioral anomaly created by the financial crisis was illusionary patterns, the idea that an individual’s assets are worth more than anticipated. If someone owns a home for many years, they will compare the purchase price of the home to its current market value. The house looks like it is worth more than it actually is. In a market where the housing prices are constantly rising, the house’s value is obviously going to look like it’s much higher than in reality. According to McDonald, when a person believes they have more wealth than they actually possess, they tend to spend excessively and over borrow, not knowing they will not be able to pay back the loan later.

5. The fifth Homo economicus deviation McDonald explains is using reference standards. Investors may base security performance off of comparisons of certain reference standards. Using reference standards, an investor may look at a security’s rate of return and take excessive risk. They’ll take the risk if they think the difference between their reference point and the industry standard is substantial. Investors will do this because of loss aversion, where someone will do whatever he can to avoid his reference line from falling below zero. The psychological pain of a loss has been proven to be higher than the pleasure of a gain. When an investor looks for a higher gain on an investment, they may take riskier bets to come out ahead.

6. The final behavior deviation McDonald provides is herding. Simply, herding is going along with the crowd – “Everyone else is doing it, so what’s stopping me?” Because others were signing up for complicated subprime mortgages,

> someone may feel okay with it as well. The problem comes when too many people start to take out subprime loans and start defaulting on payments in the future. Investors can only handle so many losses. If large amounts of unqualified borrowers signed up for subprime mortgages, investors are going to take substantial losses on their investment.

Our government followed similar behavioral deviations. The U.S. government had an overall belief that the financial markets could regulate and police themselves. Alan Greenspan was one of the biggest proponents of this idea; even advocating everyone should have access to a subprime mortgage:

> Innovation has brought about a multitude of new products, such as subprime loans and niche credit programs for immigrants. Such developments are representative of the market responses that have driven the financial services industry throughout the history of our country.

Greenspan was infamous for his laissez-faire attitude towards the financial markets, assuming problems would correct themselves. Because of his stern belief in hands-off policies, the rest of our government would follow suit, enforcing very little regulations. The misinformation provided by Wall Street caused the U.S. economy to grow on unsustainable stimulus and cyclical measures which did not allow our government to respond within a large space or a reasonable amount of time. According to the Financial Crisis Inquiry Commission Report, "the sentries were not at their posts, in no small part due to the widely accepted faith in the self-correcting nature of the markets and the ability of financial institutions to effectively police themselves." (18).

Behavioral economics provides a very unique insight into how individuals' bounded rationality allowed the subprime crisis to get out of hand. Classical economic theory assumes that people are rationally, self-interested human beings, but once human psychology is introduced into the decision-making process, modern economic theory takes over. Behavioral economics is a relatively new field that has branched into many different subsets, one of which is behavioral finance.

Finance

Summary

Finance is the study of investments and assets & liabilities under uncertainty and risk. The entire crisis was financial in nature due to poor, misinformed investors and bankers. So a study of the subprime mortgage crisis from a financial perspective is necessary to attain a better grasp on the situation. Both risky investments and investors' attitudes toward the market caused the crisis in the first place.

Key Points

- Modern portfolio theory doesn't realistically explain how investments work
- Human behavior and over speculation caused a bubble to occur

- Lack of individual responsibility on making sound financial decisions
- Lack of regulation over credit rating agencies.

Finance Perspective

In modern portfolio theory, the efficient market hypothesis assumes all financial markets are efficient. Market investors always make rational decisions, and they all have access to the same information. Investors are wealth maximizers, making the best decisions possible for their investments. The efficient market hypothesis is the idea that in all markets, prices available reflect all available information, with no one having an advantage in predicting a return on investment. Essentially, there is no way to make a profit from beating the market. In reality, though, the market is profitable each day.

Behavioral finance suggests the opposite – psychology-based ideas help explain investment issues. In behavioral finance, it is assumed an individual's investment decisions are market outcomes are determined by a market's information structure. Investors are not seen as rational, self-interested individuals because they allow emotions and other psychological conditions to make investment decisions. For example, an investor sees a stock price rise, and decides to sell instantly in case it drops suddenly.

In the 2007-2008 financial panic, the behavioral finance perspective provides insight into how human behavior was a large reason why the global financial system was brought to its knees. Robert Grosse, former graduate business school dean at Tecnológico de Monterrey in Mexico, was one of the leading experts on the crisis. In his paper "The Global Financial Crisis – a Behavioral View," he lists several elements such as inadequate risk management, limited arbitrage, and irrational exuberance as the biggest factors.

Irrational exuberance was one of the biggest problems. With irrational exuberance, there was overconfidence that the housing market would not fail. People would still pay off their mortgages because they felt their house was still worth the investment. Both banks and appraisers mispriced houses, causing issues when the large banks such as Lehman Brothers and Bear Sterns were unable to calculate the actual value of the foreclosed homes sitting on their books. Due to the fluctuating housing costs, housing prices were very sensitive, making the CDOs and MBSs they backed very risky investments. Investors were very unsure of how to value the homes given the assumption housing prices would keep rising. Instead, the housing bubble burst in 2007 & 2008 when default rates spiked and home values plummeted, causing much panic on Wall Street.

Another major behavioral finance element noted was the lack of time horizons to allow firms to "mark-to-market" the value of its assets. At the end of everyday, financial institutions were required to mark the value of their assets to the market value, adjusting for a gain or loss each day. When their assets started rapidly dropping in value, banks were unable to put up most of the collateral needed to back the securities. Large banks had to quickly raise funds in order to cover their newly weakened financial state. Firms would have to start writing capital losses on their books in order to properly adjust the value of their investments, depleting their capital value.

Overall, the biggest behavioral aspect of the financial crisis resulted in lack of confidence in the financial institutions where investors placed so much faith. Investors even started buying up 3-month T-bills at interest rates of 0% to avoid losses on their investments. The lack of confidence in the system is a result of the hubris investors and bankers felt in regards to the forever-increasing housing market prices, explained as the hot hands fallacy.

The hot hands fallacy is the assumption that a basketball player who consistently makes repeated baskets will end up making the next one. Normal human behavior identifies the player as repeating a consistent pattern of making baskets. Spectators automatically assume he will make the next shot. When the player does not, spectators are upset because the missed basket subverts expectations. The same principle is applied to the housing bubble. Bankers and investors assumed housing prices would keep rising, and when the housing bubble finally bust, they were left scrambling to recapture their losses due to the subversion of expectations. (McKay)

In addition to the investors' and bankers' hubris, much of the blame lies in the regulators and government as well. There was a sufficient lack of self-regulation and supervision by oversight groups who were meant to oversee financial institutions' policies and procedures. Also, inadequate risk management meant borrowers, lenders and investors, were taking on more risk than they could handle.

Lenders handed out subprime loans to those who could not afford it. Borrowers overestimated the amount they could repay over the mortgage life. Investors were not completely aware of the risk they took on when they placed their money in collateralized debt obligations. Within CDOs, mortgage bonds were not rated properly by the credit rating agencies, spreading more misinformation throughout the system.

The credit ratings agencies felt obligated to give the banks the ratings they wanted in order for the bank to turn a profit. If the ratings agency didn't comply with a bank's requests, the banks could go to another credit rating agency to get the ratings they wanted.

For example, a bank may send a group of bonds to Moody's for a rating. The bond analysis may actually yield a BBB status, but because the banks want to make the CDO look safer, Moody's is pressured into giving the bond AA status. No regulations were in place to stop this practice. Lack of regulation led to an absence of independent analysis on the rating agencies' behalf, allowing poor information to spread to investors. The false information made the market inefficient by behavioral finance standards. Human error and self-interest caused misinformation to spread throughout the financial market, causing the efficient market hypothesis to fail.

Behavioral finance brings a valuable perspective on the financial crisis, expanding on the psychological impact of individuals on the overall economy. Investors decided to place their money in extremely risky investments, feeling confident the housing market was strong. Regulators felt just as confident in the housing market, which ended up failing due to a lack of regulation. According to behavioral finance, it was the hubris of investors and bankers that brought down the financial system. Due to a lack of regulation over credit rating agencies, misinformation about the value of the mortgage bonds spread quickly throughout the banking system.

Accounting

Summary

Accounting is the measurement, processing and communication of financial information to entities and individuals. It is often described as the language of business because it allows individuals to discuss financial information without hindrance. To communicate financial information is an accountant's job. Overall, there is not much blame laid on the accounting field for the crisis because it was economic in nature. The stigma plaguing accountants is that they always follow the rules. Any accountants involved with the crisis were following the standards laid out by FASB

Key Points

- There is not much blame to put on the accounting field; any blame is unwarranted
- Financial Accounting Standard 157
- Fair value accounting comes under criticism during illiquid markets

Accounting Perspective

In a TEDx talk titled "The Real Truth About the 2008 Financial Crisis," chief economist Brian S. Wesbury argues mark-to-market accounting was to blame for the financial crisis. His reasoning? Mark-to-market accounting allowed banks to take large losses on their subprime loans, hurting the overall economy. The government then had to step in and bail out the banks from their massive losses. What is mark-to-market accounting, though? What impact did it really have on the 2008 financial crisis?

Mark-to-market accounting is a type of fair value accounting, which allows businesses to place the fair value of their assets on their books. For example, a business owner has $1 million in inventory, but the market value of the inventory is really worth $2 million. Assuming there is an active market for his inventory, the business owner is allowed to markup the inventory's value to the fair market value of $2 million. In accounting, marking an asset's value to market allows financial statement users to gain a fair understanding of the state of the business's assets.

Mark-to-market accounting comes from FAS 157, allowing businesses to mark their assets to the market value at the end of each day. In a good economic setting, the asset prices will go up; in a bad economic setting, the asset's value will significantly drop on a regular basis. The problem with marking to market provides significant risk. If an asset's market value drops significantly, the business would be allowed to write down the cost of the asset. Writing down large amounts could make the business report a loss. During the financial crisis, banks were able to start writing down their bad loans and bad investment losses.

In 2009, Congress asked FASB to rewrite the rule with regards to mark-to-market accounting. Now, an adjustment for risk needs to be included when a business uses mark-to-market accounting. If a risk adjustment is not included, the fair value of the asset would not be accurately reflected to readers of the financial statements. In this case, a material misstatement would have occurred. How much did mark-to-market accounting truly affect the financial crisis, though?

Various articles from journals of accounting & auditing, finance and economics all believe mark-to-market accounting did not directly contribute to the financial crisis. It did significantly impact banks' financial statements. Antonio Marra, in his paper "The Pros and Cons of Fair Value Accounting in a Globalized Economy: A Never Ending Debate," argues fair value accounting is not controversial for securities trading on highly liquid markets. He does believe controversy only appears when illiquid markets and non-traded assets are present. If illiquid markets are present, there are no buyers for assets, and toxic assets can sit on the books for a business to take a loss.

Christian Laux and Christian Leux, in a paper published in the Journal of Economic Perspectives, ask whether or not fair-value accounting contributed to the financial crisis. In their conclusion, they do not believe fair-value accounting was a major portion of the earnings write-downs banks took during the crisis. They believed there was very little fair value accounting had to do with major losses written off by banks. To them, the claim of mark-to-market accounting having a significant impact on the financial crisis was "unfounded."

Overall, Wesbury's argument of mark-to-market accounting having an impact on the financial crisis is partially invalid. Accounting did not contribute to the large losses recorded by banks, but it was human behavior and poor decision-making. Accounting fair value rules were changed slightly after the crisis to make sure businesses were correctly measuring and presenting their assets, if measured using fair value accounting.

The accounting perspective does not provide too much information into how the financial crisis came to fruition. The accountants were only following the standard set in place by FASB. Banks were allowed to take the huge losses on their investments, but there was not much of a direct impact on the overall economy because of the large write-downs. Overall, the financial crisis of 2008 was economic and financial in nature.

Conclusion and Future

Perspectives on the 2007-2008 financial crisis could allow bankers, investors, and our government to learn from the mistakes and improve upon them. Since the early 2010s, the United States has seen a shift from recession into a steady growth period. Unemployment has dropped from 10% to below 5%, prices are relatively stable, and as of 2017, the DOW Jones is trading above 20,000 points. While the overall economy has improved significantly since 2008, banks still have not completely learned from the financial crisis.

A new subprime crisis is on the horizon: the used automobile market. In the auto market, there are now lenders at “buy here, pay here” dealerships. At these lots, auto loans could yield interest rates as high as 29%. Some borrowers will take the interest rate because it comes with a monthly payment they can afford. The subprime market is back, though, and is growing more by the day. Wall Street firms who want to put the subprime loans in new collateralized debt obligations to sell to investors are pressuring dealerships into loaning more to prospective buyers. The process for a new subprime crisis is set, but it is not at the same scale as the housing crisis. The subprime mortgage crisis was far larger than the subprime auto loan crisis will be. Only time will tell how long it will take before the subprime automobile loan bubble bursts. Until it does though, dealerships will keep selling substantial auto loans, preying on unsuspecting consumers.

The 2007-2008 financial crisis has left a lot of fiscal damage in its wake, created much research and expansion in the economics, finance, and accounting fields. It provides great insight into how the banking industry works. Banks currently have a little more oversight than they did before the recession, only requiring showing more transparency in transactions now. The lessons from the financial crisis can be difficult to find, but after careful examination, it is possible to teach others how the system operates.

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