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Mortgage Loan and Regulatory Reform**

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CRISIS IN THE MORTGAGE FINANCE MARKET: THE NATURE OF THE MORTGAGE LOAN AND REGULATORY REFORM

THOMAS E. PLANK¹

I. INTRODUCTION

At the Conference on Behavior and Business Law at the University of Tennessee College of Law, on October 2, 2010, in Knoxville, Tennessee, Professor Edward Janger of Brooklyn Law School presented a draft of a paper authored by him and Professor Susan Block-Lieb, *Reforming Regulation in the Markets for Home Loans*.² This article follows another article by these scholars, *Demand-Side Gatekeepers in the Market for Home Loans*,³ in which the authors tell the “story of how agency problems in the market for securitized home loans,” the encouragement of increased leverage, and the “shift to capital markets financing for home mortgages . . . created a need for both consumer protection and consumer education—not just to protect consumers but also to protect the integrity of the capital markets themselves.”⁴ The *Reforming Regulation* article describes the regulatory regime for the regulation of the market for home loans recently enacted by the Dodd-Frank Wall Street Reform and Consumer Protection Act⁵ (the “Dodd-Frank Act”). The authors “propose a market-sensitive reading of [the Dodd-Frank Act] and suggest that the Bureau of Consumer Financial Protection (the ‘Bureau’) created under the Act should be understood to balance consumer protection with concerns for the liquidity and safety and soundness of the financial markets.”⁶

In arguing that the Dodd-Frank Act “has the potential to create a regulatory architecture that protects both consumers and the capital markets by distinguishing between financial products that can safely be financed through the capital markets and those that

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² See Susan Block-Lieb & Edward Janger, *Reforming Regulation in the Market for Home Loans* (draft of Feb. 18, 2011 unpublished manuscript) (on file with the author) [hereinafter *Reforming Regulation*].

³ See Susan Block-Lieb & Edward Janger, *Demand-Side Gatekeepers in the Market for Home Loans*, 82 TEMPLE L. REV. 465 (2009) [hereinafter *Demand-Side Gatekeepers*]. See generally Susan Block-Lieb & Edward Janger, *Consumer Credit and Competition: The Puzzle of Competitive Credit Markets*, 6 EUR. COMPETITION J. 68 (2010) (discussing the relationship between competitive markets and consumer credit).

⁴ *Demand-Side Gatekeepers*, *supra* note 3 at 466; see also *Reforming Regulation*, *supra* note 2, at 1.

⁵ See *Reforming Regulation*, *supra* note 2 (referencing Pub. L. No. 111-203, 124 Stat. 1376 (July 21, 2010)).

⁶ *Reforming Regulation*, *supra* note 2, at 1.

pose greater risks, and should, by design, be more illiquid,”⁷ their paper contains a great deal of sensible analysis and policy suggestions. But the regulatory regime enacted by Dodd-Frank is predicated on a particular “story” that the authors have embraced—that the particular features of securitization were a substantial cause of the financial crisis of 2008.⁸ In their earlier article, *Demand-Side Gatekeepers*, the authors attribute this causation to a shift from what the authors call relationship lending, which has also been called the originate and hold model, to a capital markets or originate and distribute model for mortgage finance.⁹

I have two concerns with this story. First, the story told is not complete. The shift from relationship lending to a capital markets model occurred for rational reasons that follow naturally from the nature of the mortgage loan itself. Any sensible reform effort must account for the nature of the mortgage loan as a long term asset that should be financed substantially through long term financing. As I discuss below in Parts II and III, under current law, capital markets can provide that long term financing, but relationship lenders cannot to any significant degree. To the extent that reform efforts target the capital markets model, those efforts should impose regulations only if they actually solve a serious problem and if the benefits of the regulations outweigh the costs.

Second, the story may not be true. There is an ongoing debate about the causes of the crisis in the mortgage market. Many explanations have been offered.¹⁰ It is not certain, in my view, that securitization caused the crisis. Instead, the elements of the capital markets that Professors Block-Lieb and Janger consider to be causes of the crisis market could well be the result or the byproducts of the causes.

The regulatory regime described by the authors thus presents a paradox for a conference on behavior and business law: the authors analyze (and offer suggestions regarding) a presumably rational regulatory scheme devised by presumably rational individuals to counteract the effects of both irrational and rational behavior by private actors in the mortgage market—the mortgage loans borrowers, originators, securitizers, rating agencies, and investors. Such an analysis contains a contradiction: what is the result of such a regulatory scheme if either the regulators or the regulatory scheme fail to take into consideration all relevant information and all relevant potential causes? Indeed, the regulatory regime ignores the significant role that faulty government policy may have played in creating the current crisis in the mortgage market.¹¹

We should not eschew any regulation of the mortgage market because of these uncertainties. Any regulatory regime that helps consumers and other market participants

⁷ *Id.*

⁸ *See id.*

⁹ *See Demand-Side Gatekeepers*, *supra* note 3, at 466.

¹⁰ *See* FIN. CRISIS INQUIRY COMM’N, FINAL REPORT (Jan. 2011) xvi-xxvii (describing a long list of contributing factors focused primarily on the behavior of the private sector and claims of insufficient regulation) [hereinafter FCIC REPORT]; Peter J. Wallison, Dissenting Statement, FCIC REPORT 441-533 (arguing that the primary cause of the crisis was the long standing U.S Government housing policies that fostered the housing bubble between 1997 and 2007 and the creation of a 27 million subprime and “alt A” mortgage loans); Adam J. Levitin & Susan M. Wachter, *Explaining the Housing Bubble* 3-5 (Georgetown Bus., Econ. & Regulatory Law Research Paper No. 10-16, Georgetown Pub. Law & Legal Theory Research Paper No. 10-60, Inst. for Law & Econ. Univ. of Pa. Law Sch. Research Paper No. 10-15), *available at* <http://ssrn.com/abstract=1669401> (summarizing existing theories and presenting an alternative explanation).

¹¹ *See* Wallison, *supra* note 10, *passim*.

make better decisions will be beneficial. The risk is great, however, that the regulations that have been proposed and enacted will produce little or no benefits, but will needlessly increase costs for future mortgage borrowers, primarily because of a failure to appreciate the nature of mortgage loans, the need for a reliable system of long term financing for mortgage loans, and a serious misdiagnosis of the causes of the current crisis.

The purpose of this essay is to describe the fundamental nature of mortgage loans that any regime for regulating the mortgage loan financing market must take into account to permit the efficient functioning of an efficient mortgage market. Under current law—specifically the United State Bankruptcy Code¹² and the Federal Deposit Insurance Act¹³ as discussed below¹⁴—the financing of the vast majority of mortgage loans requires the sale of the loans by originators of the loans to bankruptcy or insolvency remote entities that can obtain long term financing from the capital markets. Reform efforts have largely focused on regulating such sales and financing. Without changes in current laws and regulations that permit originators themselves to obtain long term financing that protects investors from the risk of acceleration of that financing because of the insolvency of the originator, the relationship model or the hold and invest model cannot occupy any substantial part of the mortgage finance market. Accordingly, regulatory reform of the capital markets model must seek to improve the functioning of the market and not impose needless costs on borrowers, therefore limiting the availability of credit.

As to the causes of the mortgage crisis, that topic is too big for this article. I will simply raise some questions about the focus of the current reform efforts. In particular, if the primary causes of mortgage market crisis were faulty governmental policies, the real effect of these reform efforts may not be to protect the market from the errors of consumers and participants in the mortgage market, but to raise the costs of the mortgage finance market, to make mortgage finance less affordable and to render the mortgage finance market less efficient. On the other hand, there may be a bright side: perhaps a moribund mortgage finance market would protect the larger finance market from faulty government policies.

II. THE NATURE OF MORTGAGE LOANS—LIQUIDITY RISK AND THE NECESSITY FOR LONG TERM FINANCING

Finding a satisfactory way of financing residential housing in the United States has been a challenge for almost a hundred years. The basic problem: a home, for the homeowner, is a long term asset.¹⁵ Before the 1930s, most homeowners financed the purchase of their homes through short term debt—a mortgage loan with a maturity date from anywhere to 3 to 6 years (although some loans had maturities as long as 12 years), in which the homeowner paid interest and, in some cases, some principal, expecting to refinance or “roll-over” the loan at its maturity date.¹⁶ The consequences of this mismatch between assets and liabilities of the homeowner became apparent as a result of the

¹² See 11 U.S.C. §§ 101 *et seq.* (2006).

¹³ See 12 U.S.C. § 1811 (2006).

¹⁴ See *infra* notes 31-36 and accompanying text.

¹⁵ Although a homeowner typically does not live in one home for the life of the home, the cost of the home does reflect the long term nature of the home.

¹⁶ See J. E. MORTON, *URBAN MORTGAGE LENDING: COMPARATIVE MARKETS AND EXPERIENCE* 91–99 (1959).

Depression in the 1930s, when large numbers of homeowners could not refinance their loans and defaulted.¹⁷

As I have discussed elsewhere, beginning in the 1930s, the federal government stepped in to create the federal savings and loan association industry that encouraged the development and use of the long term fixed rate amortizing mortgage loan.¹⁸ This form of loan, which has been the predominant form of single family mortgage loans since the Depression,¹⁹ solves the mismatch of assets and liabilities for the homeowner. For example, a 30 year amortizing mortgage loan in the amount of \$100,000 bearing an annual interest rate of 6% will require a monthly payment of \$599.55 (and a slightly larger payment on the last month). For the first monthly payment, the accrued interest will be paid in full—\$500—and \$99.55 will be applied to reduce the principal balance.²⁰ Each month thereafter, the monthly payment will pay the accrued interest and reduce the outstanding principal balance. The last monthly payment (\$600.08) will be sufficient to pay the accrued interest (\$2.99) on the remaining balance (\$597.09) and that remaining principal balance. Accordingly, as long as the borrower can afford to make the monthly payments, the borrower will never default.

Federal savings and loan associations funded these mortgage loans through short term deposits (and savings associations and banks continue to do so) and held the mortgage loans in their portfolio. Indeed, they were required to hold mortgage loans. Unfortunately, this financing scheme only moved the problem of the mismatch in assets and liabilities one step up the mortgage finance ladder. As long as short term interest rates remained stable, however, the system worked. This system has been referred to as the “3-6-3” system: the savings association would borrow from depositors at 3%, lend to mortgagors at 6%, and the officers were on the golf course by 3 pm.²¹

Unfortunately, the run up of inflation in the 1960s and 1970s caused the entire system to crash. Any owner of fixed rate loans faces the risk that the value of the loans in its portfolio will decrease if market interest rates rise. For example, the value of a 30 year amortizing mortgage loan with a fixed annual interest rate of 6% will lose more than 10% of its value if market interest rates for comparable loans increase two percentage points to 8%.²² For this reason, inflation and increase in markets interest rates through 1981 caused the entire savings and loan industry to become insolvent.²³

The solution for this defective structure is either (a) the origination of mortgage loans by entities that can hold these long term mortgage loans assets and finance them with long term liabilities or match them with long term liabilities—such as life insurance

¹⁷ See WILLIS R. BRYANT, *MORTGAGE LENDING: FUNDAMENTALS AND PRACTICES* 7–9 (2d ed. 1962).

¹⁸ See Thomas E. Plank, *Regulation and Reform of the Mortgage Market and the Nature of the Mortgage Loan: Lessons from Fannie Mae and Freddie Mac*, 60 SO. CAR. L. REV. 779, 784 n. 29 (2009) [hereinafter *Lessons from Fannie Mae and Freddie Mac*] (noting that since 1984, the fixed rate mortgage loan represented more than 70% of all mortgage loans, and that adjustable rate mortgage loans exceeded more than 50% of the originations in only three years).

¹⁹ See *id.* at 785 (setting forth a sample amortization schedule).

²⁰ See *id.*

²¹ See *id.* at 794.

²² See *id.* at 790 (setting forth the changes in the present value of a pool of mortgage loans caused by an increase or decrease of market rates 2 years after origination of the mortgage loans, depending on the different assumptions about the rate of prepayment that may arise because of the changes in the market rate).

²³ See *id.* at 782 (citing Kenneth E. Scott, *Never Again: The S&L Bailout Bill*, 45 BUS. LAW. 1883, 1885 (1990)).

companies or pension funds—or (b) the origination of mortgage loans and the sale of the mortgage loans to entities that can hold long term assets. Accordingly, beginning in the 1970s, Congress authorized Fannie Mae and Freddie Mac to buy mortgage loans from originators and issue pass-through securities payable from the mortgage loans but bearing a guarantee against default (for which guarantees the borrower paid a guarantee fee included in the interest rate). These securities could then be sold into the capital markets to entities that could bear the risk of changes in market value because of changes in market interest rates.

In addition, for mortgage loans that Fannie Mae and Freddie Mac could not buy, such as loans whose balance exceeded the statutory limits imposed on Fannie Mae and Freddie Mac, the market created private securitization in which originators sold mortgage loans to sponsors of securitizations (or were themselves the sponsors) that sold loans to a securitization trustee and caused the issuance into the capital markets of securities backed by the mortgage loans. The credit enhancement for these securities was typically provided through dividing the securities into senior and subordinate tranches. The subordinate tranches, which would have a higher interest rate, would bear any losses before the senior tranches. Accordingly, the senior tranches would receive high ratings—typically AAA—by rating agencies.²⁴

By carving up the cash flow from the mortgage loans into different tranches, the sponsors could also devise securities that appealed to different investor preferences for market value risk as well as credit risk. For example, the senior securities would typically be issued in tranches in which the first tranche would receive all of the principal payments until paid in full, and then later tranches of the senior securities would similarly receive all principal until paid in full. Hence, the cash flow from a pool of mortgage loans—itsself with a 30 year legal maturity—could be used to create securities with short, medium and long term expected maturities. In the case of private securitization, subordinate classes would typically be issued to investors wanting more yield and willing to take more risk (or be retained by the sponsor through a bankruptcy remote subsidiary).

The public and private securitization of mortgage loans seemed to solve the problem of matching long term mortgage loan assets with long term liabilities. Both the public and private securitization grew through the 1980s and 1990s, while the holdings of mortgage loans by savings associations declined. Specifically, from the end of 1945 through the end of 1958, the holdings by saving associations of single family, first lien mortgage loans, based on outstanding principal balance, grew from 38% to 50% of all single family mortgage loans and stayed above 50% until the end of 1980, when it began to fall quickly to 30% by the end of 1987, below 20% by the end of 1991, below 10% by the end of 2001, and to 7% by the end of 2006, just at the peak of the real estate bubble.²⁵

²⁴ See Thomas E. Plank, *The Security of Securitization and the Future of Security*, 25 CARDOZO L. REV. 1655, 1667 (2004) [hereinafter *Security of Securitization*].

²⁵ See BD. OF GOVERNORS OF THE FED. RESERVE SYS., FLOW OF FUNDS ACCOUNTS OF THE UNITED STATES: ANNUAL FLOWS AND OUTSTANDINGS 2005-2009, at 87, tbl. L.218, ll. 5, 12, 22 & 24 (Dec. 9, 2010) [hereinafter FRB OUTSTANDINGS 2005-2009; also, each Flow of Funds Accounts for previous decades is referred to as FRB OUTSTANDINGS, accompanied by the years designation] (the net of l. 12 less l. 24, divided by the net of l. 5 less l. 22, to remove the home equity and junior liens, a substantial portion of which are not long term amortizing mortgage loans); FRB OUTSTANDINGS 1995-2004, at 87, tbl. L.218 ll. 5, 12, 22 & 24; FRB OUTSTANDINGS 1985-1994, at 87, tbl. L.218 ll. 5, 12, 22 & 24 (same calculations for the years beginning 1990; for years before 1990, the l. 12 divided by l. 5; no data was reported for home equity loans); FRB OUTSTANDINGS 1975-1984, at 87, tbl. L.218 ll. 5, 12 (line 12 divided by line 5); FRB OUTSTANDINGS 1965-1974, at 87, tbl. L.218 ll. 5, 12 (same

In contrast, as Table 1 below shows, beginning in 1971, the percentage of single family first lien mortgage loans held by the Fannie Mae, Freddie Mac, Ginnie Mae, and the Farmers Home Administration²⁶ (the latter two holding much smaller amounts of mortgage loans) in mortgage pools backing mortgage-backed securities grew from 2.1% to 12.1% in 1976, to 30% at the end of 1986 to over 52% at the end of 2001. Then, from the end of 2001 to the end of 2006, the percentage declined to 39%. In addition, the percentage of single family first lien mortgage loans held by issuers of asset-backed securities grew from 1% as of the end of 1986 to 8.6% as of the end of 2001, and then grew to 21.9% as of the end of 2006, its peak.

Curiously, the percentage of single family first lien mortgage loans held by commercial banks between the end of 1945 and the end of 2010 held fairly steady between 13% and 17% (except for the years 1946 through 1955, when the percentages exceeded 17% and reached 22.3% as of the end of 1947). Presumably, commercial banks, whose business activities are more diversified than savings and loans associations, could afford to hold onto these long term assets. Also, because savings associations and commercial banks could finance their holdings through federally-insured deposits, the percentages for both types of financial institutions could reflect inventory being held for sale or securitization. On the other hand, the percentage of such mortgage loans held by life insurance companies peaked at the end of 1951 at 20.5% and thereafter declined to 13.3% as of the end of 1966 and then to less than 1% as of the end of 1986.

After the peak of the single family housing real estate bubble in 2006, discussed below, private securitization began to decline, and the bursting of the bubble in 2008 caused a dramatic decline in both total originations and the private securitization of mortgage loans. During 2008 and 2009, the “net change in assets” for all single family first lien mortgage loans equaled a negative \$214.2 billion; that is, the principal balance of outstanding mortgage loans declined by \$214.2 more than the original principal balance of new originations.²⁷ During the same time, the “net change in assets” for mortgage loans held by issuers of asset-backed securities was a negative \$607.9 billion.²⁸ For this reason, as noted in the table below, the balance of mortgage loans held by such issuers declined 6.7 percentage points in three years from 21.9% to 15.2%. Because the balance held by savings institutions also declined four percentage points, the slack was taken up by the government sponsored enterprises (“GSEs”), whose net holdings increased by \$891.2 in 2008 and 2009,²⁹ and whose holding increased to 59% at significant cost to the federal government and ultimately taxpayers and future mortgagors.

The change in the types of entities that hold mortgage loans is illustrated by the following chart:

calculation); FRB OUTSTANDINGS 1955-1964, at 87, tbl. L.218 ll. 5, 12 (same calculation); FRB OUTSTANDINGS 1945-1954, at 87, tbl. L.218 ll. 5, 12 (same calculation), all *available at* <http://www.federalreserve.gov/releases/z1>.

²⁶ See FRB OUTSTANDINGS 2005-2009, *supra* note 25, at 81 tbl. L.218 note 1.

²⁷ See *id.* at 42, tbl. F.218, ll. 5, 22 (the net of l. 5 less l. 22, to remove the home equity and junior liens).

²⁸ See *id.* at 42, tbl. F.218, ll. 19, 26 (the net of l. 19 less l. 26, to remove the home equity and junior liens).

²⁹ See *id.* at 42, tbl. F.218, ll. 17, 18.

| Table 1 ³⁰ | | | | | | | |
|--|------|------------------------|------------|----------------|----------------|-------------|---------------------|
| Percentage Holdings of Single Family First Lien Mortgage Loans | | | | | | | |
| End of Year | GSE | Agency & GSE MBS Pools | Sav. Inst. | Life Ins. Cos. | Issuers of MBS | Comm. Banks | Total \$ (millions) |
| 1946 | 0.0% | 0.0% | 38.0% | 11.0% | 0.0% | 19.8% | 23,074 |
| 1951 | 0.0% | 0.0% | 38.3% | 20.5% | 0.0% | 19.9% | 51,745 |
| 1956 | 0.7% | 0.0% | 47.8% | 20.4% | 0.0% | 16.5% | 98,686 |
| 1961 | 1.9% | 0.0% | 54.1% | 16.7% | 0.0% | 13.0% | 153,976 |
| 1966 | 1.9% | 0.1% | 56.6% | 13.0% | 0.0% | 14.1% | 232,689 |
| 1971 | 5.5% | 2.1% | 56.6% | 7.7% | 0.0% | 15.1% | 318,361 |
| 1976 | 5.9% | 7.0% | 57.4% | 3.0% | 0.0% | 16.1% | 534,962 |
| 1981 | 6.2% | 12.1% | 48.0% | 1.7% | 0.0% | 16.3% | 1,030,173 |
| 1986 | 6.1% | 30.0% | 32.9% | 0.8% | 1.0% | 13.5% | 1,729,444 |
| 1991 | 5.1% | 44.3% | 18.8% | 0.5% | 3.8% | 13.0% | 2,552,323 |
| 1996 | 6.0% | 49.3% | 13.5% | 0.2% | 6.2% | 15.5% | 3,405,863 |
| 2001 | 4.4% | 52.7% | 10.4% | 0.1% | 8.6% | 14.7% | 5,219,583 |
| 2006 | 4.9% | 39.0% | 7.8% | 0.1% | 21.9% | 15.2% | 9,389,461 |
| 2009 | 4.5% | 53.6% | 3.8% | 0.1% | 15.2% | 15.3% | 9,828,911 |

These changes in the holders of mortgage loans reflect a rationale response to a significant risk inherent in mortgage loans. Any saving association in the business of making mortgage loans that wanted to survive could not hold onto them. It had to “sell, sell, sell.” Those who decry the originate and distribute model and tout the benefits of dealing with the

³⁰ See FRB OUTSTANDINGS for years 1945-2009, *supra* note 25, at 87, tbl. L.218, ll. 5, 12-14, 17-19, 22-24, 26 (netting out home equity and junior liens).

Jimmy Stewart character in *It's a Wonderful Life*³¹ and the Bailey Building and Loan³² have failed to account for this significant risk inherent in mortgage finance.

The originate and distribute model may create a risk of agency problems. The question is to what extent are these agency problems greater than or different from any other type of property that is manufactured and sold. Many involved in the sales and distribution system for numerous types of property receive up front fees and bear little legal risk from the sales other than liability for breach of express or implied warranties. Were the up front fees and the lack of liability for mortgage loans sufficiently different from other types of property that those fees need to be regulated and increased liability for the sold assets need to be imposed? Is the reliance on representations and warranties for the sale of mortgage loans—typically much more extensive than those given to buyers of other types of property—insufficient? Should we, the smart regulators, limit the types of mortgage loans that can be originated and sold? These issues need to be addressed wisely. They should be done so in the context of and on the basis of the need to allow for the efficient origination and sale of mortgage loans. Further, any stable system of mortgage finance must provide for the financing of mortgage loans by entities who can match their long term mortgage assets with their long term financing liabilities.

III. THE NATURE OF MORTGAGE LOANS—PROTECTING INVESTORS FROM ACCELERATION RISK

As noted above, one of the risks inherent in the long term fixed rate mortgage loan is that the value of the mortgage loans will decline if the market interest rates increase. Financing mortgage loans therefore requires finding long term investors that can account for this risk. Another risk that these long term investors face, however, is that market interest rates will fall, and the value of both the mortgage loans and any long term financing payable from the mortgage loans will also rise. When interest rates rise, borrowers will seek to refinance the debt that carries higher rates with debt that has a lower rate.

The ability of a borrower to refinance its debt is essentially a one-way option. If interest rates rise, the borrower and the investor are locked in, to the benefit of the borrower and the detriment of the lender. If interest rates fall, however, a refinancing by a borrower gives the lender the par value of its investment and not the market value. For example, a 30-year \$100,000 mortgage loan bearing interest at a fixed rate of 6% would be worth about \$125,000 if mortgage interest rates fell to 4% two years later and the mortgagor could not prepay the mortgage. Mortgage loans, however, are generally prepayable. Depending on what assumptions an investor makes about the rate of prepayment, the mortgage loan described above may be worth only about \$106,000. Hence lenders take the downside risk but do not get the upside benefit from change in interests rates. This risk is priced into the initial interest rate charged for each mortgage loan.³³

One way to ameliorate the risk of prepayment is to require the borrower to pay a prepayment penalty or pay a “make whole” premium if it seeks to repay before a certain

³¹ *IT'S A WONDERFUL LIFE* (RKO Radio Pictures 1946).

³² See *Lessons from Fannie Mae and Freddie Mac*, *supra* note 18, at 794 (setting forth the changes in the present value of a pool of mortgage loans caused by an increase or decrease of market rates 2 years after origination of the mortgage loans, depending on the different assumptions about the rate of prepayment that may arise because of the changes in the market rate).

³³ See *id.* at 790.

time. Such prepayment penalties or make whole premiums are common in commercial loans and corporate and governmental revenue bonds. To the extent that a regulatory regime prohibits such prepayment penalties, the regime is simply engaging in price control.

Investors that provide long term financing for the origination of single family mortgage loans must live with the risk of prepayment of the mortgage loans. They can do so because there is sufficient information available that allows investors to price for the likely risk. Investors that provide such long term financing, however, also seek to be protected from prepayment or acceleration of their investments for reasons other than the prepayment of the underlying mortgage loans. For example, imagine that a mortgage loan originator—say, TEP Acceptance Corp.—borrows money from a lender pursuant to a long term debt obligation so that it can originate and hold a pool of single family mortgage loans. It quite happily grants the lender a security interest in that specific pool to secure the debt, and the debt is expected to be paid from the pool. Assume that the pool performs well, and the cash flow from the mortgage loans will be sufficient for the timely payment of principal and interest on the long term debt. So far, so good.

Unfortunately, the originator could get into financial difficulty for reasons unrelated to the pool of mortgage loans and the pool's ability to repay the secured debt. Perhaps another pool of mortgage loans goes bad, the cash flow is not sufficient to repay a separate lender with a security interest in that pool, and the other lender starts to foreclose on the other pool. Or an investment in a real estate development goes bad, and other creditor seek to foreclose on the originator's assets. Or an employee commits a tort for which there is insufficient insurance. For any of these and other reasons, it may be necessary for the originator, TEP Acceptance Corp., to file for bankruptcy.

Such a bankruptcy filing will adversely affect the fully-secured lender whose debt was being paid in a variety of ways.³⁴ First, a bankruptcy filing accelerates all debts of creditors, including the secured lender whose long term debt is otherwise being paid, at the par amount or face amount of the debt, regardless of the market value of the debt.³⁵ Second, although the lender's debt is accelerated, an automatic stay of indeterminate duration will prevent the lender from getting any payments on its debt or exercising its remedies against the collateral securing the debt, until the bankruptcy case is resolved through liquidation, confirmation of a reorganization plan, or dismissal, unless the lender has grounds for relief from the automatic stay.³⁶

The lender to the originator may be able to price for this bankruptcy risk, but the price is likely to be high and the costs to the originator are likely substantial. One study that contrasted the cost of a securitization of automobile loans against the corporate debt of a highly rated originator of automobile loans provides an example of these costs. This study,

³⁴ See generally *Security of Securitization*, *supra* note 24, at 1658, 1669-71; see also Thomas E. Plank, *Sense and Sensibility in Securitization: A Prudent Legal Structure and a Fanciful Critique*, 30 CARDOZO L. REV. 617, 621-23 (2008).

³⁵ See 11 U.S.C. § 502(b)(2) (if objection to a proof of claim of a creditor is made, "the court, after notice and a hearing, shall determine the amount of such claim . . . as of the date of the filing of the petition, and shall allow such claim in such amount [with exceptions not relevant]").

³⁶ See 11 U.S.C. § 362(a)(6) (providing that the filing of a petition operates as a stay of "any act to collect, assess, or recover a [prepetition] claim against the debtor"); *id.* § 362(c), (d) (providing that the stay continues until the case is closed or dismissed or relief is granted by the court); *id.* §§ 725-726 (providing for distribution to creditors in chapter 7); *id.* § 1123 (providing for distribution in chapter 11); *id.* § 549 (avoidance of unauthorized post petition transfers).

done in 1987, compared the costs of a \$4 billion private securitization of automobile loans by General Motors Acceptance Corporation in 1986 and the costs of the issuance of corporate debt (then rated AA+) of GMAC. This study showed a substantial savings for the securitization of about 130 basis points, or 1.38% percentage points, annually on the declining balance of the pool.³⁷ Significantly, practically all of the cost savings derived from the fact that, unlike the private securitization, GMAC had to provide a substantial amount of equity behind its corporate debt to warrant a AA+ credit rating, and the cost of this equity equaled 128 basis points, or 1.28% percentage points, of its debt. This equity was, in essence, necessary to provide assurance at the AA+ level that GMAC would not become a debtor in bankruptcy.

The mortgage loan originator, such as TEP Acceptance Corp., can avoid these costs—which it would have to pass on to its borrowers if it were to stay in business—by selling its loans to Fannie Mae, Freddie Mac or a private securitization trust.³⁸ In all three cases, the loans are placed in a trust and pass through securities are issued to investors. Fannie Mae and Freddie Mac issue a guarantee for their securities, and the private securitization trusts are structured primarily with internal credit enhancement that enables the issuance of highly-rated senior securities. In the case of public securitizations, the guarantee by Fannie Mae and Freddie Mac render the bankruptcy risk of the originator irrelevant (although the transfers are generally structured as true sales similar to the sales in private securitizations). Private securitizations protect the investors from the bankruptcy risk of the originator because the sponsors of the securitization structure the sale of the loans from the originator as a “true sale” that removes the mortgage loans from any potential bankruptcy estate of the originator.³⁹

Depository institutions like savings institutions and banks, whose deposits are insured by the Federal Deposit Insurance Corporation, that originate mortgage loans also face similar issues. Although they can finance their originations out of their deposits, long term direct financing by these institutions also presents acceleration risk if the FDIC is appointed as receiver or conservator of the depository institution.⁴⁰

Again, the originate and distribute model is necessary, at least under current law, to protect investors from a significant risk inherent in the long term financing of mortgage loans.⁴¹ It is no accident that since 1979, when the current Bankruptcy Code went into

³⁷ See James A. Rosenthal & Juan M. Ocampo, *Analyzing the Economic Benefits of Securitized Credit*, 1988 J. APPLIED CORP. FIN. 32, 36-40 (1992).

³⁸ Mortgage loans insured by the Federal Housing Administration can also be placed into trusts that issue securities guarantee by Ginnie Mae. See 12 U.S.C. §§ 1717(a)(2)(A), (b)(1), 1721, 1723(a).

³⁹ See 11 U.S.C. § 541(a)(1) (providing that the commencement of a case creates an estate, and the estate consists of “all legal or equitable interests of the debtor in property as of the commencement of the case”); see also *Security of Securitization*, *supra* note 24, at 1672-78.

⁴⁰ See 12 U.S.C. § 1821(c) (providing for the appointment of the Federal Deposit Insurance Corporation as receiver or conservator of the insured depository institution); *id.* § 1821(d) (empowering the FDIC as a receiver or conservator to succeed to all rights, titles, powers, and privileges of the depository institution, to take over the assets of and to operate the depository institution, as receiver to liquidate the depository institution and to realize on its assets, to pay all valid obligations of the depository institution, and to determine claims in accordance with the FDI Act).

⁴¹ Amendments to the Bankruptcy Code in 2005 relieved short term lenders to mortgage originators from the risks of the automatic stay and other risks. See Thomas E. Plank, *Toward a More Efficient Bankruptcy Law: Mortgage Financing Under the 2005 Bankruptcy Amendments*, 31 S. ILL. U. L.J. 641, 659-67 (2007).

effect, entities that are eligible to be debtors in bankruptcy (other than bankruptcy remote issuers of asset-backed securities) have never held more than 11.3% of single family mortgage loans, and since 1989 have held less than 10%.⁴² Because of the costs imposed on secured creditors that lend to persons that are eligible to be debtors under the Bankruptcy Code, those persons cannot feasibly engage in the long term financing of mortgage loans.

IV. REGULATORY REFORM AND THE ROLE OF SECURITIZATION IN THE MORTGAGE MARKET CRISIS

As noted above, private securitization took an increasing share of the financing of mortgage loans. Professors Block-Lieb and Janger,⁴³ as have others,⁴⁴ have attributed the mortgage market crises to this growth of securitization and certain features of securitization. Most of the regulatory reform efforts have been directed to these presumed defects in the securitization process. If securitization were the cause of the mortgage loan market crisis, then this regulatory reform should protect consumers and investors from the machinations of originators, sponsors of securitizations, underwriters, and rating agencies. However, what if the growth of securitization and its perceived defects did not cause the crisis? What if the perceived defects in the securitization process were simply a result or by-product of a mortgage market crisis caused primarily by federal governmental policies? What if the market crisis were caused by the Federal Reserve Board keeping interest rates so low from 2001 to 2003, the defects in the design and operations of Fannie Mae and Freddie Mac, and the governmental push for increasing home ownership?

If federal government policies were the primary cause of the mortgage market crisis, regulatory reforms that limit private actors in financing mortgage loans through the capital markets will most likely only increase the cost of mortgage financing without providing any offsetting benefits. If federal policy caused the crisis, the only benefit of the regulatory reform would be to increase the costs of mortgage financing to save consumers and investors from federal governmental actions.

I am skeptical of claims that securitization was a primary cause of the mortgage crisis. I do not propose to refute that proposition here. My purpose is more modest: to provide information that questions the plausibility of the assertion that the growth of securitization or the alleged defects in the securitization process would be sufficient to cause the crisis.

First, the following table sets forth the increases in the principal balance of single family first lien mortgage loans,⁴⁵ the increase in home prices as measured by the Case

⁴² See, e.g. FRB OUTSTANDINGS for the years 1945-2009, *supra* note 25, at 87, tbl L. 218, ll. 5-26 (net of home equity loans). These entities are nonfarm nonfinancial corporate business, nonfarm noncorporate business, households, private pension funds, finance companies and real estate investment trusts.

⁴³ See *supra* notes 3 and 7 and accompanying text.

⁴⁴ See generally Kurt Eggert, *Held Up in Due Course: Predatory Lending, Securitization, and the Holder in Due Course Doctrine*, 35 Creighton L. Rev. 503 (2002); Levitin and Wachter, *supra* note 10.

⁴⁵ See Table 1 *supra*.

Schiller U.S. National Home Price index,⁴⁶ and the Consumer Price Index-All Urban Consumers calculated by the Bureau of Labor Statistics of the U.S. Department of Labor.⁴⁷

| Col: | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------|-----------------------------|---|---------------------|----------------------------------|-------|---------------|
| End of Year | Total Mortgage Loan Balance | Annual Increase Total Mortgage Loan Balance | CS Home Price Index | Annual Increase Home Price Index | CPI | Ann. Inc. CPI |
| 1987 | 1,927,700 | 11.5% | 66.18 | | 115.4 | |
| 1988 | 2,162,113 | 12.2% | 71.22 | 7.62% | 120.5 | 4.4% |
| 1989 | 2,368,907 | 9.6% | 75.37 | 5.83% | 126.1 | 4.7% |
| 1990 | 2,391,619 | 1.0% | 74.59 | -1.03% | 133.8 | 6.1% |
| 1991 | 2,552,323 | 6.7% | 74.65 | 0.08% | 137.9 | 3.1% |
| 1992 | 2,724,640 | 6.8% | 74.74 | 0.12% | 141.9 | 2.9% |
| 1993 | 2,890,295 | 6.1% | 75.91 | 1.57% | 145.8 | 2.8% |
| 1994 | 3,056,124 | 5.7% | 77.89 | 2.61% | 149.7 | 2.7% |
| 1995 | 3,207,918 | 5.0% | 79.51 | 2.08% | 153.5 | 2.5% |
| 1996 | 3,405,863 | 6.2% | 81.18 | 2.10% | 158.6 | 3.3% |
| 1997 | 3,605,586 | 5.9% | 84.80 | 4.46% | 161.3 | 1.7% |
| 1998 | 3,949,084 | 9.5% | 90.81 | 7.09% | 163.9 | 1.6% |
| 1999 | 4,348,620 | 10.1% | 98.29 | 8.24% | 168.3 | 2.7% |
| 2000 | 4,698,620 | 8.0% | 107.90 | 9.78% | 174.0 | 3.4% |
| 2001 | 5,219,583 | 11.1% | 116.23 | 7.72% | 176.7 | 1.6% |

⁴⁶ See Case Schiller U.S. National Home Price index, 3rd Quarter 2010 (data as of Jan. 25, 2011), available at <http://www.standardandpoors.com/indices/sp-case-schiller-home-price-indices/en/us/?indexId=SPUSA-CASHPIDFF--P-US----> (last visited Feb. 12, 2011).

⁴⁷ See U.S. DEPARTMENT OF LABOR BUREAU OF LABOR STATISTICS, CONSUMER PRICE INDEX-ALL URBAN CONSUMERS (CPI-U) (as of Jan. 14, 2011), available at <ftp://ftp.bls.gov/pub/special.requests/cpi/cpi.txt> (last visited Feb. 13, 2011).

⁴⁸ Columns 2, 4, and 6 present the annual increase in, respectively, the mortgage balances and the home price and CPI indices in the preceding column.

| Table 2 ⁴⁸ | | | | | | |
|--|-----------------------------|---|---------------------|----------------------------------|-------|---------------|
| Increases in Total Single Family First Lien Mortgage Loans, Case Schiller US National Home Price Index, and Consumer Price Index (CPI) | | | | | | |
| Col: | 1 | 2 | 3 | 4 | 5 | 6 |
| End of Year | Total Mortgage Loan Balance | Annual Increase Total Mortgage Loan Balance | CS Home Price Index | Annual Increase Home Price Index | CPI | Ann. Inc. CPI |
| 2002 | 5,912,512 | 13.3% | 128.58 | 10.63% | 180.9 | 2.4% |
| 2003 | 6,646,508 | 12.4% | 142.29 | 10.66% | 184.3 | 1.9% |
| 2004 | 7,492,629 | 12.7% | 163.06 | 14.60% | 190.3 | 3.3% |
| 2005 | 8,467,564 | 13.0% | 186.97 | 14.66% | 196.8 | 3.4% |
| 2006 | 9,389,461 | 10.9% | 186.44 | -0.28% | 201.8 | 2.5% |
| 2007 | 10,035,969 | 6.9% | 170.75 | -8.42% | 210.0 | 4.1% |
| 2008 | 9,957,255 | -0.8% | 139.42 | -18.35% | 210.2 | 0.1% |
| 2009 | 9,829,911 | -1.3% | 136.04 | -2.42% | 215.9 | 2.7% |

Table 3 sets forth a comparison of the increases described in Table 2.

| Table 3 ⁴⁹ | | | | |
|--|---------------------------------------|---|--|----------------------------|
| Comparison of increases in total single family first lien mortgage loans, Case Schiller US National Home Price index, and consumer price index | | | | |
| Col: | 7 | 8 | 9 | 10 |
| End of Year | Δ: Mtg Balance Less CS Index | Δ: Lag Mtg Balance: Mtg Balance Less CS Index for Previous Year | Δ: Lag CS Index: Mtg Balance for Previous Year Less CS Index | Δ: CS Index Less CPI |
| 1987 | | | | |
| 1988 | 4.6% | | | 3.2% |
| 1989 | 3.8% | 2.0% | 6.4% | 1.2% |
| 1990 | 2.0% | -4.8% | 10.6% | -7.1% |
| 1991 | 6.6% | 7.7% | 0.9% | -3.0% |
| 1992 | 6.7% | 6.7% | 6.6% | -2.8% |
| 1993 | 4.5% | 6.0% | 5.2% | -1.2% |
| 1994 | 3.1% | 4.1% | 3.5% | -0.1% |
| 1995 | 2.9% | 2.4% | 6.6% | -0.5% |
| 1996 | 4.1% | 4.1% | 2.9% | -1.2% |
| 1997 | 1.4% | 3.8% | 1.7% | 2.8% |
| 1998 | 2.4% | 5.0% | -1.2% | 5.5% |
| 1999 | 1.9% | 3.0% | 1.3% | 5.6% |
| 2000 | -1.8% | -0.2% | 0.3% | 6.4% |
| 2001 | 3.4% | 1.3% | 0.3% | 6.2% |
| 2002 | 2.7% | 5.6% | 0.5% | 8.3% |
| 2003 | 1.7% | 1.8% | 2.6% | 8.8% |

⁴⁹ Column 7 sets forth the net of the annual percentage increase in the mortgage balance minus the annual percentage increase in the Case Schiller home price index for the same year. Column 8 sets forth the net of the annual percentage increase in the mortgage balance for the year indicated minus the annual percentage increase in the Case Schiller home price index for the preceding year. Hence, Column 8 compares the increases in mortgage loan balance and home price indices by lagging the increase in the mortgage balance. Column 9 does the reverse of column 8. It sets forth the net of the annual percentage increase in the mortgage balance for the previous year minus the annual percentage increase in the Case Schiller home price index for the year indicated. This column lags the differences home price index. Finally, Column 10 shows the net result of the annual percentage increase in the Case Schiller home price index minus the annual percentage increase in the consumer price index for the same year.

| Col: | 7 | 8 | 9 | 10 |
|-------------|---------------------------------|--|---|-------------------------|
| End of Year | Δ: Mtg Balance Less CS Index | Δ: Lag Mtg Balance: Mtg Balance Less CS Index for Previous Year | Δ: Lag CS Index: Mtg Balance for Previous Year Less CS Index | Δ: CS Index Less CPI |
| 2004 | -1.9% | 2.0% | -2.2% | 11.3% |
| 2005 | -1.7% | -1.6% | -2.0% | 11.2% |
| 2006 | 11.2% | -3.8% | 13.3% | -2.8% |
| 2007 | 15.3% | 7.2% | 19.0% | -12.5% |
| 2008 | 17.6% | 7.6% | 25.3% | -18.4% |
| 2009 | 1.1% | 17.1% | 1.6% | -5.1% |

Table 2 illustrates the magnitude of the real estate bubble. It shows, for example, the tremendous growth in the nominal balance of outstanding mortgage loans, from \$5.2 trillion in 2001 to \$9.4 trillion at the end of 2006, an 81% increase, and a tremendous growth in the Case Schiller national housing price index from 116.23 at the end of 2001 to 186.44 at the end of 2006, a 60% increase. So, for the five year period, nominal mortgage balance increased faster than the housing price index. This fact might suggest that the increase in mortgage balance pushed the increase in housing prices. However, on a year by year basis, column 7 of Table 3 shows that the disparity in the increase of nominal mortgage loan balance over the increase in housing price index occurred in 2001-2003. Again this might suggest that the increase in mortgage loan balance was pushing up housing prices in these years, but, as noted below,⁵⁰ in these years the increase in the amount of mortgage loans held by issuers of asset backed securities was modest. In 2004 and 2005, however, mortgage loan balance increased slower than housing prices, during the years when the amount of mortgage loans held by issuers of asset backed securities increased by larger amounts. In 2006, the mortgage loan balance continued to go up, but housing prices started to flatten. This data suggests that increases in mortgage loan balances followed increases in home prices. If so, how could increased mortgage loan supply cause the increase in home real estate prices, and thus, the bubble?

Further evidence suggesting that the increase in mortgage balance followed the increase in home prices, and that the increase in home prices did not follow the increase in mortgage balance, is shown by columns 8 and 9. If we compare the annual increase in the mortgage balance with the annual increase in home prices for the previous year, set forth in column 8, we see that mortgage balance increased more than the home prices in every year

⁵⁰ See *infra* notes 52-53 and accompanying text.

from 2001 through 2004, and the largest positive difference—5.6%—in the increase occurred in 2002. Only in 2005 and 2006, were mortgage balance increases lower than the increase in housing prices the previous year. Hence, as home prices for the previous year increased, there were larger increases in mortgage loan balances the following years of 2001-2004.

On the other hand, if we compare the annual increase in the mortgage balance for the previous year with the annual increase in home prices for the year indicated, set forth in column 9, we see much smaller differences in the increases during 2001-2003 and negative differences in 2004 and 2005. Hence, increases in mortgage loans balances in 2000-2004 had little affect on housing price increases in 2001-2005. Of course, in 2006, when housing prices actually declined for the year, if we compare the increase in mortgage loan balance for 2006 against the decrease in home price for 2006, column 7, we also see that the mortgage loan balance still increased. Moreover, we also see an increase in mortgage balance for 2005 as compared to the decrease in home prices for 2006, in column 9. This fact suggests that increases in mortgage balance lagged behind the increases in home prices. Further, this increase was not necessarily reckless. In comparing the increase in mortgage loan balance for 2006 against the increase in home price for 2005 in column 8, we see a decline of 3.8%. Hence, the market was starting to get the message that home prices were not increasing, and therefore, mortgage balances should not increase as much as they had in the past.

Table 3 along with Table 2 also shows the tremendous increase in housing prices over the increases in the consumer price index: for the years 1998-2001, six percentage points; for the year 2002, eight percentage points; for the year 2003, nine percentage points; and for the years 2004-2005, 11 percentage points. Further, housing prices in 2004-2005 increased faster than both mortgage loan balances and the consumer price index.

It is interesting to contrast this information with the short term interest rates during 2001-2003 and the increases in the mortgage balances held by issuers of asset-backed securities during the years 2001-2006.

First, from September 2001 through January 2005, the one year treasury bond rate was below 3%, and from July 2002 through May 2004, it was below 2%.⁵¹ Accordingly, during this time it was below the combination of the theoretical “real” interest rate—that is, the rate at which lenders would lend and borrower would borrow if there were no inflation or risk of default—of 2.5 to 3% and the inflation rate as measured by the consumer price index (shown in column 6 above). In effect, when the interest rate charged to borrower is less than the real interest rate plus inflation, lenders are paying borrowers to borrow. Lenders may well do so when their alternatives are more costly.

During this time, there was a significant increase in the amount of mortgage loans held by issuers of asset-backed securities. In the years 2001, 2002, and 2003, the “net change in assets” for single family first lien mortgage loans held by such issuers was, respectively, \$78 billion, \$80 billion, and \$122 billion; that is, the original principal balance of new originations acquired by issuers of asset-backed securities exceeded the reductions of the outstanding principal balance of outstanding mortgage loans held by such issuers in each of those years by, respectively, \$78 billion, \$80 billion, and \$122 billion.⁵² In 2004, 2005, and

⁵¹ See BD. OF GOVERNORS OF THE FED. RESERVE SYS., MARKET YIELD ON U.S. TREASURY SECURITIES AT 1-YEAR CONSTANT MATURITIES, QUOTED ON INVESTMENT BASIS, *available at* http://www.federalreserve.gov/releases/h15/data/Monthly/H15_TCMNOM_Y1.txt (last visited Mar. 9, 2009).

⁵² See FRB OUTSTANDINGS 1995-2004, *supra* note 25, at 42, tbl. F.218, ll. 19, 26 (the net of l. 19 less l. 26, to remove the home equity and junior liens).

2006, this amount increased, respectively, to \$381 billion, \$566 billion, and \$502 billion.⁵³ For 2004-2006, these are large numbers to be sure. But Tables 2 and 3 indicate that these increases were not driving up housing prices, but rather, the increase in housing prices were driving up these increases in mortgage loan balances held by issuers of asset-backed securities.

Further, the size of the increases in holdings of mortgage loans by issuers of asset-backed securities must be contrasted with the likely effect of the low interest rates on the United States economy and the total amount of debt outstanding during this time. The total amount of debt grew from \$29 trillion in 2001 to \$45 trillion in 2006.⁵⁴ Much of this total debt need not be short term debt. Still, what is the economic effect of short term interest rates that, for the years of 2001-2003, were below the real rate of interest and inflation on the economy?⁵⁵ How does this economic effect interplay with an increasing issuance of mortgage loans acquired by issuers of asset-backed securities? It seems dubious that the large issuance of private mortgage backed securities could have caused the dramatic increases in home prices in the years 2004 and 2006, and the slight decrease in housing prices in 2006 would not be explained by the net increase in mortgage holdings in 2006 of \$502 billion.

By experience and education, I am skeptical of more regulation. Sometimes regulation is a good thing. More often, however, regulation enables entrenched interest groups to protect their own interests without regard to the greater good. In my view, those who claim that regulation in a particular setting is good thing bear the burden of proving that the benefits outweigh the costs. This is a heavy burden.

Free markets are self correcting. If participants in the market make mistakes—and they often do—the participants learn from their mistakes, and the markets correct fairly quickly. An unregulated securitization market will adjust. Eventually, consumers and investors will learn what they can afford to buy.

On the other hand, regulatory regimes are not self correcting. When the regulators make mistakes, they do not correct those mistakes by themselves. First, regulators bear very little of the cost of the mistakes in the system. They have no built in incentive to correct mistakes. Second, the interest groups that have adjusted to any specific regulatory regime have no incentive to correct the regime to make it more efficient for the benefit of all. Accordingly, correcting a faulty regulatory regime requires much greater effort. In the meantime, costs go up, with no offsetting benefits.

Oh well. At least I have my 4.25% fixed rate 15 year mortgage. I am set.

Oh wait. I have 5 children who may need help in buying a house that the brave new world of mortgage finance may otherwise put out of their reach. Agggghhh!!!

⁵³ See FRB OUTSTANDINGS 1995-2004 and 2005-2009, *supra* note 25, at 42, tbl. F.218, ll. 19, 26 (the net of l. 19 less l. 26, to remove the home equity and junior liens).

⁵⁴ See *id.* at 51, tbl. L. 1 (Credit Market Debt Outstanding), ll. 1.

⁵⁵ John B. Taylor has analyzed this issue extensively and places most of the blame for the financial crisis on the Federal Reserve Board keeping short term interest rates too low. See JOHN B. TAYLOR, GETTING OFF TRACK: HOW GOVERNMENT ACTIONS AND INTERVENTIONS CAUSED, PROLONGED AND WORSENERED THE FINANCIAL CRISIS (2009), *discussed and criticized in* FCIC REPORT, *supra* note 10, at 103; Levitin & Wachter, *supra* note 10, at 3, 46-49; and Wallison, *supra* note 10, at 458.