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1/23/19

Mortgage Policy Memo

Summary:

This memo is to discuss potential causes of the Mortgage Default Crisis in the United States and the implications of lackluster policy. Originally believed to be a result of a risky expansion in the subprime mortgage market, recent data analysis has led to a reinterpretation that includes blame on both prime and subprime mortgage lending. This memo will approach both cases and provide feedback for future mortgage policy in attempt to disallow a similar crisis from occurring again.

Background:

The Mortgage Default Crisis in the United States started roughly around 2007. Scholars mostly agree that the Crisis first came about in the subprime mortgage category, but that is where much of their agreement ends. Earlier scholarly work tends to look more closely at the subprime mortgage market, as Mian and Sufi (2009) looked into mortgages by subprime ZIP codes, ZIP codes across the United States with average credit scores below the 660 threshold.¹ More recently, Ferreira and Gyourko (2015) took a step away from other scholarly work and looked to compare subprime mortgage defaults and prime mortgage defaults. They found that the event began with subprime defaults, but that prime mortgage loans held a larger market share. Their defaults rose with rates peaking around 2010Q2 and remaining relatively high through 2012 in their Figure 1.²

In the subprime market, Mian and Sufi (2009) report findings that support their “*supply based hypothesis*” consisting of the thought that expansion of credit to subprime borrowers may have been caused by an outward shift in the supply of mortgages by lenders. Specifically, they note a phenomenon where the correlation between mortgage credit growth and income credit

¹ Mian, A. and A. Sufi. 2009. “The Consequences of Mortgage Credit Expansion: Evidence from the U.S. Mortgage Default Crisis”, *Quarterly Journal of Economics*, Vol. 124: 1449-1496

² Ferreira, F. and J. Gyourko. 2015. “A New Look at the U.S. Foreclosure Crisis: Panel Data Evidence of Prime and Subprime Borrowers from 1997-2012.” NBER Working Paper #21261.

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growth in subprime ZIP codes was negative, as shown in Figures 2 and 3. This was the only period in the past 18 years where this phenomenon has occurred. They note the possibility that risk-free rates dropping to historic low levels may have been responsible for this expansion in credit, but there was no expansion observed when risk-free rates had dropped in other periods prior. As to why this supply of credit increased, there are a variety of reasons from government incentives to originators to increasing expectations of housing prices and moral hazard. Either way, they observe in the data a large expansion in subprime credit with little to no income to support that credit.³

In terms of comparing the markets, Ferreira and Gyourko (2011) find that the subprime market only accounts for a small portion of the Mortgage Default Crisis. In their data, subprime loans only comprised about 15% share of the “complete housing market” and never comprised of more than 21% in any given year. Also, they note that 18% of borrowers who ever experienced negative equity defaulted, which is relatively large considering 40% of the homeowners in their data sequences experienced. One part of their analysis included controlling for current LTV, Loan (the Mortgage)-To-Value (of the property) ratio. They found that current LTV where borrowers experienced negative equity explained roughly one-third of defaults among subprime borrowers. This carried over into prime markets, as seen in Figure 4, as current LTVs rapidly increased the declining values of real estate. Decreasing value of real estate led the average LTV for subprime borrowers to peak above 1.2 in 2009 and increase to above 1.3 by 2011. Similarly, for prime borrowers, LTVs reached a high of just below 1.1 in 2009 and 2011, hovering just above 1.0 in-between. Even though Ferreira and Gyourko mentioned that borrowers without “extremely high [initial] LTVs” still defaulted, it can be argued that initial LTVs above a certain threshold may be

³ Mian, A. and A. Sufi. 2009. “The Consequences of Mortgage Credit Expansion: Evidence from the U.S. Mortgage Default Crisis”, *Quarterly Journal of Economics*, Vol. 124: 1449-1496

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too risky in the case that real estate prices do not follow expectations, as happened preceding the Mortgage Default Crisis. Then, LTVs are more susceptible to reaching ratios above 1, and when borrowers owe more money than their property is worth, they now have incentive to default rather than pay more for a lesser value.⁴

Policy Reform Recommendations:

In order to avoid a crisis in the future, here are policy remedies to discuss for introduction in the U.S. mortgage markets. As it has been found that sub-prime mortgage defaults may have been a spark for this mortgage crisis, lending to sub-prime buyers must be done under strict risk-assessment, if done at all. These subprime buyers must be able to show for a consistent form of income and, due to their risk, present a future plan as for their income growth, as this will aim to lessen a potential negative correlation between credit growth and income growth.

Furthermore, mortgage originators should not be allowed to lend to subprime borrowers at an LTV above .5. This may affect their ability to buy property, but as they may be the first affected with decreases in property value, this will provide a cushion of incentive where they will only default due to personal, non-market issues, or due to another market catastrophe. Similarly, mortgage originators should keep the LTVs of prime borrowers below a .7 for that same reason. As these individuals are more trustworthy, individuals in the highest levels of credit scores may push that boundary. To police these rules, there should be incentivization in the means of rewards and bonuses to mortgage originators to stay within these restrictions.

Conclusion:

⁴ Ferreira, F. and J. Gyourko. 2015. "A New Look at the U.S. Foreclosure Crisis: Panel Data Evidence of Prime and Subprime Borrowers from 1997-2012." NBER Working Paper #21261.

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These policies are aimed specifically toward potential causes and correlated finding with the spark of the Mortgage Default Crisis and why it hit across both sub-prime and prime markets. These policies will influence less risky mortgage-lending and lesson any future expansions in sub-prime credit. They will also cushion borrower’s positions in the event of decreases property values.

Bibliography:

Ferreira, F. and J. Gyourko. 2015. “A New Look at the U.S. Foreclosure Crisis: Panel Data Evidence of Prime and Subprime Borrowers from 1997-2012.” *NBER Working Paper #21261*.

Mian, A. and A. Sufi. 2009. “The Consequences of Mortgage Credit Expansion: Evidence from the U.S. Mortgage Default Crisis”, *Quarterly Journal of Economics*, Vol. 124: 1449-1496

Appendix:

Figure 1: Total Foreclosures + Short Sales Over Time by Owner Type

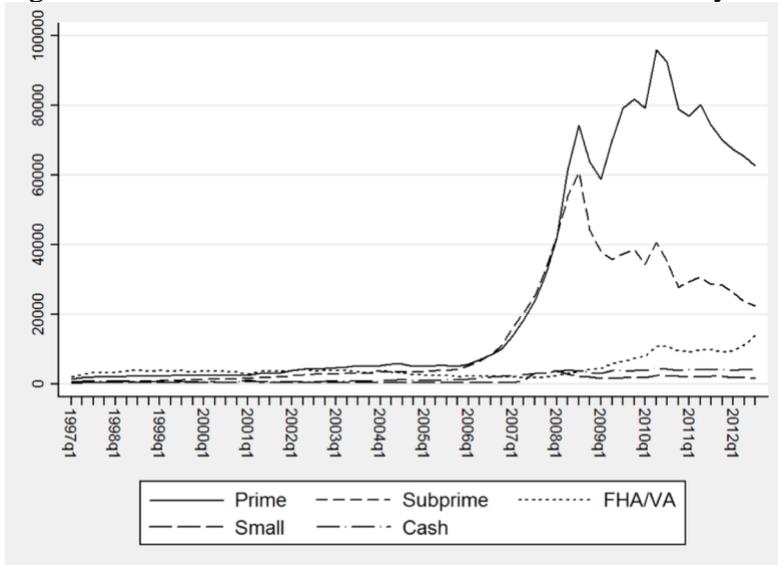


Figure 2. Bottom Left and Bottom Middle Graphs highlighting negative correlation between income growth and credit growth in subprime ZIP codes.

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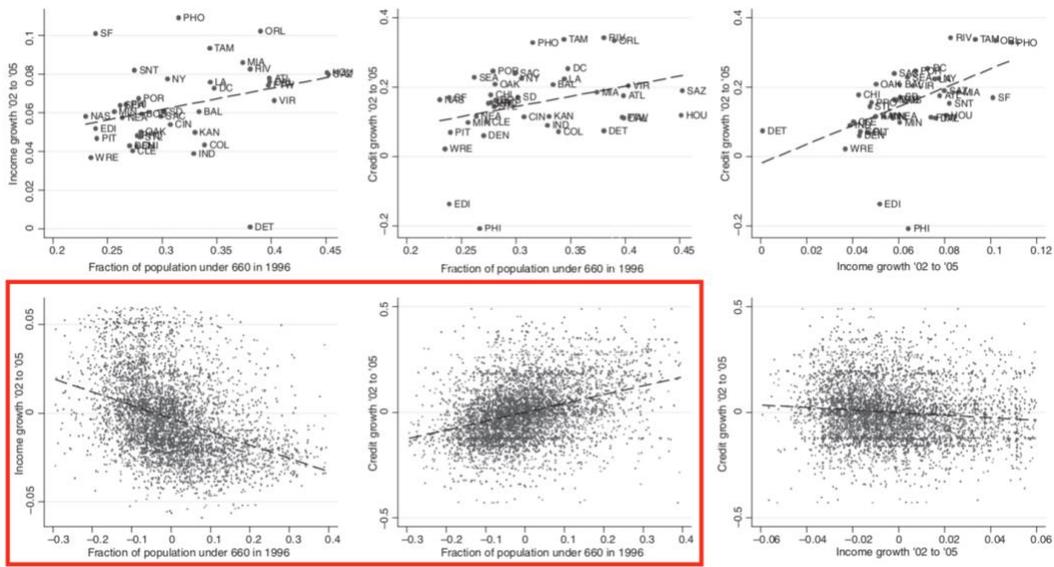


Figure 3. Timeline of negative correlation between income growth and credit growth

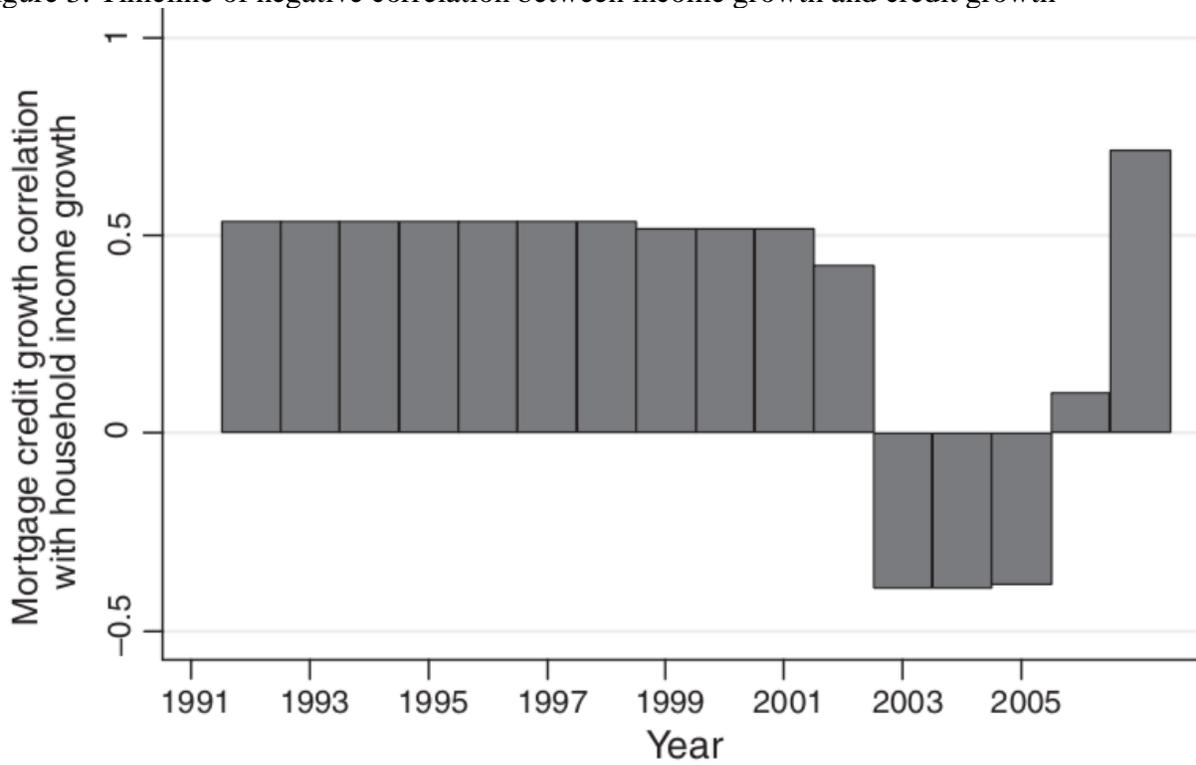


Figure 4. Average Current LTV by Borrower Type Over Time

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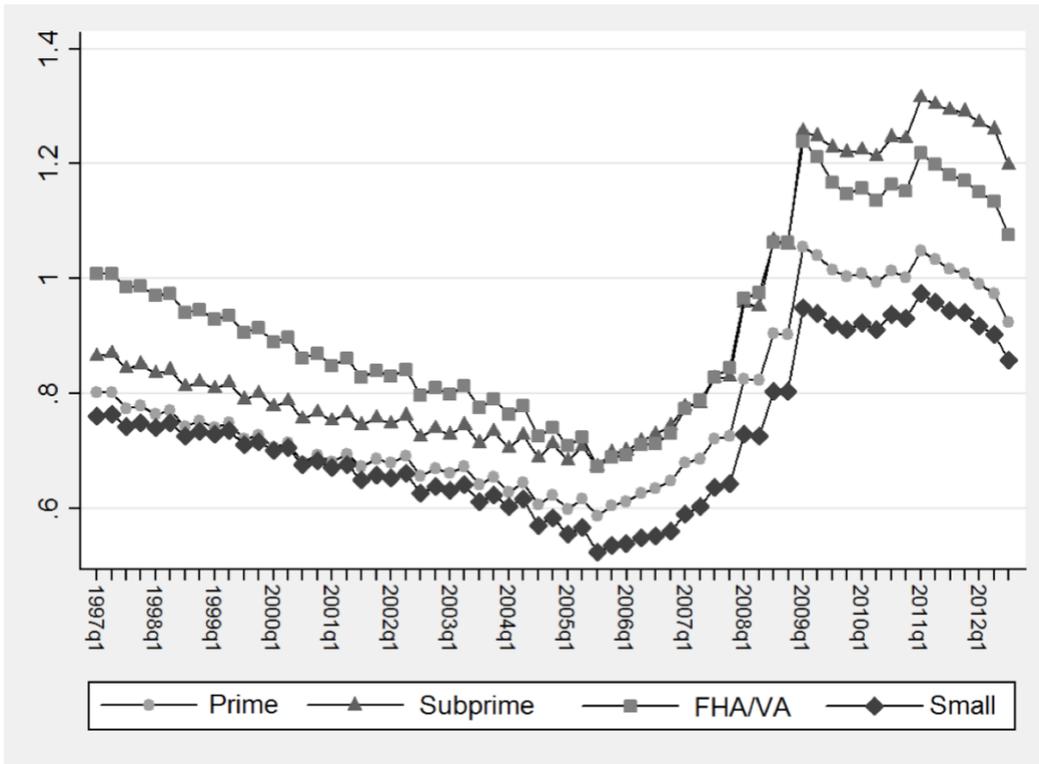
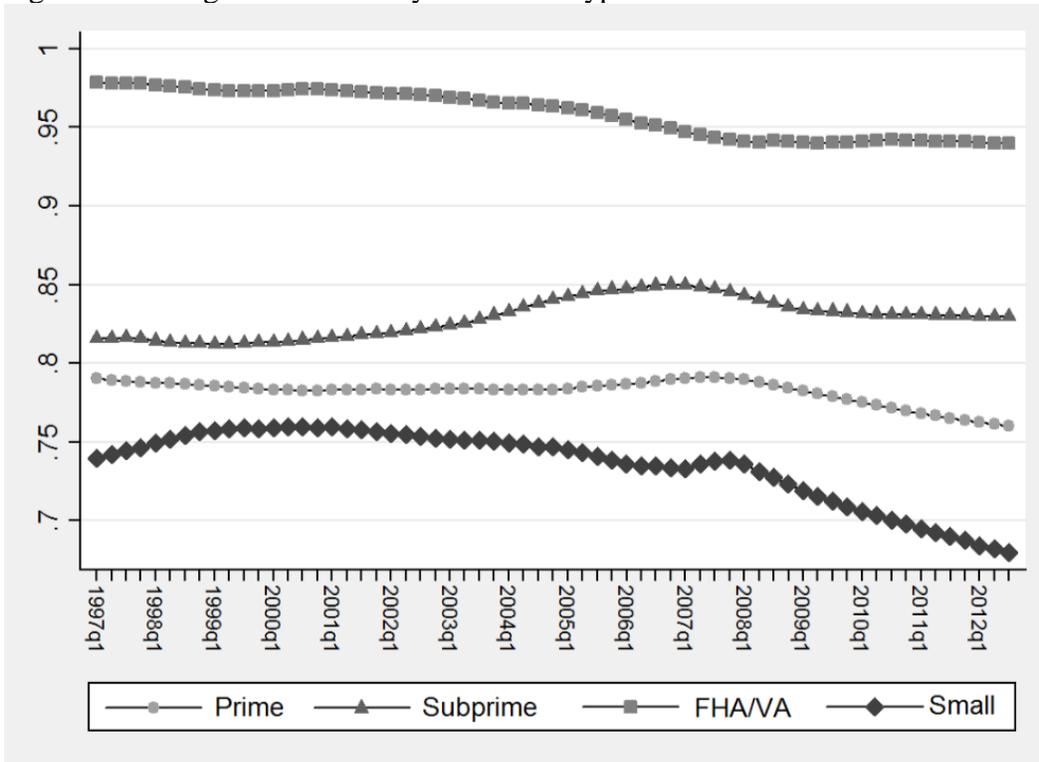


Figure 5. Average Initial LTV by Borrower Type Over Time



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