The Incentives Leading up to the 2008 Financial Crisis

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Biography:

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Abstract

There are many events that led up to the financial crisis of 2008. This study looks at the

political policies in place before the crisis happened. Focusing on the decade and a half

prior to the crisis, the incentives in the financial industry led to risk mitigation. This

response to mitigate risk explains, at least in part, a reason why there was a boom in the

CDO (Collateralized Debt Obligations) and MBS (Mortgage-Backed Securities) markets

in the years leading up to the crisis.

JEL: G01, G21, G28

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1. Introduction

The financial crisis of 2008, which officially started in late 2007, had a major impact across the world. The cause of this crisis has been blamed on many different things. Although there are many reasons, people, or countries that can be blamed, this study addresses the events leading up to this crisis that magnified the entire outcome.

John Taylor (2009) claims the primary blame lies with the Federal Reserve's unreasonably low interest rates, which occurred for the decade leading up to the crisis. A Brookings Institute article (Prasad, 2009) says that the world impacted these low interest rates, claiming that it was the world willing to lend to the U.S. that helped keep these interest rates low. Mark Duckenfield, in an ABC interview (Webb, 2008), blamed deregulation in the United States and Europe, saying "Deregulation and a lack of financial oversight are not exclusive to the U.S. A lot of European countries embraced the free market and deregulation." In the same news story Martin Weale blamed reckless investing; "In Europe, banks were buying what turned out to be subprime mortgages without bothering to check exactly what they were". In addition to those reasons, others are blaming inefficiencies in the rating agencies and the increased price of oil. Although these are all reasons that matter, a majority of the population believes the cause was also a problem with greed:

"I think we can sum up the cause of our current economic crisis in one word — **GREED**. Over the years, mortgage lenders were happy to lend money to people who couldn't afford their mortgages. But they did it anyway because there was nothing to lose." – Pinyo (Moolanomy Blog, September 22, 2008)¹

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¹ www.moolanomy.com/

When people blame greed they are blaming finance professionals and Wall Street investment banks that were making money on the sales of different forms of mortgage based financial instruments. This study will look at the policies in place before the financial meltdown and discuss how these policies incentivized the banking industry to create these financial instruments. Investors responded to the incentives put in place by government policies, which lead to the invention, or expansion, of financial instruments. The trading of these instruments is thought to be the spawn of greed; however this study will argue that these are actually the spawn of regulation which established moral hazard in the mortgage market.

This study will expand on the research previously done by Chambers, Garriga, and Schlagenhauf (2007) on homeownership policies and discuss the incentives created in the financial markets. The next section will discuss a brief history of housing policies. This study is not political and, as such, will address the policies of both a Democratic and a Republican administration in Section three. Section four will discuss the incentive effects followed by a conclusion.

2. A Historical Look

The United States Federal Housing Administration (FHA) was developed in 1934 to guarantee some home mortgages from default. The Department of Housing and Urban Development (HUD) was not established until 1965, as a cabinet-level agency and, at that point, the FHA became part of HUD. HUD was developed to "increase homeownership..." (HUD mission statement 2010)². Although this part of HUD's

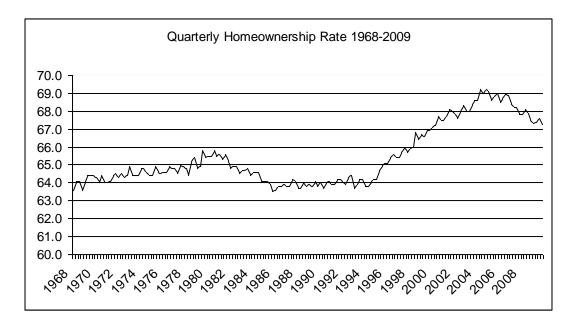
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² This information is available on the HUD website (HUD.gov).

mission will be the focus of this study, the other primary focus of their work is to enforce housing discrimination laws, established in the 1968 Civil Rights Act.

President Jimmy Carter, in 1977, signed the Community Reinvestment Act which was designed to eliminate discriminatory lending in banks. In 1980 the Depository Institution's Deregulation and Monetary Control Act increased the availability of alternative mortgages. These alternative mortgages are backed by government sponsored enterprises Fannie Mae, established in 1938 as the Federal National Mortgage Association, and Freddie Mac, established in 1970 as the Federal Home Mortgage Loan Corporation. The Federal Housing Enterprise's Financial Safety and Soundness Act of 1992 provided HUD with the oversight of Fannie Mae and Freddie Mac, allowing the expansion of these 'alternative mortgages'. Using implicit and explicit pressures (Miller, Benjamin, North, 2010 pg. 122) on lending, by 1996 the national homeownership rate hit 66.3 million or 65%, the highest it had ever been. By 2000 that number increased to 71.6 million or 67.5%. The housing rate hit a peak of 69.2% in the fourth quarter of 2004, shown in Figure 1.

Figure 1 - Homeownership Rate in the United States³



3. Presidents Bill Clinton and George W. Bush's HUD policies

In 1995 the "Blueprint for Reinvention of HUD" proposed sweeping changes.⁴ "The new HUD" (The New HUD, 1995) was released stating that "Americans value owning a home over such factors as an automobile, a happy marriage, an interesting or high-paying job, and good health." This was released shortly after the Clinton Administration's 1994 initiative called The National Homeownership Strategy. This strategic push loosened lending guidelines, while simultaneously pushing for more creative lending practices, through the FHA, Fannie Mae, and Freddie Mac, to increase homeownership. As homeownership is stated to increase wealth, responsibility, neighbourhood quality, jobs, and economic growth (Urban Policy Breif No. 2 1995,

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³ Quarterly Homeownership Rate, 1968-2009. (Data from the U.S. Census: Census.gov)

⁴ From the HUD History (HUD.gov).

1995), both President Clinton and President Bush wrote policies to increase homeownership.

Under President Bill Clinton, there were two secretaries of HUD (Henry Cisneros 1993-1997 and Andrew Cuomo 1997-2001). In 1995 President Clinton, through HUD, announced a goal to increase homeownership rates to record-high levels within the next 6 years. The mission of increasing home ownership began to target homeownership of minorities and low-income families. This was carried out, primarily, through Fannie Mae and Freddie Mac. After receiving regulatory authority over these agencies in 1992, HUD was able to use this authority to increase Fannie Mae and Freddie Mac's exposure to subprime lending. \$2.4 trillion of mortgages were to be bought over the next ten years, announced in 1999 by Secretary Cuomo, through Fannie Mae and Freddie Mac.⁵ Andrew Cuomo, Secretary of the U.S. Department of Housing and Urban Development (KeyNotes, 1997) claimed: "The homeownership rate in the last two years has jumped nearly one and a half percent – from 64.0 to 65.4 percent – the sharpest increase in history. That translates in to more than 2.3 million additional homeowners. But these gains do not come easily. They require continued hard work and creativity."

This strategy of continued growth in homeownership did not change when President George W. Bush took office. President Bush had three different HUD secretaries (Mel Martinez 2001-2003, Alphonso Jackson 2003-2008, and Steve Preston 2008-2009). During his term, the strategy was to continue the growth in homeownership in the U.S. Homeownership rates increased from 67.5% at the end of President Clinton's term to a peak of 69.2% at the end of 2004. This rate, however, was temporary as the homeownership rate fell back to 67.5% by the end of President Bush's presidency.

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⁵ From Highlights of HUD Accomplishments 1997-1999 (HUD.gov).

During both of these Presidential terms the HUD went to great lengths to increase the percentage of Americans who own their home. They decreased the down payments necessary to obtain a mortgage and the information required on mortgage applications backed by Fannie Mae and Freddie Mac. Through these regulations the incentive structure surrounding the financial markets changed, specifically in the mortgage industry.

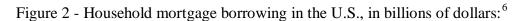
4. Incentive Effects

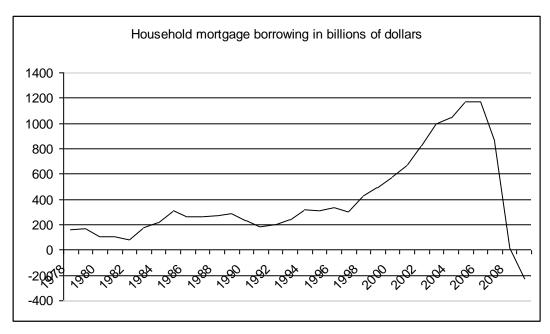
Secretary Cuomo said that continued homeownership growth would take "creativity", which is exactly what happened. Freddie Mac and Fannie Mae guarantee mortgages in the U.S. and in 1996 HUD set a goal for a minimum of 42% of mortgages backed by these organizations to be from borrowers whose household incomes are below the median income of the area (Roberts, 2008), "This target was increased to 50% in 2000 and 52% in 2005." The government did not force banks or mortgage brokerage companies to make sub-prime loans. However, Fannie Mae and Freddie Mac refused to back mortgages from any company that did not participate in the sub-prime market to a specified level. Therefore these companies were implicitly forced to increase their risky loan offerings. They had to either make risky loans or they would lose backing from Fannie Mae and Freddie Mac.

After subprime loans were required, banks and mortgage brokerage firms were forced beyond their optimal portfolio of mortgages given risk and returns levels. As portfolios are forced further from their optimal levels, firms must find ways to control for

the increased risk levels. This adjustment to policies is not 'greed', it's an efficient response to the policies put in place.

Housing prices had a major impact on the ability to get loans over this time period. Housing price changes and consumer borrowing have been looked at in Poterba (1984), Case and Shiller (1989), Stein (1995), Genesove and Mayer (1997), Hurst and Stafford (2004), and Glaeser and Gyourko (2005). Hurst and Stafford (2004) look at the motivation to refinance, separating out those who pull out equity for wealth and those who pull out equity for consumption smoothing (Figure 2 shows the U.S. mortgage borrowing). However as this financing became easier, through creative ways of issuing loans, this increased the demand and, thus price, of housing in the U.S. This initiated a continued period of growth in the housing prices that allowed the securitization of housing to continue easily.



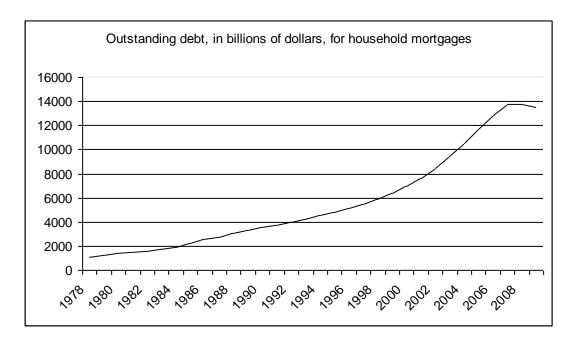


⁶ Data Source: Federal Reserve Flow of Funds

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As the issuance of creative loans increased, the problem of moral hazard also increased. Several studies have looked at the issue of moral hazard during the securitization of mortgage backed loans (Gan and Mayer, 2006 and Mian and Sufi, 2008). Although DeMarzo (2005) claim that 'sophisticated intermediaries' had the ability to value these assets, Gan and Mayer (2006) discuss the agency costs in the market for lenders to investigate the risk associated with these assets. Mian and Sufi's (2008) results suggest that moral hazard is a main culprit for the crisis, supporting the idea that the securitization has had a big effect. As the mortgage debt (Figure 3) in the U.S. has increased, studies have focused on the increased default rages on subprime mortgages (Demyanyk and Van Hemert, 2008; Doms, Furlong, and Krainer, 2007; and Keys, Mukherjee, Seru, and Vig, 2008). Demyanyk and Van Hemert (2008) find that "the quality of loans deteriorated for six consecutive years before the crisis and that securitizers were, to some extent, aware of it."





The policies, through the 1990s and early 2000s, created a problem for people making mortgages. As risk levels rose (the number of sub-prime mortgages relative to prime mortgages), strategies of handling these risks changed. The securitization process, the development of Asset-Backed Securities (ABS) and Collateralized Debt Obligations (CDO), were an efficient response to mitigate the risks banks were forced to take.

5. Conclusion

At the 2010 annual meetings the American Economic Association (AEA) set out a survey to its members, in tournament style, to find what they thought was the largest factor influencing the financial crisis. The largest factor, according to the AEA, is 'Moral Hazard'. This moral hazard was created because securitization was the efficient response to policies implemented to increase homeownership in the United States.

⁷ Data Source: Federal Reserve Flow of Funds

⁸ Source: http://www.vanderbilt.edu/AEA/Annual_Meeting/market_madness_2010.html

This study provides an overview of the policies in place that influenced this increase in sub-prime lending. Government policies incentivized the finance industry to develop new ways to handle risky loans. The industry responded with the securitization of these mortgage assets to mitigate risk. As these securitized assets increased in volume, the overall perceived risk by any one company decreased, increasing moral hazard.

Although the act of securitization appears to be an act of greed, this has been an efficient response to the government regulations put forth from the Housing and Urban Development, through Fannie Mae and Freddie Mac. Continued research on incentives, the way they affect the market and ways to make them more efficient, are encouraged.

Works Cited

- Case, K. and Shiller, R. (1989) 'The Efficiency of the Market for Single-Family Homes' *American Economic Review*, Vol. 79, pp. 125-137.
- Chambers, M., Garriga, C., and Schlagenhauf, D. (2007) 'Equilibrium Mortgage Choice and Housing Tenure Decisions with Refinancing' Research Division Federal Reserve Bank of St. Louis Working Paper Series
- DeMarzo, P. (2005) 'The Pooling and Tranching of Securities: A Model of Informed Intermediation.' *Review of Financial Studies*, Vol. 18, No. 1, pp. 1-35.
- Demyanyk, Y. and Van Hemert, O. (2008) 'Understanding the Subprime Mortgage Crisis' *Working Paper* (December 5, 2008). Available at SSRN: http://ssrn.com/abstract=1020396
- Doms, M., Furlong, F., and Krainer, J. (2007) 'Subprime Mortgage Delinquency Rates' Federal Reserve Bank of San Francisco Working Paper
- Gan, Y. and Mayer, C. (2006) 'Agency Conflicts, Asset Substitution, and Securitization' *NBER Working Paper 12359*, http://www.nber.org/papers/w12359, July
- Genesove, D. and Mayer, C. (1997) 'Equity and Time to Sale in the Real Estate Market' *American Economic Review*, Vol. 87, pp. 255-269.
- Glaeser, E. and Gyourko, J. (2005) 'Urban Decline and Durable Housing' *Journal of Political Economy*, Vol. 113, pp. 345-375.
- Hurst, E. and Stafford, F. (2004) 'Home is Where the Equity Is: Mortgage Refinancing and Household Consumption' *Journal of Money, Credit, and Banking*, Vol. 36, pp. 985-1014.
- 'KeyNotes' (1997) A Quarterly Newsletter of the National Partners in Homeownership First Quarter
- Keys, B., Mukherjee, T., Seru, A. and Vig, V. (2008) 'Securitization and Screening: Evidence From Subprime Mortgage Backed Securities' working paper
- Mian, A. and Sufi, A. (2008) 'The Consequences of Mortgage Credit Expansion: Evidence from the 2007 Mortgage Default Crisis.' *NBER Working Paper 13936*, http://www.nber.org/papers/w13936, April
- Miller, R., Benjamin, D. and North, D. (2010) 'The Economics of Public Issues' *Prentice Hall*

- Poterba, J. (1984) 'Tax Subsidies to Owner-Occupied Housing: An Asset-Market Approach' *Quarterly Journal of Economics*, Vol. 99, pp. 729-752.
- Prasad, E. (2009) 'The Global Financial Crisis: Getting Past the Blame Game Global Financial Crisis, Global Economics, U.S. Economy, Financial Markets, Financial Institutions' *The Brookings Institute* January 28, 2009
- Roberts, R. (2008) 'How Government Stoked the Mania Housing' *The Wall Street Journal* October 3, 2008
- Stein, J. (1995) 'Prices and Trading Volume in the Housing Market: A Model with Down- Payment Effects' *Quarterly Journal of Economics*, Vol. 110, pp. 379-406.
- Taylor, J. (2009) 'Getting Off Track: How government actions and interventions caused, prolonged, and worsened the financial crisis' *Hoover Institution Press* Stanford, Calif.
- 'The New HUD' (1995) U. S. Department of Housing and Urban Development (HUD.gov)
- 'Urban Policy Breif No. 2 1995' (1995) U. S. Department of Housing and Urban Development (HUD.gov) August
- Webb, S. (2008) 'Playing the Financial Crisis Blame Game: Foreign Leaders Were Quick to Attack the U.S. for Subprime Woes' *ABCNews.com* London, October 9