

SECURITIZATION REFORM: A COASEAN COST ANALYSIS

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This Note analyzes securitization reform proposals through an examination of the underlying economic justification for securitization. The Note focuses on the increase in private label asset-backed securitization of residential mortgage loans from 2002–2006 and the corresponding subprime bubble. The analysis is motivated by a recognition that securitization and financial innovation were lauded for twenty-five years and that recent reform proposals have not challenged the underlying economic justifications for securitization. Nevertheless, there is widespread recognition that securitization led to an over-supply of mortgage credit available in the United States. This Note utilizes Coase’s theory of the firm to explain the disintermediation of credit markets and the appeal of securitization to banks and lenders. It then analyzes securitization reform proposals with the same Coasean framework and notes that the costs of securitization are not strict principal-agent problems. Rather, the contracting costs of securitization inhibit the ability of parties to identify the residual risk-bearer. Residual risk-bearers are best qualified to monitor the risks of over-supply and weak originating standards in securitization markets. The Note concludes by identifying improved representations and warranties as the reform proposal most likely to account for the contracting costs imposed by securitization. Enhanced representations and warranties and explicit disclosure requirements would impose contracting costs and proper restraint on sponsors and would require them to properly identify the risk factors and risk-bearers in securitization.

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I. INTRODUCTION

The growth of the asset-backed security (ABS) market¹ over the last several decades has transformed financial markets, particularly residential

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¹ ABS markets have developed for residential mortgages, car loans, credit cards, receivables, commercial real estate, student loans, and from other securitizations in the form of collateralized debt obligations (CDOs) and CDOs squared. This Note is primarily addressing

housing.² Residential mortgage-backed securities (RMBSs) were developed in the late 1970s by government-sponsored housing giants Fannie Mae, Ginnie Mae, and Freddie Mac (collectively, the GSEs) and were utilized for thirty years without debate. More controversially, over the last fifteen years, banks have begun to issue privately sponsored RMBSs, increasing the supply of credit available to subprime borrowers who did not qualify for mortgages guaranteed by one of the GSEs.

The Federal Reserve and International Monetary Fund (IMF) have blamed the proliferation of RMBSs for the growth of the housing bubble, its subsequent crash, and the related recession.³ Very few investors recognized the risks of subprime RMBSs. There were a few exceptions; some, like Steve Eisman, identified the poor quality of RMBSs created by certain investment bankers and declared “whatever that guy is buying, I want to short it.”⁴ Michael Burry, a former neurologist from California, began investing with \$1,000 from his garage and made a fortune by betting against the RMBS market. But the world’s largest banks lost more than \$2 trillion on subprime mortgage loans between 2007 and 2010,⁵ showing that sophisticated players in the securitization markets seemingly failed to properly assess the risk of subprime mortgages.

The Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) implements several reform proposals to improve securitization markets. An analysis of these reforms must contemplate why private-label securitization markets formed, why they failed, and how the market for securitization can be improved.

This Note utilizes Coase’s theory of the firm to explain the disintermediation of credit markets and the appeal of securitization to banks and lenders. It then analyzes securitization reform proposals with the same Coasean framework and notes that the costs of securitization are not strict principal-agent problems. Rather, the contracting costs of securitization inhibit the ability of parties to identify the residual risk-bearer. The Note concludes by identifying improved representations and warranties as the reform proposal most likely to account for the contracting costs imposed by securi-

the development, benefits, and costs of ABS related to residential mortgages, including CDOs structured with residential mortgage-backed securities.

² In 2006, Lowell Bryan, a director at McKinsey & Co., estimated that “it will take 10 to 15 years for structured securitized credit to replace and displace completely the classical lending system.” VINOD KOTHARI, *SECURITIZATION: THE FINANCIAL INSTRUMENT OF THE FUTURE* 3 (2006).

³ See Ben S. Bernanke, Chairman, Fed. Reserve Board of Governors, Address at the UC Berkeley/UCLA Symposium: The Mortgage Meltdown, the Economy, and Public Policy, The Future of Mortgage Finance in the United States (Oct. 31, 2008). This was also the conclusion of the IMF. See INTERNATIONAL MONETARY FUND, *GLOBAL FINANCIAL STABILITY REPORT: NAVIGATING THE FINANCIAL CHALLENGES AHEAD* 77 (Oct. 2009).

⁴ MICHAEL LEWIS, *THE BIG SHORT: INSIDE THE DOOMSDAY MACHINE* 144 (2010) (referencing Wing Chau of Merrill Lynch).

⁵ *FACTBOX—European, U.S. Bank Writedowns, Credit Losses*, REUTERS, Feb. 24, 2011, available at <http://www.reuters.com/article/2011/02/24/banks-writedowns-losses-idUSLDE71N1J720110224>.

tization, as they would impose contracting costs and proper restraint on sponsors and require them to properly identify the risk factors and risk-bearers in securitization.

II. COASE AND THE THEORY OF THE FIRM

Coase famously attempts to explain why firms emerge in market economies.⁶ Coase defines the firm as a set of transactions organized through a nexus of contracts by a single manager that could otherwise have been coordinated by the price mechanism.⁷ He explains that a firm emerges in order to avoid the transaction and contracting costs of coordinating a group of separate exchange transactions.⁸ The converse of this principle is that production will be organized through market mechanisms, instead of within a firm, only when the benefits of the market system exceed the costs.

The size of the firm is also dependent on this cost-benefit analysis. A firm can expand by integrating more transactions into its supply chain that previously had been organized by two separate entrepreneurs.⁹ Coase writes that “[a] firm becomes larger as additional transactions are organized by the entrepreneur and becomes smaller as he abandons the organization of such transactions.”¹⁰ For example, a firm already operating in one area of the supply chain, like manufacturing, may be able to reduce certain transaction costs by expanding into retail sales or raw material production.

The credit market for residential housing has traditionally been organized by vertically-integrated financial intermediaries. In the traditional model, a single bank originates, manages, and services the distribution of mortgage credit to its customers. The bank raises funds by issuing equity and short-term debt, including deposits. It then evaluates potential borrowers and makes long-term loans, profiting from the interest rate spread. The responsibility for monitoring and servicing the loans and for foreclosing on any delinquent borrowers also falls on the bank. The bank bears the risk that borrowers will not repay their loans, and the depositors and investors bear the risk that the bank will be unable to meet its obligations. According to the Coasean theory of the firm, vertically-integrated banks formed because the contracting costs of organizing the distribution of credit for residential housing were higher than the benefits of utilizing separate market transactions for each step in the process.

At its core, asset-backed securitization signifies the de-integration of credit markets. In securitization, the distribution, organization, and management of credit are conducted through separate market transactions. Typically,

⁶ R. H. Coase, *The Nature of the Firm*, 4 *ECONOMICA* 386 (1937).

⁷ *Id.* at 389 (declaring that “the distinguishing mark of the firm is the supersession of the price mechanism”).

⁸ *Id.* at 391.

⁹ *Id.* at 397–98 (describing the cause of vertical integration).

¹⁰ *Id.* at 393.

mortgages are originated either by a bank or an independent mortgage originator. The loans are then sold to a larger money center bank that acts as the sponsor of the securitization. The sponsor pools the loans and sells them to a separate entity, the special purpose vehicle (SPV), thus forming a securitization trust. The securitization trust issues debt representing different cash flows from the pooled assets that is secured by those assets. That debt is subsequently evaluated by an independent credit rating agency and enhanced by a separate credit default swap (CDS) contract with an insurer or through other credit enhancement techniques designed to reduce investor exposure to prepayment, interest rate, and credit risk.¹¹ The securitization trust issues bonds that represent specific cash flows, such as interest-only, principal-only, super-senior AAA, subordinate AAA, or mezzanine tranches.

Investors purchase bonds issued by the SPV that reflect defined cash flows from the pooled mortgages held by the trust.¹² A servicing firm contracts with the trust and the issuer to manage the loan portfolio and collect the mortgage payments. The trustee of the securitization trust disburses the mortgage payments to investors according to the cash flow waterfall.¹³ Should the trust become distressed, a special servicer assumes the management of the loan and makes decisions regarding foreclosure or modification of the individual mortgage.

According to the Coasean “theory of the firm,” the disintermediation of the mortgage market described above indicates that the benefits of utilizing market transactions to originate, finance, and service mortgages exceed the contracting costs associated with utilizing separate parties for each function.

III. BENEFITS OF SECURITIZATION

The chief benefit for banks from securitization is lower funding costs for making residential housing loans. The securitization process enables precise distribution and transfer of credit risk from banks to other investors. The growth of private-label or non-agency securitization¹⁴ over the past fifteen years is directly correlated with the transfer of credit risk from banks to other investors. Federal Reserve statistics indicate that, out of the \$4.5 trillion in

¹¹ Other credit enhancement techniques include over-collateralization (transferring more assets to the securitization trust than would be necessary to meet the trust’s obligations if there are no defaults), guarantees on a portion of the bonds by the sponsor, and establishment of a reserve fund (where the sponsor pledges certain of the subordinated securities for the benefit of the trust).

¹² See INTERNATIONAL MONETARY FUND, GLOBAL FINANCIAL STABILITY REPORT: CONTAINING SYSTEMATIC RISKS AND RESTORING FINANCIAL SOUNDNESS 59 (Apr. 2008).

¹³ Borrowers’ mortgage payments contain a mix of interest and principal. Because RMBS investors have rights in a pool of mortgages, the borrower payments are divided, so that each tranche is paid according to the priority structure. For example, an interest-only tranche will only receive cash flows from the interest portion of the borrower’s monthly mortgage payment.

¹⁴ Private-label securitization can be distinguished from “agency” debt, which are RMBSs issued or guaranteed by the United States government or by one of the GSEs, who are the largest players in the securitization market.

mortgage debt outstanding in the United States at the end of 1995, 41.5% was either held or insured by government agencies (including Fannie Mae, Freddie Mac, and Ginnie Mae)—41.9% was held by financial institutions, and 16.6% was held by individuals and private securitization trusts.¹⁵ In 2008, out of \$14.6 trillion in outstanding mortgage debt, 39.5% was still held or insured by government agencies. The share held by financial institutions, however, dropped to 34.5% and private-label securitization trusts and other real estate investment vehicles increased their share to 26%.¹⁶

The transfer of credit risk from banks to other investors that is enabled by the securitization process lowers the funding costs of loans by greatly increasing the supply of credit for residential housing. Securitization both incentivizes banks to make more loans and creates investor demand for RMBSs.¹⁷

Securitization allows banks to finance loans at a lower cost than with traditional deposit or equity financing by greatly increasing investor demand for mortgage bonds.¹⁸ First, because the mortgages are transformed into bonds, nonbank investors can provide capital for residential housing without originating mortgages independently. The bonds can also be traded, providing increased liquidity and accessibility for investors. Also, because the banks sell the loans to an SPV, investors are not exposed to the credit risk of the bank, unlike traditional debt or equity financing.¹⁹ The tranching of the mortgages in the typical securitization structure also benefits investors by allowing them to invest in a specific RMBSs tranche that precisely matches their risk profile.²⁰

During the housing boom there were additional advantages of securitization. First, RMBSs offered higher yields to investors relative to the low risk assessed by credit rating agencies due to both the diversification benefit of pooling the mortgages and the fact that RMBSs were secured by the underlying real estate. In a typical subprime securitization from 2002 to 2006, 80% of the issuance was rated AAA and 98% was considered investment grade²¹; these ratings greatly increased investor demand for mortgage debt.

¹⁵ COUNCIL OF ECONOMIC ADVISORS, ECONOMIC REPORT OF THE PRESIDENT 281 tbl. B-76 (2011) (full report available at <http://www.gpoaccess.gov/eop/2011/pdf/ERP-2011.pdf>).

¹⁶ *Id.*

¹⁷ See Darrell Duffie, *Innovations in Credit Risk Transfer: Implications for Financial Stability*, 7–9 (Bank of Int'l Settlements Working Paper No. 255, 2008) (discussing bank motivations for credit risk transfer and implications for systematic risk).

¹⁸ George G. Pennacchi, *Loan Sales and the Cost of Bank Capital*, 43 J. FIN. 375 (1988).

¹⁹ For example, a small bank may be undiversified or hold riskier types of loans, like construction or unsecured business loans, and would therefore have higher funding costs than the sponsor-generated securitization trust that is limited to holding relatively safe, collateralized home mortgage loans.

²⁰ For example, one investor may not want to accept any interest rate risk and therefore will invest in a principal-only tranche of the SPV. Another investor may want interest rate exposure, so he could invest in an interest-only tranche.

²¹ See INTERNATIONAL MONETARY FUND, CONTAINING SYSTEMATIC RISKS, *supra* note 12, at 59.

Banks fulfilled the demand for highly-rated tranches by increasing the supply of RMBSs and re-securitizing the mortgage-backed securities (MBSs) into collateralized debt obligations (CDOs).²² Frequently, the process was performed a third time, creating CDOs squared. Each re-securitization created higher-yielding but still AAA-rated assets.

In addition to reducing financing costs for banks by increasing investor demand, banks had other incentives to securitize loans during the boom. Securitization sponsors “sold” the securities to the securitization trust and removed the mortgages from the banks’ balance sheets, reducing the reserves the banks were required to hold against the loans on their balance sheets and their regulatory capital requirements.²³ Reduced reserves and capital requirements enhanced the ability of banks to increase leverage and make more loans. The Basel II Accord²⁴ allowed banks to further reduce capital requirements for securitized debt with a AAA or AA rating.²⁵ Lower capital requirements permitted banks to make an increasing number of loans with the same amount of initial capital, which further increased the supply of credit during the housing bubble.

Greater supply of credit lowers the overall borrowing costs of banks and makes home mortgages more accessible and cheaper for borrowers. During the housing bubble, these lower capital costs allowed originators to extend credit to increasing numbers of subprime and low-income borrowers at lower interest rates than would have been possible under the traditional banking model. Under a Coasean approach, if all transaction costs are properly accounted for, the shift in housing finance from a bank-centric model to securitization should enable the efficient distribution of credit for home mortgages at a lower overall cost, thereby enhancing overall economic efficiency.

²² The underlying concept of CDOs is to pool junior tranches of RMBSs and create a new securitization trust. Much like the initial RMBS, the CDO will have lower credit risk than the underlying assets (in this case the underlying assets are RMBSs) due to pooling, diversification, and other forms of credit enhancement.

²³ See Pennacchi, *supra* note 18, at 375–76.

²⁴ The Basel Committee on Bank Supervision, consisting of financial regulators from twelve leading industrialized countries, established a framework for risk-based capital standards. The United States and other countries adopted standards based on this framework. The original agreement was reached in 1988. In 2004, the Committee approved a new framework called Basel II, which gave banks more flexibility in assessing the risk on bank balance sheets based on a bank’s risk-management techniques, including collateralization, guarantees, and hedging. See RICHARD CARNELL, JONATHAN R. MACEY & GEOFFREY P. MILLER, *THE LAW OF BANKING AND FINANCIAL INSTITUTIONS* 258–73 (4th ed. 2009). In response to the financial crisis, on September 12, 2010 the Committee formally endorsed a third agreement (Basel III) that mostly disallows the use of securitization to reduce capital requirements. See Press Release, Basel Comm. on Bank Supervision, Group of Governors and Heads of Supervision Announces Higher Global Minimum Capital Standards (Sep. 12, 2010), available at <http://www.bis.org/press/p100912.pdf>.

²⁵ Basel II reduced the risk-weighting of mortgage debt from 50% to 35%. However, securitized mortgage debt with a AAA or AA rating could be adjusted further to a 20% risk-weight.

IV. COSTS OF SECURITIZATION AND THE SUBPRIME CRISIS²⁶

Sponsors benefited greatly from the de-integration of mortgage markets and had lower financing costs, which led them to extend even more loans. Between 1995 and 2008, the amount of outstanding mortgage debt in the United States more than tripled,²⁷ even though many of these loans should never have been made. Securitization should have led to a more efficient distribution of mortgage credit but instead led to an inefficient market and ultimately the financial crisis.²⁸

Several studies have highlighted the correlation between securitization, poor origination standards, and increased rates of mortgage defaults. Mian and Sufi analyzed three potential causes for the increase in mortgage credit to subprime borrowers between 2002 and 2005: improved income and credit-worthiness of borrowers, expectations of housing price increases, and increased credit supply due to securitization.²⁹ Their study finds a sharp growth in mortgage credit followed by a sharp relative increase in defaults in zip codes with a higher percentage of subprime borrowers, indicating that the increase in mortgage credit was due to increased supply by lenders.³⁰ Purnanadam shows that loans originated by banks who sold a higher percentage of loans to third parties had higher default rates than loans made by banks with lower securitization rates.³¹ Moreover, Keys et al. demonstrate that loans made to borrowers with credit scores above 620 had more lax screening than those between 600 and 620.³² Their explanation is that loans over 620 were likely to be securitized, so lenders did not feel compelled to rigorously screen or analyze soft information regarding borrowers' credit

²⁶ One can distinguish between the two broad categories of market costs in the development of private securitization markets that may have led to the housing bubble. First, the "originate to distribute" model led to lax underwriting of the mortgages in the securitization pool, leading to foreclosures and investment losses. The question arises why the relevant parties did not make rational decisions or seek complete information about the credit-worthiness of borrowers at the issuance of MBSs. The second failure of the price mechanism was the lack of information in markets regarding the poor performance of RMBSs. This second information cost indicates that markets failed to provide arbitrage opportunities *ex parte* that might have allowed information or skepticism about the value and performance of subprime RMBSs to seep into the market earlier. See ROBERT SHILLER, *THE SUBPRIME SOLUTION* 149–50 (2008). This Note addresses market failures at the time of RMBS issuance.

²⁷ See COUNCIL OF ECONOMIC ADVISORS, *supra* note 15.

²⁸ See Bernanke, *supra* note 3.

²⁹ Atif Mian & Amir Sufi, *The Consequences of Mortgage Credit Expansion: Evidence from the U.S. Mortgage Default Crisis* (Dec. 12, 2008), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1072304.

³⁰ *Id.*

³¹ Amiyatosh Purnanadam, *Originate-to-Distribute Model and the Subprime Mortgage Crisis* (AFA 2010 Atlanta Meetings Paper Apr. 2010), available at SSRN: <http://ssrn.com/abstract=1167786>.

³² Benjamin J. Keys et al., *Did Securitization Lead to Lax Screening? Evidence from Subprime Loans* (EFA 2008 Athens Meetings Paper Dec. 25, 2008), available at <http://ssrn.com/abstract=1093137>.

quality, leading to poorer underwriting standards for loans sold to SPVs. Thus, RMBS markets were composed largely of “lemon” mortgages.³³

According to Coase, the increased transaction costs that arise from using markets to organize production can override the benefits of the price mechanism.³⁴ In securitization, the group of independent contracts that composes a single securitization increases transaction costs relative to the traditional bank model.³⁵ Securitization led to an over-supply of mortgage credit because the parties to the securitization transaction did not account for these costs. This led originators, sponsors, and investors to over-supply the markets for home mortgages. Securitization reform must identify the source of these costs and improve the securitization process, so that the transaction costs of disintermediating mortgage markets are incorporated into the securitization process and RMBSs become efficiently supplied and efficiently priced.

V. SECURITIZATION REFORM

Subtitle D of Title IX of the Dodd-Frank Act takes a three-pronged approach to reducing the transaction costs of securitization.³⁶ First, in Section 941, the Dodd-Frank Act imposes a structural change by requiring sponsors to have “skin in the game.”³⁷ Second, in Section 942, the Act mandates improved disclosures and ongoing reporting obligations for all ABS issuance,³⁸ including individual loan data and use of a computer program presenting the cash flow waterfall.³⁹ These additions will enable investors to assess the default assumptions of the sponsor and credit ratings agency and to independently value the RMBS. Third, in Section 943, the Dodd-Frank Act demands that the SEC prescribe regulations regarding the expanded use of representations and warranties in RMBS transactions.⁴⁰

The Dodd-Frank Act’s recommendations reflect an attempt to reduce apparent agency costs in the securitization process. The Act treats the transaction costs of securitization as classic Jensen-Mecklin agency costs,⁴¹ which

³³ A “lemons problem” is the term used to describe a market where, due to information asymmetries, a seller can pass off lower-quality goods to unsuspecting buyers. See George A. Akerlof, *The Market for “Lemons”: Quality Uncertainty and the Market Mechanism*, Q. J. ECON. 488 (Aug. 1970).

³⁴ Coase, *supra* note 6, at 390–91.

³⁵ For a discussion of seven distinct transaction costs between the various parties in RMBS transactions, see Adam Craft & Til Schuermann, *Understanding the Securitization of Subprime Mortgage Credit* 1 FED. RESERVE BANK OF N.Y. STAFF REPORT NO. 318 (2008), available at <http://www.newyorkfed.org/research/economists/schuermann/subprime.pdf>.

³⁶ Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111–203, §§ 941–46, 124 Stat. 1376 (2010) (Dodd-Frank Act).

³⁷ Dodd-Frank Act §§ 941, 15G.

³⁸ Dodd-Frank Act § 942.

³⁹ *Id.*

⁴⁰ Dodd-Frank Act § 943.

⁴¹ Agency costs mainly arise due to the separation of ownership from control and the different objectives of principals and agents. See Michael Jensen & William Mecklin, *Theory*

were regarded as problematic in the originate-to-distribute (OTD) model. From 2001 to 2006, approximately 75%⁴² of non-agency residential mortgages⁴³ were originated by independent finance companies.⁴⁴ Specifically, the theory underlying this portion of the Dodd-Frank Act is that because originators quickly sold the mortgages they did not have the incentive to scrutinize loan applications. This led to loans being made without documentation of income or job status,⁴⁵ inaccurate appraisals, and the proliferation of adjustable rate mortgages with ballooning payments.⁴⁶

The sponsor or arranger of the securitization trust adds yet another level of agency costs to the securitization process. The sponsor pools the mortgages and quickly transfers them to the SPV, providing little incentive for sponsors to monitor the quality of the loans or to implement strict underwriting standards. In sum, the OTD critique posits that the entire securitization process was designed to rid banks of risk by transferring risky mortgages to the SPV and investors without careful scrutiny of loan applications.

The Dodd-Frank Act treats investors as principals, and sponsors and originators as agents of those principals and seeks to utilize traditional corporate governance principles to reduce the conflicts of interest between the parties and empower investors. First, the “skin in the game” requirement attempts to align the incentives of originators and sponsors with investors.⁴⁷

of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, 3 J. FIN. ECON. 305 (1976).

⁴² Benjamin J. Keys et al., *Financial Regulation and Securitization: Evidence from Subprime Loans*, 56 J. MONETARY ECON. 700, 706 (2009) (finding that approximately 75% of overall loans in the subprime market were originated by independent finance companies, not banks). It is important to note that the research of Keys et al. indicates that mortgages originated by independent finance companies were less likely to default than those originated by banks themselves. See *infra* text accompanying note 55.

⁴³ Non-agency mortgages were those not sold to one of the GSEs, who are the largest players in the securitization market but did not buy mortgages made to subprime borrowers.

⁴⁴ According to the Center for Public Integrity, the three largest subprime lenders, Countrywide Financial, Ameriquest Mortgage, and New Century Financial, accounted for 25% of all subprime mortgages originated from 2005 to 2007. See *The Subprime 25*, CENTER FOR PUBLIC INTEGRITY, http://www.publicintegrity.org/investigations/economic_meltdown/the_subprime_25/full_list (last visited May 24, 2011).

⁴⁵ Colloquially, these are referred to as no-doc or low-doc loans.

⁴⁶ See Michael Lacour-Little & Jing Yang, *Taking the Lie Out of Liar Loans: The Effect of Reduced Documentation on the Performance and Pricing of Alt-A and Subprime Mortgages*, Nov. 29, 2010 (46th Annual AREUEA Conference Paper), available at <http://ssrn.com/abstract=1717063>.

⁴⁷ Even if the costs of securitization are classic agency problems, several concerns can be raised regarding the specific requirements of Dodd-Frank. First, is a vertical slice the most effective way to align sponsors' interests with investors' interests? Second, is a five percent interest enough to offset the fees earned by the bank on the ABS issuance and other related transactions? Third, could a sponsor hedge exposure to the mortgage market in general or to a similar collection of pooled assets, while still technically remaining exposed to the specific assets in the ABS issuance? Indeed, many have disregarded Goldman's claims to have lost \$100 million on the Abacus 2007-AC1 transaction that was the focus of an SEC complaint in April 2010, since by 2007 it had large hedging positions against the mortgage market in general and had insurance on the specific tranches of Abacus that it retained on its own balance sheet. See Louise Story, *Bank Says Losses Prove No Ill Intent*, N.Y. TIMES, Apr. 21, 2010, at B1.

Second, the disclosure requirement is designed to reduce investor reliance on credit rating agencies and sponsor credit enhancement so that investors independently assess the risk and value of their investment and do not rely on sponsor efforts.

The fundamental difficulty with Dodd-Frank's criticism of the OTD model is that reform based on purported agency cost problems instinctively requires a distinction between investors as principals and banks as their agents, leading to conflicts of interests and incentive problems. In that case, reform should focus on incentive alignment. However, banks acted as both principal and agent⁴⁸; they were heavily invested in the same "lemon" securities they were selling to investors. By 2007, 67% of the mezzanine portions of CDOs were owned by other CDOs, 80% of which were owned by the banks themselves.⁴⁹ At the other end of the risk spectrum, sponsors also frequently retained super-senior tranches.⁵⁰ These tranches did not have high enough yields to attract investors. The banks treated these as risk-free assets and assumed "that in most transactions the likelihood that the super-senior tranche gets hit by a loss will be close to zero."⁵¹ Banks acted as both principal and agent, yet seemed blind to the risks introduced by securitization and the poor quality of the underlying mortgages.

The massive losses suffered by mortgage originators and sponsors demonstrate that the interests of originators and sponsors were aligned with those of investors. According to the IMF, U.S. banks lost more than \$885 billion due to credit writedowns.⁵² In addition, more than 700 mortgage companies have declared bankruptcy, were acquired, or have closed since 2007.⁵³ The subprime crisis and securitization led to the failures of Bear Stearns, Lehman Brothers, Merrill Lynch, AIG, Washington Mutual, Indymac, Countrywide, Ameriquest, and New Century Financial. This group includes three of the five biggest Wall Street investment banks, the largest insurer, the three largest independent mortgage finance companies, and the largest savings and

⁴⁸ It is possible that an agency problem existed within banks between parties or divisions. See Jake Bernstein & Jesse Eisinger, *The 'Subsidy': How a Handful of Merrill Lynch Bankers Helped Blow Up Their Own Firm*, PROPUBLICA (Dec. 22, 2010), available at <http://www.propublica.org/article/the-subsidy-how-merrill-lynch-traders-helped-blow-up-their-own-firm>. However, conscious decisions to ignore risk are not agency problems and highlight other corporate governance and risk management problems within large financial institutions.

⁴⁹ See Jake Bernstein & Jesse Eisinger, *Banks Self-Dealing Super-Charged Financial Crisis*, PROPUBLICA (Aug. 26, 2010), available at <http://www.propublica.org/article/banks-self-dealing-super-charged-financial-crisis> (emphasizing that as investors such as pension funds fled the market amid the collapse of the bubble, banks filled the void).

⁵⁰ In 2007, JP Morgan estimated that banks held \$216 billion in super-senior CDO bonds issued in the two previous years. See *Risk Management: Put Out: The Risks Posed by CDOs Should Have Been Familiar to Wall Street's Finest*, THE ECONOMIST, Dec. 8, 2007, at 90.

⁵¹ CHRISTIAN BLUHM & LUDGER OVERBECK, STRUCTURED CREDIT PORTFOLIO ANALYSIS, BASKETS AND CDOs 184 (2003).

⁵² FACTBOX—European, U.S. Bank Writedowns, Credit Losses, *supra* note 5.

⁵³ *Mortgage Graveyard: Failed, Closed and Acquired Mortgage-Related Entities*, MORTGAGEDAILY.COM, <http://www.mortgagedaily.com/MortgageGraveyard.asp> (last visited May 6, 2011).

loan bank in the country.⁵⁴ A failure of banks and other investors to properly price the risk of RMBSs does not mean that there were misaligned incentives or classical agency costs. Misalignment of incentives cannot explain the lax underwriting standards initiated by the securitization housing bubble.

Furthermore, Keys et al. found that mortgages originated by independent originators performed better than those issued by the banks themselves.⁵⁵ If the transaction cost of securitization were related to the OTD model, one would expect greater agency costs from independent originators who did not invest in RMBSs at all and had no “skin in the game.”

The ability of Dodd-Frank’s disclosure requirements to improve price discovery by investors is also questionable. Investors always had the ability to contract with sponsors for loan-level data on the mortgages in the pool. However, for the loan-level data to be meaningful, an investor would need to challenge the models and default risk assumptions of the rating agencies. Investors did not demand individual loan data because they were not capable of modeling the risk for thousands of pooled mortgages.⁵⁶ Instead they relied on the expertise of credit rating agencies, which had expertise in evaluating all types of structured credit and also enjoyed economies of scale because they contracted to evaluate all tranches of the RMBSs, whereas each investor only needed to evaluate his own tranche.

Investors also had other signals indicating possible pricing problems for RMBSs. Investor interest in MBSs grew because the securities were mostly rated AAA, but yielded more than similarly rated corporate or sovereign debt. The higher yield should have signaled to investors the increased risk of RMBSs compared to other types of similarly-rated debt.

VI. SECURITIZATION AND THEORY OF THE FIRM

The problems with securitization markets do not appear to be related to the agency costs of the OTD model but do raise questions about the utility of the Dodd-Frank Act’s “skin in the game” requirement. Furthermore, investors will infrequently challenge the assumptions of CRAs, calling into question the utility of mandating that sponsors provide loan-level data to investors.⁵⁷ However, the third aspect of Dodd-Frank’s reform proposal,

⁵⁴ See Daniel Arnall & Charles Herman, *FDIC: WaMu: “The Largest Bank Failure Ever,”* ABC NEWS, Sept. 25, 2008, <http://abcnews.go.com/Business/story?id=5889501&page=1>. This list does not include Citibank, the largest American bank by assets, which received a \$306 billion guarantee from the U.S. Government, or other large banks, including Goldman Sachs, Bank of America, Morgan Stanley, Wells Fargo, or JP Morgan Chase, which received money from the Treasury Department through the Troubled Asset Relief Program (TARP).

⁵⁵ Keys et al., *Financial Regulation*, *supra* note 42, at 702.

⁵⁶ The complexity of ABS transactions can be daunting for investors and was used by Enron to deceive sophisticated investors prior to its bankruptcy. The utility of disclosure in such cases is more limited than in standard equity or debt issuances. See Steven L. Schwarz, *Rethinking the Disclosure Paradigm in a World of Complexity*, 2004 U. ILL. L. REV. 1.

⁵⁷ The ongoing disclosure requirements, however, will assist in providing ongoing performance information and help generate a more liquid market in RMBSs. A liquid market in

strengthening representations and warranties in securitization contracts, addresses the fundamental contracting costs added by securitization and the disintermediation of mortgage markets.

Coase identifies the cost of negotiating and concluding separate contracts for each transaction as one of the most significant costs of using markets to coordinate production as opposed to using a single firm.⁵⁸ When a transaction is organized within a firm, there are no independent contracting costs because the firm is negotiating with itself. In contrast, when multiple parties negotiate separate contracts, there is a potential for each party to negotiate without complete information about the other parties to the transaction.

In securitization, no party has complete knowledge of the risks assumed by other parties to the securitization. Additionally, the residual credit risk may be assumed by three distinct parties: investors, credit insurers, and sponsors. This creates ambiguity regarding which party actually assumes the credit risk in the transaction and removes the incentive of the parties to monitor the quality of the underlying mortgages. In general, the residual risk party is generally the best monitor of coordinated action.⁵⁹ Securitization's unique contracting costs arise from the diffusion of risk to multiple parties in a complex structure. The disintermediation itself re-introduces contracting costs that previously were absorbed within banks.

One would expect that investors in the securitization trust, as the holders of the cash flow rights, would be the risk-bearing party and therefore assume these contracting costs into their models. However, during the subprime bubble, monoline insurers like Ambac and AIG issued CDSs for many RMBSs and CDOs as a form of credit enhancement. Investors may have relied on credit ratings and ignored the agency costs of CRAs because the investors knew they were insured against any losses. Sponsor representations about the quality of the loans and agreements to repurchase certain bad loans also led investors to disregard the true risk of securitization.⁶⁰ Investors

RMBSs will, in turn, improve price discovery for future RMBS issuances. See SHILLER, *supra* note 26, at 149–50.

⁵⁸ Coase, *supra* note 6, at 390–91.

⁵⁹ Residual claimants are the constituency bearing the residual risk, which is the risk associated with the difference between cash inflows and outflows. Corporations typically vest control rights with residual claimants since they are the party with the highest profit motive; this leads to operational efficiency. See MICHAEL C. JENSEN, *A THEORY OF THE FIRM: GOVERNANCE, RESIDUAL CLAIMS, AND ORGANIZATIONAL FORMS* 1 (2000). In RMBS transactions, the party bearing credit risk is the residual risk party.

⁶⁰ In the words of the Congressional Oversight Panel, “[i]f any of the representations or warranties are breached, and the breach materially and adversely affects the value of a loan, which can be as simple as reducing its market value, the offending loan is to be ‘put-back’ to the sponsor, meaning that the sponsor is required to repurchase the loan for the outstanding principal balance plus any accrued interest.” CONGRESSIONAL OVERSIGHT PANEL, *NOVEMBER OVERSIGHT REPORT: EXAMINING THE CONSEQUENCES OF MORTGAGE IRREGULARITIES FOR FINANCIAL STABILITY AND FORECLOSURE MITIGATION* 66 (Nov. 16, 2010), available at <http://cop.senate.gov/documents/cop-111610-report.pdf>. The panel estimates that the four largest banks, Citigroup, JP Morgan Chase, Bank of America, and Wells Fargo, may lose \$52 billion

may have believed that they did not need to monitor originators since they could hold sponsors liable for any “lemon” mortgages.⁶¹

As the subprime market crashed, borrowers defaulted, and housing values plummeted, the securitization stakeholders, including insurers, sponsors, investors, trustees, and servicers, filed numerous lawsuits against one another. The parties to the failed securitizations began to squabble over the responsibility for losses. This phenomenon has been dubbed “tranche warfare.”⁶² Further claims have arisen surrounding the management of the foreclosure process and loan modifications.⁶³ Investors, banks, and insurers have all initiated litigation to apportion losses to other parties in RMBS transactions.⁶⁴ It is clear that the web of contracts in securitization did not clearly allocate losses or identify the true risk bearers.⁶⁵ The complexity and multiplicity of securitization contracts hid these risks. The result was that each party assumed another party bore the risk, and no party monitored the overall risk exposure of the underlying mortgages in the pool.

on mortgage put-backs. However, the vast majority of successful put-backs have been for agency loans. See Bethany Mclean, *My House is Your House: Don't Count on Banks Buying Back those Bum Mortgages*, SLATE, Oct. 26, 2010, <http://www.slate.com/id/2272413?wpisrc=obinsite>.

⁶¹ If sellers are liable to repurchase any lemons, then the cost of information asymmetry of RMBS transactions will be mitigated. In reality, however, private-label RMBSs had very weak put-back provisions. For example, at one major bank, less than half of RMBSs had representations and warranties that would allow investors to demand loan put backs. See Wells Fargo & Company, *BancAnalysts Association of Boston Conference*, at 13 (Nov. 4, 2010), available at www.wellsfargo.com/downloads/pdf/invest_relations/presents/nov2010/baab_110410.pdf (declaring that “repurchase risk is mitigated because approximately half of the securitizations do not contain typical reps and warranties regarding borrower or other third party misrepresentations related to the loan, general compliance with underwriting guidelines, or property valuations”); see also Mclean, *supra* note 60 (discussing the difficulty of actually enforcing put-back provisions against banks in private-label securitizations).

⁶² William Safire traces this term to the Asset Securitization Report of March 10, 2008. See William Safire, *On Language: Tranche*, N.Y. TIMES MAG., Mar. 1, 2009, at MM14. But see Dave Mulcahey, *Tranche Warfare: Who Will Be Left Holding the Bag as Subprime Mortgages Go Bad*, IN THESE TIMES MAG., Aug. 2007, at 27, available at www.inthesetimes.com/main/article/3275 (for a slightly earlier usage).

⁶³ For example, a swift foreclosure on the property will pay senior bondholders in full and leave junior bondholders in the RMBS structure with the loss. Therefore, the power to appoint the special servicer has become an area of conflict. See Ruth Simon & Robbie Wheelan, *Mortgage Investors are Set for More Pain*, WALL ST. J., Oct. 6, 2010, at C1. Another question involves who is entitled to any remaining payments from the mortgage holders: credit insurers who guaranteed the CDO or the investors in the CDO?

⁶⁴ For investors and insurers suing sponsors, see, e.g., *Epirus Capital Mgmt, LLC v. Citigroup*, No. 09 Civ. 2594(SHS), 2010 WL 1779348 (S.D.N.Y. Apr. 29, 2010); *MBIA Ins. Co. v. Merrill Lynch*, No. 601324/09, 2010 WL 2347014 (N.Y. Sup. Ct. Apr. 9, 2010); see also Aline van Duyn & Michael Mackenzie, *Tranche Warfare Breaks Out Over CDOs*, FIN. TIMES (London), Apr. 15, 2008, at 17 (sponsor suing senior noteholders).

⁶⁵ Insurers like AIG issued guarantees for many RMBSs and were responsible for many losses on AAA-rated RMBSs. However, the insurers found many ways to delay payments on guarantees they issued. In the interim, sponsors like Lehman Brothers were required to post collateral and account for losses in their RMBS portfolios daily due to mark-to-market accounting standards. Insurers had the long-term residual risk, but sponsors retained the short-term risk of default. Neither effectively monitored the risk.

The existence of tranche warfare demonstrates that the parties did not have a clear understanding of who was the residual risk party in RMBS transactions. Because the benefit of securitization is the efficient distribution of risk and lower cost of capital for loan intermediation, the failure of the parties to recognize who actually bore the risk and to assess that risk independently meant that no party believed it would suffer the full consequences of poor underwriting standards.⁶⁶ This led to both an oversupply of mortgage credit to unworthy borrowers and the housing bubble. The contracting costs involved in organizing securitization transactions caused each party to fail to recognize its position as a potential risk bearer and prevented proper governance and oversight of RMBSs.

The Dodd-Frank Act proposes to account for these contracting costs by requiring CRAs to delineate any representations and warranties made by banks regarding the credit quality of the individual mortgages and to disclose the guidelines and obligations of sponsors to repurchase bad mortgages from the SPV.⁶⁷ This proposal gives investors clarity as to which party bears the residual risk of the transaction. Any repurchase activity or demand relating to the RMBS must also be promptly disclosed.⁶⁸

These proposals partially address the contracting costs of securitization, but there are several problems. First, sponsors in private-label securitizations are still not required to issue representations and warranties about the originating standards of the mortgages in an RMBS.⁶⁹ Second, in focusing on the risk undertaken by sponsors, the Dodd-Frank Act ignores the contracting costs of credit insurers and between different tranches of investors. A more comprehensive representation and warranty scheme would *require* sponsors to make representations about origination standards regarding the solvency and credit-worthiness of bond insurers and to represent the specific default level necessary to trigger losses to the different tranches. Sponsors would still be able to transfer credit risk, but would assume the contracting costs of securitization.

Mahoney writes that disclosure requirements in traditional securities markets can enhance efficiency in two distinct ways.⁷⁰ First, disclosure can enhance informational efficiency by enabling traders to obtain all necessary information to properly price securities.⁷¹ Second, disclosure can reduce con-

⁶⁶ At the height of the financial crisis in September 2008, the contagion spread as markets struggled to determine which party bore the risk. Suspicions shifted from sponsors, like Lehman Brothers and Merrill Lynch, to investors, like the Reserve Primary Fund, to insurers, like AIG, to originators, like Washington Mutual. The market struggled to determine who would bear the losses from the housing crash.

⁶⁷ Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111–203, § 943, 124 Stat. 1376 (2010) (Dodd-Frank Act).

⁶⁸ See Securities and Exchange Act of 1934, Rule 15Ga-1, 17 C.F.R. § 240.15Ga-1 (2010).

⁶⁹ See Wells Fargo & Company, *supra* note 61.

⁷⁰ See Paul G. Mahoney, *Mandatory Disclosure as a Solution to Agency Problems*, 62 U. CHI. L. REV. 1047, 1048 (1995).

⁷¹ *Id.*

tracting costs that arise between promoters and investors.⁷² Promoters have an interest in emphasizing the potential investment payoff and minimizing risk. Disclosure requirements and resulting liability for the promoter's misleading statements protect investors by ensuring that promoters provide accurate information regarding the risk of the investment.

Strong mandatory disclosure requirements, in the form of representations and warranties, can be used to account for the contracting costs that arise from the web of contracts in RMBS transactions. In securitization, sponsors remain at the nexus of the independent contracts that organize the financing, origination, and servicing of residential mortgages. Because of this central position, sponsors have the lowest monitoring costs among originators, credit rating agencies, investors, trustees, and servicers. As such, requiring sponsors to make certain strict representations and warranties regarding the quality of the underlying assets and about the other parties to the securitization, as well as giving clear disclosure regarding which party actually bears the underlying credit risk, can help reduce the contracting costs of the other parties. Buy-back requirements for mortgages that did not comply with the sponsor's representations would impose the contracting costs on sponsors, but would still transfer the underlying credit risk to investors and insurers. As sponsors' contracting costs increase due to the added disclosures, the supply of mortgage credit will be reduced to efficient levels.

VII. CONCLUSION

A disclosure regime with enhanced representations and warranties would impose increased responsibility for the entire process on sponsors, from the quality of the mortgages to the solvency of the credit insurers. The possibility of ex post liability for misstatements and fraud in connection with the quality of the loans in the collateral pool or the insurer's ability to meet its guarantee would properly incentivize sponsors, even if the actual credit risk is spread to different parties. Enhanced representations and warranties would balance the twin objectives of transferring risk from banks to investors and protecting investors from poor monitoring and lax underwriting standards.

⁷² *Id.* at 1053.

