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Investigating the Role of Regulation and Accounting in the Subprime Crisis

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Abstract: The study queries whether low information asymmetry affects lack of proper regulatory oversight and auditor professional capabilities in the subprime mortgage crisis. This paper examines events leading up to the subprime financial crisis and finds evidence to suggest that warnings signs for a looming subprime financial crisis existed that should have triggered reaction by the accounting profession, investors and regulators. The mortgage market was able to grow into a bubble because of: (1) innovative asset securitization products, (2) risk shifting through complex derivative instruments and credit default swaps, (3) easy money policies given by central banks and (4) lack of regulatory vigilance.

Key words: financial crisis; MBS; subprime; government sponsored enterprises
JEL Code: M

1. The Mortgage Markets Developing Role

Around 30 years ago the traditional, and almost exclusive, mortgage loan product was the prime, conventional or conforming loan made by banks, savings and loans, and many mortgage companies. These loans tended to be sold to Government Sponsored Enterprises (GSE's), such as: (1) Fannie Mae; (2) Freddie Mac; (3) Ginnie Mae; and (4) Federal Home Loan Bank, which formed the core of the secondary market and provided liquidity to the mortgage marketplace. Until recently, prime loans were the only products available to purchase or refinance a single-family home. Today this type of loan is very popular for good creditors and relatively inexpensive, as the current interest rate on a 30-year conforming loan is at historically low levels of about 3.67% (HSH, 2012).

The advent of subprime lending came about as a result of changes in legal structure and the development of extended subprime securitizations. These loans were not possible until changes in the regulatory environment evolved to make them legal. The following regulatory events paved the way for subprime lending:

- The Depository Institutions Deregulation and Monetary Control Act of 1980 preempted state usury laws and allowed lenders to charge high interest rates and fees to borrowers that were not previously possible.
- The Alternative Mortgage Transaction Parity Act of 1982 permitted the use of variable interest rates and balloon payments in mortgages, creating new products for subprime loans, further opening the door for subprime

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lending on a scale not seen since Reconstruction and the Great Depression.

- The Tax Reform Act of 1986 increased the demand for mortgage debt by prohibiting the deduction of interest on consumer loans, allowing the interest deduction on mortgages for primary and secondary homes and creating huge demand for home equity loans.

Sufficient scale for this type of lending alternative was needed once legal barriers were overcome. While other factors initiated secondary market acceptance, changes in market conditions in the between 2001 and 2006 allowed the impetus for subprime lending growth. Over the decades leading up to 2001, disposable incomes grew faster than housing prices with a few short exceptions during short recessions. This pattern of growth began to reverse in 2001. Late in 2003, housing prices were increasing by double digits annually, far surpassing income gains. When interest rates began rising in mid-2004, prime borrowers' refinancing dropped, leaving lending originators struggling to grow in a shrinking market. Originators began increasingly turning to subprime borrowers to make loans, driving subprime's share of the market from less than 5% to over 20% over the three-year period from 2001 to 2004 (NPR, 2007). Other market events were taking place. For example, in the fifth largest mortgage market—the state of Texas—two important changes were made to the state constitution. First, the Texas Legislature passed a law allowing second mortgages on homes for the first time in 160 years; second, the legislature allowed homeowners to obtain Home Equity Lines of Credit (HELOC). Nondeductible interest on credit cards and automobile loans was replaced with second mortgages and home equity loans.

GSE's had purchased loans in investment packages for decades. However, with increases in new subprime lending, Wall Street, Hedge Funds and other investors discovered potential earnings in high-risk mortgages. Purchasing securities backed by subprime mortgages, these major investment houses and institutional investors created high demand for securities backed by subprime lending, further enhancing demand for more subprime mortgages. Securities were developed with innovative packaging, and new distribution methods of loan assets were created in diced risk positions referred to as tranches. When hedge funds managers learned how much money some early players were making, the size and risk in the market was exacerbated by hedge fund leveraged investing. Financial service analysts were unable to use traditional econometric models to forecast market behavior with subprime markets. While these models are reasonably accurate when the market and market structures are unchanged, when relationships change because of structural innovations or other reasons, models are far less accurate in predicting outcomes and often are wrong. Thus, the current crisis can be attributable at least partially to sophisticated investors making errors, to rating agencies in underrating risks, and to greedy or naïve borrowers, just hoping for better housing.

Most mortgage lenders would not take the exceptionally high risk of holding many subprime loans, while the same lenders regularly hold conventional mortgages for long-term investments usually in the form of government agency mortgage backed securities. The subprime market had a fundamental mismatch between who bears the risk and who reaps rewards beyond risks taken. The subprime market created it owns incentive system to motivate wrong actions. Further, there was no check on the system, no measurement of errors. That which is not measured often gets ignored.

2. Crisis Management in the Mortgage Industry

Subprime market problems are especially interesting in light of the fact that they happened in the absence of an economic recession between 2002 and 2006. Yet they occurred when delinquencies began surging, home sales falling, prices declining, and foreclosure rates were rising to multi-year highs. Some of the analysts for some of the larger subprime producers saw the hand writing on the wall by late 2006 now being referred to openly as the subprime trap that originators had to expect at least a 50 percent drop in production and thus a unsustainable model with its overhead that had built up unless an alternative product could be found (Zimmerman, 2007). Total publicly-traded financial institution losses reported for 2007 were $285 billion at banks, hedge funds, monoline insurers, other insurers, and other financial institutions. As of September 2012, total credit losses equaled about $2 trillion, half taken by U.S. banks (Villani, 2012).

Information obtained in interviews with several outplacement firm representatives reinforce the idea that often the best managers are the first to leave a firm when that firm has a poor response to a crisis. These can more easily locate a new position. However, common to mortgage market downturns are the loss of management control over the basics of lending along with mismatching customers with products. The products may seem appropriate at the time—particularly in a time of upward home price pressure or inflation—but they appear extremely unwise in retrospect. It seems that both the industry and society have collective amnesia with regards to past mistakes, which leads to repeating the same mistakes over and over again. Often new "perpetrators" shout down the naysayers that bring these negatives up during the roaring upturns. In the worst of these times, many persons complain that back-to-reality blowouts last just long enough to shake out the best and brightest and reward the perpetrators, leaving a new generation of managers to pick up the pieces. Numerous articles describe how new subprime mortgage products are poorly conceived, poorly underwritten, poorly documented and without any legitimate market risk management intervention. These issues have caused most of the current liquidity crisis in the mortgage market and thus management problems for the industry at large. The following illustrates this lack of management judgment at Heights Savings Association in Houston, which created the 40-year fixed mortgage and 40/30 adjustable rate mortgage to make lending possible to more.

> "We believe these new 40-year and Flex mortgage products are on the forefront of a new product trend in our industry," said Marcella Perry, FHB President and Chief Executive Officer. "First time homebuyers continue to be faced with increased housing prices, often beyond their budget. Our 40-year and Flex mortgages may allow them to purchase the home they want because of the lower monthly payments the products offer."
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> "These products also provide a good alternative for those customers who may want a way to keep their monthly payments low, because in addition to low monthly payments, our 40-year products allow customers to build equity in their homes," Perry said. Other customers who may benefit from these products include those who plan to be in their house for five years or less in an area where homes are appreciating in value, as well as customers purchasing investment properties who want to minimize their monthly cash expenditures.

While it may seem impossible, the foregoing was not a fantasy. This information came from a new product announcement in the 1980s (Franklin Snapp, FES Inc. personal communications and review of materials November 16, 2012). This type of product led to issues in the savings and loan market resulting in years of expense and cleanup by FSLIC consultants after the Heights failure in 1985.

Heights Savings made over 450 flex mortgage loans were made to the same half dozen qualifying borrowers and their assumptions by a small group of "investors" approved shortly thereafter. These new "homeowners" immediately set out renting these properties making handsome current income while the lender took all the market and cash flow risk. To complicate things further, many of the appraisals used to ascertain the value of these properties were far too aggressive in an already overheated market. Thus, one single small player with modest market share in a small savings and loan niche market lost over $40 million dollars, eventually paid for at taxpayer expense (King, 2006). This financial institution turned out to be in "good" company, as 237 (Villani, 2012) other savings and loans went out of business in Texas between 1981 and 1991 (Villani, 2012). At that time general economic conditions in the real estate market nationwide were not nearly as bad as in some other markets. The most troubled markets at the time were:

(1) Florida
(2) Texas
(3) California
(4) New York
(5) Illinois
(6) New Jersey
(7) Oklahoma
(8) Ohio
(9) Nebraska
(10) Louisiana

The formula for establishing maximum loan amounts for conforming conventional loans (those made by the two major government sponsored entities—Fannie Mae and Freddie Mac) has tended to move upwards every year, reflecting the general rise in average home prices in the United States. In 1990, the maximum loan limit moved down for the first time since its establishment in 1980 (Fannie Mae, 2011), reflective of the final wringing out of the residential real estate problems from the Savings and Loan liquidations and the economic uncertainty brought about by the first Gulf War and the mild recession that followed. It is interesting to note that the maximum loan limits for conforming conventional loans have stayed the same for 2006, 2007 and now 2012 (Fannie Mae, 2011). National home prices declined nationwide in 2006 into 2011 and then have fluctuated in a narrow band from then till November 2012, and national statistics show that the continuing decrease is causing problems in increasing number even in the face of positive Gross Domestic Product growth. Further decreases in home prices were expected. The following is a quote from a recent article that reflects sentiment in the marketplace.

> "The Office of Federal Housing Enterprise Oversight (OFHEO) allowed the conforming loan limit at $417,000 in 2008, regardless of how steeply housing prices fall in 2007" (Russell, 2007). This practice has continued breaking earlier practices established 20 years earlier and possible drawing out the residential real estate recovery process.

To understand management challenges to mortgage professionals, it is necessary to understand the "crisis" faced today was coming about before these declines were well understood or believed. It is also important to note that most of the most severe rate adjustments expected to cause further problems in the Subprime market expected to occur over the next several years thus motivating the Federal Reserve to keep mortgage loan rates low. Loan serving professionals now face the staggering problem of loan workouts on an ever-increasing number of loan customers who cannot afford their new payment structure. There are several new types of mortgage market products causing most of the current problems.

Interestingly enough the real serious lapses of management of process across the industry from beginning to end have not changed much from the last Savings and Loan crisis. Let's look at the high risk factors driving extreme losses today while we keep in mind those lapses in judgment on the immediate past. New Jersey Congressman, Jim Saxton, ranking Republican member of the Joint Economic Committee submitted a report on September 13, 2007 (Saxton, 2007). The following is a summarization of what he believed were the sources of the subprime implosion as to origination:

- Some subprime mortgagers exaggerated their income and net worth,
- Some subprime mortgagers speculated that they would be able to sell their home prior to the end of the teaser rate,
- Some mortgage banks and brokers pushed borrowers into Interest Only Mortgages, Negative Amortization Mortgages, etc. and mortgagors were oblivious to the potential increases,
- Some mortgage bankers and brokers submitted false appraisals and financial information,
- Some mortgage bankers did not verify the income, net worth and credit history of borrowers.

3. What is a Subprime Mortgage?

A Subprime mortgage, also called "B" mortgage or "second chance mortgage", is a mortgage made to consumers who do not qualify for market interest rates because of problems with their past credit history. There has been an increased reliance on the use of credit scoring models to make loan decisions. A common credit-scoring model created by Fair Isaac's Company is now referred to as a FICO Credit score. Other companies have their own propriety credit models, but FICO scores are the common name used. Borrowers who have a FICO credit score below 620 (on a scale from 380 to 850) are generally defined as subprime borrowers. Subprime loans are risky for both the mortgagee and the mortgagor—risky for the mortgagee because subprime mortgagees usually have lower incomes and bad records of paying debts; and obviously risky for mortgagors. To offset the risk of defaults, mortgagors charge high rates of interest. High interest rates, however, are arduous for mortgagees, which further increases their probability of default.

In the late 1980's and early 1990's through pioneering new product development, default loan servicing specialists discovered that lenders could rework nonperforming loans, get many loans to "re-perform," and then re-package those loans into new mortgage backed securities for sale, usually resulting in tidy profits. Wall Street firms and hedge fund managers, always hungry for profits, noticed these profits and coveted such for themselves. These new comers to the market believed they could earn a lot of money by lending to borrowers with poor credit unable to obtain conventional loans. Conventional lenders would not take the risk to lend to people with credit scores below the firm threshold. Wall Street and hedge fund acceptance of products that could be passed on to world-wide investors increased opportunities for subprime lenders to lend to people with below acceptable credit scores. In fact 21% of mortgage applications occurring from 2004 to 2006 were made by subprime borrowers compared to 9% between 1996-04 (MSR, 2007). Subprime mortgages reached a record of $805 billion in 2005 (MSR, 2007). In 2006 they totaled approximately $600 billion (MSR, 2007), boosting U.S. homeownership to a record of 69% of households (MSR, 2007). Mortgage professionals who have lived through a down cycle realize that one cannot price for all risks or loan costs would approach 100%.

As stated in one firm's planning session aimed at increasing the origination volume of subprime mortgages:

> "Now that the market for conventional refinancing has slowed there is no reason for your brokers to have to make lower income. The yield spread premiums available for making loans to borrowers with "scratch-n-dent" credit can pay more than adequate returns for the extra time that must be spent finding and counseling these borrowers while helping them achieve the dream of homeownership or using their home equity to restructure their debt to give themselves breathing room to recover their credit." (Excerpt above from Greenpoint Mortgage training materials provided by Mortgage Banking student in 2003.)

There are various different types of subprime mortgages. Some of the more interesting include: (1) "interest only mortgages", which allow borrowers to only pay interest for a period of time; (2) "pick a payment", which gives the borrower the option on how to repay the loan; and (3) "initial fixed rate mortgages", which convert to variable rate loans like ARM's. The 2/28 or 3/37 mortgage products were most popular during 2005 and 2006. These widely-used subprime mortgage products, also called "hybrid ARMs", are a type of 30-year adjustable rate mortgage (ARM) in which the borrower pays a low, fixed introductory (or "teaser") rate for the first two or three years, after which the loan's interest rate resets to a higher level, and adjusts periodically for the remainder of the loan's life. The borrower receives the "teaser" rate in exchange for accepting the risk of later interest rate increases. The names "2/28s" or "3/27s" are indicative of the duration of the introductory rate.

Hybrid ARMs are one of a number of loan structures called "alternative mortgage products" (AMP), a category that also includes extended maturity loans (e.g., 40-year fixed rate) and interest-only loans. Interest-only loans are structured so that during an introductory period, the borrower pays interest without paying down the principal balance, after which the monthly payment increases to allow the full amount of the principal to be amortized over the remaining term of the loan at an adjustable rate. The initial payments on some AMPs are so low that they fail to even cover the interest that borrowers owe on the loan.

Thus, even though they are making monthly payments, these borrowers end up with a larger debt. These loans are known as "negative amortizing" loans. Generally, most AMPs allow the borrower to make smaller payments at the outset, followed by higher payments in later years.

AMPs were developed to meet the needs of wealthier, more sophisticated borrowers who wanted lower initial payments so that they could invest their funds elsewhere during the introductory period. AMPs make sense for these types of clients, but lenders later began marketing AMPs to lower-income customers as "affordability products." Rising home prices in much of the country, particularly the 2003-2005 periods, fueled demand for AMPs in recent years. Rising prices created challenges for first-time homebuyers, making home ownership less affordable. Opportunities for existing homeowners, who could take advantage of increased equity in their homes, were approached for broker refinancing programs. The refinancing programs can still be seen on cable advertising every day by large well-known mortgage companies, banks and mortgage brokers.

Once marketers got past (certainly not *over*) the ethical hurdle of loaning to borrowers whose credit histories and incomes made traditional mortgages unobtainable, more and more borrowers were offered AMPs, either as purchase loans or refinancing loans ("refis"). One study estimates that that over half of the subprime loans originating in the late 1990s and early 2000s were for cash-out refinancings, in which the new loan was larger than the old, with the borrower receiving the difference in cash (Chomsisengphet, 2006). More often than not this use of equity was to pay to cover the costs of closing the new loan. When the borrower was a first-time homebuyer, low initial monthly payments of AMPs often allowed the borrowers to purchase higher-priced homes than they could have qualified for using more conventional mortgages (Thompson, 2006). Interestingly enough, most subprime borrowers continue to pay on time at the rates they were initially offered. However, many of these borrowers cannot afford loan payments beyond the initial "teaser" rates. As a result, defaults are expected to rise through 2008. Approximately 1.1 million subprime mortgage loans are expected to reset in 2007 and another 882,000 loans in 2008 (Davis, 2007). The market grew in leaps and bounds because the secondary market accepted all the risks associated with these AMP products as evidenced by an additional 1.6 million mortgages will reset between 2009 and 2014 (McBride, 2009). As profits soared, more loans were made, even to the point where mortgage brokers began to cold call subprime borrowers rather than waiting for borrowers to approach the brokers. It is estimated that mortgage brokers handle approximately 70% of this origination. Brokers match prospective borrowers with lenders who further lure borrowers with exotic mortgages such as “no doc” mortgages, which do not require any evidence of income or savings.

Adding to the confusion, “Piggy Back” Mortgages were created. A piggyback mortgage is actually a package of two loans, one added on top of the other. For residential properties, a first mortgage is make that covers 80% of the value of the property, plus a second lien which covers 10%, 15% or even the whole remaining 20% of the value of the home. The second loan—which can be either fixed- or adjustable-rate—is “piggybacked” on top of the first loan. These loans create a whole new management problem for loan servicing managers, bond trustees and the holders of the first loss positions on mortgage securitizations.

Recent articles in the mortgage servicing press tell us that the 80/20 piggyback loans are responsible for a high percentage of defaults today. Each defaulting 80/20 borrower most likely started off with two foreclosure action Notices of Default (NODs) at original default date. The holders of the 20% Second Mortgage soon found out they were pursuing a lost cause and quickly dropped out to avoid incurring more non-recoverable costs. In the beginning of the cycle, it is likely that the NODs, even Notice of Trustee Sales (NOTs), could be double counted. Junior lien holders initiated foreclosure proceedings while keeping current all senior delinquencies such as mortgage payments to the first mortgagor, property tax, and insurance, hoping for recovery in the end. The learning curve proved quite steep at every market downturn, as junior lien holders realized they were suffering total losses. Junior lien servicers today are probably instructed to perform loss analyses before incurring foreclosure costs. Investors are less likely to throw good money after bad, which will cause first mortgage holders and servicers of first mortgages to have additional losses not currently accounted for in their reserve positions. Recent research with realtors involved in the short sale market has slowly been confirming this hypothesis.

4. Economic Consequences of the Crisis

The relationship between subprime meltdown and house prices can be explained as follows. As house prices drop and the equity value of home mortgages goes down, an increase in mortgage defaults occur, causing further drop in house prices. This positive feedback relationship creates a snowball effect until members of the economy have reason to believe that there is enough strength for the reverse to happen. The subprime problem could also seep into other sectors in the economy. The housing slump is estimated to be able to strip 1-2 percentage points off the GDP figure (Davis, 2007); furthermore, the downturn in the housing market has caused a drag on the construction sector will filter down to affect other industries like plumbing, furniture and home improvements as well as legal services. The anxiety this will cause in the market will cause investors to commit more of their money in risk-free treasuries and pull more money out of junk bonds and loans to finance leveraged buyouts.

Greed and participation in the market crisis seems to have no normal boundaries:

> “In March 2007, General Motors surprised investors by announcing that company earnings plunged 90% during the first three months of 2007, primarily coming from losses at its mortgage loan subsidiary GMAC. Although the firm posted its highest profits in three years, the $651 shortfall at GMAC overshadowed any gains in its core business. UBS managers said that the company will shut its Dillon Read Capital Management arm after the hedge fund lost 150 million Swiss Francs on subprime investments. On March 13, 2007 the Mortgage Bankers Association reported a record percentage of mortgaged homes entering into foreclosure, causing the S&P 500 to tumble 2%.” (Black, 2007)
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> “On June 21, 2007, data was released showing a record number of foreclosures, with the biggest increase in the subprime sector. In the same month JP Morgan Chase announced problems with two hedge funds heavily leveraged in CDO’s with high exposure to subprime debt. The two hedge funds closed, causing further panic in the subprime sector.” (Black, 2007)
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> “One month later, Standard and Poor’s announced its plans to cut credit ratings on nearly $12 billion of bonds backed up

by subprime loans. Many rating agencies have been criticized for not assessing a realistic credit rating on mortgage-based securities to reflect the high likelihood of default. All these news announcements led to a drop in the U.S. dollar, falling to a 26-year low against the British Pound." (Black, 2007)

"E*Trade (ETFC) continues to slide, a day after it announced a big bailout deal with vulture-oriented hedge fund Citadel. Much was made of E*Trade's success in getting out from under a deteriorating $3 billion mortgage portfolio, albeit at the deeply distressed price of 27 cents on the dollar. But E*Trade stock fell Thursday and it continues to give up ground Friday as investors worry about assorted other issues, including the company's still substantial home equity loan exposure. As Phil van Doorn writes on TheStreet.com Friday, E*Trade has $2.4 billion worth of home equity loans in which the loan-to-value ratio is above 90%. With house prices falling sharply, it's all too likely that many of these loans will end up defaulting—and the potential for recovery appears low." (Barr, 2007)

This data emphasizes that the crisis was underestimated at its beginning and may have not reached its zenith. So there must be some real action on the part of managers of all the stakeholders in this business that go past the pabulum the industry, politicians and regulators feed to the public. The real losses that are showing up and go past not doing, rather ignoring the basics of controlling the process on the pricing, origination, processing, underwriting, closing, warehousing, shipping, placement, securitization and servicing sides of the business. What might this mean to managers faced with cleaning up this mess and trying to see that it doesn't reoccur are were outlined earlier in this paper.

Up to this point, most responses to the mortgage crisis have focused on efforts to stem the negative effects on homeowners, financial institutions, mortgage markets, and investors. However, it is important to understand how we as a society got into this position. There are no simple answers, but what follows are some of the generally agreed-upon causes of the crisis.

A low interest rate environment was created by two destabilizing events: (1) The technology stock bubble burst; and (2) Terrorists attacked the United States. In response, the Federal Reserve lowered interest rates to help calm financial markets, lowering its Fed Funds target rate from 6.5 percent at the end of 2000 to 1.75 percent at the end of 2001. The Fed continued to make other rate cuts until the target rate reached 1.0 percent in June 2003, and did not begin to raise rates until mid 2004 hitting 6.25 percent in June of 2006 and then were rapidly lowered as the financial crisis unfolded to their rate of ½ of 1 percent as of November 26, 2012. This long period of low interest rates has been confirmed by economists, regulators, and capital markets experts as a contributor to the housing bubble, as it inordinately stimulated demand for mortgage debt and housing price inflation.

Widespread mortgage fraud has been more of a problem during this financial crisis than during other similar recessions. One cause for this is that, during the same time, many white collar crime units were shifted to Homeland Security efforts. These units were not replaced between 2001 and 2007, allowing fraudsters to instigate problems with greater impunity. While internal reports from the Government Accountability Office stated in a report to Subcommittee on Commerce, Justice, State, and the Judiciary, and Related Agencies, Committee on Appropriations, House of Representatives in August 2004 stated that the "Analysis Did Not Identify Conclusive Effect on Federal White-Collar and Violent Crime Enforcement Resulting from FBI Priority Shifts" due to reallocation to Homeland Security (United States Government Accountability Office, 2004), though a casual reading of this and subsequent reports all indicated a white-collar crime matters referred to U.S. Attorneys decreased over the time period above, while violent crime referrals increased after September 11 (Shukovsky, 2007). The following quote further amplifies the how this problem still exists; "Even in 2012 the FBI white collar crime units have not reached even 20% of their former investigative staffing levels" (Wiedemer, 2012).

A renewed refinance boom occurred at a level unequaled in history. This boom caused lenders to expand their operations to meet additional demand along with the already increased demand for housing allowed by the low interest rate environment. When the eventual satiation of refinance demand occurred, many lenders, accustomed to easy and plentiful profits, began to offer more innovative loan products to bring new borrowers to the market. These included not only subprime products with lower credit and asset requirements of borrowers, but also novel payment plans such as interest-only and option ARM mortgages that allowed some borrowers to qualify for larger homes and others to enter the housing market for the first time.

The passage of the Housing and Community Development Act of 1992 amended the charter of Fannie Mae and Freddie Mac to reflect Congress's view that these GSEs "have an affirmative obligation to facilitate the financing of affordable housing for low-income and moderate-income families" (U. S. Code, 2012). Fannie Mae and Freddie Mac were required to meet the "affordable housing goals" set by the Department of Housing and Urban Development. In 1999 the Clinton administration placed pressure on Fannie Mae and Freddie Mac to expand mortgage loans to low- and moderate-income borrowers by increasing the ratios of their loan portfolios in distressed inner city areas designated in the CRA of 1977. This turned out to be a false assertion as many detailed studies have shown that of the few loans made by depository institutions in these distressed inner city areas turned out to perform well during the recent crisis (Traiger, 2008). Many have pointed to these two policy decisions that allowed Fannie Mae and Freddie Mac to promote the widespread use of high LTVs. Fannie Mae began offering a 97 percent LTV program in 1994. Industry experts issued strong objections to this decision, citing Fannie Mae's early 1980s experiment allowing five percent-down loans in Texas, a decision that proved disastrous, with one in four borrowers defaulting. Most studies show that rather than governmental pressure that ongoing competitive pressure and the lure of high profits pulled Fannie Mae and Freddie Mac deeper into the subprime market, leading to the introduction of first-time homebuyer programs with up to 105 percent LTV. Thus the stage was set for these organizations' demise. By 2001 Fannie Mae and Freddie Mac controlled the subprime market, "having . . . absorbed the largest and best parts of the 'old' subprime world that developed over the 1990s using risk-based pricing. They continued to make mortgage loans to borrowers with FICO scores of around 540" (LaMalfa, 2001) and made up to 105 percent LTV loans as late as the first quarter of 2007.

The profitability of mortgage securitization and the moral hazard facing many lenders with larger operations and falling demand from borrowers caused lenders to further reduce underwriting standards or simply ignore them. This increased loan production that was facilitated by the development of automated underwriting by the GSEs. In 1996 Freddie Mac indicated that up to 35 percent of borrowers who obtained mortgages from the subprime market could have qualified for a conventional loan through Loan Prospector, its automated underwriting system (OCC, 2003). Other traditional lenders and secondary market players, including Fannie Mae and Freddie Mac, began to feel want to accept an increasing amount of subprime mortgage due to the decrease in traditional refinances in 2001-2004 as previously discussed and the extra profits made on the 35% of borrowers who would have qualified for prime conventional mortgages, but were made subprime at higher rate and fees. Since the GSEs were government chartered, which gave them access to cheap capital based on the assumption by investors that they would be bailed out in a crisis. The federal government was not legally required to cover these entities' liabilities, but the belief to the contrary was a good assumption nonetheless. The GSEs had actually been privately owned since the late 1960s and early 1970s, which drove them to maximize profits. Therefore Fannie Mae and Freddie Mac had both the incentive and the capacity to take on excessive risk, and they did so with vigor that it caused the Federal Reserve Bank of Atlanta to commission a Working Paper entitled "An Analysis of the Systemic Risks Posed by Fannie Mae and Freddie Mac and an Evaluation of the Policy Options for Reducing Those Risks"

(Eisenbeis, 2006). Peter J. Wallison of the American Enterprise Institute for Public Policy made a stronger statement that, "Fannie and Freddie used their affordable housing mission to avoid additional regulation by Congress, especially restrictions on the accumulation of mortgage portfolios that accounted for most of their profits" (Wallison, 2009).

While industry experts, regulators, and elected government officials—liberals, conservatives, and progressives alike—endeavored to curb in these extremes as the possible consequences were well known, but some of the well-funded lobbying efforts in history stymied their efforts. "Fannie Mae and Freddie Mac spent some $164 million on lobbying from 1999 through 2008" (Angelides, 2011), which gave them a high level of influence over their regulatory environment.

Events that occurred during the summer of 2007 in the Structured Investment Vehicles financing market began to expose the flaws in agency ratings methodologies, flaws that did not become fully apparent until housing prices stopped appreciating. The general market's acceptance of the high ratings on mortgage-backed securities and collateralized debt obligations belied the liquidity risk contained in the fact of these substandard products backing commercial paper issued by many major banks. The first banking regulator to see the danger to financial institutions in time to avert major damage was the Canadian banking regulators (Tabe, 2010). This revelation had a ripple effect leading to a spike in interest rate spreads and collateral values, causing many firms to incur losses not thought possible just a year earlier in the United States and Europe. (No Canadian banks went out of business during the Great Depression or during the recent financial crisis (Perry, 2010); there may be some lessons to be learned from our neighbors to the north.) Now just a few months earlier in a Goldman Sachs February 2006 presentation titled, "A Primer on the Sub-Prime Market" they were simultaneously speaking the Liquidity in the Subprime Market Has Been Enhanced by the CDS Market while in the next part of the presentation discussing how clients who feel the need to protect themselves if they believe home prices are too high to use them to protect their interest.

5. How the U. S. Mortgage Market Now Functions

Since the creation of the Federal Housing Administration, the number of loans insured in any given year has varied dramatically. When conventional lenders were making high loan to value (LTV) loans and those loans were being readily purchased by the secondary market, the demand for FHA-insured loans virtually disappeared. However, when FNMA, FHLMC, and other players in the secondary market became insolvent and unable to provide money for the purchase of mortgage loans, FHA became very popular again. FHA market share has risen from 1.9% to over 24% between 2006 and 2012 respectively (Mortgage Daily, 2011). Just as government agencies were essential to the recovery after the Great Depression, their role will be equally important in recoveries from current and future depressions and recessions. If anything has been learned from the disasters of 2008 through 2012, it is that proper oversight is critical. We cannot forget the warnings that were prevalent in the late 1990's and early 2000's that showed that most FHA and subprime lending market share were higher in cities with higher economic risk characteristics (Cross, 2002). Private sector lending will always be the most important aspect of mortgage lending, but it must work in tandem with well-structured, -monitored, and controlled government programs.

The fuel that expanded this market is federal agency underwriting, since Federal agency underwriting accounts for more than half the funding of all residential loans. Four federal agencies are involved, among which Fannie Mae and Freddie Mac are the largest. These two agencies fall under the oversight authority of the Federal

Housing Finance Agency. The Federal Housing Administration (FHA) falls under the Department of Housing and Urban Development, or HUD. Ginnie Mae is limited to underwriting FHA and VA loans, and is also a part of HUD. The fourth agency, the Federal Agricultural Mortgage Corporation, or "Farmer Mac", was formed in the mid 1980s. Farmer Mac was deemed to have too many restraints and was not very active. Therefore in 1996 Congress gave Farmer Mac similar powers to Fannie Mae and Freddie Mac, although Farmer Mac is limited to underwriting agricultural loans and rural home loans outside incorporated areas. These Government-Sponsored Entities (GSEs) are now under the oversight of the Federal Housing Finance Agency (FHFA), created on July 30, 2008, when President George W. Bush signed into law the Housing and Economic Recovery Act of 2008. The Act created a regulator with the authority necessary to oversee vital components of the nation's secondary mortgage markets: Fannie Mae, Freddie Mac, and the Federal Home Loan Banks. In addition, this law combined the staffs of the Office of Federal Housing Enterprise Oversight (OFHEO), the Federal Housing Finance Board (FHFB), and the GSE mission office at the HUD. With financial crisis facing the world, strengthening the regulatory and supervisory oversight of the 14 housing-related GSEs seemed imperative. The establishment of FHFA is hoped to promote a stronger, safer U.S. housing finance system. In December 2009 the combined debt and obligations of these GSEs totaled $5.5 trillion, around half of the $11.7 trillion in U.S. residential mortgage debt.

The passage of Dodd–Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) in July of 2010 was to have supplied the framework for the recovery and stability of the mortgage securitization market along with other issues it addressed. Title IX—Investor Protections and Improvements to the Regulation of Securities of the Dodd-Frank Act was to have provided many well thought out improvements to the asset backed securities market and yet Subtitle D—Improvements to the Asset-Backed Securitization (ABS) Process allowed the regulator of Fannie Mae and Freddie Mac the Federal Housing Finance Agency and the SEC to grant exemptions which they have continued to extend to MBS issued by Fannie Mae and Freddie Mac. Equally surprising was the 5 percent risk retention requirements under Subtitle D Title IX of the Dodd-Frank Act while initially put forth in the first 243 page document along with no exemption for filing, registration or reported by the Government Sponsored Enterprises (GSE's) was all virtually removed from the final ruling purposed by the Comptroller of Currency et al for comment in early 2011 (Department of the Treasury, 2011). This makes the development of a robust ABS private market virtually too costly to ever compete with the GSE's. This leaves the Federal Government that's stated objective is to phase out of the conservatorship discussed in the next paragraph quick difficult even with the profits Fannie Mae has demonstrated in the third quarter of 2012 (Fannie Mae, 2012) it would take fourteen years for the Treasury to recover its preferred stock investment at a this rate and since the liquidity and market risk of the GSE's securities without U.S. Treasury or Federal Reserve Bank support cannot function normally for the foreseeable future.

Since Fannie Mae and Freddie Mac were placed into government conservatorship in 2008, the Federal Reserve Bank has been the primary purchaser of both of these GSE's mortgage-backed securities. The Federal Reserve Bank thus served as the purchaser of last resort for over $1.47 trillion of Fannie Mae and Freddie Mac MBS through November 2009 (FED, 2009), keeping the mortgage lending markets open. This full backstop of purchasing of all Fannie Mae and Freddie Mac MBS for the stub period mention just above allowed the continued existence of investment banking firms that received investment manager fees and primary dealer fees sufficient to allow some to show profits in 2010 that otherwise would not have when reviewing their public filings of sources of revenue (See Table 1) that shows market share by firm. Representatives of the Federal Reserve Bank announced that the Bank would pull out of this market in the first quarter of 2010 however; officials later discovered that such a change would have too great a negative impact on the mortgage market and mortgage rates. The Fed was still making purchases in July 2010 that at the time totaled $2.31 trillion (FED, 2012). The Federal Reserve Bank maintained that the purchases made between March and July of 2010 were intended only to “stabilize” the market, and most purchases made after March of 2010 appear to have been sold to commercial banks and others by the Fed in the aftermarket. The Federal Reserve has continued to have to intervene in this market to not only maintain lower rates to deal with the continuing rate reset periods, but to support the market that is still unwilling or unable to absorb the level of GSE generated new MBS as evidenced by Federal Reserve’s recent announcement of their purchasing into the future of $40 billion of agency securities in the 3rd and 4th quarter of 2012 as part of their ongoing quantitative easing program (Censky, 2012). It is an interesting observation that in the confirmation of the $2.31 trillion in MBS purchases above was the level of fees that accrued to the short list of investment banking firms that allowed them to return to profitability for underwriting by delivering these MBS to the only buyer the Federal Reserve. Without these fees several firms would not have been able to rapidly pay back their Troubled Asset Relief Program borrowings. Considering the impact of these GSEs on the U.S. economy and mortgage market, it is critical that we intensify our focus on the oversight and restructuring of Fannie Mae, Freddie Mac, and the Federal Home Loan Banks.

6. Conclusion

Because homeownership is such a significant economic factor, a great deal of attention is paid to the mortgage market. This paper discusses the current state of affairs as presented in government reports and the popular press and a review of the academic literature pertaining to the subprime market and mortgage market overall. The function of a mortgage-backed security is to convert a mortgage loan into a financial instrument that can be more easily sold to investors. By opening the financial markets as a source of money to fund mortgage loans, adequate money at a competitive cost for sound loans has become more available.

Constraints increasingly imposed on underwriters’ loan purchase policies have put a vertical halt to the subprime mortgage market. As a result, pressure has been applied by HUD to direct activities into more diverse areas of lending. Four results are probable: (1) an increase in home loans available to minority groups, immigrants, and those in underserved urban areas; (2) a growth in the offerings and market share of Federal Housing Administration (FHA) mortgage loans; (3) the rehabilitation of Fannie Mae and Freddie Mac from government conservatorship and the market acceptance without Federal Reserve Bank market intervention of their issues of MBS; and (4) the emergence of private mortgage-backed securities that have a retained loss interest by the mortgage loans’ original lenders as a market discipline to diminish the moral hazard that was created by the recent originate-to-distribute model, which has been blamed for the recent mortgage crisis. Many studies exist with varied proposals on how to privatize the GSE’s (Stanton, 2004) including those that think that housing GSE's contribute little to the quality of the U.S. housing finance system, yet they create risks for the taxpayers and the entire economic system that cannot be adequately addressed by regulation (Passmore, 2003).

While subprime lending did open up homeownership to a broader group of individuals that deserve a chance at the American dream, it has relied on a nonprice, credit rationing approach for distributing loans. This new type of mortgage lending has been has as part of its identity being able to quickly introduce different products and pricing tiers which should allow the market in the direction of risk based pricing. One key topic that is not being addressed by academia and the media at large is the function of subprime mortgage servicers in the future in limiting the lapses of due diligence and the levels of default.

7. Suggestions for Future Research

Most academic literature has focused attention on the history and structure of subprime lending and the issues of equity and efficiency in the market. Additional research should focus on both short term developments and solutions to the problems at hand and how to solve longer term concerns. This research to be helpful will have to focus on the role of regulation in curtailing poor compliance with existing laws, dealing with predatory lending practices that prevail, ensuring discipline in financial markets as it relates to collateral representations (assignee risk needs more depth to make sure Wall Street has more due diligence "skin" in the game). Theorists, industry leaders and investment firms need agree on strategies to make sure the mortgage banking system has mortgage products that are priced based on risk and real underwriting and confirmation at the loan origination level has occurred.

Research should be done to determine if fraud prosecutions of senior executives involved are actually taking place instead of quiet settlements. For example, a recent settlement occurred between the Securities Exchange Commission, JPMorgan Chase and Credit Suisse for management of the latter two having lied to investors about the quality of mortgage-backed bonds sold both before and after the 2008 financial crash for $416.9 million. This was the second large settlement after a larger one with Goldman Sachs in which not individuals were charged. After the S&L crisis more than 1,000 bank and thrift executives were convicted of felonies (Angelides, 2012), with few and counting now five years after the fact. At the tenth anniversary of the Sarbanes Oxley Act that occurred in 2012 less a half dozen convictions of the less than ten cases taken to active prosecution over the ten year period (Frankel, 2012).

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Table 1 Investment Manager Fees & Primary Dealer Fees Paid for Fannie Mae & Freddie Mac MBS Securities Where Federal Reserve Bank Was Only Buyer January 2009 through March 2010 of $2.31 Trillion (3)

Institution Name	Freddie Mac MBS Trade Amount in $ Millions As Primary Dealer	Freddie Mac MBS Trade Amount in $ Millions Investment Manager	Fannie Mae MBS Trade Amount in $ Millions As Primary Dealer	Fannie Mae MBS Trade Amount in $ Millions Investment Manager
Barclays Capital Inc.	$ 37,217		$ 102,338	
BlackRock		$ 62,450		$ 281,052
BNP Paribas Securities Corp.	$ 20,575		$ 67,325	
Cantor Fitzgerald & Co.	$ 3,900		$ 5,125	
Citigroup Global Markets Inc.	$ 54,246		$ 164,457	
Credit Suisse Securities (USA) LLC	$ 107,849		$ 257,369	
Deutsche Bank Securities Inc.	$ 82,390		$ 302,455	
Federal Reserve Bank of NY(1)		$ 16,324		$ 81,588
Goldman, Sachs & Co. (2)	$ 37,120	$ 104,879	$ 163,806	$ 235,286
J.P. Morgan Securities LLC	$ 49,908		$ 132,321	
Jefferies & Company, Inc.	$ 100		$ 250	
Merrill Lynch, Pierce, Fenner & Smith Inc.	$ 58,579		$ 180,107	
Morgan Stanley & Co. Incorporated	$ 62,502		$ 195,982	
Mizuho Securities USA Inc.	$ 450		$ 700	
Nomura Securities International, Inc.	$ 11,175		$ 30,311	
PIMCO		$ 78,682		$ 269,127
RBS Securities Inc.	$ 19,528		$ 65,601	
UBS Securities LLC	$ 32,125		$ 62,144	
Wellington Management Company		$ 315,329		$ 863,237
Total	$ 577,664	$ 577,664	$ 1,730,291	$ 1,730,291

(1) In March of 2010 the Federal Reserve Took over this function for the Freddie Mae MBS for which they were the exclusive purchaser.
(2) Goldman Sachs & Co as Primary Dealer and Goldman Sachs Asset Management as Investment Manager - both owned by same holding company
(3) Compiled from Freedom of Information Act Data Received from the Federal Reserve Bank of New York