The Financial Crisis of 2008:
"It's a Requirement to Leave Your Ethics at the Door."

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This article investigates the behavior within the financial services industry that contributed to the Crash of 2008 and the Great Recession of 2009 – 2010. Based on the theory of Adam Smith, it is not the typical academic paper as it analyzes the work of industry practitioners who wrote about the run-up of real estate and stock prices between 2003 –2009 and the ultimate collapse. It is also an examination of the role of government in the economy and the financial services industry. The intent is to initiate conversations about ethics in the Finance major of America's colleges and universities.

INTRODUCTION

The theory that this paper rests on goes back to 1776 and the publication of *An Inquiry into the Nature and Causes of the Wealth of Nations* by Adam Smith. Smith (2012, originally 1776) believed in the invisible hand of the market; that is, markets should be able to control themselves and resolve any problems or imbalances within them. He also believed in the right of the individual to pursue his/her own self-interest as long as that self-interest did not infringe upon the rights and liberties of others. A conclusion to be drawn, then, is that economic agents will behave in a civilized and ethical way in the conduct of their business.

Boatright (2008) defined ethics in financial matters as moral norms that apply to business activities in the financial markets and in financial institutions, especially to those persons involved in management. Boatright (2008) continued that financial activity is governed by detailed rules and an expectation of a high level of integrity which he defined as personal values, moral beliefs, and a commitment to doing the right thing, even when it would be inconvenient or painful.

Little has been done in the academic literature to examine this question, particularly in the understanding of the behavior of the banks, rating agencies, regulators, and Fannie Mae and Freddie Mac that led to the financial crisis of 2008 - 2009 and the response of federal government to it. There is, however, a considerable amount in the literature on Adam Smith and his moral philosophy which has been thoroughly explored (Hawtry and Johnson, 2010; Mussa, 2009; Keep, 2003). Further, there does not appear to be much, if any, reaction in the literature to what happened in the years leading up to the Crash of 2008 in terms of Smith's (2012, originally 1776) position on the role of government in the economy. In his mind, the system of natural liberty leaves the government only three duties: defense of the country, administration of justice, and maintenance of certain public works (Smith, 2012, originally 1776; Morgan, 2009; Heilbroner, 1986). It is interesting to note that one of Smith's prized students was Benjamin

Franklin who, with an understanding of Smith's theory, was the architect of the republic of the United States, based upon this concept of limited central government.

Obviously, the United States government went significantly farther in 2008 - 2009 than what Smith and Franklin envisioned, and the question becomes one of Smith's reaction to it. We will never know, but what we do know is that Smith actually argued against his own theory of the invisible hand and the pursuit of self-interest as he recognized the "dark side" of human beings and their capability for excess and corruption (Smith, 2012, originally 1776). Smith's understanding came out of the Scottish Enlightenment of the mid-1700s and the combination of the belief in man's intrinsic goodness and the skeptical suspicion about human intentions and motives (Herman, 2001). In studying the behavior of the financial system in 2005 – 2009, the market and the regulators held on to the Smith's idea that the market would correct the excesses and corruption that led to the crisis itself (Morgenson and Rosner, 2011; McLain and Nocera, 2011). However, in this situation, there simply would not have been time for it to make the necessary corrections as the speed with which the crisis occurred was unprecedented.

That said, much of what happened in 2008 was caused by Wall St. firms clinging to the outputs of the quantitative econometric models and a belief that those models were right with the market being wrong (Morgenson and Rosner, 2011; McLain and Nocera, 2011). That was the same behavior that brought down Long-Term Capital Management (LTCM) in 1998 (Lowenstein, 2000) from which Wall St. did not learn as the housing market fell apart in 2006 and 2007. So, on the one side, we have the regulators like the Chairman of the Federal Reserve System, Alan Greenspan, saying the markets are right, but we also have the executives at Bear Stearns, Lehman Brothers, and AIG saying that those same markets were wrong (Morgenson and Rosner, 2011; McLain and Nocera, 2011), a serious disconnect.

This paper will not be the traditional empirical academic paper as it draws on literature of practitioners who were close to the financial disaster of 2007 – 2009 and the events that led up to it. It focuses on behavior and resonates with the understanding of Michael Gelband of Lehman Brothers who said "You cannot model human behavior with mathematics" (McDonald and Robinson, 2009). It is based on the work of practitioners such as Secretary of the Treasury Henry M. Paulson, Jr.; MSNBC's Maria Bartiromo; well-known business author, Roger Lowenstein; and others. Can their accounts of what happened be biased? Yes, they can and probably are. My purpose, however, is to bring the ethical issues that Adam Smith knew were possible to the forefront of academic financial thinking so that we might avoid another circumstance like this that cost people their jobs, destroyed neighborhoods, and ruined life savings as the stock market crashed (Financial Commission Inquiry Report, 2011). It will also focus on the role of government in the economy as what may be good in theory may not be so good in practice.

Adam Smith believed that, aside from the three proper roles of government, any other kind of government interference would have all sorts of unwanted consequences (Herman, 2001). Herman (2001) continued that, throughout history, governments, with the best of intentions, have become involved in economic activities of their countries, often with disastrous results. The best example in the U.S., prior to 2009, came after the stock market crash of 1929 and the subsequent Great Depression. At that time, the Federal Reserve Bank lowered the money supply and raised interest rates which curtailed consumer consumption even more than had been the case. The result was prolonging the hardship of millions of Americans. In this case, the Fed should have done just the opposite, lowering interest rates and increasing the money supply to stimulate consumption. That would have resulted in increased productivity, more jobs, lower unemployment, and higher tax revenue.

In the view of noted economist Milton Friedman (2002, originally 1962), government exists, and is required, to preserve freedom, but, by concentrating power in just a few political hands, government is a threat to individual liberty. Bartiromo (2010) argued that free markets should be just that, free markets, a function of capitalism as it was designed to be by Franklin, John Adams, Thomas Jefferson and the rest of the founders. Her conclusion is that capitalism is the system that protects individual rights as alternative forms of economics (monarchy, socialism, communism) have failed. At its core, she believed, capitalism has the power to give people hope. But, capitalism can also be abused without the appropriate checks and balances.

Wall St. (the financial system) exists to transfer capital from those who have it to those who want it (Lewis, 2010). It was becoming apparent in the summer of 2007 that the efficiency and effectiveness of that allocation of capital was starting to be a problem when two (2) of Bear Stearns' hedge funds went bankrupt (Morgenson and Rosner, 2011; McLain and Nocera, 2011; Kelly, 2010). Obviously, there was serious damage done to the fortunes of their investors as their investments were now worthless. The banking system is fundamental to trade and commerce, but, in 2007, it was heading toward insolvency and a lack of liquidity which would curtail that trade and commerce. Lewis (2010) posed the question…when banking stops, credit stops…when credit stops, trade stops…when trade stops? We would find out in 2008 and 2009. At one point, when trade did, in fact, stop in 2008, the city of Chicago had but eight (8) days of chlorine for its drinking water (Lewis, 2010, 222).

The financial crisis was caused by the reckless and corrupt behavior of people in Washington, D.C., the banking system, and corporate America (Morgenson and Rosner, 2011). It is a story of greed; corporate corruption; and lies told by politicians, corporate executives, bankers, regulators, borrowers, and the rating agencies. McDonald and Robinson (2009) went a little farther as they contended that it was caused by massive and systemic accounting fraud and pure corporate wrongdoing. In the words of Lehman Brothers executive Eric Hibbert: "It [was] a requirement that you leave your ethics at the door." (McLain and Nocera, 2011, 87).

The problem was, according to Treasury Secretary Henry M. Paulson, Jr. (2010), was newly-developed and highly-complex financial and credit products (credit default swaps and mortgage backed securities, respectively). It was exacerbated by an ineffective and inefficient regulatory system that was created early in the 20th century that was ill-equipped to deal with those new, complex products. The banks created securities (bonds) by packaging up home mortgages and then selling them in bits and pieces (called tranches) to investors (McLain and Nocera, 2011). They would sell these mortgage-backed securities (MBS) to Wall St. firms to remove the risk from their own balance sheets and, incidentally, to earn large fees (Paulson, 2010). This was complicated by the behavior of the agencies that existed to gauge risk and rate the MBS (Moody's, Fitch, and Standard and Poor's) that, according to McLain and Nocera (2011), put profits ahead of what was right. In order to generate large fees, these agencies would rate the tranches as triple-A, the highest investment grade, signifying little or no risk when they did not know how much risk was really in them. Effectively, they were being paid by the same people whose bonds they were rating. The higher the rating, the more fees the rating agencies were paid.

Boatright (2008) maintained that financial and economic decisions should be made on a rational understanding of the trade-off between risk and reward. Parties in a transaction should have a good understanding of both. That is, economic exchanges are considered fair if both sides make a rational choice, but that did not happen in 2005 – 2008 because many of the participants in the events that led to the crisis were unsophisticated about the transactions in which they were involved, and many of the products were too complex for even the sophisticated investor to understand. With that said, Boatright (2008) did believe that an acceptable role of government is to correct market failures, so, in his mind, the actions of the government in 2008 – 2009, were merited. The debate about that continues.

Smith (2012, originally 1776), being influenced by David Hume, understood that human rationality was an oxymoron and that people determine what they want on the basis of emotion, notably envy, greed, hope, anger, and fear. It is up to society to manage those emotions through accepted rules, conventions, and customs that are understood by all and become the basis of a society's behavior. Bartiromo (2010) brought it to the present day saying that capitalism is based on public trust and the idea that people will play fair. Morgan (2009) countered that free markets encourage greed and manipulation which are foreign to Smith's moral philosophy. Morgan (2009) continued that avarice and moral failure, along with the inability of the government to regulate the banks, were very evident in the crisis which shook confidence in the world's financial markets which led, almost by definition, to a cessation of credit in the financial markets and stoppage of trade. The nation had not experienced anything like that in over seventy-five (75) years. Perhaps, this time was even worse because of the interconnectivity of the world's financial institutions.

But, the crisis did one more thing. It called into question the extent to which individual and corporate behavior should be subject to government intervention and the impact of that intervention on the crisis itself (Morgan, 2009). The problem, in Morgan's view, was the failure of government to understand and control the types of credits being extended by the nation's financial institutions. That resulted in some unsound banking practices, notably taking on an unsustainable amount of debt and assuming excessive risk, two conditions that are dangerous by themselves but which are lethal in combination. And, moreover, the government was at the forefront in enabling banks and other financial institutions to make loans to people who had bad credit and/or could not afford them (McDonald & Robinson, 2009).

BACKGROUND

We are all aware of the financial collapse/crisis in 2007 through 2009, but I doubt that many people have a clear understanding of the reasons behind it or the consequences of it. Fox (2009) wrote that not only did the financial markets fall apart, but also that rational market theories had been rendered useless. That is, irrationality became pervasive in the world's financial markets, especially in the United States which infected the rest of the world. Consider these comments from the Chairman of the Federal Reserve, Ben Bernanke…

> "Mr. President, we are witnessing a financial panic." (Paulson, 2010, 255)
> "Tell the Hill we're fixing to have a meltdown." (257)
> "We've passed the point of what the Fed and Treasury can do on their own." (257)
> "It's a matter of days before there is a meltdown in the global financial system." (259)

Bernanke sounded perfectly rational as he described completely an irrational situation that was caused by irresponsible behavior.

It all started in 1993 when the Department of Housing and Urban Development began telling the banks to lower their credit standards in order to increase home ownership among lower to moderate-income families (McDonald and Robinson, 2009). If they did not comply, they could be cited under the Community Reinvestment Act of 1977 and would face penalties for any noncompliance. So, the bank had to make an ethical choice: lower its standards and make loans to people who probably should not have them or face prosecution by the federal government which could result in fines. Most lowered their standards, compromising their principles.

Then, later in the 1990s, two events occurred that would shape the activities which led to the Crash of 2008. First, early in its second term, the Clinton Administration adopted the National Homeowner Strategy which was designed to increase home ownership in the United States by 8 million properties over the next several years (McClain and Nocera, 2011). All of a sudden, people who had not been able to have a home could have one. There were certainly ethical considerations in those decisions, as home ownership had become a right, not a privilege.

In the spring of 1998, the other event occurred that would change the face of banking forever when Citicorp bought Travelers Insurance to go along with its acquisition of the investment banking firm, Smith Barney (McDonald and Robinson, 2009). These were clearly violations of the Glass-Steagall Act of 1933 which forbade the conduct of investment banking and commercial banking by the same institution. Glass-Steagall had been the law of the land since the Great Depression when it was learned that banks had been using their customers' deposits to purchase stocks on margin. That was all well and good as long as the market was going up. But, we all know what happened in October, 1929, with the stock market crash which eventually bankrupted hundreds of banks, taking their customers' life savings with them. Glass-Steagall said that would never happen again but with its repeal, history would rhyme in 2008 – 2009 with the events of 1929.

On November 12, 1999, President Clinton signed the Financial Services Modernization Act that repealed Glass-Steagall (McDonald and Robinson, 2009) which would result in financial ruin, even though he was well aware of the purpose of this act that was passed in 1933. Advisors to the president thought that repealing Glass-Steagall was a good idea (Bartiromo, 2010) as the thought was that things were different in the late 1990s than they were in the 1930s. Perhaps they were with respect to technology, but the critical element that was missed was that human nature does not change just as Adam Smith had foretold (Smith, 2012, originally 1776).

Then, in 2000, Congress passed the Commodity Futures Modernization Act which explicitly removed derivative financial instruments called credit default swaps (CDS) from the eyes of any regulator (McDonald and Robinson, 2009). These derivatives were designed by traders at JP Morgan as a hedge against the risk that asset prices would decline and would be at the center of the crisis as traders began to use them as bets against the survival of firms like Bear Stearns, Merrill Lynch, AIG, and Lehman Brothers. As the value of those firms declined, the value of the CDS increased so another ethical issue appears. On the one hand, free market economics says that traders should be able to move in and out of investment positions with no intervention. On the other, if they attempt to profit at the expense of an entire firm like Lehman Brothers, does that cross the ethical line?

The technology bubble of the late 1990s burst in early 2001 sending the NASDAQ to levels from which it hasn't recovered. In September, the country experienced the attacks on the World Trade Center in New York, sending shock waves through the financial markets. To try to restore order and confidence in the markets and to stimulate spending, the Federal Reserve cut interest rates to unheard of levels which had an unintended consequence. If interest rates are low, it is easier to buy a house which people started to do, especially with the passage of the Financial Services Modernization Act and the implementation of the National Homeowners Strategy.

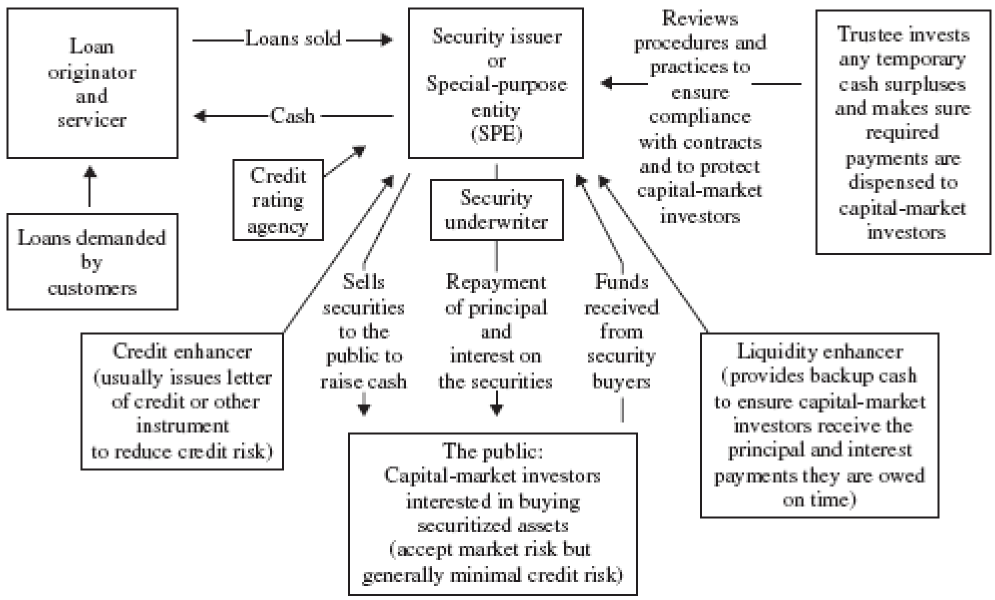
In 2002, the term "subprime lending" was not used very much, but companies like Household Finance were seeing loan volume increase significantly (McClain and Nocera, 2011). Its mortgage brokers were offering a 15 year fixed-rate loan, disguised as a 30 year loan which meant that the annual percentage interest rate was really 12.5%, not the 7% that was being promised (McLain and Nocera, 2011). Household Finance was not a commercial bank, so it could not take deposits to support the loans it was making. That meant it had to borrow money in the open market to be able to lend. So, Household would borrow in the market at one rate and would turn around and lend it at a higher rate. All was well if the demand stayed high, but if it did not and incoming cash declined, Household would have a problem repaying the borrowings which is exactly what happened.

What also needs to be remembered is that Household was not regulated by the Federal Reserve since it was a finance company. Therefore, what we had was an unregulated finance company borrowing in the open market and making loans to people who could not afford them, charging a deceptive interest rate. This was being done all over the country because the government mandated that these loans be made. The regulatory system had no jurisdiction over these transactions which allowed its lenders to do whatever they pleased since they knew no one was watching. But, that posed another ethical question that would be repeated thousands of times. Is it ethical to lend money to people who probably cannot repay the loan and to charge them a deceptive interest rate?

There was another problem: foreign investment in the United States. Countries such as China and India were becoming economic powerhouses and needed someplace to invest their excess liquidity. The U.S. bond market was an attractive investment, so the Chinese and the Indian governments invested heavily in the U.S. So, America had too much liquidity, very low interest rates, too much leverage, and increases in both the value of the stock market and real estate that could not be sustained. However, because so many people were making so much money, everyone chose to ignore the signs. Prices, they thought, would continue to increase.

Figure 1 (Rose and Hudgins, 2013) is a depiction of the way in which the subprime loans were made, financed, packaged, and sold. It is shown here to demonstrate the flow of money (represented by the arrows) through the financial system. If any one of the flows stops functioning, the entire process would come to a halt. That would happen in 2008.

FIGURE 1
(ROSE AND HUDGINS, 2013)



By 2004, Ameriquest was the largest subprime lender in the United States as since 2001, loan volume had grown twelve (12) times to $82.7 billion (McLain and Nocera, 2011). Leaving their ethics at the door, the lenders knew that the default rate would be high, so they imposed arduous terms on its borrowers many of whom would not have qualified for a loan previously. According to one of the loan officers, management at Ameriquest "condoned, encouraged, and participated in extensive document alteration, manipulation, and forging in order to see more loans" (McLain and Nocera, 2011, 130). The people at its corporate headquarters acted as if the company was a paragon of virtue rather than a place that "oozed with sleaze and fraud" (133). They were making loans with no down payment and no income verification to borrowers with low credit scores. They pooled the loans and securitized them into mortgage-backed securities (MBS), as shown in Figure 1, to be sold to the Wall St. banks like Lehman Brothers for a profit which would then turn around and sell them to the hedge funds like LTCM, also at a profit. The creditworthiness of the borrower mattered little as long as the loan could be sold, effectively transferring the risk at a profit, and, in the process, leaving their ethics at the door.

By 2005, 75% of subprime loans had some sort of floating rate, usually fixed for the first two years (McLain and Nocera, 2011). What these "shadow" banks like Household Finance did not disclose to the borrower was that this very low fixed rate, say 2%, would reprice in two (2) or three (3) years to 7% or 8%. Very often, this increase was not disclosed to the customer. One in four mortgages in the first half of the year were "interest only" loans which meant that the customer did not have to repay any of the principal, a practice unheard of in more conservative times. Further, 68% of the adjustable rate mortgages (ARMs) originated by Countrywide Financial and Washington Mutual Savings had no or low documentation requirements (McLain and Nocera, 2011), another practice that went against traditional lending standards. But, money makes people do funny things, and there was plenty of money in the system.

Angelo Mozilo, the Chairman of Countrywide Financial, sincerely believed in providing loans to low and middle income Americans, but he had a dangerous way of making them (Morgenson and Rosner, 2011). His model eliminated down payments and pared back the required documentation so that loans could be approved in minutes. Countrywide also sold these loans at a profit, but instead of going to Wall St., Fannie Mae was its biggest customer. As earnings at Countrywide grew from $1.7 billion in 2000 to

$8 billion in 2003, the focus became market share fueled by corrupt lending practices that yielded huge bonuses for Mozilo and his mortgage lenders. In 2004, Countrywide was making 200,000 loans a month, selling 26% of them to Fannie Mae. However, by September of that year, one in eight Countrywide loans was problematic; six months later, it was one in five.

The typical borrower at Countrywide had a reading level of sixth grade, and some were completely illiterate. How, then, could they understand the documents that they were signing; that is, if there were any? The lending officers laughed at the doubtful condition of many of the loans, $12.7 billion of which were sold to Fannie Mae in 2005. These were NINJA loans which stood for no income, no job, and no assets (MacDonald and Robinson, 2009).

Countrywide employed brokers rather than having its own lending staff to interact with potential borrowers (Morgenson and Rosner, 2011). That meant that they were independent contractors who were concerned only about their commissions and not about the relationship with the customer which certainly was not the way proper banking had been done in the past.

Furthermore, as shown in Figure 1, the established investment and commercial banks like Lehman Brothers, created special purpose entities (SPEs) to which they could transfer loans that were going bad which took them off their balance sheets. Much like what occurred at Enron, these SPEs hid defaulting loans so that, in the case of Citicorp and Wachovia, the regulators could not see them which made the banks look stronger than they really were, another ethical issue. Legal, yes, but it was still an ethical issue.

In 2003, Freddie Mac was charged by the SEC with managing its earnings and irregular accounting practices of which Fannie Mae was charged as well (Morgenson and Rosner, 2011). Both were supplying money to companies like Countrywide that were making loans to people who could not afford them, thereby contributing to the situation that would ultimately fall apart. Fannie had overstated it earnings by $9 billion between 2001 and 2004, and, according to the SEC, its accounting did not comply "in material respect" to generally accepted accounting principles (McLain and Nocera, 2011, 179). Ultimately, Fannie paid a $350 million civil penalty to the SEC and $50 million to the U.S. Treasury. The question becomes, why they would artificially inflate the earnings. The answer is that there is empirical evidence that earnings and stock price are correlated (Johnson and Zhao, 2012; Cheng, Warfield, and Ye, 2011; Bali, Demirtas, and Tehranian, 2008). The higher the earnings, the higher the stock price which enriches shareholders, including management.

DISCUSSION

By September, 2008, Secretary Paulson was sure that if Fannie and Freddie were allowed to continue their current practices, they would take down the U.S. financial system and very likely the global economy (Paulson, 2010). His solution was to place them into receivership, effectively making these private companies wards of the federal government. Since Fannie and Freddie were independent companies, but with ties to the federal government, their failure, he understood, would result in tens of billions of dollars being lost by investors, loss of confidence in the federal government of the United States, and a possible run on the dollar. Fannie and Freddie were severely undercapitalized which would force the federal government to provide additional equity dollars and put taxpayers at risk. The federal government was the only institution in the world that could do that, but at what cost?

Simultaneously, real estate prices continued to increase (McDonald and Robinson, 2009). Since those prices were continuing to rise, if the homeowner found that the mortgage payment could not be made, the home would simply be put up for sale. Someone would come along and purchase it for more than the original price, the bank would be repaid, and the new homeowner would move in. That worked as long as housing prices kept increasing. But, as we all know, asset prices can come down as well, which they did. When that would happen, the flow of money depicted in Figure 1 (Rose and Hudgins, 2013) would stop, effectively seizing the financial markets.

However, the investment banks like Bear Stearns and Lehman Brothers kept buying the mortgage-backed securities (MBS) from the "shadow" banks since they knew they could repackage them and sell them at a profit to the hedge funds (Kelly, 2010; McDonald and Robinson, 2009). The problem was that they were borrowing in order to buy them and seemed to forget the fact that those borrowings would have to be repaid. What would happen, then, if the value of the asset that was purchased declined to less than the amount borrowed to make the purchase? The bank would have to borrow again just to pay off the original loan, a very dangerous practice that would not have seemed possible twenty (20) years earlier. But, their models said that could not happen.

Unlike the commercial banks like Citicorp and JP Morgan Chase that were regulated by the Federal Reserve and Office of the Comptroller of the Currency, the investment banks such as Bear Stearns and Lehman Brothers and the "shadow" banks like Countrywide Financial and New Century were not regulated at all (Paulson, 2010). That allowed them to do whatever they pleased as they did not have to report to, or be examined by, the regulators. But, there was another problem: the Chairman of the Fed during the housing bubble, Alan Greenspan believed, in the tradition of Adam Smith, that the financial markets could fully monitor and police themselves (Lowenstein, 2010). He and other senior members of the Fed believed that financial executives could be trusted to do the right thing for the system, for their shareholders, and for themselves (Morgenson and Rosner, 2011). Apparently, they had forgotten the lesson of Long-Term Capital Management. Further, they failed to recognize the speed at which the crisis was occurring which meant that the markets would not have time to react.

The Fed failed to stem the flow of toxic mortgages while they permitted greater easing of credit and lowering of interest rates which would lead to greater freedom on the part of the commercial banks. And so, financial institutions made, bought, and sold mortgage securities they never examined, and did not care that they were defective since they knew that no one was watching. While Fed trusted the bankers to do the right thing, there was so much money to be made that practically guaranteed that they would do the opposite. Once they realized no one was, in fact, watching and they could do whatever they wanted, greed took over, and reckless behavior became the norm (Morgenson and Rosner, 2011).

And noted in Figure 1, the rating agencies were involved as well as they gauged the possibility that the bonds would default before their maturity (Morgenson and Rosner, 2011). Mortgage-backed securities, converted into credit default obligations (CDOs), could not have been marketed and sold without their approval. Investors relied on them completely. For most of their existence, prior to this time, the reputation of the rating agencies had been impeccable (Lowenstein, 2010). It was the job of Moody's, Standard and Poor's, and Fitch, to review any bond offering like CDOs for the risk of default before it went to market, giving the issue a rating, with AAA being the highest investment quality. So, if the rating agencies said the security was AAA, investors thought there was no, or very little, risk of default associated with it.

Early on, the rating agencies charged the firms that were buying these bond issues, but changed that practice to charge the issuer. It was a lucrative business that presented a potential conflict of interest which was realized as more and more mortgages were securitized. The mortgage bankers at Lehman Brothers and the other investment banks decided that they would pay the fees being charged by Moody's, for example, only if they liked the rating their new security received. If they did not like it, they would take the issue to Standard and Poor's or Fitch. Further, the bank would analyze the new tranche until the financial outcome was favorable at which time it would send the package to the rating agency, stipulating what rating it wanted and what fee it would pay. The higher the rating, the higher the fee that the rating agency would receive. At the height of the mortgage frenzy, Moody's put a AAA rating on thirty (30) securities a day. In 2006, \$83 billion in securities rated that highly were ultimately downgraded (Lowenstein, 2010).

The rating agencies either did not understand the risk, or they ignored it because of the fees. All they seemed to care about was maximizing the number of deals they could do for the Wall St. banks and collecting the fees (McLain and Nocera, 2011). They sacrificed their own integrity and ethics by putting profits ahead of what was the right thing to do (McLain and Nocera, 2011). Retired Moody's president, Brian Clarkson, testified before the Financial Crisis Inquiry Commission "Moody's sacrificed rating quality in an effort to grow market share" (117).They were handing out AAA freely by the hundreds, even as underwriting deteriorated, when they had never done that with AAA previously (Morgenson and Rosner, 2011).

And, then, there was AIG. The largest insurance company in the world, AIG did business in just about every country, had $1 trillion in assets, and made huge investments in credit default swaps (CDS). These were insurance policies that were taken out by firms like Bear Stearns and Lehman Brothers to eliminate the risk that the value of the mortgage-backed securities that they purchased would decline. But, more dangerous, they were also purchased by speculators who were making bets that these firms would fail (Bartiromo, 2011). The executives and traders at AIG mistakenly believed that housing prices would always increase, never thinking that the associated mortgages would default (McLain and Nocera, 2011). So, if asset values would drop, AIG would be forced to pay the claims of the holders of the CDS. This was serious risk exposure as the value of the CDS in 2006 was $26 trillion, up from $800 million in 2001 (McDonald and Robinson, 2009).

Deals were becoming so complicated that even those making them at AIG did not really understand the risk involved with them (McLain and Nocera, 2011). In July, 2007, Goldman Sachs filed a claim with AIG for $1.8 billion and simultaneously bought $575 million in credit default swaps that would pay off if the value of AIG's stock would decline. As the value of the CDOs began to decrease, AIG was forced to pay on claims to those who held them which started a liquidity crisis that would ultimately cost the American taxpayers $182.3 billion to bail out AIG. (Ultimately, AIG repaid the federal government the amount of $205 billion in 2012.) AIG's auditor, PriceWaterhouseCoopers, saw how management's poor risk management was causing a material weakness, but it did not acknowledge the risk and the losses that they knew were coming. Further, they ignored what was happening in the markets, preferring to believe their econometric models much like the behavior at LTCM several years earlier. In January, 2008, PriceWaterhouseCoopers did declare that AIG had that material weakness in its internal controls over financial reporting and oversight which AIG disclosed in an SEC filing the next month. Later in February's earnings release, the company wrote down $11.5 billion, not the $1.2 billion it had announced in its earnings guidance. The short sellers attacked AIG which sealed its fate as they would profit if the price of AIG's shares went down. Going "short" means that the investor profits if the value of his/her investment declines.

Henry Paulson, Jr., the Secretary of the Treasury, knew that AIG was a disaster as it did business in every part of the global financial system (Paulson, 2010). If it failed it would take other financial services companies around the world with it due to that interconnectivity. This was not something that the Secretary could let happen. His dilemma was one of principle as Paulson was a free market financier in the tradition of Adam Smith, but he knew that the failure of AIG was not an option and that the U.S. government was the only institution in the world that could rescue it. Sacrificing his personal principles, knowing that the system was on the verge of collapse, he arranged with Ben Bernanke, Chairman of the Federal Reserve for an $85 billion bridge loan under Section 13(3) of the Federal Reserve Act of 1913 (Paulson, 2010). This section permitted the Fed to inject capital into firms it did not regulate under "unusual and exigent circumstances." It would cost the American taxpayers another $97 billion to save AIG.

Seeing this, the credit markets were shutting down in a classic flight to quality in which traders wanted U.S. Treasuries for safety or to hedge the risk of their other securities. The commercial paper market was freezing and a sense of panic was becoming more widespread.

The first visible sign that something was wrong occurred in the 4th quarter, 2006, when HSBC, the British bank, was forced to post $10.6 billion to its loan loss reserve in anticipation of defaults on the subprime portfolio (Paulson, 2010). In April, 2007, it would be bankrupt. Also, in the spring of 2007, the "shadow" bank, New Century Financial, declared bankruptcy followed by another warning when the two hedge funds at Bear Stearns failed that summer, leaving investors with worthless claims. Matthew Tannin and Ralph Cioffi of Bear were subsequently indicted on charges that they were misleading their clients by asking them to invest more in the funds when they, themselves, were actually selling out. Tannin and Cioffi were tried in federal court in lower Manhattan and were acquitted by a jury of their peers of profiting at the expense of their clients. Their behavior was certainly unethical and immoral but apparently not illegal. But the flow of money in Figure 1 kept going, but it would not be for long.

In August, 2007, American Home Mortgage Investment Corporation, another "shadow" bank, filed for Chapter 11 of the U.S. Bankruptcy Code (Bartiromo, 2010). About the same time, interest rates on the subprime loans started to reprice to higher levels. As a result, large numbers of borrowers were facing default since they were no longer able to make their mortgage payments (Bartiromo, 2010). By this time, one in four Countrywide loans was in default (Bartiromo, 2010) which would eventually bring it down as well. Executives at Countrywide knew, as their lending brokers were making the subprime loans, the consequences could be quite severe, but they kept originating them for the profits they brought. As an example, Countrywide had made a loan to a sales executive claiming to earn $8,700 per month who had been unemployed since 1989, but he qualified for a home worth $398,000. An account executive for GNG Investments in Santa Clara, CA turned out to be a janitor making $3,901.58 per month but qualified for a loan of $600,000 (McLain and Nocera, 2011).

Additionally, on August 7, 2007, BNP Paribas of Paris, France, stopped redemptions on funds holding mortgage-backed bonds, the reaction to which was a tightening of European credit markets. That would lead to a severe liquidity problem (Paulson, 2010) which forced the European Central Bank to inject $130 billion into BNP. The problem was now recognized as worldwide.

Risk had been building up significantly in the system, the housing bubble was reaching its highest point, Wall St. firms were churning out CDOs by the thousands, subprime lenders were still making loans to those who could not afford them, and the regulators were nowhere to be seen. Everything was interconnected as shown in Figure 1 (Rose and Hudgins, 2013) and was very dangerous for the financial system, the country, and the world.

In March, 2008, the outcome of the behavior of the previous seven (7) years presented itself. It was Thursday, March 13, and the management of Bear Stearns realized it had a serious problem as its liquidity position was deteriorating rapidly (Kelly, 2010). Bear Stearns had been characterized as dysfunctional, driven by greed and internal politics, but management, on this day, was struggling with a volatile stock market, decreasing home values, and the loss of its lenders and clients. Just a year earlier, the firm's stock price was $172 per share. It was booking a record number of mortgage-backed securities as housing prices continued to rise. But, the housing market was coming apart with foreclosures becoming the norm.

Just like the other investment banks, Bear had purchased mortgages from the "shadow" banks and securitized them into bonds (CDOs) which they then sold to the hedge funds, taking the resultant fees (Kelly, 2010). All was well as long as housing prices kept increasing since, even if the borrower found that the principal and interest payments were not affordable, the house could be sold for more than the purchase price, and the bank would be made whole. Now, however, loan demand was decreasing, and management was leery of making new loans. Since there was nothing to sell, therefore, they were unable to transfer the risk. That also restricted incoming cash flow. The firm was leveraged at 30 to 1 which meant that it had $30 of debt for every $1 of equity as it used to borrow between $10 billion and $20 billion per day, repaying it the next. Management wondered if its usual lenders would be there on Friday, March 14, and questioned whether they would be able to repay the loans they already had on the books. They began to consider that default was an option. The stock price had fallen to $65 per share. They were told that ING, a regular lender, had refused credit, and cash was being depleted as more clients left. At the start of the week, Bear had $18.1 billion in cash; by Thursday, that amount was down to $5.7 billion, and it owed Citicorp $2.4 billion. Without a rescue by the government or a merger with another financial institution, management knew that bankruptcy was certain. In that event, employees would be cut off; assets would be seized, shareholders would lose everything, and bondholders would get nothing either (Kelly, 2010).

Due to the interconnectivity of the world's financial markets and financial institutions, the failure of Bear Stearns would rattle the global economy. Timothy Geithner, the president of the Federal Reserve Bank of New York, and Ben Bernanke of the Fed devised a way to get the firm to the weekend in the form of a bridge loan from JP Morgan, backed by the balance sheet of the Fed (Kelly, 2010). But, things were getting worse as the firm also owed $11 billion to several hedge funds which it did not have. The stock fell on Friday to $30 per share as the short sellers attacked again.

On Sunday afternoon, March 15, the announcement was made of the deal with Morgan at $2 per share, backed by the Fed (Cohan, 2009). Bear Stearns had brought it on itself with $30 billion in bad mortgage loans, too little diversification, too much leverage, and the failure of its hedge funds the previous summer (Kelly, 2010). But, the market helped destroy it as well, as speculators were making huge bets on Bear's failure with billions of dollars of credit default swaps, short sales, and put options. The rumor on Wall St. was…when the markets opened on Monday, now that they got Bear, was Lehman Brothers was next?

Right after Bear Stearns failed, David Einhorn, president of Greenlight Capital launched a direct attack on Lehman Brothers by shorting the firm's shares (McDonald and Robinson, 2009). Einhorn believed that Lehman was in serious danger since it was leveraged 44 times. So, the mortgage bankers were borrowing in the short term to buy long-term securitized mortgages from the "shadow" banks just as had been the case at Bear. Einhorn saw this happening, suspected accounting fraud as well, saw an opportunity, and began shorting the stock.

For second quarter, 2008, Lehman lost $2.8 billion which was the first loss it experienced since 1994 (McDonald and Robinson, 2009). Accordingly, the stock price began to drop as traders saw a similar pattern to what happened at Bear six months earlier. The firm had $680 billion in assets and $660 billion in liabilities, and began to see the cash flow stream from its domestic lenders diminishing. Thus, paying interest on its debt became problematic, so Lehman began to borrow internationally which resulted in increased interest costs, putting additional pressure on the income statement. To make matters worse, the firm was holding $7 trillion in credit default swaps as the insurer and the commercial paper market, on which Lehman relied for daily cash flow, was freezing. In a seemingly unrelated circumstance, the frozen commercial paper market caused Jeffrey Immelt, the CEO of General Electric, to tell Secretary of the Treasury Henry Paulson that he had about one week's worth of cash, or GE would go under (Paulson, 2010). The consequences of that were unthinkable. Following David Einhorn's lead, Wall St. started shorting Lehman's stock, a sure sign that the end was near.

On July 11, 2008, IndyMac Bank of Los Angeles, CA, failed, with thousands of poorly-documented subprime loans on its balance sheet (McDonald and Robinson, 2009). Fannie Mae was near collapse, and Lehman's share price was down 75% for the year. Management at Lehman, including CEO Richard Fuld, knew that they would probably have to sell the firm, but even with an offer from the Korean Development Bank, for some reason, Fuld turned it down. He did not know, or failed to realize, that fueled by greed and the pursuit of the large bonuses, Lehman Brothers was on its own. But, he did have some interest from Barclay's (McDonald and Robinson, 2009).

On September 7, 2008, Fannie Mae and Freddie Mac were nationalized by the U.S. Congress which sent a shock wave through the economy (McDonald and Robinson, 2009). JP Morgan Chase, that cleared transactions for Lehman, demanded an additional $5 billion in collateral, or it would freeze Lehman's accounts. The firm could not access the commercial paper market, so the outlook was very bleak. CEO Richard Fuld tried to structure a deal with Bank of America (BoA), but BoA wanted Merrill Lynch and the trillion dollars that it had under management in its retail division. He reached out to Secretary of the Treasury, Henry Paulson, but the Secretary wasn't interested. And, then, on Saturday, September 13, it was just about over when Barclays backed away (McDonald and Robinson, 2009).

There were three possibilities for saving Lehman Brothers. First, it could merge with another financial institution, but that did not seem likely. Second, it could appeal to the government for a federally-sponsored bailout, but neither the Treasury nor the Federal Reserve had the power to do that. Third, it could declare bankruptcy and cause the greatest financial crisis the world had ever seen. In fact, Sen. Chris Dodd, Democrat from Connecticut and Chair of the Senate Banking Committee, told Paulson not to bail out Lehman (Paulson, 2010) which left only one very unpopular and dangerous alternative.

Everyone thought that the government would intervene as it did with Bear Stearns, but Treasury would have no part of it (McDonald and Robinson, 2009). The bankruptcy would be the largest in U.S. history, but no one knew what that would mean. At 2AM on September 16, Lehman Brothers filed for bankruptcy protection. By Tuesday, September 17, fear gripped the world's financial system as the credit markets froze, effectively halting the flow of money, as demonstrated in Figure 1 (Rose and Hudgins, 2013). The markets were in a complete crisis of confidence, and no one could remember traders being so scared (Paulson, 2010). The world was petrified and on the danger of a complete financial collapse. The Dow Jones Industrial Average, which had been over 14,000 six months earlier dropped to 8,451 and was going even lower. One hundred forty (140) banks closed their doors in 2009, with another one hundred fifty-seven (157) failing in 2010 when just fifty had gone out of business from 2001 through 2008 (FDIC, 2012). The unemployment rate jumped from 5.0 in 2008 to 9.9 in 2009, before falling slightly to 9.4 in 2010 (Bureau of Labor Statistics, 2012). IRA and 401(k) portfolios were decimated, leaving thousands of Americans wondering how they would be able to retire.

The Financial Crisis Inquiry Commission was created by the Fraud Enforcement and Recovery Act of 2009. Its purpose was to examine the causes and effects of the financial crisis of 2008 and to report to the President, Congress, and the American people (Financial Crisis Inquiry Commission, 2011, xi). It concluded that the crisis was a fundamental financial failure that created chaos all across the country…26 million Americans out of work; 4 million homes lost due to foreclosure; 4.5 million homes in foreclosure process, or late with payments; $11 trillion in household wealth destroyed in retirement and savings accounts (Financial Crisis Inquiry Commission, 2011, xv – xvi). America was in trouble, and no one could save it or operate without the aid of the federal government, but again, at what cost?

The episode changed the face of the American financial system as the collapse of the derivatives market eliminated billions of dollars from the value of U.S. corporations, not to mention those retirement accounts. Bear, Merrill, the "shadow" banks, Fannie and Freddie, the rating agencies, and Lehman had brought it down. In the aftermath, it will take years to repair the reputation of the financial services industry because of the behavior it exhibited in the years before the crisis.

CONCLUSION

Secretary Paulson was not done as he had to deal with what was, in reality, a broken worldwide financial system. But, in the short-term, he had to determine what to do with AIG which was effectively insolvent (Paulson, 2010). The Secretary of the Treasury convinced Congress to give him $85 billion of the taxpayers' money in a bridge loan to bail out the troubled insurance giant. He also knew he had to get liquidity back into the market, so he also asked Congress for $700 billion to be injected into the capital structures of the nation's largest banks. The idea was to buy the toxic CDOs, but the problem was identifying the ones that were, in fact, toxic. A CDO tranche could contain hundreds of loans of different amounts, maturities, terms and conditions, and credit status of the borrower. The injection, known as the Troubled Asset Relief Program (TARP), failed on the floor of the House at the first reading. At the news, the Dow Jones Industrial Average collapsed and the Chicago Board of Trade Volatility Index (VXO) stood at 76.94 which a level that was unheard of. The higher the VXO, the more volatility in the market (financeyahoo, 2012). The world's financial markets were experiencing a complete crisis in confidence, and no one could remember when traders were as scared as they now were. The world, according to Paulson (2010), was petrified.

Maria Bartiromo was teaching at Stanford on a fellowship, at which time her students challenged her to defend capitalism (Bartiromo, 2010). They wondered about the value of the free market and questioned whether or not the financial system really worked as it was intended. She responded that there was little doubt that the low interest rates, too much liquidity, and excessive leverage, along with greed and recklessness, had damaged the system and the country. We return to Adam Smith. The idea that markets are always right and that they police and correct any sensed wrongs was being seriously questioned as they certainly did not do that in 2008. Capitalism is dependent on the public's trust of the financial services industry and the financial system, and the notion that people will play fair. But, they don't, and things had gone very wrong, prompting the government to step in and save the nation's banks. Milton Friedman maintained that capitalism is required for freedom (Friedman, 2002, originally 1962). But, the debate continues about the nature of capitalism and the proper role of government. Thus, I raise these questions with my students at Ashland (OH.) University: What is the nature of capitalism? What is the role of the federal government? Is the theory proposed by Adam Smith lost for the ages? Or, do we need a different model? The weekend changed Wall Street not because of the bank failures, but because it was a stunning moment when the confidence of the nation and the world was shattered (Bartiromo, 2010), something that had not been seen since 1929.

On June 25, 2010, Congress passed the Dodd-Frank Act in response to the crisis (Bartiromo, 2010). Many in the financial services industry were fearful that it would be a harsh reaction to the behavior that caused it, but it turned out to be a political solution and not true reform. No matter what regulations are in place, they can be ignored if people have a motivation to do so, and money is a powerful incentive.

Bartiromo (2010) concluded that basic questions had to be asked: Have we learned our lesson? Are we going to be able to avoid another September 2008? Capitalism requires free markets, as Adam Smith theorized. It protects individual rights and has the power to give people hope. The financial crisis occurred because many people in the financial system left their ethics at the door and because the system itself abandoned its integrity. The incredible increase in wealth, the irresponsible high risk leveraging, and the dearth of reason and stabilization caused the failure of Bear Stearns, Lehman Brothers, Merrill Lynch, Wachovia, and the "shadow" banks like Countrywide and New Century Financial. Citi almost collapsed as well. In response, the American people must restore fundamental values and allow integrity to guide and protect the country (207 - 208).

LIMITATIONS

There are obvious limitations to this paper. First and foremost, there is little numeric data to support it, and I am not sure that there ever will be. However, we can look at the statistics published by the Financial Crisis Inquiry Commission about the jobs that were lost, the homes that were in foreclosure, and the wealth that was lost and see the result of the Crash of 2008. What we cannot model is the behavior that caused it. All we have is the work of the practitioners who have been cited to learn of the practices and activities of those who were involved in it. I accept that their accounts may be biased but accept it because they were there and were so much closer to it.

EPILOGUE

The question becomes…are the free markets of Adam Smith good only in theory? Are they so complex and complicated that there has to be intensified government regulation? As we survey the situation in 2008 – 2009, the only institution that could save the American and world financial system was the United States government.

Paulson (2010) also had some observations as he concluded *On the Brink.* Congress has to balance profit-driven market forces and regulations to harness them for common good. With that in mind, he cited crucial lessons to be learned from the financial crisis of 2008 – 2009.

- Our regulatory system remains a hopelessly outmoded patchwork built for another day and age (439).

- The financial system contained far too much leverage, as evidenced by inadequate cushions of both capital and liquidity. Much of the leverage was embedded in largely opaque and highly complex financial products (439-440).

- The largest financial institutions are so big and complex that they pose a dangerously large risk (440).

But, there was one more lesson, and it concerns ethics. Was it ethical for the “shadow” banks to make loans to those whom they knew could not repay them? Was it ethical for the commercial banks, Fannie and Freddie, and the investment banks to leverage themselves so dangerously high to purchase the securitized assets from the “shadow” banks? Was it ethical for the rating agencies to rate those tranches as investment grade based on the fee they received from the banks? Was it ethical to hide those toxic assets in special purpose entities just to keep them off the banks’ balance sheets? Was it ethical for executives at the commercial and investment banks to continue to pay themselves huge bonuses when they knew that there was trouble ahead? Lehman Brothers executive Eric Hibbert was right when he said: “It [was] a requirement that you leave your ethics at the door.” (McLain and Nocera, 2011, 87).

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