

2014

New Guiding Principles: Macroprudential Solutions to Risk Management Oversight and Systemic Risk Concerns

Kristin N. Johnson

Steven A. Ramirez

Bluebook Citation

Kristin N. Johnson & Steven A. Ramirez, *New Guiding Principles: Macroprudential Solutions to Risk Management Oversight and Systemic Risk Concerns*, 11 U. St. Thomas L.J. 386 (2014).

This Article is brought to you for free and open access by UST Research Online and the University of St. Thomas Law Journal. For more information, please contact lawjournal@stthomas.edu.

ARTICLE

**NEW GUIDING PRINCIPLES:
MACROPRUDENTIAL SOLUTIONS TO RISK
MANAGEMENT OVERSIGHT AND
SYSTEMIC RISK CONCERNS**

KRISTIN N. JOHNSON AND STEVEN A. RAMIREZ*

TABLE OF CONTENTS

Introduction	386
I. A Primer: Risk and Risk Management.....	390
A. Understanding Risk and Risk Management	391
B. Risk Management Failures Engender Financial Crises ..	403
II. A New (?) Approach to Risk Management	412
A. SEC Rulemaking.....	414
B. Federal Reserve Regulation YY.....	416
C. Risk Management in the Courts.....	418
III. Asking the Right Questions: Identifying a More Sustainable Solution	420
Conclusion	426

INTRODUCTION

Over the last several years, financial institutions have weathered many storms; threats of insolvency¹ prompted industry consolidation² and the dis-

* Kristin Johnson, Professor of Law, Director of Regulation, Governance, and Risk Management Program, Seton Hall University Law School; Steven A. Ramirez, Professor of Law, Associate Dean of Research & Faculty Development, Director, Business & Corporate Governance Law Center, Loyola University Chicago.

1. See, e.g., William K. Sjostrom, Jr., *The AIG Bailout*, 66 WASH. & LEE L. REV. 943, 944 (2009).

2. See, e.g., Eric Dash & Andrew Ross Sorkin, *Government Seizes WaMu and Sells Some Assets*, N.Y. TIMES, Sept. 25, 2008, www.nytimes.com/2008/09/26/business/26wamu.html?pagewanted=all (explaining the sale of Washington Mutual to JPMorgan and describing the aftermath); Andrew Ross Sorkin, *JPMorgan Pays \$2 a Share for Bear Stearns*, N.Y. TIMES, Mar. 17, 2008, www.nytimes.com/2008/03/17/business/17bear.html?pagewanted=all&r=0 (discussing JPMorgan's purchase of Bear Stearns); *Wells Fargo to Buy Wachovia in \$15.1 Billion Deal*, N.Y. TIMES, Oct. 3, 2008, <http://dealbook.nytimes.com/2008/10/03/wells-fargo-to-merge-with-wachovia/> (discussing Wells Fargo's acquisition of Wachovia).

tribution of an unprecedented bounty of federal financial aid.³ The narratives of the storied enterprises that collapsed or nearly collapsed during the recent financial crisis reveal a fundamental concern: existing external rules and internal governing policies seem incapable of offering a sustainable regulatory solution to individual firm and industry-wide risk management failures.⁴

Theorists, commentators, journalists, and regulators quickly endeavored to address the catalysts that led to the crisis and solutions to prevent future crises.⁵ The reason for our preoccupation with identifying an effective regulatory framework is fairly obvious: the consequences of the crisis continue to impact communities around the world.⁶ The resulting proposed new legal standards aim to prevent excessive risk taking,⁷ encourage finan-

3. See, e.g., U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-13-180, FINANCIAL REGULATORY REFORM: FINANCIAL CRISIS LOSSES AND POTENTIAL IMPACTS OF THE DODD-FRANK ACT (2013).

4. See Steven L. Schwarcz, *Regulating Shadows: Financial Regulation and Responsibility Failure*, 70 WASH. & LEE L. REV. 1781, 1797–98 (2013) (discussing how disintermediation increases systemic risk and the potential for system-wide failure); Arthur E. Wilmarth, Jr., *The Dodd-Frank Act: A Flawed and Inadequate Response to the Too-Big-to-Fail Problem*, 89 OR. L. REV. 951, 954 (2011) (discussing how the financial crisis revealed weaknesses in the regulatory system of too big to fail financial institutions and how changes must be made to eliminate subsidies and make institutions internalize their risks).

5. See, e.g., Sheila C. Bair, Chairman, Fed. Deposit Ins. Corp., Statement on the Causes and Current State of the Financial Crisis Before the Financial Crisis Inquiry Commission (Jan. 14, 2010), available at <http://fcic.law.stanford.edu/documents/view/2144>; Viral V. Acharya & Matthew Richardson, *Causes of the Financial Crisis*, 21 CRITICAL REV. 195, 195 (2009) (suggesting that the cause of the financial crisis was, at least in part, due to the behavior of large financial institutions; explaining that financial institutions “had temporarily placed assets—such as securitized mortgages—in off-balance-sheet entities, so that they did not have to hold significant capital buffers against them . . . [and that] the capital regulations . . . allowed banks to reduce the amount of capital they held against assets that remained on their balance sheets—if those assets took the form of AAA-rated tranches of securitized mortgages. Thus, by repackaging mortgages into mortgage-backed securities, whether held on or off their balance sheets, banks reduced the amount of capital required against their loans, increasing their ability to make loans many-fold. The principal effect of this regulatory arbitrage, however, was to concentrate the risk of mortgage defaults in the banks and render them insolvent when the housing bubble popped.”); Kurt Eggert, *The Great Collapse: How Securitization Caused the Subprime Meltdown*, 41 CONN. L. REV. 1257, 1258 (2009) (arguing that the securitization of mortgages incentivized riskier investing by Wall Street firms); see also Holman W. Jenkins, Jr., *The Fannie and Freddie Hate Storm*, WALL ST. J., Dec. 28, 2011, <http://online.wsj.com/articles/SB10001424052970203391104577124403751459214> (claiming that too much blame is placed on Fannie and Freddie Mac, when the true cause of the financial crisis was the fact that “giant financial institutions in the U.S. and Europe had leveraged up with short-term and even overnight borrowings in order to hold complex mortgage derivatives that suddenly became illiquid and hard to value”); Simon Mundy, *‘Financial Amnesia’ a Factor Behind Crisis*, FIN. TIMES, Dec. 27, 2011, <http://www.ft.com/cms/s/0/d5182878-2c99-11e1-8cca-00144feabdc0.html> (quoting the Chartered Financial Analyst Society of the UK’s argument that “failure to heed the lessons of past bubbles was a key factor behind the global financial crisis” and caused “risk to be mispriced, bubbles to develop and crises to break”).

6. See U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 3, at 9–11.

7. See Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111–203, 124 Stat. 1376 (2010) [hereinafter Dodd-Frank Act] (expressing that the purpose of the legislation is to “promote the financial stability of the United States by improving accountability and transparency in the financial system, to end ‘too big to fail’, to protect the American taxpayer by

cial institution boards to engage in more careful monitoring,⁸ and enhance oversight of previously unregulated or lightly regulated areas within financial markets.⁹ A common expectation weaves these goals together—contemporary regulatory reform assumes that reforms may be implemented through the internal organizational structure of firms, or the top-down, hierarchical oversight of the board of directors and senior executives.¹⁰ Regulators' increased reliance on internal organizational structures to manage business risk exposes individual firms, the financial services industry, and international macroeconomic goals, such as financial market stability, to the well-known limits of corporate governance.

For decades, arguably almost a century, firms and regulatory authorities have entrusted boards of directors to manage the business risks related to the enterprise.¹¹ Recent contributions to the well-established literature chronicling the evolution of boards, however, question the qualifications, impartiality, and decision-making processes of boards.¹² Thus, while theorists continue to debate the merits and limits of corporate governance,¹³ a simple truth emerges—reliance on regulatory tools such as corporate governance to address risk oversight must be carefully tailored, should abandon antiquated notions about the efficacy of boards, and ought to acknowledge the known cognitive limits of group decision-making and managers' sus-

ending bailouts, to protect consumers from abusive financial services practices, and for other purposes.”).

8. *See id.*; *see also* Kristin Johnson, *Addressing Gaps in the Dodd-Frank Act: Directors' Risk Management Oversight Obligations*, 45 U. MICH. J.L. REFORM 55, 56 (2011) [hereinafter *Addressing Gaps*] (arguing that businesses need to adopt and enforce more effective risk management strategies).

9. *See* Dodd-Frank Act, *supra* note 7.

10. *See id.*

11. *See, e.g.*, DEL. CODE tit. 8, § 141 (2013) (identifying the powers of the board of directors); Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, § 302, 116 Stat. 745 (2002) (codifying the requirement of the CEO and CFO to sign financial statements certifying their accuracy); *Stone v. Ritter*, 911 A.2d 362, 373 (Del. 2006) (holding a board was not liable for poor business decisions as long as they acted with good faith); *In re Caremark Int'l Inc. Derivative Litig.*, 698 A.2d 959, 959 (Del. Ch. 1996) (discussing the business judgment rule and how it protects a board of directors); *Dodge v. Ford Motor Co.*, 170 N.W. 668, 682–85 (Mich. 1919) (discussing how the board of directors has broad discretion to declare shareholder dividends as long as shareholders' benefits are the main purpose); *Addressing Gaps*, *supra* note 8, at 98 (noting that the New York Stock Exchange mandates that listed companies appoint independent directors and explaining that NASDAQ's listing standards have a similar requirement).

12. *See* Lisa M. Fairfax, *The Uneasy Case for the Inside Director*, 96 IOWA L. REV. 127, 127 (2010) (highlighting the advantages of inside directors); Nicola Faith Sharpe, *Informational Autonomy in the Boardroom*, 2013 U. ILL. L. REV. 1089, 1089 (2013) (arguing for more informational autonomy and a rethinking of the way boards make decisions).

13. *See, e.g.*, Stephen M. Bainbridge & M. Todd Henderson, *Boards-R-Us: Reconceptualizing Corporate Boards*, 66 STAN. L. REV. 1051, 1051 (2014) (arguing that corporate boards would benefit if firms were allowed to provide board services); Donald C. Langevoort, *Commentary: Puzzles About Corporate Boards and Board Diversity*, 89 N.C. L. REV. 841, 842–48 (2011) (explaining the function of boards and arguing that the value added by a diverse board of directors is difficult to quantify); Lynn A. Stout, *The Toxic Side Effects of Shareholder Primacy*, 161 U. PA. L. REV. 2003, 2010–19 (2013) (discussing the side effects of shareholder primacy).

ceptibility to pursue self-interest at the expense of the firm's future stability. Simply stated, risk management failures illustrate inherent weaknesses in the theory and application of corporate governance and, in the context of financial institutions, corporate governance breakdowns that trigger risk management failures may engender systemic risks capable of destabilizing our national economy and the economies of other nations around the world. If these concerns have merit, we must question the implications of employing corporate governance reforms to address risk management oversight.¹⁴ Reflections on macroprudential regulatory goals may offer insight into the most effective design for our national and international regulatory design.¹⁵

This Article identifies lessons from the recent financial crisis, explores corporate governance-oriented regulatory reforms designed to enhance risk management, and notes that the weaknesses in these reforms arise, in part, because of romantic notions regarding corporate governance and its efficacy. We conclude that the current regulatory and legal framework governing risk management in the financial services industry remains deficient and dependent on corporate governance-based solutions to mitigate risk-taking by financial institutions; this choice unnecessarily exposes our financial system and economy to the risk of further risk mismanagement failures.¹⁶

14. See Kristin N. Johnson, *Macroprudential Regulation: A Sustainable Approach to Regulating Financial Markets*, 2013 U. ILL. L. REV. 881, 903–04 (2013) [hereinafter *Macroprudential Regulation*] (explaining systemic risk and the consequences that flow from the interconnectedness of financial institutions).

15. For examples of recent discussions regarding macroprudential regulatory design, see *Legislative Proposals to Reform Domestic Insurance Policy: Hearing on H.R.605, the Insurance Consumer Protection and Solvency Act of 2013; H.R.4557, the Policyholder Protection Act of 2014; the Risk Retention Modernization Act of 2014; the Insurance Data Protection Act of 2014; and H.R.4510, the Insurance Capital Standards Clarification Act of 2014 Before the H. Fin. Services Subcomm. on Housing and Ins.*, 113th Cong. (2014) (statement of Daniel Schwarcz, Assoc. Prof. of Law, Distinguished Research Fellow at the Univ. of Minn. L. Sch.); J. DAVID CUMMINS & MARY A. WEISS, *SYSTEMIC RISK AND THE U.S. INSURANCE SECTOR* 35–40 (2011) (arguing the increased interconnectedness of the insurance industry and financial industry have also increased the systemic risk of insurers and a larger scale approach is necessary to address the potential threat), available at <http://ssrn.com/abstract=1725512>; Scott Harrington, *The Financial Crisis, Systemic Risk, and the Future of Insurance Regulation*, 76 J. RISK & INS. 785, 811–15 (2009) (arguing that the creation of a federal council to monitor insurance agencies and financial institutions, and broadening federal control over insurers may be warranted); Daniel Schwarcz & Steven L. Schwarz, *Regulating Systemic Risk in Insurance*, 81 U. CHI. L. REV. (forthcoming 2014) (arguing insurance regulation requires more federal government involvement rather than using state law), available at <http://ssrn.com/abstract=2404492>; Rolf H. Weber, et. al., *Addressing Systemic Risk: Financial Regulatory Design*, 49 TEX. INT'L L.J. 149, 178–200 (2014) (exploring current and proposed regulations that anticipate important regulatory leadership by the Group of Twenty (G20) and the Financial Stability Board (FSB)).

16. The losses from the risk mismanagement underlying the Great Financial Crisis of 2008 mounted to trillions in lost GDP worldwide, a massive run up in debt among governments worldwide in efforts to save the economy from more pain, and the loss of personal wealth from declining asset prices, particularly housing and stock prices. While a final tally may be years away, it will amount to tens of trillions of dollars globally. Full recovery has not yet been achieved. One

This Article raises concerns about the extent to which financial market reforms assume that changes in corporate governance will improve risk management oversight. This Article rejects continued dependence on corporate governance reforms and endorses the adoption of a macroprudential perspective regarding risk oversight. This Article concludes by initiating an investigation into the contours of a macroprudential regulatory approach. After introducing the theory of risk management, Part I offers examples from the recent financial crisis that illustrate risk management failures. Part II describes federal regulators and state courts' adoption of prudential post-crisis regulatory reforms effectuated through corporate governance. Part III contends that nostalgic interpretations of corporate governance and its efficacy undermine risk management and distract from the development of regulatory reforms that may effectively improve risk management and mitigate systemic risk.

I. A PRIMER: RISK AND RISK MANAGEMENT

Employing risk management strategies is hardly a new approach to mitigating the costs of undesirable risks.¹⁷ The concept of managing risks dates back to the earliest annals of human history.¹⁸ Recently, however, business risk management has evolved into a much more precise and sophisticated science; the marriage between mathematicians and Wall Street firms transformed risk management into an art as each firm endeavored to achieve superior financial performance through the use of mathematical

reckoning puts the total global tab at up to \$15 trillion. Mark Adelson, *The Deeper Causes of the Financial Crisis: Mortgages Alone Cannot Explain It*, 39 J. PORTFOLIO MGMT. 16, 16 (2013).

17. H. Felix Kloman, *A Brief History of Risk Management*, in ENTERPRISE RISK MANAGEMENT 19, 19 (John Fraser & Betty J. Simkins eds., 2010).

18. In the Old Testament, the story of Joseph's interpretation of Pharaoh's dream illustrates a type of risk management approach to preserve access to food by preserving food during times of exceptional harvest for years when crops failed to produce sufficient food for a nation.

Joseph . . . was sold into slavery by his brothers, but . . . became Pharaoh's second-in-command in Egypt . . . Through seven years of the most productive harvest Egypt had seen, Joseph . . . reminded the Egyptians of the seven years of famine to come. Under the authority of Pharaoh, he instituted a program through which Pharaoh required every Egyptian farmer to place one-fifth of all produce harvested during the seven abundant years into common storage silos located throughout the country. Joseph gathered the food until he stopped measuring it, for it was beyond measure. . . . But then the seven years of abundance ended, the famine began, and the people cried out to Pharaoh for bread. The famine that followed extended beyond Egypt, so that even Joseph's family in Canaan had no food. But due to Joseph's plan and enforcement, in all the land of Egypt there was bread. In the later years of the famine, when Joseph foresaw the increasing ability of the land to produce once more, Joseph instituted a second, more extreme round of agricultural regulation. After the people of Egypt spent all they had on food, Joseph accepted their livestock in exchange for food. The next year Joseph bought all of the farm land in Egypt in exchange for food and moved all of the people into the cities where Joseph had stored food. Joseph then ostensibly gave the land back to the farmers, giving them seed and allowing them to farm the land for a tax of one-fifth of the produce, payable annually to the Pharaoh.

Genesis 41:1–32.

models, an increasingly innovative array of financial products (such as credit derivatives), and more sophisticated technology.¹⁹

In response to corporate governance failures in the early 2000s, scholars increasingly focused on the best means of coordinating and managing risk across the business enterprise.²⁰ Yet, movement toward optimal risk management proved illusory and incomplete.²¹ Part I of this Article will review the evolution of this movement, prior to the financial meltdown of 2008. Section I.A. quickly surveys the history of risk management. Section I.B. describes illustrations of risk management failures from the recent financial crisis and contends that new changes contribute to increasing complexity in financial markets and pose new and daunting hurdles for market participants, regulators, and professionals in the financial services industry.

A. *Understanding Risk and Risk Management*

Risk is generally understood as the potential for a firm to experience loss.²² Similar to the boards of other companies whose equity shares trade on national securities exchanges, financial institution boards endeavor to increase profitability while minimizing the firms' exposure to undesirable risks that lead to losses.²³ A financial institution's ability to identify and

19. "Risk-management practices and bank supervision have both evolved over their long histories, but innovations in information technology and in financial markets have caused the pace of change to increase significantly over the past two decades." Ben S. Bernanke, Chairman, Fed. Res., Speech at Stonier Graduate School of Banking: Modern Risk Management and Banking Supervision (June 12, 2006), available at <http://www.federalreserve.gov/newsevents/speech/bernanke20060612a.htm>.

20. See, e.g., Michelle M. Harner, *Corporate Control and the Need for Meaningful Board Accountability*, 94 MINN. L. REV. 541, 555–59 (2010) (explaining how lawmakers and courts should manage the actions of majority and activist minority stakeholders); Betty Simkins & Steven A. Ramirez, *Enterprise-Wide Risk Management and Corporate Governance*, 39 LOY. U. CHI. L.J. 571, 586–94 (2008) (arguing that enterprise-wide risk management would facilitate the effective functioning of corporations and capital markets and explaining that the current legal framework makes this goal impossible).

21. Notably, bank holding companies with more rigorous risk controls in place outperformed bank holding companies without such controls during the crisis (2007–08) as well as over the long term (1995–2010). Andrew Ellul & Vijay Yerramilli, *Stronger Risk Controls, Lower Risk: Evidence from U.S. Bank Holding Companies*, 68 J. FIN. 1757, 1796 (2013).

22. The word "risk" derives from the Italian "risicare" ("to dare"). See Simkins & Ramirez, *supra* note 20, at 577 (citing Peter L. Bernstein, *AGAINST THE GODS: THE REMARKABLE STORY OF RISK* 8 (1996)). Through the English language, "risk" adopted a connotation of "loss" or "harm": the earliest known English definition of the word, originating from 1621 (spelled "risque"), defines risk as "(Exposure to) the possibility of loss, injury, or other adverse or unwelcome circumstance; a chance or situation involving such a possibility." OXFORD ENGLISH DICTIONARY, <http://www.oed.com/view/Entry/166306?rskey=e0VgIy&result=1&isAdvanced=false#eid> (last visited Oct. 10, 2014).

23. Nearly a century ago, Adolf Berle and Gardiner Means posited that the separation of ownership from control created a central and pervasive concern—the classic principle and agent problem—in the management of the modern corporation. ADOLF A. BERLE, JR. & GARDINER C. MEANS, *THE MODERN CORPORATION AND PRIVATE PROPERTY* 4-9, 277–81 (1932). Hired executives, notwithstanding their allegiance to the corporation they serve, often have interests that diverge from the interests of the corporation or its shareholders. *Id.* After shareholders appoint

quantify risks indisputably correlates to the success of the firm's performance.²⁴ Unfortunately for the boards of financial institutions, numerous types of risks persistently threaten the board and executives' ability to anticipate risks.²⁵

representatives to the board of directors of the firm and the board hires professional executives, the owners of the firm no longer participate in the development of internal oversight policies or daily management of the firm's affairs. *Id.* Shareholders adopt governance policies to enable them to monitor the activities of directors and executives, collectively managers. *Id.* See also Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305, 310 (1976) (arguing that "contractual relations are the essence of a firm," and that a firm is a "nexus for a set of contracting relationships among individuals") (emphasis omitted).

24. See THOMAS H. STANTON, *WHY SOME FIRMS THRIVE WHILE OTHERS FAIL: GOVERNANCE AND MANAGEMENT LESSONS FROM THE CRISIS* (2012) (examining the organization, management, and governance of large financial firms and correlating more developed risk management programs with better outcomes). JPMorgan elected not to engage in the market for mortgage-backed collateralized debt obligations ("CDO") because the risk managers at the firm perceived the instruments as dangerous. Zachary J. Gubler, *The Financial Innovation Process: Theory and Application*, 36 DEL. J. CORP. L. 55, 96–97 (2011). Thus, while JPMorgan's equity share price declined during the financial crisis, the losses were not as significant as the losses experienced by other institutions. The closing share price of JPMorgan common stock was \$46.70 in the third quarter of 2008 ("3Q08"); \$43.82 in 3Q09; and \$38.06 in 3Q10. Press Release, JPMorgan Chase Reports Third Quarter 2008 Net Income of \$527 Million, or \$0.11 Per Share, Including Estimated Losses of \$640 Million (After-Tax) or \$0.18 Per Share for Washington Mutual Merger-Related Items 15 (Oct. 15, 2008), <http://files.shareholder.com/downloads/ONE/3535665722x0x240954/516966dc-b596-47cc-9b21-0c22ccbd21a6/3Q08EarningsPressRelease.pdf>; Press Release, JPMorgan Chase Reports Third-Quarter 2009 Net Income of \$3.6 Billion, or \$0.82 Per Share 14 (Oct. 14, 2009), http://files.shareholder.com/downloads/ONE/3535665722x0x324142/7ea411e8-fad0-40e2-9ca6-7a71607fb70e/3Q09_Earnings_Press_Release_FINAL.pdf; Press Release, JPMorgan Chase Reports Third-Quarter 2010 Net Income of \$4.4 Billion, or \$1.01 Per Share, on Revenue of \$24.3 Billion 15 (Oct. 13, 2010), http://files.shareholder.com/downloads/ONE/3602025084x0x409163/14a3f375-5913-4c58-a4ce-3eb855569bf2/3Q10_Earnings_Press_Release.pdf.

Goldman Sachs originated CDOs, but acted solely as an agent and would not take any risk in the transactions. In fact, Goldman Sachs knew that the CDOs were crossed to Paulson, a hedge fund manager, who short sold the CDOs. The firm's knowledge of Paulson's actions ultimately resulted in securities fraud litigation. Andrew F. Tuch, *Conflicted Gatekeepers: The Volcker Rule and Goldman Sachs*, 7 VA. L. & BUS. REV. 365, 395–96, n. 102 (2012). Goldman Sachs fared even better than JPMorgan, with a consistent rise in the value of its common stock. The closing share price of Goldman Sachs common stock was \$99.30 in 3Q08; \$101.39 in 3Q09; and \$116.23 in 3Q10. Press Release, Goldman Sachs Reports 2008 Third Quarter Earnings Per Common Share of \$1.81 1 (Sept. 16, 2008), <http://www.goldmansachs.com/media-relations/press-releases/archived/2008/pdfs/2008-q3-earnings.pdf>; Press Release, Goldman Sachs Reports Third Quarter Earnings Per Common Share of \$5.25 1 (Oct. 15, 2009), <http://www.goldmansachs.com/media-relations/press-releases/archived/2009/pdfs/2009-q3-earnings.pdf>; Press Release, Goldman Sachs Reports Third Quarter Earnings Per Common Share of \$2.98 1 (Oct. 19, 2010), <http://www.goldmansachs.com/media-relations/press-releases/archived/2010/pdfs/2010-q3-earnings.pdf>.

25. Credit, liquidity, and market risks are among the most significant classes of risks facing financial institutions. Credit risk represents the likelihood that (1) a borrower will default on payments owed to the firm; and/or (2) loss will result to the firm from a decrease in the borrower's credit quality. Erik F. Gerding, *Credit Derivatives, Leverage, and Financial Regulation's Missing Macroeconomic Dimension*, 8 BERKELEY BUS. L.J. 29, 30 n. 8 (2011) (citing JOEL BESSIS, *RISK MANAGEMENT IN BANKING* 12–13 (2d ed. 2002)). Because many investments are derived from other investments or securities, credit risk multiplies and becomes increasingly difficult to quantify as the degree of derivation escalates. *Id.* at 49. Liquidity risk encompasses two forms: (1) trading-liquidity risk—the risk that the firm will be unable to find a counterparty to a transaction

Financial institutions, however, serve a unique role in the domestic and international economy. When the business units within a financial services firm operate as desired, these institutions provide central services that offer a plethora of positive benefits.²⁶ The failure or insolvency of a financial institution may engender losses that extend beyond the shareholders, directors, executives, employees, and other stakeholders associated with the firm.²⁷ If a financial institution's failure triggers a series of losses across financial markets, or the threat of such a shock (systemic risk), the negative effects of the related events may certainly spill over and impact many individuals, families, and businesses in local and regional communities.²⁸

The negative externalities of a series of financial firm failures may possibly disrupt national or international financial markets. Due to the far-reaching effects of systemic risks and the permanence of the perils that systemic risks pose, legislators, academics, and journalists demand that

which is willing to purchase or sell the asset for fair market value; and (2) funding-liquidity risk—the risk that a firm will be required to alter its daily operations or financial condition in order to efficiently meet expected and unexpected current and future cash flow and collateral needs. Erik F. Gerding, *Code, Crash, and Open Source: The Outsourcing of Financial Regulation to Risk Models and the Global Financial Crisis*, 84 WASH. L. REV. 127, 138 (2009). Liquidity risk is difficult to model using market data because the risk occurs when markets seize up. *Id.* Market risk is a broad, multi-factored assessment of how volatility in economic indicators (including interest rate risk, foreign currency exchange rate risk, and commodity price risk) will affect the performance of the firm's investments. 17 C.F.R. § 229.305(a)(1) (2011); Robert T. Miller, *Oversight Liability for Risk-Management Failures at Financial Firms*, 84 S. CAL. L. REV. 47, 61–62 (2010). Due to its massive macroeconomic scope, accurately calculating market risk is complex and challenging. The collapse of large investment institutions is largely credited with their miscalculation of these risks. *See generally* Miller, *supra* note 25, at 61–62. For instance, AIG exposed itself to credit risk, liquidity risk and market risk. P.M. Vasudev, *Default Swaps and Director Oversight: Lessons from AIG*, 35 IOWA J. CORP. L. 757, 774 (2010). The cause of the recent financial crisis is often attributed to the failure of firms to properly manage and disclose credit risks regarding subprime lending. *See The Long and the Short of It*, ECONOMIST (Aug. 30, 2007), <http://www.economist.com/node/9725837>.

26. A well-functioning, efficient market allows for predictability and stability in investments. Jeffrey N. Gordon & Lewis A. Kornhauser, *Efficient Markets, Costly Information, and Securities Research*, 60 N.Y.U. L. REV. 761, 770 (1985) (describing how the efficient market hypothesis theorizes that markets are efficient because “(1) the current price of a security best predicts its future price and (2) the prevailing price immediately assimilates new information provided to the market”). Well-functioning markets create greater access to financial information, which in turn allocates resources to uses with the greatest value. Susan M. Phillips & Alan N. Rechtschaffen, *International Banking Activities: The Role of the Federal Reserve in Domestic Capital Markets*, 21 FORDHAM INT'L L.J. 1754, 1764 (1998) (“A noteworthy result of well-functioning capital markets is better information about issuers and readily available information on prices reflecting the collective judgment of market participants about the earning potential and risk of the issuer.”). In an efficient market, corporate managers are also incentivized to pursue and lobby for efficient rules of corporate governance. Robert B. Ahdieh, *Trapped in a Metaphor: The Limited Implications of Federalism for Corporate Governance*, 77 GEO. WASH. L. REV. 255, 298 n. 172 (2009).

27. By the Treasury Department's estimate, the financial crisis of 2007 to 2009 resulted in 8.8 million jobs lost, \$19.2 trillion lost in household wealth (in 2011 dollars), and a more than 5 percent fall in GDP. THE DEP'T OF THE TREASURY, THE FINANCIAL CRISIS RESPONSE IN CHARTS 3 (Apr. 2012), http://www.treasury.gov/resource-center/data-chart-center/Documents/20120413_FinancialCrisisResponse.pdf.

28. *Id.*

these institutions take special precautions to limit their exposure to certain types of risk.²⁹ Specifically, in the wake of the recent crisis, calls for reforms which manage the risks that impact individual financial institutions as well as systemic risks dominate discussions regarding regulation of financial markets.

After a careful examination of the varying definitions for the term, Steven Schwarcz explains that systemic risk is:

The risk that (i) an economic shock such as market or institutional failure triggers (through a panic or otherwise) either (X) the failure of a chain of markets or institutions or (Y) a chain of significant losses to financial institutions, (ii) resulting in increases in the cost of capital or decreases in its availability, often evidenced by substantial financial-market price volatility.³⁰

Anabtawi and Schwarcz explain that two independent correlations may interact to engender localized economic shocks that have the potential to crescendo into broader systemic crises.³¹ First, a firm's financial integrity and its exposure to the risk of low-probability adverse events may lead to economic shocks.³² Second, the inter-institutional correlation among financial firms and markets may trigger events that disrupt a local, regional, or national economy.³³ Evidence suggests that similar risks threaten the stability of individual firms and the correlation among firms within financial markets. For example, an individual firm faces credit risk when trading with counterparties pursuant to contracts that delay settlement.³⁴ In a parallel fashion, entire markets may face credit risk when a central intermediary, such as a clearinghouse, fails and defaults on its obligations to members.³⁵ In light of the fact that both intra-firm and inter-firm events may lead to economic shocks, efforts by legislators and regulators to address economic

29. See, e.g., *Systemic Regulation, Prudential Matters, Resolution Authority and Securitization: Hearing Before the U.S. House of Representatives, Comm. on Fin. Services*, 111th Cong. (2009) (testimony of T. Timothy Ryan, Jr., President and CEO of the Securities Industry and Financial Markets Association), available at democrats.financialservices.house.gov/media/file/hearings/111/ryan_-_sifma.pdf (discussing the importance of and proposing changes to systemic risk mediation proposals); Matthew Beville et al., *An Information Market Proposal for Regulating Systemic Risk*, 12 U. PA. J. BUS. L. 849, 870–80 (2010) (discussing how an information market security could provide warning signs of systemic risk in the economy).

30. Steven L. Schwarcz, *Systemic Risk*, 97 GEO. L.J. 193, 204 (2008) (defining systemic risk in terms of the consequences of economic shocks).

31. See Iman Anabtawi & Steven L. Schwarcz, *Regulating Systemic Risk: Towards an Analytical Framework*, 86 NOTRE DAME L. REV. 1349, 1351 (2011).

32. *Id.*

33. *Id.*

34. See Kristin Johnson, *Things Fall Apart: Regulating the Credit Default Swap Commons*, 82 U. COLO. L. REV. 167, 206–14 (2011) (describing counterparty or credit risk in bilateral credit derivatives agreements).

35. Kristin N. Johnson, *Governing Financial Markets: Regulating Conflicts*, 88 UNIV. WASH. L. REV. 185, 227 (2013).

disruptions must, therefore, respond to the underlying risks that singularly, or in the aggregate, create systemic risk concerns.

Theorists describe efforts to identify, quantify, or mitigate risks as risk management.³⁶ For centuries humans, communities, civilizations, empires, nation states, and local and regional governments have endeavored to control and mitigate risk.³⁷ Risk management has a long and colorful history.³⁸ In contemporary periods, the study of risk management has gained significant prominence and, in certain industries, risk management strategies influence each aspect of business conduct in the sector and every decision of executives and rank-and-file employees. For example, managing and mitigating risk is a central component of the business plans and strategies of firms operating in the nuclear power,³⁹ oil and gas extraction and distribution, and financial services industries.⁴⁰

36. See, e.g., Kenneth M. Lapine et al., *BANKING LAW* 3-80 § 80.12 (2014) (describing how banks are required to keep a certain amount of capital as a cushion to protect depositors and the FDIC from suffering excessive losses); Robert F. Weber, *An Alternative Story of the Law and Regulation of Risk Management*, 15 U. PA. J. BUS. L. 1005, 1010–15 (2013) (explaining the purpose of risk management and how it relates to risk assessment and risk control). See generally Stephen M. Bainbridge, *Caremark and Enterprise Risk Management*, 34 J. CORP. L. 967, 982 (2009) (highlighting the importance of risk management for reducing and limiting risks); Peter L. Bernstein, *The New Religion of Risk Management*, HARV. BUS. REV. 47 (1996) (considering the modern probability theory approach to risk management as blind-faith allegiance to the “supercomputer”); Miller, *supra* note 25, at 53 (discussing efforts to improve risk management at large firms); Eric J. Pan, *Rethinking the Board’s Duty to Monitor: A Critical Assessment of the Delaware Doctrine*, 38 FLA. ST. U. L. REV. 209, 216–17 (2011) (proposing that a board’s fiduciary duty to monitor should include investment in risk management systems); Cyrus Sanati, *Crisis-Shaken Executives Sharpen Focus on Risk*, N.Y. TIMES, Aug. 10, 2010, <http://dealbook.nytimes.com/2010/08/10/crisis-shaken-executives-sharpen-focus-on-risk/> (noting the increasing emphasis corporate executives place on risk management); *Financial Institutions Increase Risk Management Focus and Resources*, WALL ST. J., Nov. 11, 2013, <http://deloitte.wsj.com/riskandcompliance/2013/11/11/financial-institutions-increase-risk-management-focus-and-resources/> (elaborating on institutions’ attempt to increase expenditures on quantifying and analyzing risk).

37. Simkins & Ramirez, *supra* note 20, at 577 (“Managing risk, or what is commonly referred to as ‘risk management,’ is a concept that dates back thousands of years to when early visionaries tried to understand risk, manage aspects of risk that were manageable, and weigh the consequences of what they could not manage.”).

38. *Id.*

39. See RICHARD A. POSNER, *RISK AND RESPONSE* v (2004) (discussing how nuclear power businesses rely on risk assessment and mitigation); Saule T. Omarova, *Wall Street as Community of Fate: Toward Financial Industry Self-Regulation*, 159 U. PA. L. REV. 411, 442–43 (2011) (explaining how the nuclear power industry has been able to efficiently self-regulate).

40. See generally Simone M. Sepe, *Regulating Risk and Governance in Banks: A Contractarian Perspective*, 62 EMORY L.J. 327, 334–35 (proposing the appointment of a chief risk officer (“CRO”) as well as a completely independent board of directors to impartially review the risk assessments of the CEO and CRO); Simkins & Ramirez, *supra* note 20, at 580–81 (“Enterprise-wide risk management, or ERM, first emerged as a recognized new approach to risk management in the 1990s. ERM . . . is a natural evolution of the process of risk management, and represents a more advanced and sophisticated approach to managing risk.”); Robert Weber, *A Theory for Deliberation-Oriented Stress Testing Regulation*, 98 MINN. L. REV. 2236, 2240 (“Deliberation-oriented stress testing privileges dynamic scenarios, draws from business operations culture, relies on imagination, considers the interactivity of tested variables, remains open-ended and uncertain outcomes, and is motivated by governance concerns.”); Mamiko Yokoi-Arai, *Cor-*

Recent risk management studies and the development of more sophisticated mechanisms to control and safeguard against risk have enhanced risk management oversight.⁴¹ The most recent innovations revolve around the notion that the firm should avoid “risk silos” and instead seek to quantify and coordinate risk across the business enterprise.⁴² Naturally, this effort must be coordinated at the highest managerial levels of the firm as only senior management holds the authority and the firm-wide perspective to survey all sources of risk throughout the business.⁴³ This integrated, continuous, and comprehensive approach to risk management and coordination at the highest managerial levels of the firm emerged in the 1990s as enterprise-wide risk management, or ERM.⁴⁴

Perhaps the most influential and long-standing framework governing ERM was promulgated by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).⁴⁵ Originally published in 1994, COSO published an updated version in September of 2004 (in response to the manifest deficiencies in risk management revealed in the Enron corporate governance crisis).⁴⁶ Entitled *Enterprise Risk Management—Integrated Framework*, this framework provides guidance to firms to strive toward optimal ERM, which COSO suggests aligns risk appetite to strategy, reduces operational losses, broadly views all potential risks as opportunities to build

porate Governance Symposium: The Evolving Concept of Operational Risk and its Regulatory Treatment, 9 L. & BUS. REV. AM. 105, 107 (2003) (explaining that Operational Risk Management evaluates the risks of “inadequate systems, controls or human error”).

41. See Simkins & Ramirez, *supra* note 20, at 580–81.

42. *Id.* at 581 (“Under ERM, all risk areas function as parts of an integrated, strategic, and enterprise-wide system. While risk management is coordinated with senior-level oversight, employees at all levels of the organization using ERM are encouraged to view risk management as an integral and ongoing part of their jobs.”).

43. *Id.* at 583 (“ERM is now developing into a tool that can be used to enhance firm value. For example, security rating agencies such as Moody’s Investors Service and Standard & Poor’s (“S&P”) include whether a company has an ERM system as a factor in their ratings methodology for financial institutions and insurance companies.”).

44. *Id.* at 581. See also Weber, *supra* note 36, at 1005 (reviewing the history of risk management and arguing that the recent regulatory focus on risk management is more of a “cultural crutch in response to growing anxiety about endemic uncertainty” than a realistic regulatory effort to achieve financial stability and the safety and soundness of financial institutions).

45. “The Committee of Sponsoring Organizations of the Treadway Commission (COSO) is a joint initiative of the five private sector organizations . . . and is dedicated to . . . the development of frameworks and guidance on enterprise risk management, internal control and fraud deterrence.” *Welcome to COSO*, COMMITTEE OF SPONSORING ORGANIZATIONS OF THE TREADWAY COMMISSION, <http://www.coso.org/default.htm> (last visited Dec. 2, 2014). “COSO was organized in 1985 . . . by the American Accounting Association, the American Institute of Certified Public Accountants, Financial Executives International, The Institute of Internal Auditors, and the National Association of Accountants (now the Institute of Management Accountants).” *About Us*, COMMITTEE OF SPONSORING ORGANIZATIONS OF THE TREADWAY COMMISSION, <http://www.coso.org/aboutus.htm> (last visited Dec. 2, 2014).

46. See COMMITTEE OF SPONSORING ORGANIZATIONS OF THE TREADWAY COMMISSION, ENTERPRISE RISK MANAGEMENT—INTEGRATED FRAMEWORK v (2004), available at http://www.coso.org/documents/COSO_ERM_ExecutiveSummary.pdf

value, and improves the deployment of capital through risk disclosure.⁴⁷ In terms of corporate governance, according to COSO, ERM requires that the CEO bear ultimate responsibility for enterprise risk management but “the board of directors provides important oversight to enterprise risk management, and is aware of and concurs with the entities risk appetite.”⁴⁸ A risk officer usually will play a key support role.⁴⁹ Further, the board should discuss risk management with senior management and “ensure it is apprised of the most significant risks, along with actions management is taking to and how it is ensuring effective risk management.”⁵⁰ Finally, COSO recognizes the utility of the board seeking input from internal and external auditors and other consultants.⁵¹

Aside from its focus on ERM, COSO recognizes the importance of internal controls⁵² not only as mechanisms to secure audit integrity but also to detect financial irregularities within firms.⁵³ After a series of disturbing corporate governance failures in late 2001 and early 2002 (beginning with the Enron scandal and culminating in the WorldCom scandal), Congress enacted the Sarbanes-Oxley Act.⁵⁴ Section 404 of the Sarbanes-Oxley Act of 2002 enhanced the legal and regulatory framework securing the internal controls of U.S. publicly traded corporations by placing the responsibility for internal controls on management.⁵⁵ Sections 302 and 906 of the Sarbanes-Oxley Act reinforce this responsibility by imposing both civil and

47. *Id.* at 1 (“In sum, enterprise risk management helps an entity get to where it wants to go and avoid pitfalls and surprises along the way.”).

48. *Id.* at 6.

49. *See id.*

50. *Id.* at 6–7.

51. *See id.* at 7.

52. “Internal control is a process, effected by an entity’s board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting, and compliance.” COMMITTEE OF SPONSORING ORGANIZATIONS OF THE TREADWAY COMMISSION, INTERNAL CONTROL—INTEGRATED FRAMEWORK 3 (2013), http://www.coso.org/documents/990025P_Executive_Summary_final_may20_e.pdf

53. According to COSO:

When a system of internal control is determined to be effective, senior management and the board of directors have reasonable assurance, relative to the application within the entity structure, that the organization:

Achieves effective and efficient operations when external events are considered unlikely to have a significant impact on the achievement of objectives or where the organization can reasonably predict the nature and timing of external events and mitigate the impact to an acceptable level[;]

Understands the extent to which operations are managed effectively and efficiently when external events may have a significant impact on the achievement of objectives or where the organization can reasonably predict the nature and timing of external events and mitigate the impact to an acceptable level[;]

Prepares reports in conformity with applicable rules, regulations, and standards or with the entity’s specified reporting objectives[;] and

Complies with applicable laws, rules, regulations, and external standards[.]

Id. at 8.

54. *See* Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, 116 Stat. 745 (codified in scattered sections of 11, 15, 18, 28, and 29 U.S.C.).

55. 15 U.S.C. § 7262 (2012).

criminal penalties on senior officers (the CEO and CFO in particular) for false certifications of annual and quarterly reports, including internal control certifications.⁵⁶ The Public Company Accounting Oversight Board (PCAOB)⁵⁷ subsequently issued a new auditing standard requiring a top-down risk assessment (including a fraud/risk assessment) of a firm's controls to assess "overall risks to internal control over financial reporting."⁵⁸ These legally mandated risk assessments dovetail and further the core concept of ERM—that firms should identify, assess, and manage all potential risks to the firm. The Sarbanes-Oxley Act, although primarily focused on audit quality, ultimately requires the very broad risk assessment that essentially drives ERM.

Another source of support for ERM is the New York Stock Exchange (NYSE)⁵⁹ listing requirements.⁶⁰ The NYSE mandates that all listed firms have audit committees and that these committees play a mandatory supervisory risk management role.⁶¹ The full NYSE commentary provides:

While it is the job of the CEO and senior management to assess and manage the company's exposure to risk, the audit committee must discuss guidelines and policies to govern the process by which this is handled. The audit committee should discuss the company's major financial risk exposures and the steps management has taken to monitor and control such exposures. The audit committee is not required to be the sole body responsible for risk assessment and management, but, as stated above, the committee must discuss guidelines and policies to govern the process by which risk assessment and management is undertaken. Many

56. *Id.*; 18 U.S.C. § 1350 (2012).

57. "The PCAOB is a nonprofit corporation established by Congress to oversee the audits of public companies in order to protect investors and the public interest by promoting informative, accurate, and independent audit reports." *About the PCAOB*, PUBLIC COMPANY ACCOUNTING OVERSIGHT BOARD, <http://pcaobus.org/about/pages/default.aspx> (last visited Nov. 29, 2014); see also 15 U.S.C. § 7211 (2012) ("There is established the Public Company Accounting Oversight Board, to oversee the audit of companies that are subject to the securities laws, and related matters, in order to protect the interests of investors.").

58. PUBLIC COMPANY ACCOUNTING OVERSIGHT BOARD, RELEASE NO. 2007-005A, AUDITING STANDARD No. 5 (Nov. 15, 2007), http://pcaobus.org/Standards/Auditing/Pages/Auditing_Standard_5.aspx#usingtopdownapproach.

59. The NYSE is a self-regulatory organization (SRO) subject to plenary SEC oversight. The SEC has the power to "abrogate, add to, and delete from" any SRO rule. 15 U.S.C. § 78s(c) (2012). In addition, the SEC may enforce SRO rules. See *id.* § 78u(d)(1). The SEC is also empowered to sanction SROs that fail in their supervisory role. See 15 U.S.C. § 78s(b) & (c). The SEC reviews any SRO sanction de novo. See 15 U.S.C. § 78s(e)(1).

60. Listing requirements are SRO rules governing the firms that trade on an SRO securities exchange. Thus, on November 4, 2003, the SEC approved the NYSE Corporate Governance Rules. See U.S. SEC. AND EXCH. COMM., RELEASE NO. 34-48745, NASD AND NYSE RULEMAKING: RELATING TO CORPORATE GOVERNANCE (Nov. 4, 2003), <http://www.sec.gov/rules/sro/34-48745.htm>.

61. *Listed Company Manual: § 303A.07(b)(iii)(D), Audit Committee Additional Requirements*, NYSE (2013), <http://nysemanual.nyse.com/LCMTTools/PlatformViewer.asp?selectednode=chp%5F1%5F4%5F3%5F8&manual=%2Ffcm%2Fsections%2Ffcm%2Dsections%2F>.

companies, particularly financial companies, manage and assess their risk through mechanisms other than the audit committee. The processes these companies have in place should be reviewed in a general manner by the audit committee, but they need not be replaced by the audit committee.⁶²

This mandated risk assessment implicit in the NYSE Corporate Governance Rules creates yet another foundation for a robust ERM function. Further, the NYSE specifically contemplates collaborative risk management with clear direction from the board.

The International Organization for Standardization (ISO) is the world's largest developer of voluntary international standards to facilitate commerce and global trade.⁶³ ISO 31000 is an international standard for risk management which the ISO first proposed in 2007.⁶⁴ The ISO approach to ERM revolves around five basic steps: (1) identify and assess threats, (2) assess firm vulnerability, (3) determine the risk of loss, (4) identify risk reduction options, and (5) prioritize risk reduction based on firm strategy. The ISO approach notably views risk as both a threat and an opportunity. Thus, risk under ISO Guide 73 is no longer defined as "chance or probability of loss" but "the effect of uncertainty on objectives."⁶⁵

On the cusp of the subprime bubble, both of the major credit ratings agencies, Moody's and Standard & Poor's began to consider a firm's use of ERM as a factor in rating the quality of firm debt obligations. The Moody's approach, as well as the S&P approach, mirrors the approach of other authoritative voices, discussed above, regarding the key substantive elements of ERM. Specifically, both require a comprehensive identification and assessment of all sources of risk across the business enterprise, both emphasize the key role of the board in participating in the management and definition of the firm's risk profile, and both concur that this process should seek to mitigate or at least control risk.⁶⁶ Both ratings agencies defined

62. *Id.*

63. *About ISO*, INT'L ORG. FOR STANDARDIZATION, <http://www.iso.org/iso/home/about.htm> (last visited Nov. 29, 2014).

64. INT'L ORG. FOR STANDARDIZATION, COMMITTEE DRAFT OF ISO 31000 RISK MANAGEMENT—GUIDELINES ON PRINCIPLES AND IMPLEMENTATION OF RISK MANAGEMENT (2007). The final ISO standard was published in 2009 and included accompanying publications addressing risk management techniques and risk management vocabulary. INT'L ORG. FOR STANDARDIZATION, ISO 31000:2009 RISK MANAGEMENT—PRINCIPLES AND GUIDELINES (2009).

65. INT'L ORG. FOR STANDARDIZATION, ISO TECH. MGMT. BOARD WORKING GROUP, ISO Guide 73:2009, definition 1.1 (2009).

66. *See* MOODY'S INVESTORS SERVICE, MOODY'S FINDINGS ON CORPORATE GOVERNANCE IN THE UNITED STATES AND CANADA: AUGUST 2003–SEPTEMBER 2004 (2004), *available at* <https://www.moodys.com/sites/products/AboutMoodyRatingsAttachments/2003000000429471.pdf>. This is how Moody's summarizes its approach:

Increasing numbers of companies are undertaking enterprise-level approaches to risk—a more encompassing and systematic review of potential risks and their mitigation than most companies have undertaken in the past. Business units are tasked with identifying risks and, where possible, quantifying and determining how to mitigate them. These assessments typically are rolled up to a corporate level, sometimes with direct input

ERM similarly and both agencies assessed a firm's commitment to ERM as one factor in rating the firm's securities on the brink of the Great Financial Crisis of 2008.⁶⁷ This approach to ERM is the version of ERM that shows the most robust gains in firm value and financial performance.⁶⁸ Under this approach, board involvement is critical.

Ultimately, ERM promised to usher in a new era of superior banking stability. Thus, in 2003 Federal Reserve Chair Alan Greenspan argued that a wide variety of new financial instruments—known as derivatives⁶⁹—al-

from the board or audit committee. These assessments have often been relatively broad, focusing on reputation, litigation, product development, and health and safety risks, rather than focusing solely on financial risks. Where we have seen these assessments implemented, we have commented favorably, particularly when the board or the audit committee is actively involved.

Id. at 13.

67. See STANDARD & POOR'S, STANDARD & POOR'S TO APPLY ENTERPRISE RISK ANALYSIS TO CORPORATE RATINGS (2008), available at <http://www.nyu.edu/intercep/ERM%20for%20Non-Financial%20Companies%205.7.08.pdf>. Here is the summary of the S&P approach:

We see ERM as:

An approach to assure the firm is attending to all risks;

A set of expectations among management, shareholders, and the board about which risks the firm will and will not take;

A set of methods for avoiding situations that might result in losses that would be outside the firm's tolerance;

A method to shift focus from "cost/benefit" to "risk/reward";

A way to help fulfill a fundamental responsibility of a company's board and senior management;

A toolkit for trimming excess risks and a system for intelligently selecting which risks need trimming; and

A language for communicating the firm's efforts to maintain a manageable risk profile.

Id. at 2.

68. A recent study found:

Using ERM quality (ERMQ) ratings of financial companies by Standard & Poor's, we find that higher ERMQ is associated with greater complexity, less resource constraint, and better corporate governance. Controlling for such characteristics, we find that higher ERMQ is associated with improved accounting performance. Results show a market reaction to signals of enhanced management control from initial ERMQ ratings and rating revisions, and a stronger response to earnings surprises for firms with higher ERMQ. Focusing on the recent global financial crisis, our analysis suggests that there is no relation between ERM quality and market performance prior to and during the market collapse. However, returns of higher ERMQ companies are higher during the market rebound. Overall, results reveal that firm performance and value are enhanced by high quality controls that integrate risk management efforts across the firm, enabling better oversight of managers' risk-taking behavior, and aligning that behavior with the strategic direction of the company.

Ryan Baxter, et al., *Enterprise Risk Management Program Quality: Determinants, Value Relevance, and the Financial Crisis*, CONTEMP. ACCT. RES. 1264, 1264 (2013). Many studies assessing the efficacy of ERM prior to the crisis fail to consider that many firms implement ERM programs in response to poor financial performance or suspect risk taking by the CEO. See DONALD PAGACH & RICHARD WARR, AN EMPIRICAL INVESTIGATION OF THE CHARACTERISTICS OF FIRMS ADOPTING ENTERPRISE RISK MANAGEMENT (2007), available at <http://www.ermssymposium.org/pdf/papers/Pagach.pdf>. Naturally, this would skew the financial performance of firms adopting ERM downward.

69. The *Financial Times* defines a derivative instrument as a "financial instrument whose value is based on the performance of underlying assets such as stocks, bonds currency exchange rates, real estate." *Derivatives*, FINANCIAL TIMES, <http://lexicon.ft.com/Term?term=derivatives>

lowed financial firms to transfer and customize their risk profiles to meet their risk appetite, and thereby allow financial firms to meet external shocks with greater flexibility;⁷⁰ this in turn made the entire financial system more resilient.⁷¹ Simply put, the transfer and management of risk increased as risk became more dispersed and increasingly rested in the hands of those most desirous of risk. In 2006, Federal Reserve Chair Ben Bernanke also hailed advances in the risk management efforts of financial institutions.⁷² New financial instruments such as derivatives gave banks the ability to deal with credit risk on a portfolio-wide basis rather than focus solely on individual loan underwriting.⁷³ Sophisticated mathematical models permitted banks to quantify and hence manage risk with superior precision.⁷⁴ According to Chairman Bernanke, “large, complex banking organizations” now held superior tools “for identifying, measuring, and managing their risks.”⁷⁵

(last visited Jan. 7, 2015). Derivatives can be traded over an exchange or can be customized between private parties in which case they are called over-the-counter derivatives. *Id.* The complexity of derivatives is limited only by the imaginations of lawyers who draft the derivatives agreement and the mathematicians who model them. Saul S. Cohen, *The Challenge of Derivatives*, 63 *FORDHAM L. REV.* 1993, 2005–06 (1995).

70. *The Economist* succinctly stated the benefits that derivatives offer:

In many ways, these complex derivatives are good for economies. Because they allow investors to lay off the risk of borrowers’ defaults, they free lenders to lend more. Because risk is dispersed to those who have an appetite for it, the system should be more robust. Because derivatives are traded in liquid markets, they rapidly transmit information about the creditworthiness of borrowers. The benefits of this hyperactive shuffling of money spread well beyond financial markets. If companies are borrowing more cheaply and sensibly to make acquisitions, pay dividends and buy back their own shares, businesses everywhere should run more efficiently.

The Dark Side of Debt, *ECONOMIST*, Sept. 21, 2006, <http://www.economist.com/node/7943243>. Presciently, the *Economist* also recognized the dark side of these new instruments:

Regulators understand very well how much the world stands to gain from this revolution in finance, but they are nevertheless nervous. Because of the lack of transparency, they cannot see whether these volatile new debt instruments are in safe hands or how they will behave in a crisis when everyone is heading for the exits.

Id.

71. Greenspan spoke in compelling terms regarding the promise of risk management:

The use of a growing array of derivatives and the related application of more-sophisticated methods for measuring and managing risk are key factors underpinning the enhanced resilience of our largest financial intermediaries. Derivatives have permitted financial risks to be unbundled in ways that have facilitated both their measurement and their management. Because risks can be unbundled, individual financial instruments now can be analyzed in terms of their common underlying risk factors, and risks can be managed on a portfolio basis. Concentrations of risk are more readily identified, and when such concentrations exceed the risk appetites of intermediaries, derivatives can be employed to transfer the underlying risks to other entities. As a result, not only have individual financial institutions become less vulnerable to shocks from underlying risk factors, but also the financial system as a whole has become more resilient.

Alan Greenspan, Chairman, Fed. Res., Remarks at the 2003 Conference on Bank Structure and Competition, Chicago, Illinois: Corporate Governance (May 8, 2003), available at <http://www.federalreserve.gov/boarddocs/speeches/2003/20030508/>.

72. See Bernanke, *supra* note 19.

73. *Id.* at ¶ 8–9.

74. *Id.* at ¶ 11.

75. *Id.* at ¶ 27.

In fact, “banking organizations of all sizes have made substantial strides over the past two decades in their ability to measure and manage risks.”⁷⁶

The endorsement of modern risk management techniques and instruments from two consecutive Fed Chairs highlights the immense potential that ERM holds to stabilize the financial sector, limit the risk of financial firm failure, and facilitate greater macroeconomic stability. Yet, the crisis of 2008 belies this promise; in fact, a key issue lurked unresolved.⁷⁷ ERM practices and law simply did not recognize the great harm that CEOs could inflict through risk manipulation for profit.⁷⁸ The next section will seek to highlight why ERM failed to enhance financial stability and to protect the financial sector from mass insolvency through an analysis of the best evidence available regarding the risk mismanagement at the center of the crisis.

Moreover, ERM does not reach the second category of risks that Schwarcz and Anatawbi describe as inter-firm dynamics. Section B of this Part chronicles the economic shocks that challenged financial markets during the recent financial crisis. The narratives below offer clear support for the conclusion that the regulatory framework adopted prior to the recent financial crisis insufficiently addresses both intra-firm and inter-firm correlations that engender systemic risk concerns.

76. *Id.* See also Eric S. Rosengren, President & CEO, Speech at the Conference on New Challenges for Operational Risk Measurement and Management: Risk-Management Lessons from Recent Financial Turmoil (May 14, 2008) (similar statement of Boston Federal Reserve Bank President made later in the crisis), available at <http://www.bostonfed.org/news/speeches/rosengren/2008/051408.htm>.

77. Certain commentators identified the key issue of CEO autonomy and independence of the risk management function early on, but concluded that the evidence available at that time justified only more limited disclosure obligations under the federal securities laws. *E.g.*, Simkins & Ramirez, *supra* note 20, at 591–92. Later, as the crisis unfolded and more evidence emerged regarding the massive risk mismanagement that drove the crisis more commentators recognized that the risk function cannot succeed without independence. See GABRIELE SABATO, FINANCIAL CRISIS: WHERE DID RISK MANAGEMENT FAIL? 14 (2009), available at <http://ssrn.com/abstract=1460762> (“The Chief Risk Officer (CRO) is still not [sitting with] the Board of most banks,” most risk managers still report to the CEO, and concluding that this “risk structure has clearly proved not to be appropriate.”).

78. See ANETTE MIKES, RISK MANAGEMENT AT CRUNCH TIME: ARE CHIEF RISK OFFICERS COMPLIANCE CHAMPIONS OR BUSINESS PARTNERS? 1 (2008), available at <http://ssrn.com/abstract=1138615> (investigating the role chief risk officers at 15 international banks prior to the financial crisis and finding that while “the role of chief risk officers (CROs) had expanded dramatically” there still was lack of clarity between the role of “Strategic Advisor” and the role of “Strategic Controller” which posed the “danger of an expectations gap opening around particular risk management approaches” among key stakeholders).

B. Risk Management Failures Engender Financial Crises

Countrywide Financial originated, serviced, and packaged more subprime loans than any other firm.⁷⁹ Countrywide engaged in reprehensible lending practices; in fact, ultimately Countrywide settled allegations of predatory lending asserted by eleven states for over \$8 billion, the largest such settlement in history.⁸⁰ The states alleged that Countrywide lied about its “no closing cost loans,” misled consumers with respect to hidden fees, structured loans with risky features, paid brokers more to originate higher risk loans, and frequently originated based upon inflated borrowers’ income (without borrower involvement).⁸¹ The *New York Times* interviewed former employees⁸² that corroborated (and documented) many of these allegations.⁸³ The profits generated through lax lending standards and fees were so significant that Countrywide continued its reckless⁸⁴ lending even after delinquency rates soared.⁸⁵ “As such, the company is Exhibit A for the lax and, until recently, highly lucrative lending that has turned a once-hot business ice cold and has touched off a housing crisis of historic proportions.”⁸⁶

Anthony Mozilo, the firm’s CEO, knew that Countrywide exposed itself to lethal risks from its subprime loans. In one email, Mozilo correctly described one of Countrywide’s loan products as “[p]oison.”⁸⁷ He elaborated: “In all my years in the business I have never seen a more toxic [prod-

79. David Olive, *Corporate Rewards for Failure*, THESTAR.COM, Feb. 1, 2008, <http://www.thestar.com/columnists/article/299415> (reporting that Countrywide CEO sold \$400 million in stock between 2005 and 2008).

80. Gretchen Morgenson, *Countrywide to Set Aside \$8.4 Billion in Loan Aid*, N.Y. TIMES, Oct. 6, 2008, <http://www.nytimes.com/2008/10/06/business/06countrywide.html>.

81. *Id.*

82. Gretchen Morgenson, *Inside the Countrywide Lending Spree*, N.Y. TIMES, Aug. 26, 2007, <http://www.nytimes.com/2007/08/26/business/yourmoney/26country.html?pagewanted=all> (“Such loans were made, former employees say, because they were so lucrative—to Countrywide. The company harvested a steady stream of fees or payments on such loans and busily repackaged them as securities to sell to investors.”).

83. *Id.* (“One document, for instance, shows that until last September the computer system in the company’s subprime unit excluded borrowers’ cash reserves, which had the effect of steering them away from lower-cost loans to those that were more expensive to homeowners and more profitable to Countrywide.”).

84. *See id.* (“The company would lend even if the borrower had been 90 days late on a current mortgage payment twice in the last 12 months, if the borrower had filed for personal bankruptcy protection, or if the borrower had faced foreclosure or default notices on his or her property.”).

85. *See id.* (“One reason these loans were so lucrative for Countrywide is that investors who bought securities backed by the mortgages were willing to pay more for loans with prepayment penalties and those whose interest rates were going to reset at higher levels.”).

86. *Id.* (“[T]he profit margins Countrywide generated on subprime loans that it sold to investors were 1.84 percent, versus 1.07 percent on prime loans. A year earlier, when the subprime machine was really cranking, sales of these mortgages produced profits of 2 percent, versus 0.82 percent from prime mortgages.”).

87. THE FIN. CRISIS INQUIRY COMM’N, FINAL REPORT OF THE NATIONAL COMMISSION ON THE CAUSES OF THE FINANCIAL AND ECONOMIC CRISIS IN THE UNITED STATES 20 (2011) [hereinafter FCIC], available at <http://www.gpo.gov/fdsys/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf>.

uct].”⁸⁸ He even knew the firm’s viability was at stake. He stated that firms that follow the lead of other lenders in making high-risk loans go “broke.”⁸⁹ Yet, Mozilo and Countrywide continued to originate massive subprime loans.⁹⁰ The chief risk officer at Countrywide never objected to these lethal high-risk loans but instead affirmatively acted to facilitate the lending.⁹¹ Finally, this risky lending relied upon high levels of short-term debt for funding.⁹²

Mozilo garnered outrageous compensation for leading Countrywide into the subprime pit.⁹³ In 2006, Mozilo’s compensation amounted to \$102 million, which included a bonus of \$20.5 million for increasing earnings at Countrywide from \$4.11 per share in 2005 to \$4.62 per share in 2006.⁹⁴ In 2007, Mozilo exercised stock options, hauling in \$127 million, just prior to the announcement on July 24, 2007 that Countrywide would write down \$388 million in loan losses.⁹⁵ In 2007, Mozilo earned an additional \$102 million in salary and \$30 million in options compensation.⁹⁶ He retired in 2008 with a \$58 million benefit.⁹⁷ For the entire year of 2007, Countrywide lost \$704 million, as 33% of its subprime mortgages were delinquent.⁹⁸ Shareholders lost over 80% of the value of their shares, relative to their value before the credit crisis.⁹⁹ Ultimately, Countrywide was acquired by Bank of America—where its subprime portfolio may have inflicted up to \$33 billion in additional loan losses according to one analyst.¹⁰⁰

Bank of America also paid the great weight of Angelo Mozilo’s SEC fine for insider trading. The SEC alleged that Mozilo sold Countrywide shares to investors without disclosure of known risks arising from high-risk

88. *Id.*

89. *Id.*

90. *Id.* at 108.

91. *See id.* at 174.

92. *See id.* at 248 (“On August 2, [2007] . . . Countrywide CEO Angelo Mozilo realized that his company was unable to roll its commercial paper or borrow on the repo market. ‘When we talk about [August 2] at Countrywide, that’s our 9/11.’”).

93. *See Olive, supra* note 79.

94. James J. Bicksler, *The Subprime Mortgage Debacle and its Linkages to Corporate Governance*, 5 INT’L J. OF DISCL. & GOVERN. 295, 296 (2008).

95. *Id.* at 296–97.

96. *Id.* at 297.

97. *Id.*

98. Roddy Boyd, *Countrywide: From Bad to Worse: The Troubled Lender Posted a \$422 Million Loss and Revealed That a Third of Its Subprime Loans are Delinquent*, FORTUNE, Jan. 29, 2008, http://archive.fortune.com/2008/01/29/news/companies/boyd_countrywide.fortune/index.htm.

99. *Bank of America and Countrywide: Fingers Crossed*, ECONOMIST, June 28, 2008, <http://www.highbeam.com/doc/1G1-204985789.html>.

100. *Bank of America Faces Lingering Financial Woes from Countrywide: Report*, MARKETWATCH, Feb. 8, 2009, <http://www.marketwatch.com/story/bank-america-faces-lingering-financial-woes>.

mortgage lending.¹⁰¹ On the eve of trial the case settled for \$73 million. Bank of America (and its insurance) paid all but \$22 million.¹⁰² As such, the Mozilo fine only represents a small fraction of the \$500 million that Mozilo took from 2000–2008 as Countrywide’s CEO.¹⁰³ Put simply, the high risks that sunk Countrywide were not “poison” for Mozilo.

Washington Mutual (WaMu) was the nation’s largest thrift, until it became the nation’s largest bank failure.¹⁰⁴ Four elements of WaMu’s business epitomized reckless lending: first, “WaMu gave mortgage brokers handsome commissions for selling the riskiest loans, which carried higher fees, bolstering profits and ultimately the compensation of the bank’s executives;” second, “WaMu pressed sales agents to pump out loans while disregarding borrowers’ incomes and assets;” third, “[t]he bank set up what insiders described as a system of dubious legality that enabled real estate agents to collect fees of more than \$10,000 for bringing in borrowers, sometimes making the agents more beholden to WaMu than they were to their clients;” and fourth, “WaMu pressured appraisers to provide inflated property values that made loans appear less risky, enabling Wall Street to bundle them more easily for sale to investors.”¹⁰⁵ It suffered mortgage-related losses in excess of \$11 billion in 2008.¹⁰⁶ WaMu’s CEO received \$88 million in pay between 2001 and 2007.¹⁰⁷ Yet, the loan losses “wipe[d] out all of its earnings from 2005 and 2006 and three months’ worth of profits

101. Press Release, U.S. Sec. and Exch. Comm., Former Countrywide CEO Angelo Mozilo to Pay SEC’s Largest-Ever Financial Penalty Against a Public Company’s Senior Executive (Oct. 15, 2010), available at <http://www.sec.gov/news/press/2010/2010-197.htm> (stating that Mozilo “deliberately disregarded his duties to investors by concealing what he saw from inside the executive suite—a looming disaster in which Countrywide was buckling under the weight of increasing risky mortgage underwriting, mounting defaults and delinquencies, and a deteriorating business model”).

102. Walter Hamilton & E. Scott Reckard, *Angelo Mozilo, Other Former Countrywide Execs Settle Fraud Charges* L.A. TIMES, Oct. 16, 2010, <http://articles.latimes.com/2010/oct/16/business/la-fi-mozilo-sec-20101016>.

103. Peter J. Henning, *When Disgorgement Comes Cheap*, N.Y. TIMES, Oct. 18, 2010, <http://dealbook.nytimes.com/2010/10/18/when-disgorgement-comes-cheap/>.

104. See Jon Talton, *WaMu’s Loyal Shareholders Left Holding the Empty Bag*, SEATTLE TIMES, Nov. 9, 2008, http://seattletimes.nwsourc.com/html/jontalton/2008368307_biztaltoncol09.html. See also STAFF OF S. COMM. ON HOMELAND SEC. & GOVERNMENTAL AFFAIRS, PERMANENT SUBCOMM. ON INVESTIGATIONS, 112TH CONG., WALL STREET AND THE FINANCIAL CRISIS: ANATOMY OF A FINANCIAL COLLAPSE 2 [hereinafter LEVIN-COBURN REPORT], available at http://www.levin.senate.gov/imo/media/doc/supporting/2011/PSI_WallStreetCrisis_041311.pdf (describing how “[a]t the time of its failure, WaMu was the nation’s largest thrift and sixth largest bank, with \$300 billion in assets, \$188 billion in deposits, 2,300 branches in 15 states, and over 43,000 employees”).

105. Peter S. Goodman & Gretchen Morgenson, *Saying Yes to Anyone, WaMu Built Empire on Shaky Loans*, N.Y. TIMES (Dec. 27, 2008), <http://www.nytimes.com/2008/12/28/business/28wamu.html> (interviewing twenty-four former employees and others who did business with WaMu, who portrayed the thrift’s business in a manner consistent with 89 confidential witnesses from a shareholders suit against WaMu management).

106. See *id.*

107. *Id.*

generated in 2004.”¹⁰⁸ When the profits disappeared, the CEO still kept his “performance” compensation.¹⁰⁹

The bi-partisan Levin-Coburn Report found that WaMu suffered major risk management flaws prior to its failure at the height of the financial crisis.¹¹⁰ Its primary regulator, the Office of Thrift Supervision (OTS) chided WaMu for risk management flaws for each of the five examinations prior to WaMu’s failure.¹¹¹ Yet, the OTS took no enforcement action.¹¹²

American International Group (AIG), once the world’s largest insurance company, lost more than any other firm in history—amounting to \$61.7 billion in the fourth quarter of 2008.¹¹³ The AIG Financial Products unit, which caused the catastrophic losses through massive derivatives trading, was unregulated—but was backed by the full credit and guarantee of the parent company. Fed Chair Ben Bernanke maintained that AIG “exploited a huge gap in the regulatory system” and operated as an unregulated hedge fund that “made huge numbers of irresponsible bets.”¹¹⁴ Treasury Secretary Timothy Geithner concurred, calling AIG a hedge fund that grew “without any adult supervision.”¹¹⁵ The Treasury Secretary and the Fed Chair speak with particular authority since they engineered the bailout of AIG, which left the United States as the owner of nearly 80 percent of the firm.¹¹⁶

108. Gretchen Morgenson, *Gimme Back Your Paycheck*, N.Y. TIMES, Feb. 22, 2009, <http://www.nytimes.com/2009/02/22/business/22pay.html>.

109. *Id.*

110. LEVIN-COBURN REPORT, *supra* note 104, at 4.

111. *Id.* (“[D]uring the five years prior to WaMu’s collapse, OTS examiners repeatedly identified significant problems with Washington Mutual’s lending practices, risk management, asset quality, and appraisal practices, and requested corrective action. Year after year, WaMu promised to correct the identified problems, but never did.”).

112. *Id.* (“OTS failed to respond with meaningful enforcement action, such as by downgrading WaMu’s rating for safety and soundness, requiring a public plan with deadlines for corrective actions, or imposing civil fines for inaction. To the contrary, until shortly before the thrift’s failure in 2008, OTS continually rated WaMu as financially sound.”).

113. Hugh Son & Margaret Popper, *AIG’s CEO Says Insurer Can Still Repay Taxpayers*, BLOOMBERG (Mar. 2, 2009, 11:00 AM), <http://www.bloomberg.com/apps/news?pid=20601103&sid=ahykOmEesvWk&refer=us>. AIG underwrote \$450 billion of credit default swaps that obligated it to pay on pools of securities in the event that the primary obligees failed to pay. Lilla Zuill & Kristina Cooke, *AIG Failure Would Be Disastrous for Global Markets*, REUTERS (Mar. 2, 2009, 8:57 AM), <http://uk.reuters.com/article/stocksAndSharesNews/idUKLNE52101v620090302>. The government pumped \$200 billion into AIG. *Id.*

114. *Economic and Budget Challenges for the Short and Long Term: Hearing Before the S. Budget Comm.*, 111th Cong. 3 (2009) (statement of Ben Bernanke, Chairman, Board of Governors of the Fed. Res. Sys.).

115. *President’s Fiscal Year 2010 Budget Overview: Hearing Before the H. Comm. on Ways and Means*, 111th Cong., 3 (2009) (statement of Timothy Geithner, Sec’y, U.S. Treasury), available at <http://waysandmeans.house.gov/hearings.asp?formmode=view&id=7849>.

116. Joint Press Release, Bd. of Governors of the Fed. Res. Sys. and U.S. Dep’t of the Treasury, U.S. Treasury and Federal Reserve Board Announce Participation in AIG Restructuring Plan (Mar. 2, 2009), <http://www.federalreserve.gov/newsevents/press/other/20090302a.htm>.

AIG's losses arose from credit default swaps (CDS) whereby the firm assumed the risk of loss on pools of subprime related securities.¹¹⁷ Essentially, the firm acted as credit insurer, yet the credit default swaps were not insurance and AIG assumed these risks through an unregulated subsidiary, meaning it did not have to reserve fully against future losses nor carry any capital to fund potential losses.¹¹⁸ The fees generated from the credit default swaps were consequently free income with little associated expense.¹¹⁹ AIG literally gambled its viability away in the name of short-term profits.¹²⁰ When the market for subprime securities crashed, AIG absorbed huge losses in the form of obligations to subprime investors.¹²¹ The short-term profits were used to fund a \$600 million bonus pool for the officers in charge of the unit that underwrote the credit default swaps.¹²² The CEO who managed AIG into this subprime mess was paid \$47 million in severance pay when he was discharged.¹²³ The U.S. government effectively seized control in late 2008, at a cost of billions to U.S. taxpayers.¹²⁴

The essential problem at AIG involved a failure of risk management. The firm's management simply concluded that the risks of ever being obligated to pay under the credit default swap agreements were so remote that little risk management was needed. AIG never hedged its exposure to credit default swaps, and only limited its exposure after it had entered into hun-

117. See Michael Lewitt, *Wall Street's Next Big Problem*, N.Y. TIMES (Sept. 15, 2008), <http://www.nytimes.com/2008/09/16/opinion/16le Witt.html> (defining credit default swaps as a credit insurance contract in which one party pays another party to protect it from the risk of default on a particular debt instrument: "The insurer (which could be a bank, an investment bank or a hedge fund) is required to post collateral to support its payment obligation, but in the insane credit environment that preceded the credit crisis, this collateral deposit was generally too small.").

118. See *id.*

119. See Stephen Taub, *New York: Credit-Default Swaps=Insurance*, CFO.COM, Sept. 22, 2008, <http://www.cfo.com/article.cfm/12285201>. Ironically, shortly after AIG's federal bailout, New York determined that credit default swaps would be regulated as if they were contracts of insurance, meaning that firms would have to hold capital reserves to secure the obligations. See *id.*

120. See Gretchen Morgenson, *A.I.G., Where Taxpayers' Dollars Go to Die*, N.Y. TIMES, Mar. 8, 2009, <http://www.nytimes.com/2009/03/08/business/08gret.html> (explaining that AIG obligated itself to assume up to \$440 billion in credit default swaps, which was more than twice its total market value of \$200 billion. "That means the geniuses at A.I.G. who wrote the insurance were willing to bet more than double their company's value that defaults would not become problematic. That's some throw of the dice. Too bad it came up snake eyes for taxpayers.").

121. By the end of 2008, AIG had lost \$61.7 billion due to its subprime related securities. David Glovin & Joel Rosenblatt, *Maurice Greenberg Sues AIG Over 'Inflated' Shares*, BLOOMBERG (Mar. 2, 2009, 9:20 PM), <http://www.bloomberg.com/apps/news?pid=20601087&sid=aHDo c7YcjQZI&refer=home>.

122. Lilla Zuill, *NY AG Says Targeting Exec Pay at AIG, Elsewhere*, REUTERS, Oct. 22, 2008, <http://www.reuters.com/article/newsOne/idUSTRE49L6I420081022>.

123. *Id.* It is not clear how much of compensation will ultimately be paid to the AIG executives because their pay is being challenged by the Attorney General of New York. *Id.* "It is not just compensation, but incentives—perverse incentives for executives to produce (short-term) profit rather than long-term growth." *Id.* (quoting New York Attorney General Andrew Cuomo).

124. See Brady Dennis, *AIG Posts \$61.7 Billion Loss, Faces Grim Future*, WASH. POST, Mar. 3, 2009, <http://www.highbeam.com/doc/1P2-19952696.html>.

dreds of billions in agreements.¹²⁵ The OTS leveled criticisms regarding “risk management, corporate oversight, and financial reporting, culminating in [a] Supervisory Letter issued by OTS in March 2008, which downgraded AIG’s examination rating.”¹²⁶ The firm’s auditors found similar problems and alerted the firm to material weaknesses in risk management.¹²⁷ In particular, the firm suffered from severe liquidity risk and was unable to meet collateral calls in accordance with the CDS agreements.¹²⁸ In fact, the OTS “in hindsight” now maintains that if the liquidity risks of the CDS agreements had been properly assessed, AIG would have been ordered to reduce its CDS exposure.¹²⁹ This risk mismanagement cost shareholders dearly: the shares of AIG traded as high as \$70 per share in 2007 and as of its latest bailout the shares traded for less than \$2.¹³⁰

AIG deceived its shareholders of the risks in its CDS exposure. On August 9, 2007, for the first time, AIG disclosed the \$79 billion in CDS exposure in an investor conference call, including \$64 billion backed by subprime mortgages. During the call, Joseph Cassano, the CEO of AIG Financial Products, stated that “without being flippant” it is hard to conceive of a scenario where AIG would lose “\$1 in any of these transactions.”¹³¹ Senior Vice President and Chief Risk Officer Robert Lewis assured investors: “We believe that it would take declines in housing values to reach depression proportions, along with default frequencies never experienced, before our . . . investments would be impaired.”¹³² At the time these statements were made, AIG had already paid \$1.2 billion in cash to Goldman Sachs (with another slug of cash to be paid the next day) in response to collateral calls required under the contractual terms of the CDS. These payments were not mentioned to investors.¹³³ On December 5, 2007, with the

125. Robert O’Harrow Jr. & Brady Dennis, *Downgrades and Downfall*, WASH. POST, Dec. 31, 2008, <http://www.washingtonpost.com/wp-dyn/content/article/2008/12/30/AR2008123003431.html>.

126. *American International Group’s Impact on the Global Economy: Before, During, and After Federal Intervention: Hearing Before the H. Subcomm. on Capital Markets, Ins., and Gov’t Sponsored Enter., Comm. on Fin. Serv.*, 11th Cong. 6 (2009) (statement of Scott M. Polakoff, Acting Dir., Office of Thrift Supervision) [hereinafter *OTS Statement*].

127. See *Downgrades and Downfall*, *supra* note 125.

128. *Id.* On Feb. 6, 2008, AIG’s auditing firm alerted the chairman of AIG’s board of material weaknesses in internal control involving its ability to value the CDS portfolio. The auditors impugned management generally and its ERM program in particular. The next day the auditor informed the AIG audit committee of these facts. AIG disclosed the material weaknesses in internal control to its investors on Feb. 11, 2008, and its stock plunged. FCIC, *supra* note 87, at 272–74.

129. See *OTS Statement*, *supra* note 126, at 6.

130. Matt Krantz, *AIG: Removal from Dow Index is the Least of Your Worries*, USA TODAY, Oct. 6, 2008, http://www.usatoday.com/money/perfi/columnist/krantz/2008-10-06-aig-stock-dow_N.htm; Jonathan Stempel & Lilla Zuill, *AIG Has \$61.7 Billion Loss, New US Aid May Not Be Last*, REUTERS, Mar. 2, 2009, <http://www.reuters.com/article/ousiv/idUSN0134457520090302>.

131. Gretchen Morgenson, *Behind Insurer’s Crisis, Blind Eye to a Web of Risk*, N.Y. TIMES, Sept. 27, 2008, <http://www.nytimes.com/2008/09/28/business/28melt.html>.

132. FCIC, *supra* note 87, at 268.

133. *Id.*

subprime market now rapidly unraveling, AIG's CEO told investors "we believe the probability that [our residential real estate investments] will sustain an economic loss is close to zero."¹³⁴ At the time its payments to Goldman alone already totaled \$2 billion.¹³⁵ This fundamental failure to disclose risk alone justifies the *Economist* in stating that AIG presents "perhaps the biggest failure of risk management in the crisis."¹³⁶ As for Joseph Cassano, he retains the \$315 million he garnered during his twenty-one-year tenure at AIG, and even obtained a \$1 million per month consulting payment from AIG after discharge.¹³⁷

Lehman Brothers presents another case of manifest risk mismanagement. Major problems with real estate emerged in the summer of 2007. Nevertheless, on October 7, 2007, when commercial real estate already made up over 6 percent of its assets, Lehman Brothers invested \$5.4 billion in Archstone Smith, a publicly traded real estate firm.¹³⁸ It was the bank's largest commercial real estate investment.¹³⁹ Lehman claimed that "Risk Management is at the very core" of its business.¹⁴⁰ Yet, according to the FCIC "the Executive Committee simply left its risk officer, Madelyn Antonic, out of the loop when it made this investment."¹⁴¹

Earlier, in the summer of 2006, senior management—in defiance of the firm's risk policies and warnings from risk managers—invested in more home mortgage assets.¹⁴² Ultimately, the mortgage-related assets on Lehman's books nearly doubled from 2006 to 2007 to over \$100 billion.¹⁴³ These risky investments rested on a capital foundation of short-term

134. *Id.* at 272.

135. "Cassano did not reveal the \$2 billion collateral posted to Goldman, the several hundred million dollars posted to other counterparties, and the daily demands from Goldman and the others for additional cash." *Id.*

136. *The Joe Cassano Guide to Escapology*, *ECONOMIST*, July 1, 2010, http://www.economist.com/blogs/freeexchange/2010/07/financial_crisis_inquiry_commission.

137. *No Ordinary Joe*, *ECONOMIST* (July 1, 2010), <http://www.economist.com/node/16485620>. Similarly, the AIG CEO was paid \$107 million over four years and received a severance package of \$18 million, despite its auditors criticism of his risk management function. FCIC, *supra* note 87, at 273.

138. "Lehman, in a 50-50 partnership with Bank of America, put up \$17.1 billion of debt and \$4.6 billion in bridge equity financing." Devin Leonard, *How Lehman Got Its Real Estate Fix*, *N.Y. TIMES*, May 3, 2009, <http://www.nytimes.com/2009/05/03/business/03real.html> (stating also that Lehman had \$5.4 billion in exposure).

139. FCIC, *supra* note 87, at 176.

140. *Id.* at 177.

141. *Id.*

142. Edward J. Estrada, *The Immediate and Lasting Impacts of the 2008 Economic Collapse—Lehman Brothers, General Motors, and the Secured Credit Markets*, 45 *U. RICH. L. REV.* 1111, 1115–16 (2011) (citing Report of Anton R. Valukas, In re Lehman Bros. Holdings Inc., No. 08-13555 (Bankr. S.D.N.Y. Mar. 11, 2010)).

143. *See generally* Wyo. State Treasurer v. Moody's Investors Serv. (In re Lehman Bros. Mortg.-Backed Sec. Litig.), 650 F.3d 167, 171 (2d Cir. 2011) ("In the period from 2005 to 2007, [Lehman Bros.] and similarly situated persons purchased approximately \$155 billion worth of mortgage pass-through certificates").

debt.¹⁴⁴ Lehman understated its leverage through accounting manipulations.¹⁴⁵ Martin Kelly, Lehman's global financial controller, stated that the transactions had "no substance" and other officers openly acknowledged the manipulation was no more than an "accounting gimmick."¹⁴⁶ Lehman's president and chief operating officer termed the accounting machinations "another drug" that Lehman used to conceal its actual financial condition.¹⁴⁷

Lehman's toxic investment on a highly leveraged capital base proved fatal. On September 15, 2008, it entered bankruptcy, setting off the worst phase of the financial crisis.¹⁴⁸ The OTS found that Lehman made an "out-sized bet" on real estate and suffered from "major failings in its risk management process."¹⁴⁹ Unfortunately, this regulatory warning only came in July of 2008—two months before Lehman entered bankruptcy.¹⁵⁰ As for Chief Risk Officer Antoncic, she was shunted aside, ignored, and ultimately moved out of her risk manager position in 2007 after three years.¹⁵¹

At Citigroup, Richard Bowen, a veteran banker, received a promotion in early 2006 when he was named business chief underwriter.¹⁵² He oversaw loan quality for \$90 billion per year of mortgages underwritten and purchased by CitiFinancial.¹⁵³ Bowen discovered that up to 60 percent of the loans purchased did not meet Citigroup's loan guidelines.¹⁵⁴ Bowen tried to alert senior management but the efforts "never translated into any action."¹⁵⁵ Instead, in order to build volume, "there was a considerable push" to loosen underwriting standards.¹⁵⁶ Citi even started to purchase stated-income loans and "joined the other lemmings headed for the cliff."¹⁵⁷

144. Thomas E. Plank, *Regulation and Reform of the Mortgage Market and the Nature of Mortgage Loans: Lessons from Fannie Mae and Freddie Mac*, 60 S.C. L. REV. 779, 782 (2009) ("Unfortunately, the regulatory structure of Fannie Mae and Freddie Mac encouraged [investment banks and mortgage originators] to engage in the risky business of buying higher yielding mortgage loans and mortgage-backed securities and financing those purchases through shorter-term, lower-rate debt that carried the implicit guarantee of the United States government. In addition, investment bankers and lenders also held significant amounts of mortgage-backed securities that they financed with shorter-term debt").

145. David A. Skeel, Jr. & Thomas H. Jackson, *Transaction Consistency and the New Finance in Bankruptcy*, 112 COLUM. L. REV. 152, 164 (2012).

146. FCIC, *supra* note 87, at 177.

147. *Id.*

148. Press Release, U.S. Sec. and Exch. Comm., Statement Regarding Recent Market Events and Lehman Brothers (Updated) (Sept. 15, 2008), <http://www.sec.gov/news/press/2008/2008-198.htm>; Andrew Ross Sorkin, *Lehman Files for Bankruptcy; Merrill is Sold*, N.Y. TIMES, Sept. 14, 2008, <http://www.nytimes.com/2008/09/15/business/15lehman.html>.

149. FCIC, *supra* note 87, at 178.

150. *Id.*

151. *Id.* at 18.

152. *Id.* at 19.

153. *Id.*

154. *Id.*

155. FCIC, *supra* note 87, at 19.

156. *Id.*

157. *Id.*

According to Bowen, “[a] decision was made that ‘[w]e’re going to have to hold our nose and start buying the stated product if we want to stay in business.’”¹⁵⁸ After he alerted management to the excessive riskiness of the mortgages, “he went from supervising 200 people to supervising only 2, his bonus was reduced, and he was downgraded in his performance review.”¹⁵⁹ As for Citigroup’s chief risk officer for consumer lending, according to Bowen, he actually reversed large numbers of underwriting decisions from “turn down” to “approved.”¹⁶⁰

Citigroup also suffered from uncontrolled risk in its investment bank where massive bets accumulated on mortgage-backed securities. Citigroup’s CEO Chuck Prince stated in 2007 that if liquidity dried up “things will be complicated” but that “as long as the music is playing you’ve got to get up and dance.”¹⁶¹ Citigroup worked to keep the music playing by including “liquidity puts” in its securitized pools of subprime mortgages it sold to investors.¹⁶² The liquidity put required Citigroup to repurchase interests in subprime mortgages in the event of financial turbulence.¹⁶³ Thus, in late 2007, Citigroup publicly disclosed for the first time that it had \$55 billion in subprime mortgage exposure and anticipated losses of about \$8 billion to \$11 billion.¹⁶⁴ Prince resigned shortly thereafter.¹⁶⁵ In December of 2007, Citigroup announced it would assume \$58 billion of debts that had been carried by structured investment vehicles (SIVs) it had sponsored; the SIVs had invested in long-term assets (including mortgage-related assets) with short-term funding.¹⁶⁶ The risks of these losses went undisclosed to shareholders.¹⁶⁷

The New York Fed found serious problems with Citigroup’s risk management of subprime exposure: “Senior management, as well as the independent Risk Management function charged with monitoring

158. *Id.* at 111.

159. *Id.* at 19.

160. *Id.* at 168.

161. David Wighton, *Prince of Wisdom*, FIN. TIMES (Nov. 4, 2007), <http://www.ft.com/intl/cms/s/0/fce88e10-8b12-11dc-95f7-0000779fd2ac.html>.

162. Carol J. Loomis, *Robert Rubin on the Job He Never Wanted*, FORTUNE, Nov. 26, 2007, at 69.

163. *Id.*

164. *Id.*; Shawn Tully, *Wall Street’s Money Machine Breaks Down*, FORTUNE, Nov. 26, 2007, at 65, 68.

165. FCIC, *supra* note 87, at 265; Loomis, *supra* note 162, at 69.

166. Shannon D. Harrington & Elizabeth Hester, *Citigroup Rescues SIVs With \$58 Billion Debt Bailout (Update1)*, BLOOMBERG, Dec. 14, 2007, <http://www.bloomberg.com/apps/news?pid=20601087&refer=home&sid=aS0Dm.iV5BCI>. See generally Tim Bowler, *The Rise and Fall of Citigroup*, BBC, Jan. 16, 2009, <http://news.bbc.co.uk/2/hi/business/7746077.stm> (“If the bank had been allowed to collapse, it could have caused financial havoc around the globe, seizing up fragile lending markets and causing untold losses among institutions holding debt and financial products backed by the company.”).

167. In fact, not even the Chair of the Citigroup Executive Committee comprehended the risks from these instruments. Loomis, *supra* note 162, at 69.

responsibilities, did not properly identify and analyze these risks in a timely fashion.”¹⁶⁸ The FCIC similarly concluded: “Citigroup’s risk management function was simply not very concerned about housing market risks.”¹⁶⁹ The chief risk officer, David C. Bushnell, reportedly told senior management that housing prices would need to drop 30 percent (as they did in the Great Depression) for Citi to suffer serious problems.¹⁷⁰ In fact, Citi suffered massive losses and tipped into insolvency as a result of a 4.5 percent decline in housing prices, due largely to loan write-downs and the liquidity puts it had written.¹⁷¹ Total losses at Citigroup from mortgages, mortgage-backed securities, and mortgage-related CDOs would approach \$60 billion, or about half of Citigroup’s capital.¹⁷²

The above failings in basic risk management represent only the egregious mismanagement at the most high-profile firms at the center of the Great Financial Crisis of 2008. Other notable instances of risk mismanagement include: (1) Freddie Mac, in 2005, where CEO Richard Syron fired David Andrukonis, Freddie’s longtime chief risk officer because Andrukonis was concerned about the risks of relaxing underwriting standards; (2) Ameriquest, where Ed Parker, the former head of Ameriquest’s Mortgage Fraud Investigations Department, detected fraud at the company within one month of starting his job there in January 2003, but senior management did nothing and instead demoted him in 2005 and laid him off in 2006; and (3) Merrill Lynch, which became addicted to the fee income regardless of risks from its CDO business, and failed to even install a chief risk officer.¹⁷³

Taken together, these narratives illustrate that our current approach to ERM is deeply flawed. Part III reviews regulatory responses intended to enhance systemic risk oversight at the intra-firm and inter-firm levels. While well-intentioned and likely to improve the indisputably weak pre-crisis risk management obligations, these responses are, quite simply, inadequate and do not overcome obvious shortcomings at both of the institutional levels of systemic risk concern.

II. A NEW (?) APPROACH TO RISK MANAGEMENT

On the brink of the meltdown, experts and observers heralded advanced enterprise-wide risk management techniques as one factor warrant-

168. FCIC, *supra* note 87, at 267.

169. *Id.* at 262.

170. *Id.*

171. *Id.*

172. *Id.* at 261.

173. See generally Annette Mikes, *Becoming the Lamp Bearer: The Emerging Roles of the Chief Risk Officer*, in ENTERPRISE RISK MANAGEMENT 71, 73 (John Fraser & Betty J. Simkins eds. 2010) [hereinafter *Lamp Bearer*] (discussing the history of Merrill Lynch’s risk management department’s origin and its gradual loss of power).

ing optimism for the resolution of the subprime mortgage crisis.¹⁷⁴ Instead, beginning in late 2007, stunning failures in risk management surfaced.¹⁷⁵ By the time the meltdown transpired, keen observers concluded that risk management operated as a ruse to conceal and manipulate risk for profit to senior executives and at great cost to everyone else.¹⁷⁶ Wall Street led a historic breakdown in mortgage underwriting¹⁷⁷ and did so with very high levels of short-term debt (or leverage) on their own balance sheets, essentially guaranteeing that even small losses would send the entire financial sector (which was highly interconnected through derivatives markets)¹⁷⁸ over the cliff and into insolvency.¹⁷⁹ The inconceivably high risks at the

174. The President of the Federal Reserve Bank of Boston explained:

I want to note that despite a number of lessons from the recent financial turmoil, we should not despair, nor should we see investments in risk management as wasted. Indeed, had the discipline not advanced as far as it has, I believe the recent financial turmoil would be much more damaging. And as a result of our models and improved risk management, with some nudges from bank supervisors, the capital position of banks in the aggregate remain quite healthy.

Rosengren, *supra* note 76.

175. David Wighton, *Wall Street Dispatch: Imagination and Common Sense Brew a Safer Culture*, FIN. TIMES, Nov. 28, 2007, <http://www.ft.com/cms/s/0/efcf97a6-99df-11dc-ad70-0000779fd2ac.html> (“[I]t is obvious there has been a massive failure of risk management across most of Wall Street . . .”).

176. Raghuram Rajan, *Bankers’ Pay Is Deeply Flawed*, FIN. TIMES (Jan. 9, 2008, 4:21 PM), <http://www.ft.com/intl/cms/s/0/18895dea-be06-11dc-8bc9-0000779fd2ac.html> (“[U]nless we fix incentives in the financial system we will get more risk than we bargain for. Unless bankers offer these better explanations, their enormous pay, which has been thought of as just reward for performance, will deservedly come under scrutiny.”).

177. John C. Dugan, Office of the Comptroller of the Currency, Comptroller, Remarks before the Exchequer Club 6 (Jul. 21, 2010), *available at* <http://www.occ.treas.gov/ftp/release/2010-84a.pdf> (stating that, with respect to the financial crisis of 2008–09, “at the heart of it all, the worst mortgage underwriting in our nation’s history”). The Office of the Comptroller of the Currency directly supervises every national bank in the nation.

178. For example, AIG, the world’s largest insurance company, entered into \$500 billion in credit default swaps (a type of credit derivative) whereby it agreed contractually to absorb losses from a variety of credit obligations including subprime mortgages. The counterparties to these transactions included banks (and bank affiliates) that counted on AIG’s ability to pay on the credit default swaps to secure \$379 billion in bank capital. Thus, if AIG failed, many banks would accompany it into receivership or bankruptcy. FCIC, *supra* note 87, at 50, 140. “The government ultimately committed more than \$180 billion because of concerns that AIG’s collapse would trigger cascading losses throughout the global financial system.” *Id.*, at xxv.

179. According to economist Nouriel Roubini, as of January 2009, the entire financial sector faced insolvency. Henry Meyer & Ayesha Daya, *Roubini Predicts U.S. Losses May Reach \$3.6 Trillion*, BLOOMBERG, Jan. 20, 2009, <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aS0yBnMR3USk> (“credit losses could peak at a level of \$3.6 trillion for U.S. institutions. . . . If that’s true, it means the U.S. banking system is effectively insolvent because it starts with a capital of \$1.4 trillion. This is a systemic banking crisis.”). Given the massive amount of government aid to the financial sector we now know the essential accuracy of Roubini’s analysis. For example, the Fed made trillions in secret low-interest loans to financial institutions to avert mass bankruptcy of the entire financial sector. Phil Kuntz & Bob Ivry, *Fed’s Once-Secret Data Compiled by Bloomberg Released to Public*, BLOOMBERG, Dec. 23, 2011, <http://www.bloomberg.com/news/2011-12-23/fed-s-once-secret-data-compiled-by-bloomberg-released-to-public.html>. These loans supplemented the massive capital injections the U.S. government made under the TARP program. Andy Kessler, *What Paulson Is Trying to Do*, WALL ST. J., Oct. 15, 2008, <http://on>

largest and most sophisticated financial institutions inexplicably sunk the entire interconnected Wall Street financial complex.¹⁸⁰ In the aftermath of the debacle, official inquiries found pervasive disregard of basic risk management techniques in favor of short-term profits (and accompanying wind-fall compensation for senior financial managers).¹⁸¹

The manifest failures summarized in Part I gave rise to a number of legal and regulatory developments with respect to ERM. Part II surveys a few of the regulatory responses. Generally, the responses might be categorized as regulation oriented responses adopted by federal authorities or common law based approaches espoused by state courts. While an unprecedented volume of nascent regulation has emerged in recent years, we consider three significant legal and regulatory responses here: (1) the SEC's promulgation of disclosure requirements regarding risk management practice applicable to all publicly traded firms, (2) the Federal Reserve's imposition of risk management committees for large financial institutions, and (3) the courts' treatment of common law based understandings of directors' fiduciary duties to insulate risk mismanagement, short of a showing of bad faith.¹⁸²

A. *SEC Rulemaking*

Governance policies frequently serve as the medium for assigning authority and outlining accountability for a corporation's activities. Typically, in corporations, governance policies assign authority to directors, executive officers and others to make decisions on behalf of the corporation.¹⁸³ As a result, boards are often responsible for risk governance.

Federal regulations have long required firms whose securities trade in public markets to disclose information regarding risk-taking activities as well as information regarding the structure and composition of the board. Following the recent financial crisis, the SEC adopted regulations intended to expand risk-oriented disclosure obligations.¹⁸⁴ New regulations seek to fill the gap between traditional corporate governance disclosures, which in-

line.wsj.com/article/SB122402984044334627.html. Given the amount of capital the government needed to deploy to save the banks, it is impossible to dissent from Roubini's essential point.

180. "Too many of these institutions acted recklessly, taking on too much risk, with too little capital, and with too much dependence on short-term funding." FCIC, *supra* note 87, at xviii.

181. *Id.* at xix. Regulatory inquiries reached the same conclusion. See *Lamp Bearer*, *supra* note 173 (discussing findings of Treasury and banking regulators).

182. We offer analysis of the details of other relevant regulatory responses in another contribution. See Kristin Johnson & Steven Ramirez, *Regulatory Responses to the Crisis* (forthcoming 2015).

183. DEL. CODE tit. 8, §141(a) (2014); New York's General Business Corporation Law notes that "the business of a corporation shall be managed under the direction of its board of directors." N.Y. BUS. CORP. §701 (McKinney 2014).

184. Press Release, U.S. Sec. and Exch. Comm., SEC Approves Enhanced Disclosure About Risk, Compensation and Corporate Governance (Dec. 16, 2009), <http://www.sec.gov/news/press/2009/2009-268.htm>.

volved a description of risk taking activities and biographical information about the board, and information regarding boards' risk-related decision-making processes. Following the financial crisis, the SEC moved to force firms to disclose critical data regarding whether the board and the executives who serve on the board may have incentives to take inappropriate risks with the firms' wealth in order to enhance their own compensation.

On December 16, 2009, the SEC finalized regulations mandating enhanced disclosure regarding risk oversight.¹⁸⁵ The new regulations require disclosure of compensation policies that may lead to operational risks and the role of the board of directors in governing firm risk.¹⁸⁶ More specifically, when a public firm solicits proxies from shareholders it must disclose the policies and practices of the firm relating to compensation to the extent that risks arising from the registrant's compensation policies and practices for its employees are likely to have a materially adverse effect on the firm, and the relationship of such policies and practices to risk management practices and risk-taking incentives.¹⁸⁷ Further, public firms must disclose the extent of the board's role in risk management, including how the board exercises its oversight function, as well as the impact that this has on the board's leadership structure.¹⁸⁸

According to the SEC, "the board's role in the oversight of a company's management of risk is a significant policy matter regarding the governance of the corporation." Under current practices, the CEO often acts as the ultimate risk arbiter without any requirements that the CEO possess actual particular risk management expertise.¹⁸⁹ Permitting an individual executive to exercise unbridled authority to make risk management decisions

185. *Id.* The updated reporting obligations require firms subject to the rules to include disclosures in their annual proxy and information statements about:

- The relationship of a company's compensation policies and practices to risk management;
- The background and qualifications of directors and nominees;
- Legal actions involving a company's executive officers, directors and nominees;
- The consideration of diversity in the process by which candidates for director are considered for nomination;
- Board leadership structure and the board's role in risk oversight;
- Stock and option awards to company executives and directors; and
- Potential conflicts of interests of compensation consultants.

Id.

186. Securities and Exchange Commission, Proxy Disclosure Enhancements, 74 Fed. Reg. 68334 (Dec. 23, 2009).

187. 17 CFR § 229.402 (2014).

188. *Id.* at § 229.407.

189. As noted in 2008:

[C]orporate governance law at the state level gives corporate management autonomy to implement ERM or to have no enterprise-wide risk management frameworks in place at all. Boards are simply given the power to manage the corporation as they see fit and do not have any risk management expertise or controls in place. In the public corporation, this means that the CEO is the institutional center of risk management. This is the natural result of broad public ownership combined with the CEO's power over board selections and the very minimal duties of board members under the law to supervise CEOs. Thus, under current corporate governance practices, the CEO is usually a risk silo.

creates significant concerns. Moreover, CEOs often hold a high degree of autonomy with respect to the board and exercise authority to influence the slate of nominees for the board.¹⁹⁰ Because of their control over the board's operations and decision-making, CEOs may influence other directors to acquiesce to risk-taking strategies that diminish the long-term value of the firm. Adopting disclosure-based rules presumably serves to create pressure on the board of directors and the CEO to implement a more independent risk management function. In addition, proponents of heightened disclosure obligations believe that such obligations will improve the quality of risk oversight by encouraging boards to elect directors with appropriate credentials or require CEOs to demonstrate relevant expertise. A risk management regime which seeks to bring expertise and diverse views regarding risk management issues to board-level discussions can be expected to strongly outperform a CEO-centric approach to risk management.¹⁹¹

B. Federal Reserve Regulation YY

Congress responded to indisputable risk management deficiencies and resounding risk management failures in the financial sector by adopting the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"). Section 165(h) of the Dodd-Frank Act directs the Federal Reserve to promulgate regulations mandating that publicly traded bank holding companies with over \$10 billion in assets create a "risk committee" that

Simkins & Ramirez, *supra* note 20, at 587. Simkins and Ramirez also identify the key challenges with a CEO-centric approach to risk management:

A CEO-centric model of risk management need not lead to suboptimal results. Ideally, the CEO's interests will align with the shareholders in a manner that encourages appropriate risk management. Nevertheless, the CEO could just as easily be tempted to harvest enhanced compensation for increased profits today at the expense of large risks for the corporation tomorrow. Moreover, the CEO is a single person. Risk management can be enhanced through diversity in perspectives and expertise. Therefore, the CEO is not the optimal center for all risk management, even if CEO input is essential for any kind of meaningful risk management.

Id. at 587–88. See also Lucian A. Bebchuk, *The Myth of the Shareholder Franchise*, 93 VA. L. REV. 675, 732 (2007) ("The shareholder franchise is largely a myth. Shareholders commonly do not have a viable power to replace the directors of public companies. Electoral challenges are rare, and the risk of replacement via a proxy contest is extremely low.").

190. As discussed below, the insulation between CEO power and influence and the selection of the board of directors is still incomplete. See also Steven A. Ramirez, *Games CEOs Play and Interest Convergence Theory: Why Diversity Lags in America's Boardrooms and What to Do About It*, 61 WASH. & LEE L. REV. 1583, 1613 (2004).

191. This approach for public firms echoes the proposal of Simkins and Ramirez in 2008:

Firms should be required to provide qualitative disclosures regarding their approach to enterprise risk management including: 1) whether there is a comprehensive enterprise-wide risk management function; 2) the extent of board involvement in that function; 3) whether the CEO controls that function; 4) the breadth of expertise available to address firm risks; and 5) any differences between management and risk managers regarding the firm's current risk profile. This approach to the intersection of corporate governance and enterprise-wide risk management is fully consonant with the SEC's traditional role in issuing interpretative guidance.

Simkins & Ramirez, *supra* note 20, at 593.

is “responsible for the oversight of the enterprise wide risk management practices” of the bank holding company. The Act directs that such a risk committee include independent board directors and at least one risk management expert. While Congress acted quickly requiring the introduction of risk committees, the Federal Reserve moved at a slightly less rapid pace issuing guidance regarding the new obligations. Several scholars raise noteworthy questions regarding the strengths and weaknesses of the introduction of risk management committees.¹⁹²

More recently, the Office of the Comptroller of the Currency (OCC) adopted risk management guidelines applicable to certain financial institutions subject to the agency’s oversight.¹⁹³ These guidelines mandate minimum standards for the design and implementation of a risk governance framework for large banks and minimum standards for a board of directors in overseeing the framework’s design and implementation. In the announcement describing the guidelines, the OCC explains that boards and governance policies should

enable [an] independent risk management [committee] to maintain its independence from front line units. Under this reporting structure, the board of directors or the board’s risk committee reviews and approves the Framework. In addition, the final Guidelines clarify that a [chief risk officer—CRO or CRE] should have unrestricted access to the board of directors and its committees with regard to risks and issues identified through independent risk management’s activities. The board of directors or its risk committee approves all decisions regarding the appointment or removal of the CRE and approves the annual compensation and salary adjustment of the CRE.¹⁹⁴

The standards contained in the final guidelines will be enforceable by the same new statute that authorizes the OCC to prescribe operational and managerial standards for financial institutions subject to the agency’s oversight. The failure to comply may lead to an enforcement proceeding against the financial institution.

192. Lynne L. Dallas, *Short-Termism, the Financial Crisis, and Corporate Governance*, 37 J. CORP. L. 265, 356 n.666 (2012) (referencing the risk committee requirements of the DFA); Nizan Geslevich Packin, *It’s (Not) All About the Money: Using Behavioral Economics to Improve Regulation of Risk Management in Financial Institutions*, 15. U. PA. J. BUS. L. 419, 425–26 (2013) (explaining the DFA mandate for risk committees); Carol Beaumier & Jim DeLoach, *Risk Oversight: Should Your Board Have a Separate Risk Committee?*, CONFERENCE BOARD, Jan. 2012, available at <http://www.conference-board.org/retrievefile.cfm?filename=TCB-DN-V4N1-12.pdf&type=subtitle>; Matteo Tonello, *Should Your Board Have a Separate Risk Committee?*, HARV. L. SCH. FORUM ON CORP. GOVERN. & FIN. REG. (Feb. 12, 2012, 10:07 AM), <http://blogs.law.harvard.edu/corpgov/2012/02/12/should-your-board-have-a-separate-risk-committee/>.

193. OCC Guidelines Establishing Heightened Standards for Certain Large Insured National Banks, Insured Federal Savings Associations, and Insured Federal Branches; Integration of Regulations, 79 Fed. Reg. 54518, 54518 (Sept. 11, 2014) (to be codified at 12 C.F.R. pt. 30 and 170, <http://www.gpo.gov/fdsys/pkg/FR-2014-09-11/pdf/2014-21224.pdf>).

194. *Id.* at 54526.

The development of formal structural reforms such as board committees is analogous to the reforms adopted by the SEC and will likely lead to similar benefits. Independent committees enhance transparency and reduce executives' or directors' abilities to act in a purely self-interested manner. The creation of operational guidelines and the ordering of reporting obligations offer more interesting methods of ensuring the soundness of regulation. These measures demonstrate a limited but expanding set of tools available to regulators to mitigate the risk exposure of individual firms. Questions remain regarding the ability of regulators to identify and reduce risk that arises due to the contractual commitments among financial institutions, the correlations among investments in similar asset classes and the soundness of intermediaries who facilitate the largest financial arrangements in the financial markets sector.

C. Risk Management in the Courts

The starting point for judicial articulation of any duty to rationalize the risk management function is in *In re Caremark*, a Delaware chancery court decision.¹⁹⁵ The court approved a shareholders' derivative action settlement (despite finding the plaintiffs' claim to be very weak, and in the course of its opinion included extensive dicta regarding the duties of board directors, some of which bear upon ERM).¹⁹⁶

One example of the judicial disinclination to hold senior managers liable for any degree of risk mismanagement is a Delaware case, *In re Citigroup Shareholders Litigation*.¹⁹⁷ Citigroup shareholders alleged Citigroup officers and directors breached their fiduciary duties arising from massive subprime lending losses and that directors engaged in waste through a share repurchase program and approving a compensation package for its retiring CEO.¹⁹⁸ The defendants moved to dismiss.¹⁹⁹ Essentially, the plaintiffs claimed that Citigroup's senior management mismanaged risk: "the defendants breached their fiduciary duties by failing to properly monitor and manage the risks the Company faced from problems in the subprime lending market and for failing to properly disclose Citigroup's exposure to subprime assets."²⁰⁰ The court held that in order to prevail on such a claim plaintiffs would need to show bad faith of the directors in mismanaging risk,²⁰¹ bad faith to overcome the defense Citigroup directors held under

195. *In re Caremark Int'l Inc. Deriv. Litg.*, 698 A.2d 959 (Del. Ch. 1996).

196. *Id.* at 972.

197. *See In re Citigroup Inc. S'holder Deriv. Litig.*, 964 A.2d 106 (Del. Ch. 2009).

198. *Id.* at 111–12.

199. *Id.* at 112.

200. *Id.* at 111.

201. "Thus, to establish oversight liability a plaintiff must show that the directors *knew* they were not discharging their fiduciary obligations or that the directors demonstrated a *conscious* disregard for their responsibilities such as by failing to act in the face of a known duty to act. The

section 102(b)(7),²⁰² and bad faith to overcome the power the directors have to determine to sue themselves.²⁰³ The court even held that any disclosure claim required a finding of bad faith.²⁰⁴ Under Delaware law, no plaintiff has ever succeeded in such a claim.²⁰⁵

The courts thus move in an entirely contradictory direction from the regulators and other ERM experts who actually apply the lessons from the Great Financial Crisis of 2008 to ERM practice and regulation. More than anything, this illogical and unreasoned exculpation for even infinite recklessness at the apex of our economy reflects the unique institutional context in which Delaware corporate law is made. In any event, the Delaware approach (which essentially transmogrifies the duty of care into a duty for directors not to consciously disregard their duties) approves of the most egregious risk mismanagement imaginable. The next part of this Article will assess the current regulatory and legal approach to risk management from a corporate governance perspective. Moreover, even a survey of diverse interpretations of the strengths and weaknesses of Delaware courts' interpretation of boards' risk management oversight obligations reveals the unlikelihood that internal organizational structures will effectively mitigate risk-taking within financial institutions.²⁰⁶

test is rooted in concepts of bad faith; indeed, a showing of bad faith is a *necessary condition* to director oversight liability." *Id.* at 123 (emphasis in original).

202. "A plaintiff can show bad faith conduct by, for example, properly alleging particularized facts that show that a director *consciously* disregarded an obligation to be reasonably informed about the business and its risks or *consciously* disregarded the duty to monitor and oversee the business." *Id.* at 125 (emphasis in original).

203. "Such conclusory allegations, however, are not sufficient to state a claim for failure of oversight that would give rise to a substantial likelihood of personal liability, which would require particularized factual allegations demonstrating bad faith by the director defendants." Citigroup, 964 A.2d at 127.

204. "[T]o show a substantial likelihood of liability that would excuse demand, plaintiffs must plead particularized factual allegations that 'support the inference that the disclosure violation was made in bad faith, knowingly or intentionally.'" *Id.* at 132.

205. *See In re Goldman Sachs Grp., Inc. S'holder Litig.*, No. CIV.A. 5215-VCG, 2011 WL 4826104, at *23 (Del. Ch. Oct. 12, 2011) (dismissing claims regarding compensation and risk management and stating that under "the business judgment rule, Delaware law encourages corporate fiduciaries to attempt to increase stockholder wealth by engaging in those risks that, in their business judgment, are in the best interest of the corporation 'without the debilitating fear that they will be held personally liable if the company experiences losses.'").

206. *See Nadelle Grossman, The Duty to Think Strategically*, 73 LA. L. REV. 449 (2013) (proposing that firms should think critically about their management strategies for creating gains, not just limiting losses, to create additional value within in their companies); Christine Hurt, *The Duty to Manage Risk*, 39 IOWA J. CORP. L. 253 (2014) (reviewing the financial crisis litigation, discussing the lack of a separate fiduciary duty to manage financial risk, and positing that this lack of a separate duty is desirable); Daniel J. Morrissey, *M&A Fiduciary Duties: Delaware's Murky Jurisprudence*, 58 VILL. L. REV. 121 (2013) (outlining Delaware fiduciary duty jurisprudence and assessing how this framework has been the basis of recent important opinions and concluding that the lack of clarity, which stems from competing considerations of the Delaware courts, would be better addressed in a different forum); Anne Tucker Nees, *Who's The Boss? Unmasking Oversight Liability Within the Corporate Power Puzzle*, 35 DEL. J. CORP. L. 199 (2010) (proposing a reform to oversight liability that defines the "red flags" directors must look for in articulating the duty to

Regulators' and courts' efforts acknowledge the significance of risk management and the need for a useful method for protecting individual firms and entire economies from risk management failures. The mechanisms adopted, however, fall short of accomplishing the desired outcome. Scholars debate the substantive value of boards and board committees. Consequently, it is wise to question whether reliance on such committees or even demands regarding the reporting line for risk officers will be sufficient to diminish the threat of risk management failures.

III. ASKING THE RIGHT QUESTIONS: IDENTIFYING A MORE SUSTAINABLE SOLUTION

As one journalist recently concluded, Wall Street's subprime investments easily represent "one of the worst miscalculations in the annals of risk management."²⁰⁷ Recent reforms suggest that Congress and regulators have similarly concluded that faulty risk management materially contributed to the crisis. Federal regulatory efforts adopted by a diverse array of agencies in the wake of the crisis include reforms that impose more demanding risk management regulations. The latest corporate governance reforms continue the evolution in corporate law that has resulted in the far-reaching federal redesign of the organic structure of the public firm.

Since the financial crisis of 2008, however, even more stunning failures of risk mismanagement have emerged. For example, in late 2011, MF Global, a major securities broker-dealer and futures commodities merchant filed for the eighth largest bankruptcy in U.S. history after dissipating customer funds in reckless derivatives trading involving Eurozone debt.²⁰⁸ MF Global discharged its chief risk officer when the officer raised objections to the CEO's trading strategy and the use of customer funds to fund the risky derivatives positions.²⁰⁹ The bankruptcy trustee in the MF Global case alleged that CEO Jon Corzine directed a reckless and grossly negligent trad-

monitor); Eric J. Pan, *Rethinking the Board's Duty to Monitor: A Critical Assessment of the Delaware Doctrine*, 58 FLA. ST. U. L. REV. 209 (2011) (positing that Delaware courts have made it difficult for plaintiffs to successfully bring duty to monitor claims and that expanding the duty to monitor will effectively change board members' behavior towards risk management); Eric J. Pan, *A Board's Duty to Monitor*, 54 N.Y. L. SCH. L. REV. 717 (2010) (examining Delaware case law and arguing that Delaware's weak fiduciary standard is inconsistent with recent attempts to promote increased risk management and oversight through boards).

207. Shawn Tully, *Wall Street's Money Machine Breaks Down*, FORTUNE, Nov. 26, 2007, http://archive.fortune.com/magazines/fortune/fortune_archive/2007/11/26/101232838/index.htm. See also *Caremark and Enterprise Risk Management*, *supra* note 36, at 968 ("The financial crisis of 2008 revealed serious risk management failures on an almost systemic basis throughout the business community.").

208. Matthew Leising & Donal Griffin, *Corzine's Lack of MF Global Controls Exposed With Missing Customer Money*, BLOOMBERG (Nov. 2, 2011, 1:37 PM), <http://www.bloomberg.com/news/2011-11-02/corzine-s-lack-of-mf-global-controls-exposed-with-missing-customer-money.html>.

209. James O'Toole, *The Risks that Killed MF Global*, CNNMONEY, Feb. 12, 2012, http://money.cnn.com/2012/02/01/markets/mf_global_risks/index.htm.

ing scheme that broke the law by using customer funds.²¹⁰ Creditors of MF Global sustained massive losses in addition to the losses shareholders suffered from the bankruptcy filing.²¹¹ Lost customer funds still have not been fully restored.²¹²

In 2012, JPMorgan Chase & Co. disclosed massive losses arising from complex derivatives trading in its London office.²¹³ Ultimately losses exceeded \$6 billion.²¹⁴ A bi-partisan Senate investigation revealed woeful failures to manage and control enterprise risk.²¹⁵ The so-called London Whale trades were conducted by traders in the Chief Investment Office (CIO) of JPMorgan Chase, America's largest bank and derivatives dealer. The Senate's investigation found that, beginning in early 2012, the CIO used synthetic credit derivatives to pursue high risk trading, hid losses through mismarked trades, disregarded repeated warnings of increasing risk, manipulated risk models, evaded regulatory oversight, and deceived investors and regulators about its risky derivatives trading.²¹⁶ The Senate investigation exposed not only high risk activities but broader, more systematic failures in basic risk analysis and risk management.

Democratic Senator Carl Levin stated that:

the whale trades show how synthetic credit derivatives, when purchased in massive quantities through complex trading strategies, can become a runaway train of unstoppable losses. . . . [h]ow derivative valuation practices can be manipulated to hide losses,

210. In re MF Global Holdings Ltd. Secs. Litig., 982 F. Supp. 2d 277, 290, 296–301 (S.D.N.Y. 2013). Ben Protess, *MF Global Customers to Be Paid Back in Full*, N. Y. TIMES DEALBOOK, Apr. 3, 2014, <http://dealbook.nytimes.com/2014/04/03/mf-global-customers-to-be-paid-back-in-full/> (more than two years after the collapse of the brokerage firm, James W. Giddens, the court-appointed trustee overseeing the return of customer money, announced that he was sending a final round of checks to make MF Global's customers whole).

211. Joseph Checkler, *Trustee Alleges Corzine Masterminded MF Global Scheme*, WALL ST. J., Sept. 18, 2013, <http://online.wsj.com/article/SB10001424127887323308504579083700920492362.html>.

212. Ben Protess, *Threatening Letters Sent to 140 MF Global Vendors*, NY TIMES DEALBOOK (Sept. 18, 2013, 9:09 PM), <http://dealbook.nytimes.com/2013/09/18/threatening-letters-sent-to-140-mf-global-vendors/>.

213. Dina ElBoghady & Danielle Douglas, *JPMorgan's Admission: A Symbolic Victory for the SEC, of Limited Use in Private Lawsuits*, WASH. POST, Sept. 19, 2013, http://www.washingtonpost.com/business/economy/jpmorgan-chase-to-pay-920-million-for-london-whale-trading-losses/2013/09/19/0c9d7d52-2130-11e3-b73c-aab60bf735d0_story.html.

214. *Id.*

215. Press Release, U.S. Senate, Comm. on Homeland Def. and Governmental Affairs, Permanent Subcomm. on Investigations, *JPMorgan Chase Whale Trades: A Study in Derivatives Risks and Abuses* (Mar. 14, 2013), available at www.hsgac.senate.gov/subcommittees/investigations/media/senate-investigations-subcommittee-holds-hearing-and-releases-report-on-jpmorgan-chase-whale-trades.

216. Press Release, Office of U.S. Senator Carl Levin, Senate Investigations Subcommittee Holds Hearing and Releases Report on JPMorgan Chase Whale Trades (Mar. 14, 2013), available at <http://www.levin.senate.gov/newsroom/press/release/senate-investigations-subcommittee-holds-hearing-and-releases-report-on-jpmorgan-chase-whale-trades>.

and how derivative risk controls can be bypassed or manipulated to conceal risk.²¹⁷

Republican Senator John McCain similarly termed the London Whale trading “shameful.”²¹⁸ He added that “JPMorgan gambled away billions of dollars through risky and exotic trades, then intentionally hid its losses from investors and the public, showing complete disregard for risk management procedures and regulatory oversight.”²¹⁹ This reckless derivatives trading echoes the reckless banking that led to the financial collapse of 2008–2009.

Part I describes the flaws in corporate governance related to ERM that played a key role in the development, amplification and propagation of the financial crisis of 2008–2009. These post-events demonstrate that legal and regulatory responses discussed in Part II have failed to cure the risk management practices that were cause for concern in the period leading to the recent financial crisis. While there remains skepticism about the role of corporate governance in the recent crisis,²²⁰ most investigations into the causes of the crisis highlight corporate governance failures generally, and risk mismanagement in particular.²²¹

217. *Id.*

218. *JPMorgan Chase Whale Trades: A Case History of Derivative Risks & Abuses: Hearing on JPMorgan Chase Whale Trades Before the S. Permanent Select Comm. on Investigations*, 113th Cong. ¶ 5 (2013) (opening statement of Sen. John McCain) (“This case represents another shameful demonstration of a bank engaged in wildly risky behavior. The ‘London Whale’ incident matters to the federal government and the American taxpayer because the traders at JPMorgan were making risky bets using excess deposits, portions of which were federally insured. These excess deposits should have been used to provide loans for main-street businesses. Instead, JPMorgan used the money to bet on catastrophic risk.”).

219. *Id.* at ¶ 12.

220. See Brian R. Cheffins, *Did Corporate Governance “Fail” During the 2008 Stock Market Meltdown? The Case of the S&P 500*, 65 *BUS. LAW* 1 (2009) (arguing that firms removed from S&P 500 exhibited acceptable corporate governance practices but failing to consider impact of systemic legal frameworks and legal indulgences granted managers); see also STEPHEN M. BAINBRIDGE, *CORPORATE GOVERNANCE AFTER THE FINANCIAL CRISIS* 13 (2012) (citing Cheffins for the proposition that corporate governance played no role in the financial crisis).

221. *E.g.*, FCIC, *supra* note 87; LEVIN-COBURN REPORT, *supra* note 104, 65–68 (finding that Washington Mutual embarked on high-risk mortgage lending in early 2005, even as the bank’s own chief risk officer stated that the condition of the housing market signifies a “bubble” with risks that “will come back to haunt us” and that WaMu forged ahead despite repeated warnings that the risks were excessive, its lending standards and risk management systems were deficient, and many of its loans were tainted by fraud). The Levin-Coburn report found that WaMu was typical of home mortgage lenders in terms of risk. *Id.* at 4. See also *G-20 Declaration on Financial Crisis: World Leaders Spell Out a Series of Steps for Regulation, Monetary and Fiscal Policy Aimed at Stabilizing Markets*, CNNMONEY, Nov. 15, 2008, http://money.cnn.com/2008/11/15/news/international/g20_declaration/ (statement of G-20 leaders finding that crisis occurred because “[d]uring a period of strong global growth, growing capital flows, and prolonged stability . . . market participants sought higher yields without an adequate appreciation of the risks and failed to exercise proper due diligence” and that “weak underwriting standards, unsound risk management practices, increasingly complex and opaque financial products, and consequent excessive leverage combined to create vulnerabilities in the system”); OECD, *THE CORPORATE GOVERNANCE LESSONS FROM THE FINANCIAL CRISIS* 2 (2009) (finding that “to an important extent” the financial crises arose from “failures and weaknesses in corporate governance,” particularly in the areas of compensation incentives and risk management).

Essentially, the new ERM regulations attempt to repair manifest deficiencies in American corporate governance law in order to achieve appropriate macroprudential outcomes, particularly the containment of systemic risk. Yet, the experience with the MF Global fiasco and the London Whale derivatives amply demonstrate that basic enterprise-wide risk management norms still suffer from a failure to assess, disclose, and manage risk within the financial sector and even among the largest banks.

While there is some empirical support for the approach of the Fed and the OCC to ERM in the financial sector for at least the largest banks and bank holding companies, that evidence (which necessarily precedes the new rules) only tells the impact of ERM policies and practices at firms that willingly adopt ERM—not firms that adopt regulatory mandates foisted upon them in the wake of financial catastrophe. We are skeptical whether firms that do not willingly embrace the precepts of ERM will willingly accept a culture where CROs can stem initiatives supported by line managers. A culture change within a firm cannot arise from regulatory mandates alone.

Rather, incentives for compliance must outweigh incentives for inappropriate risk manipulation and risk non-disclosure. Organic redesign of corporate governance can succeed to an extent. In the final analysis, only incentives will persuade senior managers to forgo risk that can fatten bonus payouts at the expense of shareholders and systemic risk. At a minimum, the ERM initiatives of the OCC and the Fed fail to assure that substantive risk decisions change because the new rules do not change managerial incentives regarding risk mismanagement.

Because “systemic risks may result from a financial institution’s own risk management decisions (endogenous risk) or the risk management decisions of other actors in financial markets (exogenous risk),” addressing systemic risk will often begin only when significant financial institutions adopt effective internal risk management policies.²²² As one theorist has noted, however, “concentrating on financial institution boards’ risk monitoring oversight efforts is simply shortsighted.”²²³

More importantly, “while recently adopted corporate governance reforms enhance the effectiveness of regulated or conventional financial institutions’ ability to assess their internal risk-management approaches and executives’ and employees’ risk taking activities, these reforms generally fail to address exogenous systemic risk concerns that shadow banking institutions engender.”²²⁴ As individual firms enhance risk governance, there remains potential for an individual financial institution’s failure to introduce a ripple effect of solvency crises across the industry. Internal risk oversight,

222. *Macroprudential Regulation*, *supra* note 14, at 914.

223. *Id.*

224. *Id.*

however, must be coupled with broader risk governance across financial markets.

We describe regulation that focuses on internal institutional risk management as prudential regulation. Commentators refer to regulation that emphasizes a more holistic, systemic risk view of oversight as macroprudential regulation. Theorists exploring macroprudential regulation often define the term by comparing and contrasting it to prudential, or safety and soundness, regulation. While prudential regulation that focuses on the gatekeeping role of financial institution boards, macroprudential regulation considers endogenous and exogenous risks or the internal and external risks to financial markets.

The increasing interest in macroprudential regulation is, in part, the result of theorists' conclusions that macroprudential regulation may help to overcome the limits of prudential regulation. Because macroprudential regulation focuses on the regulation of the system rather than the regulation of the individual institutions that comprise the market participants in an industry, macroprudential regulation enhances the stability of the system. This approach to regulation offers containment policies that prevent risks from multiplying across the financial system, and ensures against market failures or shocks that threaten to disrupt a significant sector of the economy. As a result, macroprudential regulation is a more appropriate tool for monitoring systemic risks.²²⁵ As one commentator explains that macroprudential regulation aims to "control[] the credit growth that normally leads to asset price growth, which in combination with increasing risk appetite, [is] often driven by irrational exuberance."²²⁶

Macroprudential regulation is not intended to replace microprudential regulation; rather macroprudential regulation compliments microprudential regulation.²²⁷ There are, however, obvious limits to the reach of macroprudential policies. For example, macroprudential policies do not address the appropriate capitalization ratios that individual banks should maintain.²²⁸

In a recent speech, former SEC Chairman Mary Schapiro described the goals of macroprudential policy. According to Chairman Schapiro, macroprudential policies aim to identify and minimize systemic risk. Reaching this goal requires two important tools. First, commentators agreed that there must be a single systemic risk regulator with unfettered access to

225. Anna Gelpern, *Financial Crisis Containment*, 41 CONN. L. REV. 1051,1064–1065 (2009); see also Emiliios Avgouleas, *Rationales and Designs to Implement an Institutional Big Bang in the Governance of Global Finance*, 36 SEATTLE U. L. REV. 321, 374 (2013).

226. Avgouleas, *supra* note 225, at 374.

227. *Id.* ("When it comes to safeguarding macro-economic stability, [macroprudential regulation] is no substitute for monetary and fiscal policies.").

228. *Id.* ("[M]acroprudential policy may not act as a defense against inflation or macro-economic imbalance.").

market-wide information. Our regulatory framework is highly fragmented and, as a result, the creation of a single repository of information is necessary to address the information gaps that exist in the shadow of regulation. Because the authority of each regulator has statutorily defined limits, efforts to oversee systemic risk would be undermined without a regulatory authority empowered to review the impact of individual agency decisions or the effects of market participants' activities across financial markets.

Responding to the crisis, we would encourage the exploration of macroprudential regulatory policies. While defining the contours of these policies is beyond the scope of this Article, we imagine that asking important questions may offer the best path to identify an appropriate solution to concerns regarding the best governance practices to effectuate risk management. To that end, we query whether there are structural mechanisms that may be employed to enhance risk management within firms. As we note above, the introduction of risk management committees seems to be a step in the right direction. Concerns remain, however, when we consider the homogeneity of corporate boards and the important influence that diversity of viewpoints may have on desirable risk management outcomes. We also note that none of the proposed structural reforms dismantles the imperial power of the CEO.

Mitigating systemic risk will require effectively managing both endogenous and exogenous risks. If the culture of corporate boards undermines endogenous risk assessment what types of reforms might improve internal risk management policies and procedures? Even if internal risk management policies begin to reduce the likelihood that an individual firm will suffer a future solvency crisis, can regulations offer a method for protecting well-run firms from the risk management failures of industry counterparties? Ultimately, we might ask if there is a method by which macroprudential regulation might address the agency problem in the context of financial institution, i.e. can reforms effectively address the self-interested, individual incentives of directors and officers?

Commentators have introduced several theories that begin to answer these questions regarding internal institutional and systemic risk management. One suggestion may be to reconsider the current practice of relying on a single executive or CEO or at least revisit the authority, implied and actual, imputed to such individuals. Another approach may involve abandoning altogether the use of boards. A third proposal posits that greater diversity among board members may enhance decision-making. Finally, there are numerous ideas regarding how improvements to identifying risks within financial institutions and across financial markets may facilitate the reduction of systemic risks. In a forthcoming article, we offer our best reflections on addressing these questions. There may be significant merit to each of these proposals and, in light of the potential harms and spill-over

effects that systemic risks pose, the most laudable idea may be to allow a thousand flowers to blossom.

CONCLUSION

This Article explores the challenges of relying on flawed corporate governance and corporate governance reforms to effectively manage enterprise risk and mitigate against systemic risks. As a wave of technology and profit-incentivized compensation structures dominate financial markets, even basic transactions are rapidly changing. Today, even the simplest transactions, such as a stock purchase or sale, are executed over high-tech networks. Sophisticated market participants engage even more advanced technology and, following decades of interdisciplinary efforts, the assistance of mathematicians and scientists.

Recent proposals for large financial firms from the Fed and the OCC herald a potential revolution in corporate governance.²²⁹ While perhaps part of the natural evolution for financial institutions whose shares trade in public markets, i.e. banking institutions whose boards and executives are subject to the pressures of quarterly-earnings reports and shareholder elections, these corporate governance-oriented reforms are too weak to stem the tidal wave of enterprise risk and systemic risk that risk management failures at such firms create. Continued reliance on these types of reforms is not inherently problematic. The failure to recognize the limits of this approach, however, may well lead to even more devastating risk management failures, market disruptions, and the realization of irreversible systemic risks.

229. *E.g.*, Enhanced Prudential Standards and Early Remediation Requirements for Covered Companies and Foreign Banking Organizations, 79 Fed. Reg. 17240 (Mar. 27, 2014) (to be codified at 12 C.F.R. pt. 252) (implementing the Dodd-Frank Act's requirements for increased prudential standards, which includes the requirement for establishing a risk committee), *available at* <http://www.gpo.gov/fdsys/pkg/FR-2014-03-27/pdf/2014-05699.pdf>.