

FINANCIAL REFORM AND THE SUBSIDIZATION OF SOPHISTICATED INVESTORS' IGNORANCE IN SECURITIZATION MARKETS

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Many commentators have argued that securitization – where investment banks pool receivables, such as mortgages, and then resell them as a collection of securities – creates investments so complex that even sophisticated investors cannot determine asset quality. Securitization's critics often cite evidence of widespread fraud in the securitization of subprime residential mortgage loans as an exemplar of this argument. Relying on recent work in behavioral economics and social psychology, these critics conclude that mandatory disclosure will be insufficient to protect investors from overpaying for lower quality assets because of limitations endemic to human behavior.

However, loans securitized in the \$800 billion market for commercial mortgage backed securities ("CMBS") have not experienced widespread defaults or evidenced fraud. Even though few CMBS issuances took place during the financial crisis, the resiliency of commercial mortgage loans is an example of where, even under stress, investments created through securitization have met investors' expectations. As a result, CMBS stand as an unexplored counterexample to securitization's critics who contend that securitization makes accurate pricing of assets impossible. This Article fills an important gap in the literature by being the first to examine the CMBS market and its resilience during the Market Meltdown and one of the first to examine the effects of the Dodd-Frank Wall Street Reform Bill on securitization.

Even in a market with perfect information, some critics of securitization suggest that behavioral biases will prevent investors from acting rationally. I argue that these behavioral biases may be (i) culturally specific, (ii) overcome through use of technology, and (iii) mitigated through learning and cross checking.

Drawing on research of information asymmetries in economics and finance, I propose an alternate regulatory framework to determine, in a market where not all information is publicly available, at what point prices will inform investors about investment quality. In particular, I use the frame-

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work to show that, even in an illiquid market, sufficient publicly available information about substitute investments is the best investor protection. I conclude that protecting investors from themselves robs uninformed investors of the information necessary to transact with sophisticated investors and subsidizes sophisticated investors' ignorance at the expense of all market participants.

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INTRODUCTION

The commercial mortgage-backed securities¹ (“CMBS”) market has been declared dead.² A bankruptcy judge recently reached that conclusion in the bankruptcy³ of one of the larg-

1. Financial intermediaries pool mortgages secured by income producing commercial real estate and then resell the asset pool as a collection of securities. These securities are termed “commercial mortgage backed securities.” See Xudong An, Yongheng Deng & Stuart A. Gabriel, *Value Creation through Securitization: Evidence from the CMBS Market*, 38 J. REAL EST. FIN. & ECON. 302, 303 (2009) (describing studies from financial economics which investigate value creation through securitization). CMBS issuances typically fall into two categories: single borrower deals and multi-borrower deals. See Joseph F. DeMichele & William J. Adams, *Commercial Mortgage Backed Securities*, in *THE HANDBOOK OF COMMERCIAL MORTGAGE-BACKED SECURITIES* (Frank J. Fabozzi & David P. Jacob eds., 1998) [hereinafter DeMichele, *CMBS*]. I focus only on the multi-borrower deals herein.

2. The conclusion that the CMBS market is dead is reminiscent of the initial line of Albert Camus’ absurdist classic, *The Stranger*. “Maman died today.” ALBERT CAMUS, *THE STRANGER* 3 (Matthew Ward trans., Vintage Books 1988) (1942). Some of the most influential legal commentary has regarded the failure of efficient markets as a theoretical impossibility. As a result, the failure of the CMBS market is a question in the existentialist tradition about whether markets with sophisticated investors are supposed to fail at all.

3. *In re Gen. Growth Props., Inc.*, 409 B.R. 43, 60 (Bankr. S.D.N.Y. 2009) (noting that “[t]here was no evidence to counter the Debtors’ demonstration that the CMBS market, in which they historically had financed and refinanced most of their properties was “dead” as of the Petition Date, and that no one knows when or if that market will revive.”). In April of last year,

est U.S. commercial real estate owners.⁴ The \$800 billion⁵ CMBS market's failure is a quiet, but potentially catastrophic event to the economy, as CMBS has recently provided as much as one-half of commercial real estate acquisition financing⁶ and almost one-fifth of the financing of all commercial real estate transactions in the United States.⁷

The CMBS market's recent collapse has generally surprised market participants,⁸ since the CMBS market had

General Growth Properties, one of the largest owners and operators of commercial real estate in the United States, and a number of its wholly owned affiliates, filed for bankruptcy. What was most notable to many legal commentators was that many of the affiliated entities were single purpose bankruptcy remote entities who owned assets that were performing and not in financial distress. Given that the lenders required bankruptcy remote structures to avoid debts of the owner of the borrowers causing the borrower to file for bankruptcy, the case has been widely watched in commercial real estate circles. See Michael J. de la Merced, *General Growth Properties Files for Bankruptcy*, N.Y. TIMES (Apr. 16, 2009, 2:34 AM), <http://dealbook.blogs.nytimes.com/2009/04/16/general-growth-properties-files-for-bankruptcy>.

("As the second-biggest operator of malls in the nation, behind only the Simon Property Group, General Growth's troubles have been closely watched by the real estate industry for months.")

4. Brian M. Resnick & Steven C. Krause, *Not So Bankruptcy-Remote SPEs and In re General Growth Properties Inc.*, AM. BANKR. INST. J., Oct. 2009, at 59, 60 (noting that at the time of General Growth Properties, Inc.'s April bankruptcy filing, "the company was the second-largest shopping mall operator and one of the largest real estate investment trusts (REITs) in the United States, owning more than 200 malls in 44 states, as well as several commercial office buildings and five master-planned communities.")

5. Andres D. Christopoulos, Robert A. Jarrow & Yildirim Yildirim, *Commercial Mortgage Backed Securities (CMBS) and Market Efficiency with Respect to Costly Information*, 36 REAL EST. ECON. 441, 441 (2008) [hereinafter Christopoulos, *CMBS and Market Efficiency*].

6. Ken Miller, *Using Letters of Credit, Credit Default Swaps and Other Forms of Credit Enhancements in Net Lease Transactions*, 4 VA. L. & BUS. REV. 45, 46 (2009) (describing the role of CMBS financing in credit tenant loans).

7. Jarjis Sa-Aadu, James D. Shilling & George H. K. Wang, *A Test of Integration and Cointegration of Commercial Mortgage Rates*, 18 J. FIN. SERVICES RES. 45, 46 (2000) [hereinafter Sa-Aadu, *Test of Commercial Mortgage Rates*] ("The pace of securitization in commercial mortgage market accelerated in the early 1990s such that between 15 and 20% of the roughly \$1.1 trillion commercial mortgages outstanding have now been securitized. This figure also includes mortgages from prior years. As recently as 2005, 25% of commercial mortgages were intended for securitization.")

8. See, e.g., Dwight Cass & John Foley, *Commercial Loans Are Looking Risky*, N.Y. TIMES, Nov. 20, 2008, at B2 (describing market participants differing

shown remarkable resiliency to negative economic events.⁹ For example, even after the severe crisis posed by the September 11th terrorist attacks, CMBS did not experience widespread defaults.¹⁰ Furthermore, at the time of the CMBS market collapse, commercial mortgage loans, the underlying collateral for CMBS, were largely performing as an asset class.¹¹

Commentators have argued that the collapse in the CMBS market has mirrored (or may have been a contributing factor in)¹² the most severe economic downturn the world economy has experienced since the Great Depression (the “Market Meltdown”).¹³ Although since the beginning of the Market Meltdown, the Federal Reserve has implemented a number of short-term lending facilities designed to restart the CMBS market,¹⁴ CMBS issuances have returned only within the last few

views of the collapse in commercial real estate markets and the effect on the CMBS market).

9. Even after significant downgrades to the mortgage-backed securities sector, CMBS pricing has been resilient. See Al Yoon, *U.S. CMBS Resilient in Face of Massive Downgrades*, REUTERS, June 29, 2009, <http://www.reuters.com/article/idUSN2950312320090629> (“Bonds in the \$700 billion market held near Friday’s levels after Standard & Poor’s that day affirmed that it would adopt a more conservative outlook on the market for office, retail and apartment building debt, which may result in downgrades to a third of all outstanding CMBS.”).

10. See Tracey Seslen & William C. Wheaton, *Contemporaneous Loan Stress and Termination Risk in the CMBS Pool: How “Ruthless” is Default?*, 38 REAL EST. ECON. 225, 225 (2010) (finding that rates of CMBS defaults remained “remarkably low from 2000 to 2004 despite the market stress after September 11”).

11. For example, in the context of the General Growth Properties’ bankruptcy, the court noted, “GGP Group’s shopping center business had a stable and generally positive cash flow and that it continued to perform well, despite the current financial crisis.” *In re Gen. Growth Props., Inc.*, 409 B.R. 43, 55 (Bankr. S.D.N.Y. 2009).

12. See William Poole, *Causes and Consequences of the Financial Crisis of 2007-2009*, 33 HARV. J.L. & PUB. POL’Y 421, 431 (2010) (describing the federal government’s response to the “toxic assets” on bank balance sheets).

13. INT’L MONETARY FUND, *WORLD ECONOMIC OUTLOOK APRIL 2010: REBALANCING GROWTH* 69 (Apr. 2010), <http://www.imf.org/external/pubs/ft/weo/2010/01/pdf/text.pdf> [hereinafter 2010 IMF *WORLD ECONOMIC OUTLOOK*] (noting that the “global economy is recovering from its deepest downturn since World War II, but the speed of recovery differs greatly across regions.”).

14. In November, 2008, the Federal Reserve instituted the Term Asset Securities Lending Facility. Hal S. Scott, *The Reduction of Systemic Risk in the United States Financial System*, 33 HARV. J.L. & PUB. POL’Y 671, 719 n.210

months.¹⁵ It is uncertain when, or if, new issuances will return to anywhere near previous levels.¹⁶

Some commentators view the Market Meltdown as an unanswered challenge to the theory that the efficiency of capital markets will provide uninformed investors with adequate information about asset quality.¹⁷ According to the dominant asset pricing theory in finance, and a substantial portion of the associated legal commentary, if prices in efficient markets quickly incorporate new information,¹⁸ and markets in CMBS are efficient, then the CMBS prices should reflect the value of its underlying assets.¹⁹ Instead, the

(2010) (describing the liquidity facilities created by the Federal Reserve to aid the asset-backed securities market). Nonetheless, the number and size of the deals are much smaller than previous levels. Board of Governors of the Federal Reserve System, Minutes of the Federal Open Market Committee (Sept. 21, 2010), <http://www.federalreserve.gov/monetarypolicy/fomcminutes20100921.htm>.

15. See Lingling Wei, *CMBS Market Rises from Ashes of Collapse*, WALL ST. J., July 21, 2010, http://online.wsj.com/article/B1000142405274870472304575379543602271202.html?mod=googlenews_wsj (describing upcoming CMBS issuances for 2010 and the dearth of issuances in the two prior years).

16. See *In re Gen. Growth Props., Inc.*, 409 B.R. at 60 (concluding “there is no evident means of refinancing billions of dollars of real estate debt coming due in the next several years”).

17. See, e.g., Peter J. Smith, *New Legal Fictions*, 95 GEO. L.J. 1435, 1457 (2007) (“Empirical evidence has substantially undermined the strong version of the efficient-capital-markets hypothesis.”). Although it is worth noting that the strong version of the efficient capital markets hypothesis has been declared counterfactual even by the proponents of the theory as a whole. Eugene F. Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. FIN. 383, 388 (1970) (noting that the hypothesis that prices fully reflect all available information is not literally true) [hereinafter Fama, *Theory & Empirical Work*].

18. *Id.* at 383.

19. See *infra* notes 271-288 and accompanying text. The Efficient Markets Hypothesis has been described by some commentators as the most influential economic theory to influence legal regulation. Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549, 549 (1984) [hereinafter Gilson, *Market Efficiency*] (“Of all recent developments in financial economics, the efficient capital market hypothesis (‘ECMH’) has achieved the widest acceptance by the legal culture.”). But see Lynn A. Stout, *The Mechanisms of Market Inefficiency: An Introduction to the New Finance*, 28 J. CORP. L. 635, 636 (2003) (responding to Gilson & Kraakman’s assertion by stating “[t]he idea that securities prices reflect informed estimates of value has always coexisted uneasily with a darker view that sees stock prices as disconnected from economic reality.”).

market failed²⁰ and no investors would buy CMBS at any price.²¹

No legal commentator to date has reviewed the CMBS' role in the Market Meltdown. Market participants and practitioners have generally concluded that years of lax lending standards²² in subprime residential mortgage loan origination²³ led to increasingly poor loan quality,²⁴ widespread downgrades of the highest rated²⁵ classes of residential mortgage backed securities ("RMBS"), and substantial losses in the lowest rated classes.²⁶ Consequently, investors indiscriminately fled asset-

20. See *infra* notes 182-198 and accompanying text.

21. See Wei, *supra* note 15.

22. See Poole, *supra* note 12, at 424 (describing lax lending standards that resulted in low quality residential mortgages contributed to collateral debt obligation transactions).

23. There is no universally accepted definition of a subprime residential mortgage loan. See Alex M. Johnson, Jr., *Preventing a Return Engagement: Eliminating the Mortgage Purchasers' Status as a Holder-In-Due-Course: Properly Aligning Incentives Among the Parties*, 37 PEPP. L. REV. 529, 543 n.60 (2010) ("Although there is no precise, legal definition of a Subprime Mortgage it is generally accepted in the industry that a Subprime Mortgage is any mortgage that a lender makes that it would not normally make – pursuant to its normal terms and conditions."). Colloquially, subprime residential loans are broadly defined as any loan that does not conform to Fannie Mae's (as defined herein) underwriting standards.

24. Kia Dennis, *The Ratings Game: Explaining Rating Agency Failures in the Build up to the Financial Crisis*, 63 U. MIAMI L. REV. 1111, 1112 (2009) ("Investors continued to purchase these securities even as evidence mounted suggesting that homes were being overpriced and that the mortgages backing those securities were becoming increasingly risky.").

25. Adam Ashcraft, Morten L. Bech, & W. Scott Frame, *The Federal Home Loan Bank System: The Lender of Next-to-Last Resort?* 1 (Fed. Res. Bank of Atlanta, Working Paper No. 2009-4, 2009), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1310281 (noting that after the widespread deterioration in subprime RMBS, Standard & Poor's downgraded all mortgage backed securities). Typically, two of three national statistical rating organizations, Standard & Poor's, Fitch, or Moody's rate each of the classes of debt issued in a CMBS transaction. However, they have been criticized for ratings given in subprime RMBS transactions. Claire A. Hill, *Why Did Rating Agencies Do Such a Bad Job Rating Subprime Securities?*, 71 U. PITT. L. REV. 585, 585 (2010) ("The three main rating agencies, Moody's, Standard & Poor's, and Fitch, have been scorned and vilified for their bad performance in rating subprime securities. They gave AAA ratings to securities whose quality was far lower.").

26. The lowest rated classes are the first to experience losses in the underlying collateral. During the Market Meltdown, those losses were shifted from lenders to investors. Kurt Eggert, *The Great Collapse: How Securitization*

backed securities markets,²⁷ except for markets for mortgage-backed securities issued by government-sponsored entities.²⁸

However, in attempts to critique the efficient markets hypothesis²⁹ and associated financial regulations, many legal commentators have embraced theories from Behavioral Law and Economics,³⁰ and have concluded that the complexity³¹ of securitized investments left investors overly reliant on information and financial intermediaries.³² They argued that this reliance was the Market Meltdown's primary cause.³³ Further, these scholars criticize assumptions of market efficiency as being overly reliant on investor rationality.³⁴ As a result, many

Caused the Subprime Meltdown, 41 CONN. L. REV. 1257, 1259 (2009) ("This crisis was triggered by the subprime meltdown that started in late 2006, when early subprime loan defaults increased dramatically and then subprime lenders began going out of business rather than buying back problem loans.").

27. Steven L. Schwarcz, *Systemic Risk Meets Subprime Mortgages*, FORBES.COM, May 1, 2008, <http://www.forbes.com/2008/05/01/subprime-fed-system-oped-cxsls0501subprime.html> ("Once investors realized that highly rated subprime-mortgage-backed securities could lose money, they began shunning all complex securitization products, including asset-backed commercial paper, which was thought to be almost as safe as cash.").

28. See Lingling Wei, *CMBS Savior? Developers Diversified Deal Is Nearer*, WALL ST. J., Nov. 4, 2009, http://online.wsj.com/article/NA_WSJ_PUB:0,,SB125729550942326763,00.html (describing hopes that Federal Reserve's Term Asset-Backed Securities Loan Facility ("TALF") will spark the CMBS market).

29. See discussion of the Efficient Market Hypothesis *infra* notes 271-288 and accompanying text.

30. For a fuller discussion of the legal commentary of Behavioral Law and Economics scholars about the Market Meltdown, see *infra* notes 289-318 and accompanying text.

31. See Steven L. Schwarcz, *Regulating Complexity in Financial Markets*, 87 WASH. U. L. REV. 211, 222 (2009) [hereinafter Schwarcz, *Regulating Complexity*] (concluding that complexity led to overreliance on heuristics such as credit ratings).

32. See Daniel J. Morrissey, *The Securities Act at Its Diamond Jubilee: Renewing the Case for a Robust Registration Requirement*, 11 U. PA. J. BUS. L. 749, 752 (2009) ("Not only was the risky nature of those securities hidden from their purchasers, but it may not have been known by their underwriters.").

33. Steven L. Schwarcz, *Disclosure's Failure in the Subprime Mortgage Crisis*, 2008 UTAH L. REV. 1109, 1110 (2008) ("Most, if not all, of the risks giving rise to the collapse of the market for securities backed by subprime mortgages were disclosed, yet the disclosure was insufficient, in part because complexity made the risks very difficult to understand.") (footnotes omitted).

34. A common critique from the literature base about the Efficient Markets Hypothesis is the idea that people are not necessarily rational actors and cannot be counted on to act in their own best interests, as they may not be

legal commentators advocate for increased mandatory disclosure³⁵ and the reallocation of risk from investors to issuers of securitized products.³⁶

Acting on calls for reform,³⁷ U.S. federal administrative agencies, such as the Federal Deposit Insurance Commission³⁸ and the Securities and Exchange Commission,³⁹ have proposed new rules regarding securitization.⁴⁰ Also, the President⁴¹ and members of Congress⁴² proposed a set of reforms

able to determine what those interests are. See Mark Klock, *Contrasting the Art of Economic Science with Pseudo-Economic Nonsense: The Distinction Between Reasonable Assumptions and Ridiculous Assumptions*, 37 PEPP. L. REV. 153, 166 (2010) ("Yet many commentators are writing about a growing body of empirical evidence suggesting that people are not rational. These authors want policy makers to conclude that economic theory is flawed, and thus, law and policy based on economic theory is flawed.").

35. See, e.g., Hill, *supra* note 25, at 602-3 (describing the current proposals for regulating securitization).

36. See Schwarcz, *Regulating Complexity*, *supra* note 31, at 220 (noting that one possible solution is to require originators of subprime loans to retain a risk of loss).

37. Aside from the specifics of the regulation, legal commentators have generally supported increased regulation of the financial sector generally to prevent economic crises similar to the Market Meltdown. See Evan N. Turgeon, *Boom and Bust for Whom?: The Economic Philosophy Behind the 2008 Financial Crisis*, 4 VA. L. & BUS. REV. 139, 141 (2009) ("Since the 1980s, financial gurus responsible for the nation's economic health have failed to acknowledge a fact that history has shown to be true: financial markets not subject to restrictive regulation produce national economic crises.").

38. See, e.g., Treatment by the FDIC of Financial Assets in Connection with a Securitization, 75 Fed. Reg. 27,471 (proposed May 17, 2010) (to be codified at 12 C.F.R. pt. 60).

39. See, e.g., Asset-Backed Securities, 75 Fed. Reg. 23,328 (proposed May 3, 2010) (to be codified at 17 C.F.R. pts. 200, 229, 230, 239, 240, 243, and 249).

40. Even state level law enforcement officials have used their authority to regulate the Rating Agencies who rate securitized transactions. For example, New York State Attorney General Andrew Cuomo recently ended an investigation into the Rating Agencies with an agreement reached between Moody's Investors Service, Standard & Poor's and Fitch Ratings that requires changes made to agreements regarding timing of payment and further disclosure. Tomoeh Murakami Tse, *Rating Agencies Agree to Changes*, WASH. POST, June 6, 2008, <http://www.washingtonpost.com/wpdyn/content/article/2008/06/05/AR2008060502675.html>.

41. Timothy Geithner & Lawrence Summers, *A New Financial Foundation*, WASH. POST, June 14, 2009, <http://www.washingtonpost.com/wp-dyn/content/article/2009/06/14/AR2009061402443.html> (concluding that the financial reform legislation "will impose robust reporting requirements on the

to the current financial regulatory framework earlier this year. The result was the Dodd-Frank Wall Street Reform and Consumer Protection Act (“Dodd-Frank Bill”)⁴³ that was signed into law in July. With respect to securitization, the Dodd-Frank Bill principally⁴⁴ requires RMBS issuers to retain a portion of the credit risk⁴⁵ and provide increased disclosures to investors.⁴⁶

Unfortunately, many of the proposed reforms to mortgage-backed securities markets in the academic legal literature (and the Dodd-Frank Bill) do not adequately differentiate⁴⁷ among different mortgage asset classes; particularly, residential mortgages from commercial real estate mortgages.⁴⁸

issuers of asset-backed securities; reduce investors’ and regulators’ reliance on credit-rating agencies; and, perhaps most significant, require the originator, sponsor or broker of a securitization to retain a financial interest in its performance”).

42. Chairman Chris Dodd’s draft of the Financial Reform Bill notes “[c]ompanies made risky investments, such as selling mortgages to people they knew could not afford to pay them, and then packaged those investments together, called asset-backed securities, and sold them to investors who didn’t understand the risk they were taking.” Press Release, S. Comm. On Banking, Housing, and Urban Affairs, Restoring American Financial Stability—Create a Sound Economic Foundation to Grow Jobs, Protect Consumers, Rein in Wall Street, End Too Big to Fail, Prevent Another Financial Crisis, <http://banking.senate.gov/public/files/FinancialReformSummary231510FINAL.pdf>.

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

44. True to its name, the Dodd-Frank Bill covers areas as diverse as securitization and consumer protection. *Id.*

45. 15 U.S.C. § 78(a)(15)(G) (2010) (requiring administrative agencies to enact regulations requiring securitizers of assets to retain five percent (5%) of the credit risk of any asset backed securities issuance, under certain circumstances).

46. 17 U.S.C. § 77(g)(c) (2010) (requiring administrative agencies to enact regulations to disclose loan level information about loan originator identity, compensation and risk retention); § 77(g)(d) (requiring issuers of asset-backed securities, in connection with filing a registration statement, to perform due diligence on the related issuance and disclose the due diligence).

47. For example, the Dodd-Frank Bill does allow regulators to distinguish amongst asset classes, but provides no metric as to how regulators should do so. 15 U.S.C. § 78(a)(15)(G)(c)(2)(A) (2010). Further, the Dodd-Frank Bill permits the credit retention risk to be contractually spread between originators and securitizers. 15 U.S.C. § 78(a)(15)(G)(d)(2).

48. To date, only one article compares the difference in loan servicing requirements between CMBS and RMBS transactions. *Cf.* Anna Gelpert &

While much has been written about failures in the origination of the subprime residential mortgages and their role in the Market Meltdown,⁴⁹ scant attention has been paid to the role played by commercial mortgages.⁵⁰

Furthermore, since the structure of the CMBS market informs practices in the larger U.S. commercial real estate market and the global CMBS market,⁵¹ reforms to U.S. securitization markets will have effects in global credit markets as well.⁵² More importantly, although there is evidence of widespread fraud in the RMBS market, there has not been widespread fraud in commercial real estate securing CMBS loans.⁵³ However, securitization's critics have seized on fraud in RMBS market and recommended changes to all securitization markets.

Adam J. Levitin, *Rewriting Frankenstein Contracts: Workout Prohibitions in Residential Mortgage-Backed Securities*, 82 S. CAL. L. REV. 1075, 1102-10 (2009) (describing the differences between CMBS and RMBS loan servicing requirements) [hereinafter Gelpert, *Rewriting Frankenstein Contracts*].

49. See, e.g., Navid Vazire, *Smoke and Mirrors: Predatory Lending and the Subprime Mortgage Loan Securitization Pyramid Scheme*, 30 PACE L. REV. 41 (2009).

50. To date there has not been any published article in a law review that separately addresses the effect of disclosure in CMBS in the context of the Market Meltdown. The vast majority of the legal literature discusses subprime MBS and then seamlessly discusses all mortgage-backed securities.

51. Michael Madison, *The Real Properties of Contract Law*, 82 B.U. L. REV. 405, 464 (2002) ("Securitization has also revolutionized the way in which real estate is being acquired and financed").

52. See Georgette Chapman Poindexter & Wendy Vargas-Cartaya, *En Ruta Hacia el Desarrollo: The Emerging Secondary Mortgage Market in Latin America*, 34 GEO. WASH. INT'L L. REV. 257, 258 [hereinafter Poindexter, *Desarrollo*] ("Globally, analysts predict that CMBS issuance will rise twenty percent to approximately \$72 billion in 2001 compared to 2000's \$60 billion. The U.S. component is expected to grow to \$52 billion from \$48 billion in 2000. Canada, Europe, and Asia are anticipated to issue as much as \$20 billion, up from 2000's \$12 billion."); see also Douglas Arner, *Emerging Market Economies and Government Promotion of Securitization*, 12 DUKE J. COMP. & INT'L L. 505 (2002). See generally Michael J.T. McMillen, *Asset Securitization Sukuk and Islamic Capital Markets: Structural Issues in These Formative Years*, 25 WIS. INT'L L.J. 703, 753-60 (2008) (describing the structure of two CMBS deals in Dubai); Tien Foo Sing, Seow Eng Ong & Kah Hwa Ng, *Commercial Mortgage Backed Securitization in Singapore: The Challenges Ahead*, 21 REAL EST. FIN. 14 (2004).

53. Although CMBS is starting to see higher rates of default and loss severity, delinquency rates are at still near the relatively low rate of 8.4%. See Lingling Wei, *For CMBS, 'Worst Is Yet To Come'*, WALL ST. J., June 2, 2010, http://online.wsj.com/article/NA_WSJ_PUB:SB10001424052748703961204575280920467715864.html.

In so doing, they have overlooked the fact that there has not been significant devaluation of the highest rated classes of CMBS.⁵⁴ As a result, the CMBS market stands as an important theoretical and unresolved counterpoint to the existing narrative that government regulation is necessary to protect sophisticated investors from themselves.

This Article fills an important gap in the legal commentary on securitization by analyzing the role and structure of the CMBS market. I argue that, contrary to the majority view in the legal commentary, the causes of the RMBS market's failure are not applicable to the CMBS market. Significant structural differences between the two markets account for greater investor protections in CMBS.

The dominant legal commentary recommends enhanced regulation of the CMBS market as a default setting. Many commentators do so under the belief that securitization without regulation creates systemic risk.⁵⁵ The question of systemic risk, as argued later, is created by concentrating market risk in a small number of market participants.⁵⁶ I argue that current regulation should not artificially limit investor choice, but rather ensure that there are fewer barriers to market entry. In so doing, market risk will be spread out among more market participants, reducing the risk of public bailout of private firms.

Part I describes the market architecture of CMBS. Part II describes the doctrine of informational asymmetry as an explanation for market failure and an alternate regulatory framework.

54. *See id.* (citing an officer at a large owner of CMBS as believing the worst is yet to come with respect to CMBS performance).

55. Patricia A. McCoy, Andrey D. Pavlov & Susan M. Wachter, *Systemic Risk Through Securitization: The Result of Deregulation and Regulatory Failure*, 41 CONN. L. REV. 1327, 1332 (2009) ("The subprime crisis evolved into contagion that paralyzed credit markets worldwide and triggered the deepest recession in the United States since the Great Depression. This is the systemic risk that securitization without regulation engendered.").

56. Although typical bank regulations require diversification of assets, broad diversification across all banks can lead to bank failure. Wolf Wagner, *Diversification at Financial Institutions and Systemic Crises*, 19 J. FIN. INTERMEDIATION 373, 373 (2010) ("[D]iversification also makes the banks more similar to each other by exposing them to the same risks" which may result in an increased risk of "a systemic crisis.").

I.

ARCHITECTURE OF THE CMBS MARKET PROVIDES GREATER
INVESTOR PROTECTIONS THAN THE ARCHITECTURE
OF THE RMBS MARKET

The Dodd-Frank Bill is to be followed by the promulgation of regulations requiring issuers of asset-backed securities (i) to retain the first five percent of any losses and (ii) enhance disclosure to investors in private placements. The result of these regulations will be a reallocation of risk from investors in structured products to the issuers of these products.⁵⁷ The largely unanswered question, however, is why issuers would be more informed about asset quality than investors are.

The new regulations seem to be an extension of the idea that sellers generally know more about assets than buyers do. CMBS purchasers tend to be large institutional investors, and are themselves originators of commercial mortgages. Since these investors have undertaken due diligence on the underlying real estate markets and are directly involved in the business of making mortgage loans, they have a greater universe of knowledge to compare real estate assets. In contrast, the issuers are largely asset brokers who merely know how to find buyers in one market and match them with sellers in another. More importantly, because CMBS issuers have traditionally acted as brokers while investors have acted as asset evaluators, much of the skillset and institutional knowledge for evaluating the underlying assets rests with the investor group.⁵⁸

57. Both provisions have a similar economic effect. Requiring issuers to retain the first five percent (5%) of risk of any asset-backed securities transaction grants an insurance policy against a portion of losses. The enhanced disclosure has a similar effect. To the extent that an investor loses money on any securitized asset, there are now increased legal remedies to require the issuer to repurchase the asset.

58. Many of the largest originators of CMBS loans are also affiliates of CMBS issuers. *Compare CMBS Market Statistics*, COM. MORTGAGE ALERT, (Commercial Mortg. Alert, Hoboken, N.J.), <http://www.cmalert.com/ranking.php?rid=241> (listing US issuers of CMBS for the first nine months of 2010) *with CMBS Market Statistics*, COM. MORTGAGE ALERT, (Commercial Mortg. Alert, Hoboken, N.J.), <http://www.cmalert.com/ranking.php?rid=242>. However, the skillset required to evaluate the market for a CMBS loan is different than that of knowing the market of a CMBS security. Underwriting the risk of commercial real estate has a different set of inputs than the risk of holding a CMBS security.

Supporters of the Dodd-Frank Bill argued that risk reallocation was necessary because investments in asset-backed securities of all types are too complex for investors to understand.⁵⁹ By implication, if the investments were simpler or easier to understand, investors would have been able to ferret out the fraud in subprime residential mortgage loans. Writers in the popular press have advanced this narrative and it has taken hold in the academic legal commentary.⁶⁰

A. *The Dominant Narrative in the Legal Commentary About the Market Meltdown Presumes Investors Were Flummoxed by Complexity, but Bought Anyway*

The dominant narrative⁶¹ advanced about the Market Meltdown in the legal literature⁶² is that greedy investment

59. This also implies that if investors were not so confused by the complexity of the asset that they could determine high quality assets from low quality ones; suggesting that the confusion of sophisticated investors is not a permanent state.

60. A more formal proof of this assertion requires study that is outside of the scope of this Article. In this context, I simply note the substantial number of law review articles on the subject that refer to the Market Meltdown as advanced in the popular press. For a fuller discussion about how researchers study narratives generally, see CATHERINE KOHLER RIESMANN, *NARRATIVE ANALYSIS* 54-60 (Sage Publications, 1993).

61. The idea of narrative as a means of analysis has crossed over from the social sciences to legal commentary. One important feature of narrative as an analytical tool is that narrative informs framing debate of what legal rules should exist. While I mean here that the narrative is malleable and uninformed investors were duped into taking risks that they did not understand, there is a counter narrative that suggests that the financial industry is simply reaping the benefits of years of de-regulation. See Sanford M. Jacoby, *Finance and Labor: Perspectives on Risk, Inequality, and Democracy*, 30 *COMP. LAB. L. & POL'Y J.* 17, 28 (2008) ("The financial industry is a paradigmatic example of a lobby that secures for itself benefits whose costs are diffused throughout the polity. The process might be called 'deregulatory capture.'").

62. Compare Lauren E. Willis, *Will the Mortgage Market Correct? How Households and Communities Would Fare if Risk Were Priced Well*, 41 *CONN. L. REV.* 1177, 1177 (2009) ("[The] dominant narrative of the subprime lending crisis is that recent mortgage market problems are the fallout of the bursting of a speculative housing bubble."), with Donald C. Langevoort, *Brokers As Fiduciaries*, 71 *U. PITT. L. REV.* 439, 450 (2010) [hereinafter Langevoort, *Brokers*] ("Many institutional buyers were well aware of the conflicts of interest and difficulty of evaluating risk in these extraordinarily complex products, but bought anyway. . . . Moreover, the so-called warning signs about excessive risk were largely in the public domain: the grounds for concern visible to any sufficiently sophisticated and interested analyst.").

bankers (“Greedy Investment Bankers”)⁶³ goaded naïve institutional investors (“Naïve Institutional Investors”)⁶⁴ into purchasing securities (“Confusing Yet Profitable Securities”) that the Naïve Institutional Investors believed to be both safe⁶⁵ and liquid substitutes for U.S. Treasury Bonds.⁶⁶ In fact, according to the narrative, the Confusing Yet Profitable Securities were backed only by collections of illiquid and fraudulent⁶⁷ subprime residential mortgage loans (“Subprime Fraudulent Loans”) which were likely to default quickly.⁶⁸

Unfortunately, according to this narrative, the Greedy Investment Bankers never told the Naïve Institutional Investors of the substantial risks of default, other than in some long and

63. Robert Hardaway, *The Great American Housing Bubble: Re-Examining Cause and Effect*, 35 U. DAYTON L. REV. 33, 36 (2009) (“[T]he greed and recklessness of investment banks in attaining extreme leverage by sidestepping reserve requirements and creating exotic financial instruments, such as collateralized debt obligations (“CDOs”) and structured investment vehicles (“SIVs”), is now well documented in an avalanche of books and articles now flooding the market.”).

64. See Langevoort, *Brokers*, *supra* note 62, at 450 (“And the marketplace for securitized debt and derivatives is largely institutional, not retail. One of the most profound questions for securities regulation going forward is why—assuming that at least some of this severe risk was foreseeable—institutions were such willing buyers of so much of that debt.”).

65. *Id.* (“We know that, for the most part, the current financial crisis was initially triggered by weaknesses in the home (mainly subprime) mortgage market that swiftly caused a drop in the value of seemingly safe mortgage backed securities and derivatives based on those securities.”).

66. See, e.g., John P. Harding, C.F. Sirmans & Sansanee Thebpanya, *CMBS Pricing: Evidence from Modern Conduit Issues*, 14 J. FIXED INCOME 69, 74 (2004) (Describing CMBS pricing models which view “the mortgage as a combination of a riskless fixed-term obligation (which can be valued using the current term structure of Treasury rates) and an option that provides the borrower certain rights to terminate the debt prior to maturity through prepayment or default.”).

67. Dale A. Whitman, *How Negotiability Has Fouled up the Secondary Mortgage Market, and What To Do About It*, 37 PEPP. L. REV. 737, 738 (2010) (“During the period from 2001 through 2006, many very bad mortgage loans were made. By ‘bad,’ I mean that they were originated either extremely carelessly or by means of outright fraud on the part of the borrower, often with the connivance of a mortgage broker or a loan officer for the originating lender, and sometimes with the lender’s full knowledge and encouragement.”).

68. *Id.* (“Because these loans were so badly underwritten, they carried a high probability of default.”).

incomprehensible documents⁶⁹ that no one could possibly be expected to read. Worse yet, the Greedy Investment Bankers, through their conflicted mouthpieces, the national statistical rating organizations (the “Rating Agencies”),⁷⁰ convinced the Naïve Institutional Investors that the most highly rated bonds were just as liquid and as unlikely to default as U.S. Treasury Bonds.⁷¹ Since some arcane process called securitization created the market where the Naïve Institutional Investors bought the Subprime Fraudulent Loans, and that market mechanism did not protect the Naïve Institutional Investors,⁷² the narrative concludes that regulation must rein in securitization to stabilize the world economy.

The dominant underlying themes that “investors took risks that they didn’t understand” and “risk was mispriced”⁷³ have shaped the legislative debate around securitization reform.⁷⁴ Both President Obama and influential congressional

69. See Schwarcz, *Regulating Complexity*, *supra* note 31, at 220 (“[C]omplexities of modern investment securities can lead to a failure of investing standards and financial-market practices.”).

70. Charles W. Murdock, *Why Not Tell the Truth?: Deceptive Practices and the Economic Meltdown*, 41 *LOV. U. CHI. L.J.* 801, 851 (2010) (“[T]he rating agencies were bought off by the investment bankers who were packaging and selling these instruments.”).

71. John Patrick Hunt, *Credit Rating Agencies and the “Worldwide Credit Crisis”: The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement*, 2009 *COLUM. BUS. L. REV.* 109, 112 (2009) [hereinafter Hunt, *Credit Rating*] (“[W]elter of regulatory reports on the crisis assert that high credit ratings on novel financial instruments helped induce investors to purchase these instruments.”).

72. *The Causes and Current State of the Financial Crisis: Before Financial Crisis Inquiry Comm.* (2010), <http://www.fcic.gov/hearings/pdfs/2010-0114-Bair.pdf> (statement of Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation) (“The financial regulatory system collectively did not rein in many of the risky financial activities that helped create the conditions for the crisis.”).

73. Andrey D. Pavlov & Susan M. Wachter, *Systemic Risk and Market Institutions*, 26 *YALE J. ON REG.* 445, 452 (2009) (“With private-label MBS, investors bore default risk; while this risk should have been priced, as systemic risk grew, the pricing of risk did not increase.”).

74. One important source of this narrative is popular media coverage. See, e.g., Melissa B. Jacoby, *Negotiating Bankruptcy Legislation Through the News Media*, 41 *HOUS. L. REV.* 1091, 1093 (2004) (concluding that the media’s role in the development of recent bankruptcy legislation “may have helped the excluded opposition by reframing the debates in ways that had the potential to produce controversy and delay”).

representatives repeated this narrative in arguing for the Dodd-Frank Bill's passage.⁷⁵ However, because this narrative only includes the perspective of perceived failures in residential mortgage securitization and imputes those failures to all asset-backed securities, it overlooks the successes of the CMBS market.⁷⁶ More importantly, increased regulation of securitized products may have unintended negative consequences and may not protect investors as intended.

B. *History of CMBS*

Mortgage securitization's global roots date back several centuries.⁷⁷ However, recent advances in financial engineering and computer technology⁷⁸ have helped to create a global

75. See *supra* notes 41 - 47 and accompanying text.

76. While there are no shortage of practice guides published by the American Bar Association and the Practising Law Institute, there are very few law review articles about the structure of CMBS. Several that have been published are not recent and do not reflect the changes in the CMBS market since their publication. For general information, see Alan Kronovet, *An Overview of Commercial Mortgage Backed Securitization: The Devil is in the Details*, 1 N.C. BANKING INST. 288 (1997) [hereinafter Kronovet, *CMBS: Details*]. See also Georgette C. Poindexter, *Subordinated Rolling Equity: Analyzing Real Estate Loan Default in the Era of Securitization*, 50 EMORY L.J. 519, 524-529 (2001) [hereinafter Poindexter, *Subordinated Equity*] (describing the real estate crash of the late 1980s and 1990s and concomitant reasons for the creation of the real estate mortgage securitization market).

77. Compare Kenneth W. Dam, *The Subprime Crisis and Financial Regulation: International and Comparative Perspectives*, 10 CHI. J. INT'L L. 581, 582 (2010) ("Contrary to popular impression, securitization (the pooling of loans, including mortgage loans, into securities) is common throughout the world. In Germany, mortgage-backed securities have been common for at least 200 years."), with Nestor M. Davidson & Rashmi Dyal-Chand, *Property in Crisis*, 78 FORDHAM L. REV. 1607, 1607 (2010) ("A robust market in residential mortgage-backed securities had existed for at least two decades. In the early part of this millennium, subprime-mortgage-backed securities joined the secondary market."). The resolution of this paradox appears to be that while securitization of mortgages has been around for long time, only recently have residential home mortgages been securitized, with subprime mortgages to follow, in large numbers. Joseph C. Shenker & Anthony J. Colletta, *Asset Securitization: Evolution, Current Issues and New Frontiers*, 69 TEX. L. REV. 1369 (1991) (noting the history of securitization's expansion ever since the 1970s).

78. Leon T. Kendall, *Securitization: A New Era in American Finance*, in A PRIMER ON SECURITIZATION 1, 8 (Leon Kendall & Michael Fishman eds., 1996) ("[W]ithout the computers to model securitized structures, to track cash flows, and to oversee the many detailed elements in transactions on a

market⁷⁹ in structured products composed of receivables of all asset classes.⁸⁰ The modern roots of commercial mortgage securitization grew out of the government sponsored entities (“GSEs”)⁸¹ residential⁸² securitization programs.⁸³

Prior to the commercial real estate’s widespread securitization in the 1990s, commercial real estate primary investors were tax shelter syndicates, savings institutions, commercial banks, and life insurance companies, not the GSEs.⁸⁴ However, after the Tax Reform Act of 1986 removed tax shelter syndicates as a funding vehicle for commercial real estate,

daily and monthly basis, the volume of deals would be much smaller and those done would be much simpler.”). This article was written before many of the recent advancements in technology. However, as a normative matter, the use of computers to create complex models under which the securitization markets operated may not have been a positive advance. See Kenneth A. Bamberger, *Technologies of Compliance: Risk and Regulation in a Digital Age*, 88 TEX. L. REV. 669, 717-21 (2010) (describing how the advancement in computer modeling of risk assessment began to replace human judgment in valuation of complex financial instruments).

79. Poindexter, *Desarrollo*, *supra* note 52, at 257.

80. Receivables of all types have been securitized. See Henry T.C. Hu, *Swaps, The Modern Process of Financial Innovation and the Vulnerability of a Regulatory Paradigm*, 138 U. PA. L. REV. 333, 335-44 (1989) (describing the diversity of financial products and the process of innovation which created them). Hu’s article predates the development of Collateralized Debt Obligations, Collateralized Loan Obligations, Credit Default Swaps and a number of other even more esoteric products designed to manage risk.

81. Government National Mortgage Association (“Ginnie Mae”), Federal National Mortgage Association (“Fannie Mae”), and Federal Home Loan Mortgage Corporation (“Freddie Mae”). I refer to them collectively herein as the GSEs.

82. See Nestor, *supra* note 77, at 1607 (“[A] robust market in residential mortgage-backed securities had existed for at least two decades. In the early part of this millennium, subprime-mortgage-backed securities joined the secondary market.”); Kenneth C. Kettering, *Securitization and Its Discontents: The Dynamics of Financial Product Development*, 29 CARDOZO L. REV. 1553, 1556 (2008) (noting securitizations roots with the government sponsored entities).

83. The GSEs began purchasing residential and commercial mortgages from initial lenders, guarantying the mortgages and bundling them in securitized pools as a part of their securitization programs. Edward L. Glaeser & Hédi D. Kallal, *Thin Markets, Asymmetric Information, and Mortgage-Backed Securities*, 6 J. FIN. INTERMEDIATION 64, 68-70 (1997) [hereinafter Glaeser, *Thin Markets*] (describing the creation of MBS by the GSEs).

84. DeMichele, *CMBS*, *supra* note 1, at 74.

prices fell for several years.⁸⁵ The effect was the closing in the early 1990s of thousands of savings and loan (“S&L”) institutions, which were heavily exposed to real estate.⁸⁶

As a result of the S&L crisis, the Resolution Trust Corporation (“RTC”)⁸⁷ was created to buy nonperforming real estate loans from insolvent thrifts⁸⁸ and S&Ls, and sell them as securities.⁸⁹ The RTC’s securitization of S&L real estate loans created the framework for a large-scale commercial real estate loan market.⁹⁰ With fewer lenders and a model

85. Sharon E. Foster, *Too Big To Fail—Too Small To Compete: Systemic Risk Should Be Addressed Through Antitrust Law but Such a Solution Will Only Work if It Is Applied on an International Basis*, 22 FLA. J. INT’L L. 31, 41 (2010) (arguing that the 1986 Tax Reform Act “removed tax shelters for real estate investments, significantly decreasing the value of many such investments which had been held more for their tax-advantaged status than for their inherent profitability”).

86. *See id.* (noting that closings of “1,043 institutions holding \$519 billion in assets contributed to a massive restructuring of the S&L industry”).

87. Yildirim Yildirim, *Estimating Default Probabilities of CMBS Loans with Clustering and Heavy Censoring*, 37 J. REAL EST. FIN. & ECON. 93, 99 (2008) [hereinafter Yildirim, *Estimating Default of CMBS*]. For a general discussion of the effect that the RTC had on the creation of the CMBS market, see Joseph Philip Forte, *A Capital Markets Mortgage: A Ratable Model for Main Street and Wall Street*, 31 REAL PROP. PROB. & TR. J. 489, 493-96 (1996) [hereinafter Forte, *CMM*]; *see also* Georgette Chapman Phillips, *The Paradox of Commercial Real Estate Debt*, 42 CORNELL INT’L L.J. 335, 339 (2009) [hereinafter Phillips, *Paradox*].

88. A thrift institution is a financial institution whose primary purpose is to offer home loans and savings accounts. For a fuller discussion on the history of thrift institutions prior to the S&L crisis, see Lissa Lamkin Broome, *The Influence of Enhanced Thrift Institution Powers on Commercial Bank Market Expansion*, 67 N.C. L. REV. 795 (1989).

89. Phillips, *Paradox*, *supra* note 87, at 339 (“Between 1991 and 1995, the RTC securitized \$18 billion in loans, with \$14 billion in the first two years alone. This restructuring of loan income flow opened the doors of Wall Street finance to local real estate markets. Private investment companies entered the market, further fueling its growth.”). *See also* Poindexter, *Subordinated Equity*, *supra* note 76, at 524-29 (describing the real estate crash of the late 1980s and 1990s and concomitant reasons for the creation of the real estate mortgage securitization market).

90. Christopoulos, *CMBS and Market Efficiency*, *supra* note 5, at 445 (describing CMBS as a “relatively new market, jumpstarted by the Resolution Trust Corporation working out the commercial loan portfolios of many thrifts and savings loans in the early 1990s”).

for success,⁹¹ the private-label CMBS⁹² market began in earnest.⁹³

Annual CMBS issuance grew from \$3 billion in 1990⁹⁴ to its zenith of \$230 billion in 2007.⁹⁵ Over \$1.2 trillion total of CMBS have been issued since the market's inception.⁹⁶ Currently, the CMBS market's size is about \$800 billion, comprised of roughly 200 pools of new loans originated since the early 1990s;⁹⁷ each pool has about 300-500 real estate loans. More than 15% of all commercial real estate debt is securitized.⁹⁸

This success story ended, according to most market commentators, with the unexpected 2007 failure of a Bear Stearns-managed hedge fund comprised of subprime RMBS.⁹⁹ No significant issuance of CMBS has occurred since.¹⁰⁰ The CMBS

91. The securitization of commercial mortgages by the RTC helped to create the market infrastructure for the CMBS market. Yildirim, *Estimating Default of CMBS*, *supra* note 87, at 99. For a general discussion of the effect that the RTC had on the creation of the CMBS market, see Forte, *CMM*, *supra* note 87, at 493-96. See also Phillips, *Paradox*, *supra* note 87, at 339.

92. I use the term "private label" to distinguish the GSE's issuance of mortgage-backed securities secured by multi-family apartment buildings. See Frank E. Nothaft & James L. Freund, *The Evolution of Mortgage Markets and Its Effect on Lending Rates*, 25 J. REAL EST. RES. 91, 94 (2009) (describing the development of Fannie Mae and Freddie Mac's securitization of multifamily mortgages from its beginnings in the early 1980s). Many times in the literature regarding mortgage-backed securities, a distinction is made between private label RMBS and RMBS created by the GSEs. While there are very few articles that address commercial mortgage backed securities generally, that few have not distinguished between commercial mortgages, such as multi-family buildings, that are included in GSE mortgage pools.

93. The success of the RMBS market helped spur the CMBS market as well. Ann M. Burkhart, *Real Estate Practice in the Twenty-First Century*, 72 MO. L. REV. 1031, 1035 (2007) (describing the growth of the secondary mortgage market in the United States).

94. Poindexter, *Subordinated Equity*, *supra* note 76, at 528.

95. CRE Finance Council, *Compendium of Statistics*, 5 (2010) http://www.crefc.org/uploadedFiles/CMSASite_Home/Industry_Resources/Research/Industry_Statistics/CMSA_Compendium.pdf (last visited Aug. 23, 2010).

96. *Id.* at 6.

97. See *id.* at 232 (describing the history of the CMBS market).

98. *Id.*; Sa-Aadu, *Test of Commercial Mortgage Rates*, *supra* note 7, at 46.

99. Kenneth J. Robinson, *TALF: Jump-Starting the Securitization Markets*, FED. RES. BANK OF DALL. ECON. LETTER, Aug. 2009, at 1, available at <http://www.dallasfed.org/research/ecllett/2009/el0906.pdf>.

100. Commercial Mortgage Alert, a leading industry weekly newsletter read by many CMBS market participants, notes that in calendar year 2007,

market's troubles are a particular example of problems in the asset-backed securities markets more generally.¹⁰¹ As a result, what began as a localized problem affecting a small class of U.S. residential mortgage borrowers soon had widespread global effects.¹⁰²

Unfortunately, in coming years, billions of dollars in loans in CMBS are set to mature.¹⁰³ Low interest rates and high loan to value ratios for loans in CMBS transactions¹⁰⁴ will require many CMBS loan servicers to continue to employ an "extend and pretend" policy¹⁰⁵ because of a failure of the underlying borrowers to find refinancing in this new, more restrictive lending environment.

The academic legal commentary has focused on subprime residential mortgage securitization as a vehicle that hid fraud in poorly originated loans. However, unlike RMBS, CMBS loans contain provisions that have largely prevented fraud, such as limitations on prepayment, guarantor recourse, and restrictions on the borrower's organization.

some \$61 billion in CMBS were issued and in 2009, none were. There was \$18 billion in government-funded deals and no Commercial Real Estate CDO issuances in 2009. See *CMBS Market Statistics*, COM. MORTGAGE ALERT, (Commercial Mortg. Alert, Hoboken, N.J.), <http://www.cmalert.com/ranking.php?rid=226>.

101. 2010 IMF WORLD ECONOMIC OUTLOOK, *supra* note 13, at 45 ("In addition, private securitization remains largely moribund; given the importance of this funding channel for lending in the pre-crisis period, a continued lack of securitization will pose an increasing constraint to finance and growth.").

102. See generally Arthur E. Wilmarth, Jr., *The Dark Side of Universal Banking: Financial Conglomerates and the Origins of the Subprime Financial Crisis*, 41 CONN. L. REV. 963 (2009) [hereinafter Wilmarth, *Dark Side*].

103. Lingling Wei & Peter Grant, *Commercial Real Estate Lurks as Next Potential Mortgage Crisis*, WALL ST. J., Aug. 31, 2009, <http://online.wsj.com/article/SB125167422962070925.html> ("[B]y the end of 2012, some \$153 billion in loans that make up CMBS are coming due, and close to \$100 billion of that will face difficulty getting refinanced, according to Deutsche Bank.").

104. Because of the pooling effects of securitization, interest rates are lower for CMBS loans over portfolio loans for similar property types. An, *supra* note 1, at 303.

105. D. Eric Remensperger, *Bond Bombs, the Workout of a CMBS Loan Requires the Cooperation and Approval of the Special Servicer*, L.A. LAW., Jan. 2010, at 40 (noting however, it is widely believed that this "extend and pretend" policy cannot continue indefinitely).

The Rating Agencies, along with other market participants, created these requirements.¹⁰⁶ By requiring investor protections at the loan level, the Rating Agencies helped create market structure wherein CMBS investors would be protected from possible fraudulent activities much differently than their RMBS counterparts. Accordingly, the extensive literature that discusses securitization solely through the lens of RMBS will not adequately explain securitization of CMBS.

C. *Product Structure of CMBS Transactions Provides Greater Investor Protections than RMBS*

CMBS have important characteristics that distinguish them from RMBS. CMBS loans contain prepayment limitations, requirements that the associated borrowers be bankruptcy remote entities, and fewer assets as compared to RMBS transactions. These differences offer greater investor protections for CMBS investors.

1. *Prepayment Limitations in CMBS Incentivizes Long Term Ownership in the Underlying Collateral*

Unlike residential mortgages,¹⁰⁷ CMBS loans typically have prepayment prohibitions¹⁰⁸ and prepayment penalties,¹⁰⁹ which may differ depending on the type of collateral

106. STANDARD & POOR'S, STRUCTURED FINANCE: U.S. CMBS LEGAL AND STRUCTURED FINANCE CRITERIA 91 (2003) [hereinafter S&P CMBS CRITERIA].

107. Brent W. Ambrose & Anthony B. Sanders, *Commercial Mortgage-Backed Securities: Prepayment and Default*, 26 J. REAL EST. FIN. & ECON. 179, 189-90 (2003) [hereinafter Ambrose, *CMBS: Prepayment*] (describing common CMBS prepayment penalty structures).

108. Generally, lenders are not required to accept prepayment from a borrower. Dale A. Whitman, *Mortgage Prepayment Clauses: An Economic and Legal Analysis*, 40 UCLA L. REV. 851, 858 (1993) [hereinafter Whitman, *Mortgage Prepayment Clauses*] ("American law has presumed that in the absence of a clause permitting prepayment, the lender is under no duty to accept it.").

109. Christopher Downing, Richard Stanton & Nancy Wallace, *Volatility, Mortgage Default, and CMBS Subordination 1-2* (Feb. 19, 2008) (unpublished manuscript), available at <http://faculty.haas.berkeley.edu/stanton/papers/pdf/cmbs.pdf> ("The loans purchased for CMBS pools usually contain provisions that limit prepayment risk, so default is the primary source of risk for CMBS investors.").

pledged¹¹⁰ and on the lender making the loan. Generally, CMBS loans may not be repaid for two years beginning on the date the loan was securitized¹¹¹ and contain prepayment penalties any time prior to the last four months of the loan term.¹¹² The three typical prepayment options and associated penalties in CMBS loans are defeasance,¹¹³ yield maintenance,¹¹⁴ and fixed interest rate payment.¹¹⁵

Empirical studies have found that prepayment penalties are effective in deterring prepayment of a CMBS mortgage¹¹⁶ and incentivize borrowers to hold the underlying property un-

110. Ambrose, *CMBS: Prepayment*, *supra* note 107, at 180 (describing how the “fixed menu” of mortgage terms can be varied by a CMBS lender to control for the risk of default of different properties and borrowers).

111. Most CMBS loans are sold to a REMIC Trust. *See infra* note 173 and accompanying text. The IRS provisions governing REMICs require that assets not be changed for two years after the Startup Day. However, since the vast majority of CMBS loans require defeasance, or a substitution of assets, many CMBS loans simply prohibit prepayment for a two-year period. In the instance of a default during that two-year period, then a fixed interest rate or yield maintenance payment is due.

112. Roger Lehman, Julia Tcherkassova & Mary Stuart Freyberg, *CMBS See Increased Callability*, *CMBS WORLD*, Winter 2007, at 25 (noting that open periods for when a loan can be prepaid without a penalty have averaged about 4.1 months, except for several large loans, over the past few years).

113. Loans that have defeasance prepayment provisions require the borrower to create a single purpose entity that only owns government securities with the same maturities as the upcoming payments under the loan and delegate its responsibility to make payments under the loan to that entity. In return, the CMBS lender releases mortgaged property from the lien of the security instrument and the borrower's obligation to pay under the note. For a useful explanation and accompanying chart describing the defeasance process, see Amit Nagpal & Atul Sheely, *An Examination of Commercial Mortgage-Backed Securities—Some Useful Insights for Borrowers*, 10 *J. HOSP. FIN. MGMT.* 35, 42-45 (2002).

114. Yield maintenance requires a payment of what the investor would have received if the payment had been made to maturity. Gregory A. Thorpe, *River East Plaza: Liquidated Damages Analysis Applies to Prepayment Premium*, 42 *REAL PROP. PROB. & TR. J.* 41, 41 (2007) (“The yield-maintenance provision is a method of compensating lenders if the borrower prepays during a declining interest rate environment.”).

115. Fixed interest rate prepayment penalties are typically calculated depending on the year of prepayment, i.e., 5% first year, 4% second year, etc. They are much less common than either defeasance or yield maintenance prepayment penalties.

116. Ambrose, *CMBS Prepayment*, *supra* note 107, at 192 (noting that in analyzing their sample of 4,257 commercial loans from 33 CMBS deals that “yield maintenance penalties are effective in deterring early prepayment”).

til the maturity of the loan. The borrower, in acting to protect its equity investment from the reach of the prepayment penalty, has an incentive to finance only properties with a stable income flow – precisely those that are less likely to default. Simultaneously, the lender has an incentive to offer financing only to properties that will not default and can generate enough rents to meet the debt service of the loan.

Research has shown that tougher contractual prepayment penalties are largely effective in protecting CMBS owners from prepayment risk.¹¹⁷ Early prepayment would prevent the CMBS investor from receiving its contracted yield to maturity and risk reinvestment of its principal in a lower interest rate environment. As a result, for the CMBS borrower, the relatively large amount equity invested in a property securing a CMBS loan, is a greater incentive to avoid default than the lower nominal equity of an average RMSB loan.¹¹⁸

Perhaps as important as the cost of the penalty are the additional costs associated with prepayment. The most common prepayment penalty, defeasance,¹¹⁹ has significant legal

117. Compare Xiaoqing Eleanor Xu, *What Drives the Return on CMBS?*, 33 J. PORT. MGMT. 145, 145 (2007) (finding that “CMBS investors are largely protected from prepayment risk by contractual provisions such as prepayment lockout, yield maintenance, defeasance, and prepayment penalties.”), with Qiang Fu, Michael LaCour-Little & Kerry D. Vandell, *Commercial Mortgage Prepayments Under Heterogeneous Prepayment Penalty Structures*, 25 J. REAL EST. RES. 245 (2003) [hereinafter Fu, *CM Payments*] (finding “[h]owever, a careful empirical look at prepayment exercise among commercial and multifamily mortgages reveals that prepayment does occur and cannot be ignored, especially since it may produce pricing fluctuations an order of magnitude greater than default risk.”). The difference, according to Fu, et al., has to do with the type of prepayment penalty. Weaker prepayment structures result in different prepayment risks. *Id.* at 272.

118. The literature has not been uniform in concluding that negative equity is an effective predictor of default. Ambrose, *CMBS Prepayment*, *supra* note 107, at 192. However, other than a pension, a home is often the single largest asset of a household’s portfolio of assets. Erik Hurst & Frank Stafford, *Home Is Where the Equity Is: Mortgage Refinancing and Household Consumption*, 36 J. MONEY, CREDIT & BANKING 985, 986 (2004).

119. Gregory A. Thorpe, *River East Plaza: Liquidated Damages Analysis Applies to Prepayment Premium*, 42 REAL PROP. PROB. & TR. J. 41, 62 n.99 (2007) (“As a result of the boom in the conduit market, defeasance has become the overwhelmingly preferred alternative to yield-maintenance prepayment premiums in securitized mortgage financing.”).

and accounting costs that run up to \$60,000.¹²⁰ Combined with the prepayment penalty, prepayment of a CMBS loan can be extremely costly. The result is an incentive for CMBS borrowers to be more prudent in financing properties than for RMBS borrowers.

Traditionally, prepayment penalties are less common in residential mortgage loans than in commercial mortgages.¹²¹ Many states have outlawed prepayment penalties as improper bargaining away of borrower rights. Some commentators have noted that prepayment penalties in residential mortgage loans now commonly exist only as a result of the recent advent of private-label¹²² securitized residential mortgage loans.¹²³

Responding to criticism that prepayment penalties improperly affect the equity of homeowners and their concomitant wealth,¹²⁴ the Dodd-Frank Bill requires lenders to present

120. Martin Dierker, Daniel Quan & Walter Torous, *Valuing the Defeasance Option in Securitized Commercial Mortgages*, 33 REAL EST. ECON 663, 667 (2005) ("Furthermore, for loans of less than \$10 million there are fixed administrative costs ranging from \$50,000 to \$60,000. For larger loans, such costs may increase proportionately.").

121. See Whitman, *Mortgage Prepayment Clauses*, *supra* note 108, at 856-71 ("Most mortgages on income-producing real estate (as distinct from owner-occupied housing) contain clauses restricting early payment of the loan.").

122. The term "private label" is frequently used in the practitioner literature about securitization to distinguish loans that are made by the GSEs (which could be termed public label) and those made by private originators. See generally Brent J. Horton, *Defense of Private-Label Mortgage-Backed Securities*, 61 FLA. L. REV. 827 (2009).

123. Scott Talkov, *Exposing the Myth of Mortgage Prepayment Penalties in the Aftermath of River East*, 44 REAL PROP. TR. & EST. L.J. 585, 586 (2009) ("For residential loans, prepayment fees had nearly disappeared in the 1980s as a result of regulatory changes, only to resurge in connection with the growth of the securitized subprime mortgage market that emerged outside of the heavily regulated markets.") (footnotes omitted).

124. Prepayment penalties for residential loans are another example of where federal policy has to balance to opposing interests. In one instance, the Federal Government had a policy seeking higher rates of minority home ownership. U.S. DEP'T OF HOUSING AND URBAN DEV., BLUEPRINT FOR THE AMERICAN DREAM (2002), available at <http://archives.hud.gov/initiatives/blueprint/> (last visited Aug. 22, 2010). However, the amounts of home ownership and home equity varies significantly across racial and ethnic lines. Lauren J. Krivo & Robert L. Kaufman, *Housing and Wealth Inequality: Racial-Ethnic Differences in Home Equity in the United States*, 41 DEMOGRAPHY 585, 592 (2004) ("Over 70% of white households own their homes, compared with 46% of black household and 49% of Hispanic households. Asians fall between these extremes, with a homeownership rate of 55%. The basic rela-

loans to borrowers with and without prepayment penalties.¹²⁵ Because of the effect of prepayment penalties in CMBS loans as compared to their relative absence in RMBS loans, the primary risk to CMBS investors is that of default on the underlying commercial mortgage loans whereas the primary risk to investors in RMBS is that the underlying borrowers will prepay their loans.¹²⁶

Unfortunately, the Dodd-Frank Bill creates a Sisyphean choice for lenders. Investors are not supposed to bear the risk of mispriced assets – loans in the case of asset-backed securities – and lenders cannot protect themselves by allocating that risk to borrowers. Yet the Dodd-Frank Bill forces lenders to bear an increased risk of widespread default in real estate assets, ostensibly the result the bill was designed to prevent.

2. *Limited Recourse Structures of CMBS Loans Require Lenders To Insure the Property Subject to a CMBS Loan in Order To Provide Sufficient Proceeds at a Foreclosure Sale To Pay Investors After Default.*

Unlike RMBS lenders,¹²⁷ CMBS lenders are generally limited in their recourse to the guarantor¹²⁸ for a deficiency at a foreclosure sale, except for certain defined defaults.¹²⁹ Con-

tionship between home owning and equity is clear from the means and medians of housing equity. Blacks and Hispanics have notably lower values of mean home equity than do whites, and all three minorities have low median housing equity because homeownership is so much less common.”).

125. 15 U.S.C. §1639(c)(4) (2010).

126. Paul D. Childs, Steven H. Ott, & Timothy J. Riddiough, *The Pricing of Multiclass Commercial Mortgage-Backed Securities*, 31 J. FIN. QUANTITATIVE ANALYSIS 581, 582 (1996).

127. There is a great lack of uniformity about the available remedies available to a lender against a borrower for a deficiency after a foreclosure. Most states permit such remedies, although there are a few larger states which do not. Grant S. Nelson, *Confronting the Mortgage Meltdown: A Brief for the Federalization of State Mortgage Foreclosure Law*, 37 PEPP. L. REV. 583, 590 (2010) [hereinafter Grant, *Confronting the Mortgage Meltdown*] (“While, at one extreme, some states impose virtually no limitation on deficiency judgments and personal liability, the polar opposite is represented by California and a few other states where personal recourse against a borrower is nearly always unavailable. Other states fall somewhere in between these doctrinal poles.”) (footnotes omitted).

128. Kronovet, *CMBS: Details*, *supra* note 76, at 297 n.96.

129. Forte, *CMM*, *supra* note 87, at 512-13 (describing non-recourse carveouts in CMBS mortgages).

ceptually, limited recourse¹³⁰ finance assumes that the lender has underwritten solely the cash flow from the property, not the borrower's ability to pay out of other income or assets.¹³¹

In contrast, although many states limit the recourse against residential borrowers at a foreclosure sale to the property securing the lender's loan,¹³² residential lenders typically underwrite residential loans with a great focus on the borrower's ability to repay the loan.¹³³ As a result, unlike an RMBS lender, because rents from the mortgaged are the sole source of income that the CMBS lender relies upon to repay its loan,¹³⁴ the CMBS lender has an incentive to ensure the property will produce sufficient rents to repay the loan, even after foreclosure.¹³⁵

130. I use the term "limited recourse" to describe loans for which the lender's recourse after a foreclosure has been contractually limited by the parties. However, much of the practitioner literature describes this category of loans as non-recourse. See, e.g., Jonathan L. Mechanic, *The Borrower in Workout Negotiations: How Much Do I Get To Keep?*, in NEGOTIATING THE SOPHISTICATED REAL ESTATE DEAL 2010, at 63 (PLI Real Est. L. & Practice, Course Handbook Ser. No. 579 2010). In fact, this is a misnomer. Upon the breach of certain covenants in the loan documents, usually called bad-boy carveouts by practitioners and market participants, the lender may have full recourse against the other assets of the borrower or the guarantor of the loan. The loans are described as non-recourse because there is no recourse unless certain triggering events occur.

131. See, e.g., S&P CMBS CRITERIA, *supra* note 106, at 9 ("The ability of an SPE to incur indebtedness, other than the indebtedness that is supporting the rated securities, should be limited.").

132. Grant, *Confronting the Mortgage Meltdown*, *supra* note 127, at 590 (describing the differences in state law with respect to the liability of a borrower on a deficiency judgment after foreclosure).

133. Major determinants of underwriting in a residential loan include the Borrower's Fair Issac Credit Score ("FICO"), income, age and ratio the value of the loan represents as a percentage of the property value. Brent W. Ambrose, Michael LaCour-Little & Anthony B. Sanders, *Does Regulatory Capital Arbitrage, Reputation, or Asymmetric Information Drive Securitization?*, 28 J. FIN. SERVICES RES. 113, 118 (2005) [hereinafter Ambrose, *Securitization Drivers*].

134. S&P CMBS CRITERIA, *supra* note 106, at 9.

135. This is not to say that there was no significant and pervasive evidence of aggressive underwriting in CMBS transactions. See Wilmarth, *Dark Side*, *supra* note 102, at 1039 (noting that a number of analysts warned that commercial mortgages were subject to loose underwriting).

3. *Bankruptcy Remoteness Provisions Require Enhanced Underwriting of CMBS Assets*

A central goal in securitization is to limit the ability of a bankruptcy court to exercise its equitable powers and consolidate the mortgaged asset with other debts of the borrower. As a result, the Rating Agencies generally require the CMBS borrower to own no assets other than the property subject to the mortgage,¹³⁶ and to have no debt other than the mortgage secured by the property¹³⁷ (often termed “bankruptcy remoteness” in the practitioner literature). Depending on the proposed loan size, these requirements may be evidenced by covenants in the loan documents, in the organization documents and/or by an opinion of counsel.

To structure CMBS with a cash stream similar to bonds,¹³⁸ with a payment and payoff of principal at maturity, typical industry loan underwriting focuses on the rents generated by the property as the sole means of repaying a CMBS loan.¹³⁹ However, a borrower’s other debts increase the credit risk to the borrower and lender.¹⁴⁰ As a result, CMBS has a number of organizational and structural protections against bankruptcy.

136. I use the term mortgage here loosely. In some states the security interest in real property is effectuated by a Deed of Trust, where the borrower conveys the underlying property to a trustee who returns it after the note has been paid off. In Georgia, the security instrument is a Deed to Secure Debt where the deed to the property is delivered to the lender and will be returned after the borrower has fulfilled its obligations to the lender. However, the more important distinction is between whether the state follows the lien or title theory of mortgages. See generally Ann M. Burkhardt, *Freeing Mortgages of Merger*, 40 VAND. L. REV. 283, 322-24 (1987).

137. S&P CMBS CRITERIA, *supra* note 106, at 89-98 (describing S&P’s requirements for bankruptcy remote single purpose entity formation in CMBS transactions).

138. Ambrose *Securitization Drivers*, *supra* note 133, at 113(2005) (“In securitization, heterogeneous and illiquid individual loans are combined into relatively homogeneous pools and transformed into highly liquid bonds traded in dealer markets and generically referred to as asset-backed securities.”).

139. See, e.g., S&P CMBS CRITERIA, *supra* note 106, at 9 (“In virtually all stand-alone property-specific transactions and large loan transactions, the mortgaged property and the mortgaged property’s income stream are the sole source of cash flow for payment of the rated securities.”).

140. *Id.*

D. *Fewer Assets Involved in CMBS Securitization Allow for Greater Investor Protection than in RMBS Transactions*

Although both CMBS and RMBS involve assets that are securitized, and the process of securitization is generally similar across asset types, there are some important differences between the two. These differences may have afforded CMBS investors greater protections than RMBS investors. Perhaps the most important difference is simply that fewer assets are contributed to CMBS transactions than to their RMBS counterparts. As a result, more in-depth due diligence on a per-asset basis may be performed.

A typical securitization is composed of three parts: origination, securitization, and servicing. In each stage, CMBS offers different and sometimes greater protections to investors than does RMBS.

1. *Origination*

To obtain a CMBS loan, typically a borrower will contact a CMBS source¹⁴¹ (an "Originator")¹⁴² for a loan quote. This quote will contain two major features: (i) an interest rate and (ii) a loan amount. In order to issue a quote, an Originator typically requests the location of the property and a rent roll.

Not surprisingly, loans that offer the lender greater credit support, as measured by high loan to value ratios or low debt service coverage ratios,¹⁴³ typically receive better loan terms.¹⁴⁴ Lenders may also request additional guarantees from the bor-

141. The main sources for CMBS financing for a borrower are: (i) a conduit lending affiliate of an investment bank, (ii) an insurance company, or (iii) a commercial bank.

142. An originator creates commercial mortgage loans intended for securitization. Robert A. Grovstein, et al., *Commercial Mortgage Underwriting: How Well Do Lenders Manage the Risks?*, 14 J. HOUSING ECON. 355, 360 (2005).

143. Debt service coverage ratio is typically a fraction, the numerator of which is the monthly net operating income generated by the property, less certain expenses, and the denominator of which is the monthly amounts required to pay the loan under the note. This number can be calculated over periods of time different than monthly increments, i.e. quarterly or annually. At the height of CMBS issuance, market participants would complain that loose underwriting standards would permit lenders to underwrite proposed rents rather than rents in place to achieve higher debt service coverage ratios. Matthew Silfee, *CMBS Market Coming Back to Life, S&P Says*, IDD ASSET SECURITIZATION REP., Aug. 5, 2010, <http://www.structuredfinance.com/news/-209416-1.html> (last visited Aug. 23, 2010) (noting that

rower, escrows, or lock boxes to improve credit support.¹⁴⁵ Nonetheless, these additional supports may not reduce a CMBS lender's credit risk, as some researchers have concluded that the debt service coverage ratio is a salient measure of the probability of default.¹⁴⁶

After obtaining quotes from a number of sources, the potential borrower and broker may compare quotes offering the best combination of rates, loan amortization schedule, and loan proceeds.¹⁴⁷ However, unlike residential loans where frequently lenders and borrowers have no prior relationships, commercial real estate deals involve fewer parties who tend to know each other.¹⁴⁸ This difference has created a reputational effect for the parties of commercial real estate transactions that may discourage fraud at the initial origination of the loan.

However, if the CMBS lender has created such a secure loan, then an important inquiry is why securitize the loan? If the loan is of such high quality then the lender should have an incentive to keep it in its portfolio of assets and not sell the

more conservative underwriting has led CMBS lenders to utilize "higher vacancy assumptions and in-place rents.").

144. Ambrose, *CMBS: Prepayment*, *supra* note 107, at 180 (describing the standard CMBS contingent claims pricing approach of loan default probability as a function of loan to value and debt coverage ratio).

145. *See, e.g.*, S&P CMBS CRITERIA, *supra* note 106, at 9. In a lockbox arrangement, tenants pay the lender directly any rents owed to the landlord to an account controlled by the lender: such arrangements are a common feature of CMBS loans which have secondary mezzanine financing. *See* Andrew R. Berman, *Risks and Realities of Mezzanine Loans*, 72 MO. L. REV. 993, 1020 (2007) (describing cash management procedures between senior and mezzanine CMBS lenders).

146. Brian A. Ciochetti, Yongheng Deng, Gail Lee, James D. Shilling & Rui Yao, *A Proportional Hazards Model of Commercial Mortgage Default with Originator Bias*, 27 J. REAL EST. FIN. & ECON. 5, 22 (2003).

147. The interplay of loan pricing and proceeds is an important one. The greater the amount of proceeds, the less money the borrower has to bring to the closing table, for an acquisition, or the greater amount returned in the context of a refinance. For interest rates, the higher the interest rate, the more money is diverted from the Borrower to the Lender's loan.

148. *See* William G. Hardin III, Ken H. Johnson & Wu Zhonghua, *Brokerage Intermediation in the Commercial Property Market*, 31 J. REAL EST. RES. 397, 400 (2009) ("[W]hen compared to residential real estate [the commercial real estate] market is characterized by a much smaller number of participants, who know the other transaction participants, and who make decisions based on investment criteria that require data collection and analysis.").

loan in a securitization transaction. Market pricing theory suggests that in perfect capital markets, such a repackaging would not be necessary.¹⁴⁹

However, in practice markets are not perfect. Securitization offers borrowers a product that is not available in the market: long-term, assumable financing at lower interest rates.¹⁵⁰ For lenders, securitization offers the ability to monetize long-term assets to match short-term liabilities. More importantly, because of the market completion effect,¹⁵¹ the act of selling a loan may not signal a lender wanting to sell only poorly underwritten loans. This is particularly true if the lender is a repeat seller of loans, as loan selling may constitute a business that generates its own fees in lieu of holding the loan to maturity.

Notwithstanding the common depository point for all CMBS loans, in the global debt capital markets, there are differences in the terms and conditions that originators of CMBS loans will offer a potential borrower.¹⁵² Some lenders have an

149. In perfect capital markets, the capital structure of a firm should not affect its value. As a result, in such markets, a lender would have no incentive to pool loans and resell them as a separate set of assets, as each loan could be sold and appropriately priced individually. Merton Miller, *The Modigliani-Miller Propositions After Thirty Years*, 2 J. ECON. PERSP. 99, 99 (1998) (“Our Proposition I, holding the value of a firm to be independent of its capital structure (that is debt/equity ratio) is accepted as an implication of equilibrium in perfect capital markets.”).

150. Peter M. DeMarzo, *The Pooling and Tranching of Securities: A Model of Informed Intermediation*, 18 REV. FIN. STUD. 1, 2 (2005) (concluding that transactions costs, market incompleteness and asymmetric information can be used to explain the gains from repackaging assets in a securitization).

151. In finance theory, a complete market is one where all securities can be synthetically created out of a series of options. In the context of securitization, prior to securitized assets, there was no mature market whereby illiquid assets, such as real estate mortgages, could be sold as a series of securities. See, e.g., Marc Romano & Nizar Touzi, *Contingent Claims and Market Completeness in a Stochastic Volatility Model*, 7 MATHEMATICAL FIN. 399 (1997). As a result, selling loans into this market alone cannot be interpreted as a signal about loan quality, i.e. a seller would only sell loans that the seller knew to be of low quality and keep high quality loans. The market completion effect for securitized assets suggests that sellers will sell even high quality assets because there is now a willing buyer for the asset. For a discussion more generally about subprime mortgages and market completion, see Peter Chinloy & Nancy MacDonald, *Subprime Lenders and Mortgage Market Completion*, 30 J. REAL EST. FIN. & ECON. 153 (2005).

152. Ambrose, *CMBS Default*, *supra* note 107, at 188 (For some borrowers, “[i]n an attempt to limit the impact of property value declines, lenders util-

appetite for riskier loans¹⁵³ and will attempt to price for the increased risk.¹⁵⁴ Others may be unwilling to make riskier loans on any terms. But in a competitive market for borrowers, Originators may signal that they are flexible in offering loan terms and underwriting.¹⁵⁵ However, even with loans originated by lenders with more aggressive underwriting, diversity in the loan pool may help to balance out the risk of any particular loan.¹⁵⁶ Unfortunately, many mortgage-backed securities participants may have believed that diversity alone would be enough to overcome weak underwriting. For the origination of subprime residential mortgages, fraud may have overcome any strength diversification provided.

As part of the underwriting process of a commercial transaction, the lender will obtain an appraisal,¹⁵⁷ a property condi-

ize LTV [loan to value] ratios that are designed to limit default risk by requiring borrowers to meet collateral conditions.”).

153. See generally Sheridan Titman, Stathis Tompaidis & Sergey Tsyplov, *Determinants of Credit Spreads in Commercial Mortgages*, 33 REAL EST. ECON. 711 (2005).

154. As a result, one indicator of asset quality is the risk profile of the originators. Sheridan Titman & Sergey Tsyplov, *Originator Performance, CMBS Structures and Risk of Commercial Mortgages* 23 (Nov. 2009) (unpublished manuscript), available at <http://www.csom.umn.edu/assets/152761.pdf> (“[T]hese results suggest that mortgages originated by institutions with poor accounting performance are ex post riskier, but imply that mortgage spreads at origination do not fully account for the amount of risk involved in these mortgages.”).

155. See, e.g., Thomas J. Chemmanur & Paolo Fulghieri, *Reputation, Renegotiation, and the Choice Between Bank Loans and Publicly Traded Debt*, 7 REV. FIN. STUD. 475, 376 (1994) (“[A]n important reason why banks’ treatment of borrowing firms in financial distress may be fundamentally different from that of holders of publicly traded debt is that banks are long-term players in the debt market and therefore have a desire to develop a reputation for financial flexibility.”).

156. Maciej Firla-Cuchra & Tim Jenkinson, *Why Are Securitization Issues Tranched?* 3 (Mar. 2005) (unpublished manuscript), available at <http://www.economics.ox.ac.uk/Research/wp/pdf/paper225.pdf>.

157. Although beyond the scope of this Article, there are many parallels in the role of appraisers in the S&L crisis of the early 1990s and residential appraisals used for subprime residential mortgage loans. For a general discussion of the impetus that created FIRREA during the S&L crisis, see Frank A. Vickory, *Regulating Real Estate Appraisers: The Role of Fraudulent and Incompetent Real Estate Appraisals in the S&L Crisis and the FIRREA Solution*, 19 REAL EST. L.J. 3, 8-11 (1993). For a general discussion of what FIRREA requirements are for appraisals, see Cherokee W. Wooley, *Regulation of Real Estate*

tion report,¹⁵⁸ a Phase I environmental report, if necessary, and credit reports on certain owners of the borrower. The lender will then engage counsel, begin the initial drafting of the loan documents, and will typically require the borrower to provide an ALTA/ACSM survey¹⁵⁹ and title insurance, in addition to an opinion of counsel.¹⁶⁰

In contrast, in a residential transaction, lenders rarely require surveys, title insurance policies are typically issued only for the lender's benefit, the lawyer at the closing table represents only the lender, and the borrower frequently does not have counsel.¹⁶¹ Inspections are normally done only at the borrower's request and appraisals do not have the protections that CMBS lenders request. This lack of due diligence in residential mortgage transactions may be a result sheer number of loans and the price sensitivity of residential mortgage borrowers. Further, since the average size of a loan in a CMBS transaction is close to \$6 million – with several loans larger than \$30 million contributed to most securitizations – the error of mispricing the risk of an individual loan in a CMBS transaction will have a much greater effect than mispricing a much smaller residential loan.¹⁶²

Appraisers and Appraisals: The Effects of FIRREA, 43 EMORY L.J. 357, 375-91 (1994).

158. Similar to the organization of the Borrower, the Rating Agencies have issued criteria for due diligence in CMBS transactions. See STANDARD & POOR'S, STRUCTURED FINANCE: CMBS PROPERTY EVALUATION CRITERIA (2004).

159. See Sidney G. Saltz, *The Essentials of Due Diligence*, 22 PROB. & PROP. 32, 36 (2008) (“[B]ecause the surveyor is required to examine a title commitment, it will locate and identify the various locatable encumbrances, such as easements. In general, lenders will require ALTA surveys.”).

160. Jonathan C. Lipson, *Price, Path & Pride: Third-Party Closing Opinion Practice Among U.S. Lawyers (A Preliminary Investigation)*, 3 BERKELEY BUS. L.J. 59, 71-81 (2005) (describing requirements of closing opinions).

161. Some legal commentators have noted that due diligence professionals such as lawyers, accountants and auditors serve the roles of gatekeepers. F. Phillip Hosp, *Problems and Reforms in Mortgage-Backed Securities: Handicapping the Credit Rating Agencies*, 79 MISS. L.J. 531, 540 (2010) (“There are several types of gatekeepers to include auditors, CRAs, securities analysts, and attorneys, to name a few. Together, these professions are tasked with the ultimate mission of protecting market transparency and informational integrity.”) (footnotes omitted).

162. See Gelpert, *Rewriting Frankenstein Contracts*, *supra* note 48, at 1109 (“Because CMBS have many fewer loans, but for much larger amounts, a single default is much more costly to CMBS holders than it is for RMBS holders.”).

2. Securitization

Many investment banks securitize loans and some of the largest commercial real estate mortgage originators have investment banking arms.¹⁶³ However, since a large number of assets are required to achieve investor and Rating Agency-required levels of diversification, lenders tend to pair up with each other.¹⁶⁴ Further, investor appetite has required diversification across property types and geographic locations.¹⁶⁵ Diversification is consistent with modern portfolio theory,¹⁶⁶ which holds that diversification of risk will help to hedge against any asset specific risk.¹⁶⁷

At the beginning of a securitization, the investment bank arranging the transaction will create entities to purchase the loans.¹⁶⁸ Next, interested investors, including the purchaser of the lowest rated class of securities in a securitization (“B-piece buyer”), accounting firms and the Rating Agencies will

163. Typically, the loans originated by an affiliate of the issuer will be the largest number of loans contributed to the securitization.

164. Joel A. C. Baum et al., *Dancing with Strangers: Aspiration Performance and the Search for Underwriting Syndicate Partners*, 50 ADMIN. SCI. Q. 536 (2005) (noting that familiarity and repeated ties can inform both sides about the competency of the other party and reduce uncertainty and promote information sharing.).

165. Christopoulos, *CMBS and Market Efficiency*, *supra* note 5, at 445 (“[Because] CMBS trusts are usually diversified across property types and geographic locations, property value risk is less of a concern”).

166. Modern portfolio theory draws on the Capital Asset Pricing Model, which provides that an asset’s expected return depends on its covariance with the market portfolio. Turan G. Bali & Robert F. Engle, *The Intertemporal Capital Asset Pricing Model with Dynamic Conditional Correlations*, 57 J. MONETARY ECON. 377, 377 (2010). See generally Robert C. Merton, *An Intertemporal Asset Pricing Model*, 41 ECONOMETRICA 867 (1973).

167. Joseph J. Ori, *A Seven Step Portfolio Diversification Strategy*, 25 REAL EST. REV. 27, 27 (1995) (“A mixture of assets in a real estate portfolio that have low correlations with one another reduces the risk for any level of return (or produces greater aggregate return for any level of risk) than a portfolio in which asset returns are positively or highly correlated.”).

168. To create the entity required to purchase the loans from the Originators, the investment bank arranging the securitization (the “Arranger”) will create an entity typically called the depositor. The depositor will purchase the commercial mortgage loans and sell them to a trust, which elects to be taxed as a real estate mortgage investment conduit (“REMIC”), and the trust conveys certificates of ownership to the investors.

conduct due diligence on the loan pool.¹⁶⁹ Then, the main servicers of the loans after the securitization transaction closes, the master servicer,¹⁷⁰ and the special servicer,¹⁷¹ are selected. Finally, the trustee,¹⁷² who processes the payments to the investors, is selected and the loans are sold to the appropriate investors.

Typically, a trust is the preferred vehicle to own the loans and to issue ownership interests therein. CMBS are technically certificates of ownership granting the owner a right in the payment of the loans held by the trust. The trust will choose a REMIC tax election so that distributions of the proceeds of the loans from the trust to its owners will be free from entity-level taxation.¹⁷³

169. As due diligence proceeds, the Arranger typically organizes an underwriting syndicate to purchase the initial issuance classes of certificates with investment grade ratings. The classes of certificates are rated (and the first loss classes typically do not have an investment grade rating) and represent an ownership interest in the trust with rights to payment of principal, interest, or both.

170. The Master Servicer services loans all of the loans after securitization and prior to any sixty (60) day delinquency.

171. The Special Servicer services all delinquent loans.

172. The trustee administers the Trust for the investors and distributes payments distributed from the collection of the mortgage loans by the Master Servicer to the certificate holders of the Trust in order of payment priority. *See generally* LaSalle Bank Nat'l Ass'n v. Nomura Asset Capital Corp., 424 F.3d 195 (2d Cir. 2005).

173. The REMIC tax election is not the only vehicle under the tax code to prevent entity level taxation of ownership interests in real estate. Clarissa C. Potter, *A Wrench or a Sledgehammer? Fixing FASITS*, 56 SMU L. REV. 501, 502 (2003) (noting special rules for real estate investment trusts that typically allow entities to escape entity level taxation and not be classified as partnerships). The REMIC trust is a very common vehicle for issuing mortgage-backed securities. The REMIC tax statute allows issuers to split cash flows from certain qualifying mortgage loans without creating entity level taxation. *See* KENNETH G. LORE & CAMERON L. COWAN, *MORTGAGE-BACKED SECURITIES, DEVELOPMENTS AND TRENDS IN THE SECONDARY MORTGAGE MARKET* 275 (2005 ed.). A mortgage loan is a qualifying mortgage loan if the mortgage is principally secured by an interest in real property. 26 U.S.C. § 860G(a)(3)(A) (2010). The Treasury Department regulations provide that an obligation be principally secured by real property if the mortgage meets one of two tests. First, the "fair market value of the interest in real property" must equal or exceed eighty percent of the value on the obligation on the date of origination or date the loan was contributed to a securitization. 26 C.F.R. § 1.860G-2(a)(1)(i). Second, "substantially all of the proceeds of the obligation [must have been] used to acquire or to improve or protect an interest in real prop-

When the certificates are sold to investors, after the filing of the prospectus, the sale's proceeds are used to pay the originators for selling their loans. These certificates correspond to tranches in a senior subordinated structure whereby the highest classes of securities are paid first and subsequent classes of securities are paid in order of payment priority – or rating.¹⁷⁴ Each class of certificate receives payments only after all of the higher rated classes are paid. The rated classes of certificates are sold to the underwriting syndicate.¹⁷⁵ The unrated class of certificates is sold in a private placement transaction to a sophisticated investor. Unlike RMBS transactions, CMBS transactions typically have only 300 loans per loan pool. As a result, prior to the issuance of the certificates as securities, the B-piece buyer typically can review due diligence information about each loan and have its employees or contractors visit each property securing a loan in the pool of loans contributed to the REMIC trust.¹⁷⁶ Compared to RMBS loans, fewer CMBS loans require enhanced due diligence because the price of CMBS is more sensitive to, and reflective of, perceived asset quality.¹⁷⁷

erty that, at the origination date, is the only security for the obligation.” *Id.* See also *LaSalle*, 424 F.3d at 202 (discussing the requirements for REMIC eligibility). The REMIC rules were relaxed during the market meltdown because a violation of the strict REMIC rules could subject all of the certificates issued by the trust to entity level taxation.

174. Christopher J. Mayer & Yingjin Hila Gan, *Agency Conflicts, Asset Substitution and Securitization* (Nat'l Bureau of Econ. Research, Working Paper No. 12359, 2006) (“Large numbers of assets are grouped together in a single pool. Claims to the cash flows from the pooled loans are sold as securities, where the economic claims to cash flows are divided (or “tranching”) based on a strict priority system. Parties pay a premium to buy the most senior tranches, whose capital is protected by the existence of more junior securities that absorb initial losses.”).

175. Christopoulos, *CMBS and Market Efficiency*, *supra* note 5, at 445 (noting that a typical CMBS transaction's structure may contain anywhere from one to several hundred underlying loans (mostly first liens), and issues about 10 different bond tranches including at least one IO bond).

176. During the due diligence period, the B-piece buyer has the right to request information from the originators about the commercial mortgages to be contributed to the trust. Since the B-piece buyer experiences the first loss, it contractually has the right to remove loans from the loan pool.

177. Paul D. Childs, Steven H. Ott, Timothy J. Riddiough, *The Pricing of Multiclass Commercial Mortgage-Backed Securities*, 31 J. FIN. & QUANTITATIVE ANALYSIS 581, 582 (1996) (“Consequently, and in sharp contrast to the RMBS, CMBS value is contingent on movements in underlying collateral as-

Concurrent with the B-piece buyer's review of the mortgage loan documentation and the underlying property, one or more Rating Agencies will also review a random portion of the mortgage loan documentation to determine the appropriate size of each class of securities and to ensure that the loans to be contributed comply with their requirements.¹⁷⁸ Since each class depends on subordinate classes to absorb losses, the Rating Agencies use projected loan losses to determine how large a particular class has to be in order to support its more senior tranches.¹⁷⁹ The greater the level of subordination, the fewer highly rated certificates can be issued. The Rating Agencies also review the top ten or twenty (depending on the Rating Agency and vintage of the transaction) largest loans in the deal, and a random sample of the remaining loans.¹⁸⁰ When its due diligence is completed, the Rating Agency issues its press release announcing its ratings of the classes of certificates.

3. *Servicing*

There are significant differences between RMBS and CMBS servicing structures.¹⁸¹ The initial special servicer is typically the B-piece buyer because it is the owner of the controlling class of certificates. However, at set increments, the trust

set value for each mortgage in the pool, in addition to being sensitive to changes in the term structure of interest rates.”).

178. When practitioners or market participants refer to a loan as being unsecuritizable, they often refer to the requirements of the Rating Agencies. See Andrew R. Berman, “Once a Mortgage, Always a Mortgage”—the Use (and Misuse of) Mezzanine Loans and Preferred Equity Investments, 11 STAN. J.L. BUS. & FIN. 76, 100 (2005) (“Because of the uniformity and strictness of rating agency guidelines, and since a lender cannot typically change the provisions of a loan once it is made, many mortgage lenders now frequently require that all new mortgages comply with most of the guidelines.”).

179. See, e.g., S&P CMBS CRITERIA, *supra* note 106, at 16.

180. An important threshold for the Rating Agencies with respect to any one loan is if the loan is (i) five percent (5%) or more of the unpaid pool balance, (ii) one of the top ten loans in the pool or (iii) a loan over \$20 million. See, e.g., *id.* (describing when a Ratings Agency confirmation is required when such a large loan is defeased).

181. Gelpern, *Rewriting Frankenstein Contracts*, *supra* note 48, at 1103 (“CMBS are structured very differently from RMBS. In particular, they are designed with the need for workouts in mind.”).

is appraised,¹⁸² and the certificate holders whose class is entitled to distributions from the mortgage loans can replace the special servicer.¹⁸³ As a result, each CMBS class has a stake in loan servicing. As a result, it may be that the most important difference between CMBS and RMBS is the flexibility that the Special Servicer has to work out loans.¹⁸⁴

In conclusion, in lumping all asset-backed securitizations into one group, the current legal commentary and legislative reforms overlook the market-based protections provided to investors in CMBS transactions. Unfortunately, these CMBS protections could be undone by reforms that tilt the risk allocation between investors and issuers in a way that further undermines a stalled market.

II.

ECONOMIC PERSPECTIVES ON MARKET FAILURE

Although the current legal commentary (and regulatory reform) does not properly distinguish between RMBS and CMBS, this failure is largely a function of the description of the problem by the commentators and policy makers: market failure in securitized markets. The existing legal commentary on the Market Meltdown frames the cause as a market failure: the failure to stop fraud in the origination of subprime residential mortgages¹⁸⁵ and the accompanying failure of infor-

182. *Id.* at 1105-06 (“Instead, it adjusts according to where the cashflow waterfall stops at any point in time. Thus, as the junior-most tranches find themselves out of the money, control shifts upward in the capital structure. This means that out-of-the-money junior tranches therefore have no say over decisions that will no longer impact them. Likewise senior well-in-the-money tranches also have no say over decisions from which they are insulated by virtue of still-in-the-money subordinated tranches. Instead, the CMBS controlling party system means that an investor with money immediately on the line is involved with management of the trust’s assets.”) (footnotes omitted).

183. *Id.* at 1108 (“CMBS controlling parties also have a powerful disciplinary tool at their disposal to ensure special servicer cooperation: CMBS controlling parties may fire the special servicer without cause.”).

184. *Id.* at 1103 (“CMBS are structured very differently from RMBS. In particular, they are designed with the need for workouts in mind.”).

185. *See* Willis, *supra* note 62, at 1219 (“Misaligned incentives and resultant fraud were rampant.”).

mation¹⁸⁶ and financial intermediaries¹⁸⁷ to inform investors of the fraud.

Unfortunately, much of the legal commentary asserts as an explanation for unexplained market activity that the cause is market failure, without defining market failure. As a result, market failure is used to describe any market where goods are not produced according to some normative expectation. In particular, the problem of securitization is often broadly described as a market failure,¹⁸⁸ caused by overly lax regulatory oversight that permitted the creation of overly complex investments.¹⁸⁹ Without properly defining what constitutes a market

186. Jeffrey Manns, *Rating Risk After the Subprime Mortgage Crisis: A User Fee Approach for Rating Agency Accountability*, 87 N.C. L. REV. 1011, 1045 (2009) [hereinafter Manns, *Rating Risk*] (noting that after the Market Meltdown began “flaws in the rating agencies’ methodologies began to be exposed on a large scale, but downstream purchasers were left holding the bag on devalued investments that they purchased in reliance on lax ratings.”).

187. *Id.* at 1043 (“Mortgage lenders and brokers exploited the RMBS and CDO market by ‘flipping’ subprime mortgages and engaging in lax underwriting practices and even outright fraud that accounted for approximately twenty-five percent of subprime losses.”).

188. *Id.* at 1035. See also Oren Bar-Gill, *The Law, Economics and Psychology of Subprime Mortgage Contracts*, 94 CORNELL L. REV. 1073, 1080 (2009) (The article “highlights a demand-side market failure: imperfectly rational borrowers ‘demanded’ complex deferred-cost loan contracts and lenders met this demand. However, the failures in the subprime mortgage market were not limited to the demand side. In fact, a supply-side market failure explains why lenders willingly catered to borrowers’ imperfectly rational demand even when the demanded product designs increased the default risk borne by lenders.”); Steven L. Schwarcz, *Markets, Systemic Risk, and the Subprime Mortgage Crisis*, 61 SMU L. REV. 209, 211 (2008) (noting that subprime mortgage crisis “was triggered not by institutional failure but by market failure”); Aaron Unterman, *Exporting Risk: Global Implications of the Securitization of U.S. Housing Debt*, 4 HASTINGS BUS. L.J. 77, 78 (2008) (“[T]he dangers of securitization were exposed in the U.S. mortgage-backed securities market, and an important segment of the industry was reduced to rubble. This industry demolition—that is, this market failure—demonstrates a serious deficiency in the operation and regulation of the international capital market.”).

189. Brian J.M. Quinn, *The Failure of Private Ordering and the Financial Crisis of 2008*, 5 N.Y.U. J. L. & Bus. 549, 552 (2009) (“Market failures were facilitated by regulatory structures that relied on private parties, including rating agencies, to manage risks rather than more intrusive government regulation”); Manns, *Rating Risk*, *supra* note 186, at 1035 (“Commentators have attributed these market and regulatory failures to a broad set of causes ranging from excessive risk-seeking in a bubble market, structural shortcomings of corporate self-governance, lax oversight by the SEC, and an erosion of the independence of securities market intermediaries. The defining irony of

failure, it is impossible to disprove when a market failure exists and under what set of circumstances the market failure is a natural and predictable occurrence.¹⁹⁰

It is not clear when investments become so complex that even the most sophisticated investors cannot detect fraud in the underlying investment.¹⁹¹ The basic assumption of the “complexity argument” is that without complexity, information about asset quality would be widely available and easily understood, and investors would have similar views of asset pricing and quality. However, even where investors largely have the same information and pricing is widely available, there are still divergent views of asset quality and pricing, even amongst sophisticated institutional investors.¹⁹² As a result, it is not clear that making investments less complex or information more widely available would necessarily result in correlations between pricing and asset quality.

Nonetheless, reformers and commentators alike have sought to reform the same market mechanism—securitiza-

these market failures is that they stemmed from a changed landscape of market incentives that cajoled securities intermediaries into tacit complicity with their corporate clients in facilitating bubble markets or fraud.”).

190. See Franklin Allen & Douglas Gale, *Financial Intermediaries and Markets*, 72 *ECONOMETRICA* 1023, 1023 (2004) (“In the absence of a general equilibrium framework, it is hard to evaluate the robustness of the results and, ultimately, to answer the question: What precisely are the market failures associated with financial crises?”).

191. See Saule Omarova & Adam Feibelman, *Risks, Rules, and Institutions: A Process for Reforming Financial Regulation*, 39 *U. MEM. L. REV.* 881, 907 (2009) (“If policymakers move directly to reform regulatory structure or substantive rules without a fine-grained assessment of the forces behind specific instances of market failure and of the post-crisis shifts in market practice, they risk adopting regulatory reforms that are either incomplete or tailored to obsolete circumstances.”).

192. Investment banks may have differing models for valuing complex securities that may lead to information asymmetries. In analyzing data from a liquidation auction \$90 million portfolio collateralized mortgage obligations issued by Fannie Mae and Freddie Mac, which would have a “negligible credit risk,” Professors Bernardo and Cornell found that the average range of bids sophisticated investors and investment banks submitted for pieces of the portfolio bids (the percentage amount by which the high bid exceeded the low bid) was as high as 63%. Professor Bernardo and Cornell conclude that “different dealers have different valuations of these securities due to asymmetric information or differing valuation methodologies.” Antonio E. Bernardo & Bradford Cornell, *The Valuation of Complex Derivatives by Major Investment Firms: Empirical Evidence*, 52 *J. FIN.* 785, 790 (1997).

tion—in hopes of eliminating fraud, without investigating the anomaly of well-performing CMBS structures. Furthermore, the concept of market failure, as used by many legal commentators, has a decidedly normative quality. These commentators invoke the term market failure a critique whenever a particular product is not produced. However, the constant use of the term belies its commonality. Many markets fail to produce goods.¹⁹³ The proper question is not whether markets fail to produce goods, but whether that failure is a justification, by itself, for government intervention into markets.

The term market failure is a term of art in economics. Though economists frequently disagree about the definition of the term, or even the possibility of the existence of market failure, most agree that the failure can be caused by a lack of transparency.¹⁹⁴ Financial economics is premised on the idea that rational actors will act in their own best interest but need information to make decisions.

More importantly, in the context of securitization reform, the dominant legal commentary and regulation centers on eliminating asymmetries between issuers of securities and investors. Information asymmetries are endemic to buyer-seller relationships, even in the context of sophisticated investors who have many techniques to determine asset quality.¹⁹⁵ However, the existence of information asymmetry need not universally cause fraud; in the absence of reliable information providers, new firms can fill the void and provide information required by the market.¹⁹⁶ Yet the failure of the market to

193. Richard O. Zerbo Jr. & Howard E. McCurdy, *The Failure of Market Failure*, 18 J. POL. ANALYSIS & MGMT. 558, 561 (1999) (“A fundamental problem with the concept of market failure, as economists occasionally recognize, is that it describes a situation that exists everywhere.”).

194. See Francis M. Bator, *The Anatomy of Market Failure*, 72 Q.J. ECON. 351, 354 (1958) (describing market failure as a result of legal and organizational imperfections which leave “inputs or outputs hidden”).

195. See Joseph A. Franco, *Why Antifraud Prohibitions Are Not Enough: The Significance of Opportunism, Candor and Signaling in the Economic Case for Mandatory Securities Disclosure*, 2002 COLUM. BUS. L. REV. 223, 244 (2002) (“Even if investors could independently verify information in some cases, they would have no guarantee of continuing access to firm-specific information or continuing capability to verify it, and such a process might be costly. This, in a nutshell, is the problem of informational asymmetry.”).

196. K. N. M. Dundas & P. R. Richardson, *Corporate Strategy and the Concept of Market Failure*, 1 STRATEGIC MGMT. J. 177, 178 (1980).

produce information may be a function of information's status as a public good.¹⁹⁷ Because information can be communicated costlessly to any other creditor and yet is costly to produce, the free rider effect stops others from producing it.¹⁹⁸ In either case, an important inquiry is to determine whether information asymmetries caused the Market Meltdown.

A. *Information Asymmetry Is a Cause of Market Failure*

The Dodd-Frank Bill (and a lot of legal commentary)¹⁹⁹ has as its core the idea that the lack of information between investors and issuers of securities was a primary contributing factor to the Market Meltdown.²⁰⁰ This lack of information, according to the dominant narrative, led to a lack of trust²⁰¹ that has shuttered the CMBS market and closed down the RMBS market, except where the federal government had guar-

197. Hayne E. Leland & David H. Pyle, *Informational Asymmetries, Financial Structure, and Financial Intermediation*, 32 J. FIN. 371, 383 (1977) ("Purchasers of information may be able to share or resell their information to others, without diminishing its usefulness to themselves. The firm may be able to appropriate only a fraction of what buyers in totality would be willing to pay.").

198. Yair Listokin & Benjamin Taibleson, *If You Misrate, Then You Lose: Improving Credit Rating Accuracy Through Incentive Compensation*, 27 YALE J. ON REG. 91, 102 (2010) ("Credit ratings have many characteristics of a public good. Ratings entail high fixed costs of production—researching a debtor is costly and time-consuming—but zero marginal costs since the information can be shared costlessly with any potential creditor.").

199. Bernard S. Black, *The Legal and Institutional Preconditions for Strong Securities Markets*, 48 UCLA L. REV. 781, 786 (2001) ("A critical barrier that stands between issuers of common shares and public investors is asymmetric information.").

200. See *supra* notes 37-47 (describing the regulatory framework of the Dodd-Frank Bill). See also Omari Scott Simmons, *Corporate Reform As a Credence Service*, 5 J. BUS. & TECH. L. 113, 114 (2010) ("Credence characteristics, at least in the short-term, make it difficult for corporate constituents to discern the impact of corporate reform due to information asymmetries.").

201. Raymond H. Brescia, *Trust in the Shadows: Law, Behavior, and Financial Re-Regulation*, 57 BUFF. L. REV. 1361, 1363 (2009) ("Without such trust, credit markets will remain weak, consumer confidence and spending will remain stagnant, and investors will seek the safety of low-yield savings mechanisms while eschewing riskier investments that stand a better chance of promoting job creation.").

anteed the assets.²⁰² Further, many commentators argued that without adequate information, investors were unable to untangle the complex asset structures and to appropriately price for risk.²⁰³

The dominant theory about market failure is Nobel Prize winner George Akerlof's seminal work, which describes the problem of information asymmetries as a "Lemons Problem." Akerlof concludes that market failure can occur where sellers cannot communicate costlessly to buyers the value of their products.²⁰⁴ Akerlof describes a market with only two states of quality (high and low) and two vintages of goods (new and old) and where, *ex ante*, buyers cannot tell the difference between quality of the goods. However, *ex post*, after experiencing the goods, buyers can determine the difference in quality.²⁰⁵

In Akerlof's two-state, two-vintage model, if a buyer purchases a new, low-quality good—a "lemon"—she will be incentivized to sell the good into the market and buy a new good.²⁰⁶ Since, *ex ante*, subsequent buyers will not be able to tell the difference between a higher quality good and a lower quality good, the market will be flooded with lower quality goods.²⁰⁷

Akerlof's conclusion—that a market for high quality goods can collapse when buyers cannot determine quality prior to purchase—has many implications.²⁰⁸ Buyers would

202. These markets include debt issued by the GSE and the Term Asset Lending Facility designed to jumpstart the asset-backed markets. See Wei, *supra* note 28.

203. As an extension of attacks on assumptions from classical economics that investors are rational actors, some legal commentators have argued that investors need protection from overly complex investments as the investor's lack of understanding will prevent accurate risk assessment. See, e.g., Schwarcz, *Regulating Complexity*, *supra* note 31, at 216-20 ("[T]he complexities of the assets underlying investment securities, and of the means of originating those assets, can lead to a failure of lending standards and unanticipated defaults.").

204. George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 Q. J. ECON. 488 (1970) [hereinafter Akerlof, *Lemons*] (discussing asymmetric information and market failure).

205. *Id.*

206. *Id.*

207. *Id.*

208. I use the term here "collapse" in lieu of "market failure" because the term "market failure" has a normative meaning in some of the economics

only be willing to pay for low quality goods, not knowing what type of good he will receive, and sellers of high quality goods will be unwilling to sell their goods for less than they believe they could receive in a better quality market.²⁰⁹

Much of the legal commentary of securitization rests on this view of the market.²¹⁰ In particular, CMBS appears to fit in neatly with the description of a Lemons Problem. During the Market Meltdown, sellers of CMBS refused to accept bids that were dramatically lower than what they paid.²¹¹ Buyers, unsure of the quality of any good created through securitization, refused to pay anything above bargain basement prices. The result was that no issuances or sales of CMBS occurred for a two-year period. However, this anecdotal evaluation of the “market failure” of securitization overlooks an important empirical question: Were investors in CMBS, or other securitized investments, unaware of the risks posed by those investments?

1. *Investors in CMBS and Other Securitized Products May Have Known the Risks Those Investments Posed*

Although it is frequently asserted that investors did not completely understand the complex structures that securitization markets created,²¹² there is little empirical evidence to support such assertions. Furthermore, much of the existing

literature. See Bator, *supra* note 194, at 351 (“What is it we mean by ‘market failure’? Typically, at least in allocation theory, we mean the failure of a more or less idealized system of price-market institutions to sustain ‘desirable’ activities or to estop ‘undesirable’ activities.”).

209. See Akerlof, *Lemons*, *supra* note 204, at 488.

210. Julia Patterson Forrester, *Still Mortgaging the American Dream: Predatory Lending, Preemption, and Federally Supported Lenders*, 74 U. CIN. L. REV. 1303, 1308 (2006) (“[M]ajor increase in the availability of subprime credit has opened the door to predatory lenders, and market failures have kept honest subprime lenders from driving the dishonest ones out of the market.”).

211. Glaeser, *Thin Markets*, *supra* note 83, at 65 (describing the reluctance of uninformed liquidity traders to trade with informed market participants because the “traders may choose not to trade for fear of suffering losses due to their relative ignorance”).

212. The literature typically asserts that complexity is a cause of this confusion, but does not describe a baseline level of complexity would be appropriate. Many of the owners of securitized assets participate in other complicated financial transactions such as currency swaps, forwards, commodities trades, loans, etc., for clients. It is not clear from the existing academic legal commentary why each of these transactions would not be too complicated for a sophisticated investor to understand.

literature surrounds individual investors, not the traders and other market professionals who invest in structured products on behalf of the large financial intermediaries that typically own CMBS.²¹³ There have not yet been studies testing the amount or quality of investors' knowledge about structured products prior to their purchase of such products.²¹⁴

The assertion that investors' lack of knowledge of structured products caused them to overprice those assets is hard to evaluate because it does not specify who the investor is. In much of the legal commentary, the description of investor implies an individual investor. However, the vast majority of the investors in the stock market are sophisticated institutional investors.²¹⁵ As a result, the current regulatory focus on preventing fraud amongst individuals may be inapplicable to sophisticated investors who can make their own independent and informed determination about asset quality.²¹⁶

Furthermore, individual investors have a number of barriers that make it difficult for them to own CMBS. Structured products are not easily available for individual sale. Individual investors need to purchase them through intermediaries who are sophisticated investors. Complex computer algorithms are frequently employed to value the securities.²¹⁷ As a result, it

213. René Fischer, *Do Investors in Structured Products Act Rationally?* 4 (Aug. 22, 2007) (unpublished manuscript) ("Apart from these approaches towards structured products, financial research has to our best knowledge not done any research on investment strategies and attitudes of individual investors in this product category."), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1011008&rec=1&srcabs=941720.

214. Part of the reason no study has been done could be a function of the difficulty of determining the important agent of such a study.

215. Schwarcz, *Regulating Complexity*, *supra* note 31, at 243 ("[S]ophisticated investors and qualified institutional borrowers are the very investors who lost the most money in the subprime financial crisis.").

216. Luigi Zingales, *The Future of Securities Regulation*, 47 J. ACCT. RES. 391, 392 (2009) ("What has changed the focus is not only the success of the 1930s securities regulation but also the increase in institutional ownership (from less than 10% in the 1930s to more than 70% today), which has made the protection of unsophisticated investors from fraudulent securities and stock market manipulation outdated.") The author does argue for protection of unsophisticated investors in other ways.

217. See Geoffrey P. Miller & Gerald Rosenfeld, *Intellectual Hazard: How Conceptual Biases in Complex Organizations Contributed to the Crisis of 2008*, 33 HARV. J.L. & PUB. POL'Y 807, 823 (2010) ("These traders manifested tunnel vision, seeing only the model and not the limitations on its use. Authorita-

was unlikely that any individual investor could own CMBS. Therefore, the “they didn’t know what they were buying theory” essentially suggests that the most sophisticated institutional investors were confused by the nature of a particular kind of investment.²¹⁸

Even assuming that these sophisticated institutional investors were confused, to the extent such a personification makes sense for organizations,²¹⁹ there has been little analysis to explain what makes securitized assets more confusing than other complex investment products.²²⁰ Sophisticated investors are not deemed to be sophisticated in one market and ranked amateurs in another. The mere fact of being a large sophisticated investor implies that fewer protections are required. Under this policy analysis, federal securities law permits sophisticated investors to opt out of certain investor protections.²²¹ Although this option applies only to very large investors,²²² many

rian bias also played a role, as the models were often created by PhDs in math or finance, people of frightening intelligence whose technical expertise was beyond question. The models also generated output with an impressive level of precision, discouraging people who used them from questioning their basic assumptions.”) However, Miller and Rosenfield argue that this bias blinded the banks from making good decisions.

218. Although a more nuanced version of this theory which some legal commentators advance is that sophisticated investors understood the complicated models they created but that they did not properly account for risk.

219. Since organizations are comprised of individuals with heterogeneous backgrounds and views, it is not clear that an entire organization could be confused. Information may flow to members who may not understand a concept from those who do. Differences amongst members of the organization suggest that it is difficult to assume that a sophisticated institution could be personified as “confused.”

220. Hunt, *Credit Rating*, *supra* note 71, at 199 (“Sophisticated investors might have no need for rating-agency analysis and products could be sold successfully to these investors without ratings. Indeed, some specialized structured products are issued without ratings.”).

221. The lowest rated classes of CMBS are often sold in a private placement transaction to certain large sophisticated institutional buyers. Kenneth B. Davis, Jr., *The SEC and Foreign Companies—a Balance of Competing Interests*, 71 U. PITT. L. REV. 457, 463 (2010) (“The logic underlying the Rule is without fault: very large institutional investors should be permitted to choose whether they require the protections afforded by 1933 Act registration.”).

222. *Id.* (noting Rule 144A permits a private placement “that offers and sales may be made only to persons reasonably believed to meet the definition of ‘qualified institutional buyer’ (“QIB”) – generally traditional institutional investors with \$100 million or more in assets under management”).

of the top owners of CMBS are themselves qualified institutional buyers.²²³ As a result, the argument of CMBS investor confusion would require those investors to be confused in one market and to be experts in substantially similar markets.

However, attempts to evaluate whether the complexity of securitized products led to a lack of investor knowledge about the quality of the underlying assets still yield incomplete results. First, it is difficult to evaluate how information about risk moves across organizations. Second, and perhaps more importantly, the theory of investor knowledge is simply not testable.²²⁴

Assuming that investors are uninformed about – or confused by the complexity of – structured products, it is difficult to apply this same theory to an organization. Organizations consist of different individuals performing separate (and perhaps overlapping) roles. Institutional investors that purchase structured products employ many people in different roles and with different levels of responsibility to evaluate the asset quality and concomitant pricing of the products. There may be groups of underwriters, traders, salespeople, risk managers, and structurers, each working on separate teams or combined teams for the same task. Individuals in one group or varying groups may have information that would permit the overall organization to assess risk. Further, the roles themselves may differ at each institutions.²²⁵ Emerging theory on social networks suggests that the transmission of knowledge may depend on the organization type.²²⁶ However, since there has been very little empirical research into institutional investors' knowledge about the risks of securitized products, it is difficult to evaluate

223. For example, each of the top 25 insurance companies would qualify for as qualified institutional buyers based solely on their CMBS holdings. See CRE Finance Council, *supra* note 95, at 20.

224. Cf. Richard A. Posner, *Rational Choice, Behavioral Economics and the Law*, 50 STAN. L. REV. 1551, 1560 (1998) (noting that attacks on rational choice theory lack testability).

225. Stephen M. Bainbridge, *Caremark and Enterprise Risk Management*, 34 J. CORP. L. 967, 982 (2009) (“Risk management is a young discipline. Accordingly, as already noted, best practices with respect to enterprise risk management are still evolving. In addition, as we have seen, the types of risk management programs that will be effective vary from firm to firm.”).

226. See Morten T. Hansen, *The Search-Transfer Problem: The Role of Weak Ties in Sharing Knowledge Across Organization Subunits*, 44 ADMIN. SCI. Q. 82 (1999).

what level of information a given institution had prior to investing.

Second, the investor knowledge theory fails because it does not provide a testable alternative.²²⁷ It does not state a threshold of knowledge that is required for investor to evaluate a complex investment risk. Do investors need to know that the risk exists? Should they be completely aware of the likelihood of occurrence? If they knew, would they act on it? The theory does not answer any of the preceding questions.

More importantly, the argument of the uninformed investor overlooks the possibility that their ignorance was self-inflicted. Simply put, the investors may have determined that the costs of acquiring the knowledge to protect them from risk outweighed the potential loss.²²⁸ They took the risk that the investments would pan out. However, protecting those investors subsidizes (or would subsidize) their cost of finding investments with adequate information to evaluate asset quality.

As a result, existing theory has not yet explained how the uninformed (or perhaps irrational) investor would exist in a sophisticated institution, or how much knowledge an investor needs to be freed from their uninformed status. As a normative matter then, the market mechanism (which has been successful in some types of securitization) may be a better alternative to requiring sophisticated investors to be informed.²²⁹

2. *Regulation Is Not Required To Ensure Investor Protection*

Nonetheless, the basis of securitization reform fits perfectly into measures designed to reduce information asymme-

227. D. Bruce Johnsen, *Myths About Mutual Fund Fees: Economic Insights on Jones v. Harris*, 35 J. CORP. L. 561, 611 (2010) (noting in the context of advisory fees for mutual funds that the “available empirical work in no way calls into question the proposition that investors are rational and collectively well-informed”).

228. *Id.* at 589 (“[M]utual fund investor ignorance and apathy arise, not because these ‘behaviors’ are etched in stone, but because, given the alternatives, investors feel sufficiently protected from expropriation that remaining relatively ignorant is in their best interest.”).

229. *Id.* at 611 (“As an intellectual matter, inventive theories based on cognitive biases and investor irrationality should be avoided where widely accepted and well-tested economic theory will do. As a legal matter, theories based on ‘behavioral economics’ have no place in law courts at this early time in their conception.”).

tries between the parties: it guarantees information and increases mandatory disclosures. However, it is not clear why government action would be necessary to require these measures. Each party to a particular securitization simply could privately contract to require both measures without government insistence. In fact, in CMBS securitization, investors require mandatory disclosures.²³⁰ In turn, the issuers rely on representations and warranties loan sellers make in the context of the sale of the loans during the securitization transaction.²³¹ Violations of these warranties has resulted in loan repurchases or damages that have the same effect of providing a springing guarantee to the lowest class of investors.²³²

For example, each of the participants in a publicly available offering for a CMBS transaction is offered a base prospectus and a prospectus supplement that outlines each risk factor in a transaction.²³³ The B-piece buyer, who purchases the lowest rated securities in a privately placed transaction, has even greater rights: it may review loan files for each loan to be included in the transaction and remove a pre-negotiated number from the pool.

Further, the reallocation of risk between sophisticated investors and issuers of securities overlooks the possibility that the investors may have more experience and sophistication in the underlying asset class than the issuers who may be mere brokers or arrangers.²³⁴ Economic theory describes several

230. I would like to thank my colleague Professor Bruce Luna for this observation.

231. There have been a number of successful lawsuits which have required loan sellers to pay damages based on violations of representations and warranties made as a part of a securitization. *See, e.g.,* LaSalle Bank Nat'l Ass'n v. Nomura Asset Capital Corp., 424 F.3d 195 (2d Cir. 2005); Trust for the Certificate Holders of the Merrill Lynch Mortg. Investors, Inc. Mortg. Pass-Through Certificates, Series 1999-C1 v. Love Funding Corp., 556 F.3d 100, 109-13 (2d Cir. 2009).

232. *See, e.g.,* LaSalle, 424 F.3d 195.

233. JEFFREY ROTBLAT & RONALD N. LANNING, MORTGAGE AND ASSET BACKED SECURITIES LITIGATION HANDBOOK § 1:48 (Thompson/West 2008) ("As each transaction is offered, a separate prospectus supplement, containing information specific to that particular CMBS offering, together with the original base prospectus, is prepared and delivered to investors and filed with the SEC.").

234. In the context of CMBS where there are very few B-piece buyers who own interests in many CMBS transactions. In 2007, there were only eleven purchasers of B-pieces for U.S. CMBS deals. The top five B-piece buyers

ways to confirm asset quality, including buyer examination and certification of asset quality by sellers, information intermediaries and financial intermediaries.

3. *Buyers of Securitized Assets Can Examine the Underlying Assets Directly*

The buyer may directly examine each property and the concomitant loan documents to determine value. Unfortunately, the tight frame of the initial issuance of CMBS makes this difficult. However, by tranching CMBS in a series of senior-subordinated securities, where the highest rated classes are paid before any lower rated class, issuers have created a structure where investors can determine if their risk assessment ability will allow them to incur higher risk. The most junior holder of CMBS securities may need to evaluate all of the properties individually to determine their risk. In contrast, holders of more senior classes of certificates may only need to evaluate the ability of the holder of the more junior classes to evaluate the losses. If the risk assessment of the holder of the junior classes in a securitization transaction is correct, then classes senior to any junior classes will not experience any losses.

However, there are a number of impediments to asset examination by investors without extensive experience in commercial mortgage underwriting. Although physical examination of the underlying assets is possible, each loan is also memorialized by a number of documents that are enforceable in a variety of jurisdictions.²³⁵ Remedies may differ from state to

accounted for over 80% of the deals in terms of dollars. *Buyers of CMBS B-Pieces in 2008*, COM. MORTGAGE ALERT, <http://www.cmalert.com/ranking.php?rid=203> (last visited Oct. 7, 2010). In 2008, there were only five purchasers of B-pieces for deals issued in the United States. *Id.* Several of the largest B-piece buyers had gone bankrupt. *UPDATE 1 - Anthracite Capital to Liquidate Under Chapter 7*, REUTERS, Mar. 15, 2010, <http://www.reuters.com/article/idUSSGE62E0RN20100315>. As a result, requiring the issuers to incur the first losses in a CMBS transaction shifts the risk of loss from knowledgeable parties with many comparable properties and institutional knowledge to less knowledgeable parties.

235. Grant, *Confronting the Mortgage Meltdown*, *supra* note 127, at 587 (“‘Uniform’ is hardly a word one would appropriately use to describe the current law of real estate finance law. Mortgage law varies substantially from state to state and represents an often perplexing amalgam of English legal history, common law, and legislation.”).

state. For example, less than half of the states offer judicial foreclosure as a remedy for borrower default.²³⁶ The majority of states have non-judicial foreclosure procedures. The procedures for judicial foreclosure differ among the states and can best be described as parochial or byzantine.²³⁷ So even if an investor could physically examine each property and the associated mortgage loan documentation, it may still be unable to evaluate its ability to recover its investment during widespread defaults of the underlying commercial mortgage loans.

However, more generally, investors with little experience evaluating complex securities may have difficulty evaluating the risk of the investment.²³⁸ More complex investments may impose even greater costs on inexperienced investors who cannot rely on their previous experience to subsidize the cost of later review.²³⁹ Further, smaller investors may find intensive examination of asset quality difficult to undertake because they lack the resources to gamble on mispricing a securitized asset with an unsure payoff.²⁴⁰ As a result, although it is technically possible to evaluate the risk of default by examining the underlying assets in a securitized transaction, some investors may find the practical barriers insurmountable at a cost effective rate.

The larger point, however, is not that investors would need to examine the underlying assets of every securitized transaction. Securitized transactions are not, simply because

236. *See id.*

237. *See id.*

238. The difficulty in modeling performance of securitized products may be greater than even other types of financial instruments. James Fanto, *Anticipating the Unthinkable: The Adequacy of Risk Management in Finance and Environmental Studies*, 44 WAKE FOREST L. REV. 731, 741 (2009) (noting one effect of the complexity of securitized products "is that the complexity of many of the asset-backed securities undermined the proper functioning of the risk models; that is, the inputs were so numerous that the models did not have the computational capacity to predict adequately the risks associated with these securities").

239. Schwarcz, *Regulating Complexity*, *supra* note 31, at 221 (concluding that additional analysis associated with complex investments may lead to additional costs).

240. Jeffrey N. Gordon & Lewis A. Kornhauser, *Efficient Markets, Costly Information, and Securities Research*, 60 N.Y.U. L. REV. 761, 794 (1985) [hereinafter Gordon, *Efficient Markets*] ("[R]ational investors will choose to invest in securities research if they are large enough even though the pattern of research investment leads, with high probability, to an efficient market.").

they are securitized, so complex that no institutional investor could determine asset quality and price accordingly, even if the examination of the underlying assets is contracted to a more sophisticated party. In fact, in CMBS transactions physical examination of underlying assets is often contracted to due diligence firms, other than the Rating Agencies, that review the quality of the underlying properties. The success of this arrangement in CMBS suggests that government imposition of issuer risk profiles may be unnecessary.

4. *Sellers of Securitized Assets Can Certify to Buyers Information About Asset Quality*

Buyers can also obtain confirmation of asset quality with covenants, representations, and warranties. In CMBS, representations and warranties are given to the buyers by the originators at the initial issuance of the securities. In addition, each borrower makes a series of representations and warranties that each lender relies on in making its representations and warranties to the issuer of the CMBS transaction in which the underlying loan is included.

Even in the context of those representations and warranties, however, the buyer may not know how to verify that information for two reasons. First, the information is diffuse. There is a lot of information given to investors and it may be difficult to prioritize the importance of the information in risk assessment. Second, borrowers of the underlying loans provide much of the information about asset quality in CMBS transactions. This information may be expensive to verify and the borrower may not be contractually required to provide additional verification. Nonetheless, there have been a number of lawsuits where CMBS Originators have repurchased loans from REMIC trusts because of a violation of a representation or warranty about asset quality. Therefore, one method to improve investor protection may simply be to enforce the existing agreements about information that the parties have entered into.

5. *Information Intermediaries Can Inform Investors About Asset Risk*

Buyers can also rely on third party information intermediaries to evaluate the quality of products before making

their investment.²⁴¹ An information intermediary may help to reduce the transaction costs of investment decisions by sorting out and evaluating information more cost effectively than the buyer or seller can.²⁴² In light of the reduced costs of searching for information on the Internet, where information can be obtained so inexpensively, the fact that information intermediaries still exist suggests they may provide value to both parties.²⁴³ In the context of asset-backed securities, the Rating Agencies performed this screening function.²⁴⁴

Credit ratings are given on a continuum, with each notch being a more optimistic prediction about the long-term credit quality of the class.²⁴⁵ The rating is not a measure of the liquidity of the asset, but rather the probability of payoff at maturity.²⁴⁶

Since many types of debt are rated by the Rating Agencies, the rating allows investors to compare debt across asset classes. Further, since many investors are required to invest in

241. Frank Partnoy, *Siskel and Ebert of Financial Markets?: Two Thumbs Down for the Credit Rating Agencies*, 77 WASH. U. L.Q. 619, 632 (1999) [hereinafter Partnoy, *Rating Agencies*] (“Rating agencies may exist because of information asymmetry between debt issuers and investors.”)

242. Thomas F. Cotter, *Some Observations on the Law and Economics of Intermediaries*, 2006 MICH. ST. L. REV. 67, 68 (2006) (describing an information intermediary as “the economic agents that help to reduce the costs of buyer-seller transactions, by enabling buyers and sellers to find one another, and to sort, classify and distribute information to one another”).

243. With the advent of the Internet and the plethora of information online, it may be that buyers and sellers may disintermediate and find each other directly. The existence of intermediaries in the face of so much information may be evidence of their utility in reducing transaction costs. *Id.* at 69.

244. Partnoy, *Rating Agencies*, *supra* note 241, at 631 (“Financial economists have viewed bond credit ratings variously as screening mechanisms for information unavailable publicly, as attempts to distinguish issuers of inferior quality and thereby avoid “average quality pricing.”).

245. Manns, *Rating Risk*, *supra* note 186, at 1036 (“The distinctiveness of ratings turns on the fact that they reflect the long-term, structural creditworthiness of issuers.”).

246. Joshua D. Coval, Jakub Jurek & Erik Stafford, *The Economics of Structured Finance* 18 (Harvard Bus. Sch., Working Paper No. 09-060), available at <http://www.hbs.edu/research/pdf/09-060.pdf> (“[C]redit ratings, by design, only provide an assessment of the risks of the security’s expected payoff, with no information regarding whether the security is particularly likely to default at the same time that there is a large decline in the stock market or that the economy is in a recession.”).

assets that have the highest rated classes of debt,²⁴⁷ the rating agencies also provide a compliance function.

Commentators have noted that this market failure coincided (or may have been caused by) the outsized payments for ratings²⁴⁸ or conflicts of interest with the issuers.²⁴⁹ However, it is not clear from this analysis why the purchasers of the ratings would not have factored this discount into the ratings. One possible explanation is that the investors were not relying on the ratings for credit quality, but rather access to capital markets.²⁵⁰ However, since CMBS transactions have not faced widespread downgrades or defaults, the vilification of the function of the Rating Agencies in RMBS transactions overlooks the lower cost efficient collateral evaluation the Rating Agencies provided for investors in the CMBS market. Moreover, since the Rating Agencies provide credit comparisons to other asset types, the market for securitized products is expanded.²⁵¹ While much of the current legal commentary focuses on the failures of the Rating Agencies to (accurately) forecast default rates in subprime residential mortgages (or put “accurately” here), the relative accuracy of the ratings in CMBS transactions suggests an instance where information intermediaries may provide investors with reliable information about asset quality.

6. *Investors Can Contract with Other Financial Intermediaries To Bear the Risk of Decline in Asset Value*

Buyers can rely on financial intermediaries to signal the quality of the goods sold through the intermediary taking an ownership interest in the goods. As an example, in the con-

247. Dennis, *The Ratings Game*, *supra* note 24, at 1140 (noting regulations that require ratings from NRSO for money market mutual fund, student financial aid assistance and insurance company investments as examples).

248. *Id.* at 1140 (“[T]he profits from issuing inaccurate ratings on mortgage backed securities were far greater than they had been with respect to inaccurate ratings of more traditional asset classes.”).

249. See generally Manns, *Rating Risk*, *supra* note 186.

250. Partnoy, *Rating Agencies*, *supra* note 244, at 681-82.

251. Amir Sufi, *The Real Effects of Debt Certification: Evidence from the Introduction of Bank Loan Ratings*, 22 REV. FIN. STUD. 1659, 1662 (2009) (“[T]he evidence suggests that loan ratings allow borrowers to expand the set of creditors beyond domestic commercial banks toward less-informed investors, such as foreign banks and nonbank institutional investors.”).

text of CMBS, the B-piece buyer is a financial intermediary whose ownership signals a belief in the quality of the loans in the pool. Aside from the information that financial intermediaries can impart to investors, what may be most important are the long-term relations that banks maintain with borrowers.²⁵² Similar to the role B-piece buyers play in CMBS transactions, banks gain an institutional knowledge that allows them to precisely evaluate risks of similar assets because they have access to so many borrowers with similar property types.

Although the Dodd-Frank Bill attempts to eliminate information asymmetries between issuers and investors by requiring issuer guarantees and increased disclosure to all parties, several other methods could have worked towards resolving the same problem, such as buyer examination, seller examination, information intermediary and financial intermediary certification. Yet it is not clear from the legal commentary, or from the policy promoted by the Dodd-Frank Bill, why issuers and investors could not privately contract for the same effect. The underlying policy of the Bill appears to shift the risk of loss away from investors and leave it with issuers. However, since most of the expertise in evaluating securitized assets exists with those who purchase them, it is not clear how this reallocation increases information about the assets. Predictably, issuers will raise the costs of issuing securitized assets and investors will pay for the costs of the due diligence.

B. *Information Elasticity as an Indicator of the Need for Regulation*

The Dodd-Frank Bill is consistent with a part of the recent flood of conflicting research about how to reform the markets for securitized products. The associated legal commentary generally can be separated into three schools of thought: (1) Markets are efficient and need little government regulations;²⁵³ (2) Government regulation is necessary because inves-

252. Howard Bodenhorn, *Short-Term Loans and Long-Term Relationships: Relationship Lending in Early America*, 35 J. MONEY, CREDIT & BANKING 485, 485 (2003) (“[W]ith repeated contracting, banks continuously gather information and update their evaluations of borrower creditworthiness.”).

253. See *infra* notes 271-288 and accompanying text (discussing the Efficient Markets Hypothesis).

tors do not consistently make rational decisions;²⁵⁴ and (3) Investors can make rational decisions but may never have the necessary information to do so.²⁵⁵ Unfortunately, many commentators present each as a complete answer to the question of when government regulation is required in markets, exclusive of any other theory. The breadth of the legal commentary typically identifies the failure of markets to produce a good as a market failure,²⁵⁶ and then applies a particular theory to cure the failure. However, much of the legal commentary about the Market Meltdown does not properly describe how to determine when a market failure, as opposed to a temporary pricing anomaly, has occurred.

Generally speaking, all major theories previously discussed concede that with perfect information about an asset, uninformed investors can rely on others to set fair prices.²⁵⁷ Much of the current debate is simply a reaction to the perceived failures of the Efficient Markets Hypothesis. However, this reaction overlooks a pre-requisite for the Efficient Markets Hypothesis to be applicable, instances where there are relatively few barriers to information.²⁵⁸

In a perfect market with no transaction costs and perfect liquidity, prices can be assumed to accurately reflect asset quality.²⁵⁹ Investors can determine proper pricing by searching

254. See *infra* notes 289-318 and accompanying text (discussing Behavioral Law and Economics).

255. See *infra* notes 199 - 211 and accompanying text (discussing Information Asymmetries and a Lemon's Problem in markets).

256. See *id.*

257. Behavioral Law and Economics scholars may argue that even if prices are fair, this does not imply that investors will make the right consumption decisions. They may still purchase too much of goods which do little to increase their overall wealth.

258. Although I have described the sufficient condition for the EMH to apply as relatively few barriers to information, the description of the EMH requires that cost not be one of those barriers. See Gordon, *Efficient Markets*, *supra* note 240, at 771 ("It is not difficult to specify conditions under which capital markets will inevitably be speculatively efficient: no transaction costs in trading securities, costless access by all market participants to all available information, and agreement by market participants as to implications of such information for the current price and distributions of future price of each security (i.e., homogenous expectations).").

259. See *id.*

markets to get an average measure of prices.²⁶⁰ The easier and cheaper the search, the more accurate prices will be.²⁶¹ Knowing the ease of comparison, sellers of low quality assets have an incentive to price appropriately. Further, sellers of high quality assets can market their goods to buyers without worrying about low quality goods passing themselves off as high quality goods.

However, this model, similar to Akleroff's Lemons Problem, is a two-state, two-quality model, where buyers, unable to tell the difference between the high and low quality states, are only willing to pay for the state which they can confirm, the low quality good. Each of the dominant asset pricing theories mentioned herein agrees that access to more information will lead to better asset pricing. As a result, one method to increase the efficiency of markets is to increase the availability of information. If information is not available at any price, then each of the three theories supports the idea that markets will fail. If information is available but relatively expensive, then the markets are not efficient and barriers to investing exist. The larger question is how to determine whether information can be acquired cheaply.

One way to expand Akleroff's Lemons Problem to gauge the efficiency of markets is to determine the availability of information about the prices of investments in a market. To the extent that there is a range of substitute investments (at differing qualities) that each encompasses the qualities of all of the lower quality assets, investors can compare the difference in price between investments.²⁶² Even if information is non-

260. Price is one metric by which buyers can tell the difference between goods whose quality can be determined by search and goods whose quality is determined, *ex post*, after experiencing the goods. See David N. Laband, *An Objective Measure of Search Versus Experience Goods*, 29 *ECON. INQUIRY* 497, 507 (1991).

261. To meet consumer demand for product information, sellers will offer information about product quality along with the sale of the underlying good. See Robert B. Ekelund, Jr., Franklin G. Mixon, Jr. & Rand W. Ressler, 22 *J. ECON. STUD.* 33, 34 (1995) ("Suppliers provide a joint product along goods and services. That product – advertising and all forms of information such as personal selling or quality signaling – is demanded by consumers to reduce search and other information costs to optimal levels.").

262. The Capital Asset Pricing Method ("CAPM"), which is the dominant pricing tool for investments, employs a similar analysis. The price of an asset is a measure of its riskiness over the market risk. See Fischer Black, Michael

rivalrous²⁶³ and nearly costless to distribute,²⁶⁴ information can be sold for a price. The Lemons Problem can be expanded not just to high and low quality goods, but to goods with high and low quality of publicly available information. The more information about the good that is publicly available and verifiable, the more liquid the good will be.²⁶⁵ However, even in illiquid markets asset pricing is possible, provided that there is a sufficient minimum level of information about the good or substitute goods so that buyers can price in the risk of being wrong.

As a result, a rule can be fashioned for regulation in markets in three cases. First, in markets where investments are not traded at all²⁶⁶ and substitute investments with greater available information trade at no additional premium, since the market is largely illiquid, regulators²⁶⁷ should confirm that fraudulent activity has not driven buyers from the market. Second, in markets where goods are for sale but the relative cost of information is expensive, regulation should encourage the reduction of barriers to offer for sale goods or information about such goods.²⁶⁸ Third, in markets where goods are for sale and information is relatively inexpensive, no regulation should be required, as markets will offer protection to investors. If information can be obtained cheaply or costlessly,

C. Jensen & Myron Scholes, *The Capital Asset Pricing Model: Some Empirical Tests*, in *STUDIES IN THE THEORY OF CAPITAL MARKETS* 79 (Michael C. Jensen ed., 1972).

263. Elias L. Quinn, *Envisioning the Smart Grid: Network Architecture, Information Control, and the Public Policy Balancing Act*, 81 U. COLO. L. REV. 833, 850 (2010) (“[I]nformation is a non-rivalrous good: the consumption of information by one party does not prevent its consumption or use by another, because copies retain all the value of originals and can be made at very low costs.”).

264. *Id.* (“[T]he prevalence of copying technologies makes it difficult to exclude individuals from the use of information goods once they have been disseminated.”).

265. Since the gap between what sellers are willing to sell for and what buyers can verify is comparatively close with greater available information.

266. This should be a rare situation as a good’s constituent parts, minus disaggregation costs, should provide some value so that the good is not worthless.

267. I do not offer any opinion as to the type of the regulator, as such a discussion is outside of the scope of this Article.

268. This is the classic Lemon’s Problem in a context of a market with limited information.

even uninformed investors can rely on the availability of information provided by the market.²⁶⁹ As a result, if information about a particular good is available with little change in price, little government regulation should be required since even the most unsophisticated buyers can obtain accurate price information relatively cheaply. Further, even investors who cannot evaluate information can rely on other buyers for fair prices. Regulation's main role in a market where information is price elastic and information is available at little cost is to enforce contracts and property rights.

The proposed Information Elasticity Model of regulation relies on work done in financial economics on asset pricing, particularly the Efficient Markets Hypothesis. However, the Efficient Markets Hypothesis has come under strong attack from scholars in Behavioral Law and Economics.²⁷⁰ As a result, a resolution and discussion of this ongoing debate is necessary prior to relying on either theory for a regulatory framework.

C. *Efficient Markets Hypothesis*

The dominant theory²⁷¹ of market architecture in finance is the Efficient Markets Hypothesis ("EMH"). An efficient

269. Much of the criticism of the Efficient Markets Hypothesis concedes this point. The larger question is what is an applicable rule if information requires transaction costs. See Gordon, *Efficient Markets*, *supra* note 240, at 771.

270. For a discussion of Behavioral Law and Economics as a critique of the efficient markets hypothesis, see generally Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471 (1998) [hereinafter Jolls, *Behavioral Approach*]. There is an extensive source of legal commentary applying principles from behavioral finance in critiquing the Supreme Court's tacit acceptance of the efficient markets hypothesis in securities fraud cases. Frederick C. Dunbar & Dana Heller, *Fraud on the Market Meets Behavioral Finance*, 31 DEL. J. CORP. L. 455 (2006) (critiquing the Supreme Court's adoption of the efficient markets hypothesis in securities fraud cases with theories from behavioral finance); Lynn A. Stout, *The Unimportance of Being Efficient: An Economic Analysis of Stock Market Pricing and Securities Regulation*, 87 MICH. L. REV. 613 (1988) (arguing against market efficiency as the source of resource allocation); Thomas S. Ulen, *Evolution, Human Behavior, and Law: A Response to Owen Jones's Dunwoody Lecture*, 53 FLA. L. REV. 931 (2001) (critiquing rational choice theory).

271. Fama, *Theory & Empirical Work*, *supra* note 17, at 383 ("[A] market in which prices always 'fully reflect' available information is called 'efficient.'"); Gilson, *Market Efficiency*, *supra* note 19, at 549.

market is described as one where there are a number of sufficient conditions for a market to behave efficiently such that “all available information is costlessly available to all market participants.” In such a market,²⁷² no one trader can earn outsize rewards, because arbitrage opportunities mean that prices will reflect all available information.²⁷³ As a positive externality to an efficient market, uninformed market participants may act as free riders, latching on to prices discovered by informed arbitrageurs.

An implication of the EMH is that, provided information is precisely delivered,²⁷⁴ barriers to the flow of information between buyers and sellers should be removed.²⁷⁵ When sufficient public information is available about asset quality, sellers will be price takers because buyers will know of cheaper goods of the same quality from other sellers and buyers. As a result, the due diligence about the risk an investment poses will simply be a function of a potential investor’s risk appetite and ability to find the necessary securities to smooth out its investor consumption patterns, i.e., investments to account for patterns of borrowing and saving.²⁷⁶

Notwithstanding the natural counterfactualism of the EMH, i.e., that markets are in fact not complete and market participants do have hidden interests,²⁷⁷ particularly because

272. There are three forms of this market. The weak form suggests prices have incorporated all historical information. The semi-strong supports that prices incorporate new information. The strong says all information is incorporated. Gilson, *Market Efficiency*, *supra* note 19, at 549.

273. Fama, *Theory & Empirical Work*, *supra* note 17, at 383; Dunbar & Heller, *supra* note 270, at 462.

274. See Hareesh Sapra, *The Economic Trade-Offs in the Fair Value Debate*, 6 J.L. ECON. & POL’Y 193, 198-200 (2010) (discussing the information asymmetries and accounting).

275. Oren Bracha & Frank Pasquale, *Federal Search Commission? Access, Fairness, and Accountability in the Law of Search*, 93 CORNELL L. REV. 1149, 1173 (2008) (“Market participants need information about products and services to make informed economic decisions. To the extent information is less available or more costly to obtain, the market will be less efficient and prices will be less competitive.”) (footnotes omitted).

276. Ronald J. Balvers, Thomas F. Cosimano & Bill McDonald, *Predicting Stock Returns in an Efficient Market*, 45 J. FIN. 1109, 1110 (1990) (“To maximize utility, investors attempt to smooth out consumption by adjusting their required rate of return for financial assets.”).

277. See Sanford J. Grossman & Joseph E. Stiglitz, *On the Impossibility of Informationally Efficient Markets*, 70 AM. ECON. REV. 393 (1980).

of agency problems,²⁷⁸ many legal commentators, courts and lawmakers have cited the EMH as a guiding principle in articulating rules of the architecture of American securities markets.²⁷⁹ The Securities Act of 1933 and Securities Exchange Act of 1934, which preceded formal development of the theory, have at their heart a desire to disclose to investors unknown risks.²⁸⁰ Other courts have cited EMH explicitly as a theorem whose truth has been largely accepted by the academic community.²⁸¹ Courts and legal commentators have adopted the theory as the best ways to protect investors, i.e., give them information.²⁸²

Nonetheless, the Market Meltdown posed an ontological question for believers in Efficient Market Hypothesis.²⁸³ Even

278. Sylvia R. Lazos Vargas, *Florida's Property Rights Act: A Political Quick Fix Results in a Mixed Bag of Tricks*, 23 FLA. ST. U. L. REV. 315, 385 (1994) ("In addition to these considerations, efficient market outcomes, even between only two parties, are premised on three key assumptions: no significant transaction costs, perfect information, and rational utility maximization by the bargaining agent on behalf of its principal.").

279. Gilson, *Market Efficiency*, *supra* note 19, at 549.

280. R. Daniel Kelemen & Eric C. Sibbitt, *The Americanization of Japanese Law*, 23 U. PA. J. INT'L ECON. L. 269, 285 (2002) ("The hallmarks of U.S. securities regulation are (i) a focus on regulating only the quality of mandatory disclosure of issuers, not the quality of the investments themselves or the range of permissible investments, (ii) a high degree of transparency in the regulatory process itself, and (iii) a strong emphasis on private enforcement, through both self regulatory organizations and antifraud litigation by private parties.").

281. *Basic v. Levinson*, 485 U.S. 244, 246 (1998) ("Recent empirical studies have tended to confirm Congress' premise that the market price of shares traded on well-developed markets reflects all publicly available information, and, hence, any material misrepresentations."). Note that some courts have held differently. *McLaughlin v. Am. Tobacco Co.*, 522 F.3d 215, 224 (2d Cir. 2008) (distinguishing stocks sold on a stock market from consumer goods on the grounds that the market for consumer goods is anything but efficient).

282. Gordon, *Efficient Markets*, *supra* note 240, at 762-65 (describing the influence of the Efficient Markets Hypothesis on the creation of financial regulation).

283. Maurice E. Stucke, *Money, Is That What I Want?: Competition Policy and the Role of Behavioral Economics*, 50 SANTA CLARA L. REV. 893, 904 (2010) ("The financial crisis has prompted policymakers to re-examine fundamental issues such as the efficiency of markets and the role of legal, social, and ethical norms in a market economy.").

for commentators that have not lost faith, there are those who believe that the EMH may need modification as a result.²⁸⁴

There is a wealth of information supporting the weak and semi-strong²⁸⁵ versions of EMH, but there are a number of odd effects that suggest that the theory may not explain all situations.²⁸⁶ For example, there is evidence that stocks achieve better returns in January than in other months.²⁸⁷ Further, the weekend effect²⁸⁸ also suggests that the news incorporated into stock prices is not random. Aside from particular oddities, there are investors who consistently achieve returns that outperform the market. Each of these examples suggests that there are instances where the theorem has failed to be universally explanatory.

The EMH by its very terms applies to markets with sufficient information. The Information Elasticity Framework largely coincides with the EMH. If markets are efficient, then buyers may rely on prices to be fair. If markets are not, then the EMH sets an aspirational goal of perfect information. In either event, the EMH is consistent with modern regulatory theory in financial markets: more information leads to investors being able to protect themselves from unscrupulous salespeople.

284. Samuel Gregg, *Smith Versus Keynes: Economics and Political Economy in the Post-Crisis Era*, 33 HARV. J.L. & PUB. POL'Y 443, 444 (2010) ("Other economists, however, argued that the stock market meltdown demonstrated the EMH's inability to account for the market overpricing assets such as mortgages.").

285. Fama, *Theory & Empirical Work*, *supra* note 17, at 385.

286. Klock, *supra* note 34, at 178-79 ("[T]here is some empirical evidence that has been interpreted as evidence of systematically incorrect asset pricing. Asset pricing anomalies are not necessarily proof that the market is inefficient.").

287. Werner F. M. De Bondt & Richard Thaler, *Does the Stock Market Overreact?*, 40 J. FIN. 793, 804 (1985) (noting that their research could not explain excess returns on stocks found in the month of January).

288. Peter Talosig III, *Regulation FD—Fairly Disruptive? An Increase in Capital Market Inefficiency*, 9 FORDHAM J. CORP. & FIN. L. 637, 693 (2004) ("One anomaly known as the 'weekend effect' demonstrates that Monday's closing stock prices are frequently lower than the previous Friday's closing stock prices.").

D. *Critics of Information Processing by Behavioral Law
and Economics Scholars*

Although the Efficient Markets Hypothesis remains the dominant theory in asset pricing in financial economics, it is not without its detractors. The main critique Behavioral Economics scholars offer of classical economics is that humans, investors included, are not necessarily rational actors.²⁸⁹ As a result, they cannot be relied upon to offer the kind of arbitrage necessary to keep financial order.

In fact, the behavioral economics proposes that investors are often irrational because of a series of biases that cloud their judgment.²⁹⁰ As a result, the Behavioral Law and Economics scholarship takes issue with the “anti-paternalism” view of regulation that some law and economics scholars advocate. Instead, some Behavioral Law and Economics scholars have sometime referred to themselves as “anti-anti-paternalists.”²⁹¹

Although Behavioral Law and Economics scholars have offered a laundry list of biases that are purported to effect human thinking, the responses to complexity²⁹² are commonly mentioned in the context of securitization. Legal commentators who argue for a simplification of investments frequently suggest that humans cannot fully understand complex situations. As a result, we rely on a series of simplifying heuristics that introduce more problems. Commentators have noted

289. Posner, *supra* note 224, at 1553 (noting in response to Jolls, *Behavioral Approach*, *supra* note 270 “[b]ehavioral economics rejects the assumption that people are rational maximizers of preference satisfaction in favor of assumptions of ‘bounded rationality,’ ‘bounded willpower,’ and ‘bounded self-interest.’ The first and most familiar of those terms refers to the fact that people have cognitive quirks that prevent them from processing information rationally. This phenomenon is distinct from positive information costs. The latter phenomenon conventional rational choice has no difficulty assimilating.”).

290. Balvers, Cosimano & McDonald, *supra* note 276.

291. Claire A. Hill, *The Law and Economics of Identity*, 32 *QUEEN'S L.J.* 389, 443-44 (2007) (“In contrast, the ‘new paternalists,’ some of whom sometimes refer to themselves as anti-anti paternalists, think that people ‘make mistakes’ or have self-control problems and would want government to intervene, perhaps only to help them make better choices, but sometimes perhaps even in stronger ways.”).

292. Miller & Rosenfeld, *supra* note 217, at 813-15.

that amongst these biases are confirmation bias,²⁹³ representative bias,²⁹⁴ oversimplification bias,²⁹⁵ and authoritarian bias.²⁹⁶ However, even accepting that these biases may exist in human behavior, the extent that they influence human behavior or the behavior of investors in general is not clear.²⁹⁷

There are at least two reasons to be skeptical of the universality of cognitive biases. First, organizational culture may affect the expression of biases.²⁹⁸ Second, culture may mediate biases.²⁹⁹ The assertion of bias suggests that the biases are endemic to the human condition. However, social psychology suggests that not all humans may have these biases.³⁰⁰ Indeed, there are reasons to believe that investors as a group may be insulated from many of the biases that afflict individuals generally. First, investors need not be individuals. With respect to specialized products, the investor class is dominated by organizations and computers. It is not clear how the biases would be transmitted across organizations. Large, sophisticated organizations have a number of metrics designed to prohibit biases from entering trading. Further, since many investment decisions, even in organizations, are made by teams – to prevent investment biases from clouding judgments – it is not clear how biases are mediated through the differing roles inside investment institutions.

293. Confirmation bias occurs when other information is discarded to confirm an initial reaction. *Id.*

294. Representativeness bias is the assumption that a sample is a reliable measure of an unobserved variable. *Id.*

295. Oversimplification bias is the overuse of rules of thumb or heuristics. *Id.*

296. Authoritarian bias is tendency to overvalue information from authoritative sources. *Id.*

297. Daniel F. Spulber, *Consumer Coordination in the Small and in the Large: Implications for Antitrust in Markets with Network Effects*, 4 J. COMPETITION L. & ECON. 207, 245 (2008) (noting that similarly to consumer markets, “in financial markets, there is little evidence to suggest that behavioral irregularities prevent consumers from making a best response to the expected purchases of other consumers”).

298. George Huber, *Organizational Learning: The Contributing Processes and the Literatures*, 2 ORG. SCI. 88, 102 (1991) [hereinafter Huber, *Organizational Learning*].

299. See generally Dan M. Kahan, *Two Conceptions of Emotion in Risk Regulation*, 156 U. PA. L. REV. 741, 753 (2008) [hereinafter Kahan, *Two Conceptions*].

300. Posner, *supra* note 224, at 1559.

Even if biases affected all humans, in many institutions computers do a great deal of the underlying work in making investment decisions, and in some cases computers are programmed to purchase securities without human oversight. There is no concrete empirical evidence advanced by Behavioral Law and Economics scholars that humans, in programming computers to make investment decisions based on asset pricing methods, would pass on cognitive biases to computers.

Organizations also have different modes of information acquisition that stand separate and apart from the individuals who work there.³⁰¹ Therefore, it is possible that even if a majority of individuals responded to complexity with unmitigated biases, the organizational response to the same complex scenario could be different. One reason is that even the biases that individuals have may be “unlearned” within the context of the socialization process of the organization.³⁰²

However, organizations can also confront groupthink issues.³⁰³ While organizations can provide the settings necessary to give context to heuristics, research suggests that when an idea is accepted by an organization’s culture, it is difficult for the organization to rethink it.³⁰⁴ Therefore, an overarching institutional bias may run counter to the complexity biases of its employees, or the institution may express the same response to complexity that its employees express. More impor-

301. Huber, *Organizational Learning*, *supra* note 298, at 102 (noting that “[t]he facts that a person’s prior cognitive map (or belief structure or mental representation or frame of reference) will shape his or her interpretation of information, and that these cognitive maps vary across organizational units having different responsibilities, are well established”).

302. *Id.* at 105 (“Socialization sometimes causes new members to unlearn. A consequence can be that the knowledge that the new members possessed upon entry becomes unavailable to the organization.”).

303. Michael J. Tippins & Ravipreet S. Sohi, *IT Competency and Firm Performance: Is Organizational Learning a Missing Link?*, 24 STRATEGIC MGMT. J. 745, 749 (2003) (“As the shared understanding of information is committed to organizational memory, future information is evaluated in light of what already exists.”).

304. Kenneth A. Bamberger, *Technologies of Compliance: Risk and Regulation in a Digital Age*, 88 TEX. L. REV. 669, 699 (2010) (“Yet this organizational source of strength can also create predictable decisionmaking pathologies by rendering decision makers insensitive to change, the source of risk. These knowledge structures accentuate familiarity—what is cognitively available and deemphasize difference, masking red flags that might indicate troubling elements of new situations.”).

tantly, organizations mediate individual biases. Without studies at the organizational level, it is difficult to determine how individual biases manifest themselves in investment decisions.

The assertion of Behavioral Law and Economics scholars that cognitive biases pervade decision-making also overlooks the importance of culture as a mediator.³⁰⁵ Culture mediates reactions to complexity.³⁰⁶ Worse yet, when attempting to curb the influence of cultural biases, individuals tend to check others in the same culture who, not surprisingly, also share those biases.³⁰⁷ As a result, cultural groups create worldviews which impact the way that cognitive bias is processed by the members of that group. This may overcome individual information processing heuristics.³⁰⁸

On that front, proponents of cognitive bias provide a response that cognitive biases mediate cultural issues, as opposed to culture mediating cognitive bias.³⁰⁹ Either way, other research in social psychology shows that prior to risk percep-

305. Dan M. Kahan, Paul Slovic, Donald Braman & John Gastil, *Fear of Democracy: A Cultural Evaluation of Sunstein on Risk*, 119 HARV. L. REV. 1071, 1072 (2006) (concluding a major fault in behavior law and economics views on risk are the overlooking of “[a] growing body of work suggests that cultural worldviews permeate all of the mechanisms through which individuals apprehend risk.”).

306. *Id.* at 1083 (“Culture is cognitively prior to facts in the sense that cultural values shape what individuals believe the consequences of such policies to be. Individuals selectively credit and dismiss factual claims in a manner that supports their preferred vision of the good society.”).

307. *Id.* at 1085 (“Accordingly, they must trust others to tell them which risk claims, supported by which forms of highly technical empirical evidence, to believe. And the people they trust, not surprisingly, are the ones who share their cultural worldviews—and who are likely to be disposed to particular positions by virtue of affect, probability neglect, availability, and similar mechanisms. Risk perceptions are thus likely to be uniform within cultural groups and diverse across them.”).

308. *Id.* at 1090-91 (“Consistent with previous research, we found that factors such as income, education, community type (rural or urban), political ideology, and personality type do predict various risk perceptions. But we also found that cultural worldviews exert significantly and substantially more predictive power than these characteristics.”).

309. Cass Sunstein, one of the leading proponents of Behavioral Law and Economics responded directly to the concerns raised by Dan M. Kahan, Paul Slovic, Donald Braman & John Gastil’s paper, *supra* note 305. Cass Sunstein, *Misfearing: A Reply*, 119 HARV. L. REV. 1110, 1111 (2006) (“‘Cultural cognition’ is largely a result of bounded rationality, not an alternative to it.”).

tion, an individual's emotion determines risk perception.³¹⁰ Unfortunately, the complexity (for lack of a better term) of the interaction of culture, emotion and bias makes it almost impossible to construct normative responses.³¹¹ However, leaving aside the debate about causation,³¹² the bigger issue is that law may support the irrationality of one group over the other.³¹³ If cognitive bias leads to poor risk judgment that is not universal, then protecting investors with those biases runs the risk of subsidizing irrational behavior, independent of cause, over rational behavior.

Part of the reason for the debate in the legal commentary about whether complexity biases are pervasive is that the theory does not offer any way to test its validity.³¹⁴ It does not present a falsifiable thesis which permits testing the bounds of when complexity biases are important versus ancillary.³¹⁵ As a result, it is not clear that the biases cannot be explained by other causal factors or if the biases can be overcome or eliminated.

The issue of bias is one that qualitative researchers in the social sciences have faced in assessing data quality. As a result, there is a literature base that provides methods for confirming that conclusions reached from qualitative research methods

310. Kahan, *Two Conceptions*, *supra* note 299, at 753 ("Studies that tell us only that emotion is cognitively prior to risk perceptions, then, are equally compatible with both the cultural evaluator theory's conception of emotion as expressive perception and the irrational weigher theory's conception of emotion as bias.").

311. Richard L. Hasen, *Efficiency Under Informational Asymmetry: The Effect of Framing on Legal Rules*, 38 UCLA L. REV. 391, 396 (1990) ("Incorporating effects like 'availability' or 'representativeness' into models usable for formulating social policy is all but impossible. Each choice made would have to be evaluated against all of the heuristics known at that time.").

312. The debate over causation is whether cultural biases cause cognitive biases or is it the other way around. See Sunstein, *supra* note 309, at 1111.

313. David J. Arkush, *Situating Emotion: A Critical Realist View of Emotion and Nonconscious Cognitive Processes for Law and Legal Theory*, 2008 BYU L. REV. 1275, 1335 (2008) ("A more fundamental problem is the division of decision making into several types—such as cognitive versus emotional and rational versus irrational—without a clear means of distinguishing the two and without an empirical basis for the rational, non-emotional decision making that emotional irrationalism prioritizes.").

314. Posner, *supra* note 224, at 1553.

315. Fama, *Theory & Empirical Work*, *supra* note 17, at 385.

are free from individual biases.³¹⁶ However, the social psychology literature about bias, and some of the legal commentary about bias in the context of racial discrimination, suggests that biases are at the subconscious level and not easily overcome.³¹⁷ The larger point is that the debate is not settled in either social psychology literature or the academic legal literature that considers bias in the context of racial prejudice.³¹⁸

The critiques of market efficiency leveled by Behavioral Law and Economics scholars, though interesting, have not yet risen to the level of acceptance (or applicability) in the wider community to suggest that more information about an asset, by itself, is not enough to ensure asset quality for investors generally. However, in the context of large, sophisticated institutional investors, the dominant investor base for structured products, concerns about cognitive bias may simply be misapplied. Even if human judgment is bounded by bias, the ability

316. MATTHEW B. MILES & A. MICHAEL HUBERMAN, *QUALITATIVE DATA ANALYSIS* 245-46 (2d ed. 1994). There are a number of strategies to confirm the absence of bias in data analysis including checking for representativeness, researcher effects, triangulating across sources and methods, weighting the evidence, testing using extreme cases, following up surprising cases, ruling out spurious relations, replicating a finding and checking out rival explanations. *Id.* The Behavioral Law and Finance scholarship has not yet advanced theories or evidence to rule out the possibilities that investors can have complexity biases and use methods to “work around” the biases.

317. However, there is a competing school of thought that suggests that attitudes towards judgment may be unconscious and resistant to change. Anthony G. Greenwald & Linda Hamilton Krieger, *Implicit Bias: Scientific Foundations*, 94 CAL. L. REV. 945, 945 (2006) (“[T]he science of implicit cognition suggests that actors do not always have conscious, intentional control over the processes of social perception, impression formation, and judgment that motivate their actions.”); see Charles R. Lawrence III, *The Id, the Ego, and Equal Protection: Reckoning with Unconscious Racism*, 39 STAN. L. REV. 317, 322 (1987) (arguing that a “large part of the behavior that produces racial discrimination is influenced by unconscious racial motivation”); see generally DEREK BELL, *FACES AT THE BOTTOM OF THE WELL, THE PERMANENCE OF RACISM* 4-14 (1992).

318. The legal and economic literature about bias frequently discusses matters of racial prejudice and discrimination. This is an ongoing debate in that literature base about whether bias, in the context of racial prejudice, is conscious, and can be mitigated through learning or is unconscious and may be more permanent. While the answer to that question is outside of this scope of this Article, it is worth noting that articles in the Behavioral Law and Economics literature frequently important the concept of bias in human decision making as if it were a settled issue in the social psychology literature from which is was found.

of sophisticated investors to protect themselves should not be further bolstered by regulation that protects their every move at the cost of the sellers of investments, the issuers. Doing so subsidizes sophisticated investors at the cost of all market participants.

CONCLUSION

The existing legal commentary about securitization and the theory behind the Dodd-Frank Bill overlooks the possibility that investors and issuers in asset-backed securities transactions confirm asset quality without the need for additional government regulation. Investors can examine the underlying assets directly, rely on certification from the sellers, pay third parties for information, or rely on financial intermediaries to bear a greater portion of the risk. Unfortunately, due to a myopic focus on the ills of residential mortgage backed securities, the legal commentary and the Dodd-Frank bill overlook the important success of CMBS, where widespread fraud has not surfaced.

To determine the necessary scope and breadth of regulation of asset-backed securities markets, this Article proposes a set of presumptions to determine whether markets have failed and require greater regulation. In markets where information is relatively expensive or difficult to obtain, regulators should look to remove barriers to competition. In markets where information is relatively cheap, regulation should not extend beyond enforcement of contracts and protection of property rights more generally.

Investors in asset-backed markets, particularly CMBS, receive a number of contractual protections and a plethora of mandated disclosures about asset quality. In some instances, they have the right to physically examine the underlying collateral prior to investment. Mechanically forcing issuers to bear more risk for the mistakes of sophisticated investors will have the predictable effect of concentrating systemic risk and reducing the efficiency of capital markets. Shifting risk from sophisticated investors to issuers will not decrease systemic risk. Worse yet, the additional cost of due diligence that issuers will incur will be passed on to consumers and investors alike. As a result, all parties who interact with issuers of structured products may be forced to bear the additional expense of govern-

ment regulations that seek to protect sophisticated investors from themselves in the name of protecting the market from sophisticated investors.