DYNAMIC REGULATION OF THE FINANCIAL SERVICES INDUSTRY

*Wulf A. Kaal**

INTRODUCTION

Much of the theoretical work on financial stability of the last several years suggests that financial instability is endogenous to the financial system. The Office of Financial Research ("OFR") reports that the financial crisis of 2007 "served as a painful reminder that the financial system is prone to internal instability . . . ."[1] Policy makers continue to struggle with determining financial fluctuations and shocks and the role the government and regulation can play in making financial institutions less disruptive.[2] Academics debate what kind of limits should be imposed on financial institutions to curtail the propensity of the financial industry to careen towards disaster.[3] The predominant approach in most jurisdictions entails

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* Associate Professor, University of Saint Thomas School of Law (Minneapolis). I would like to thank Alan Palmiter and the participants at the Spring 2013 *Wake Forest Law Review* Symposium for helpful comments. I am also grateful to research librarian Valerie Aggerbeck for outstanding support.

1. OFFICE OF FIN. RESEARCH, 2012 ANNUAL REPORT 12, *available at* http://www.treasury.gov/initiatives/wsr/ofr/Documents/OFR_Annual_Report_071912_Final.pdf. The report defines financial stability as "[a] financial system [that] is operating sufficiently to provide its basic functions for the economy even under stress." *Id.* at 1.

2. *See* Eduardo Porter, *Economists Agree: Solutions are Elusive*, N.Y. TIMES, Apr. 24, 2013, at B1, *available at* http://www.nytimes.com/2013/04/24/business/solutions-remain-elusive-after-financial-crisis.html?pagewanted=all (citing Oliver Blanchard, Chief Economist of the International Monetary Fund, to support the assertion that policymakers remain uncertain about the measures required to achieve financial stability).

3. *See* CHRIS BRUMMER, SOFT LAW AND THE GLOBAL FINANCIAL SYSTEM 57–59 (2012) (recommending cooperation between national financial regulatory authorities and their foreign counterparts, because promulgating new regulatory standards will require more creativity and flexibility in light of financial globalization); MARKUS BRUNNERMEIR ET AL., THE FUNDAMENTAL PRINCIPLES OF FINANCIAL REGULATION 10–11 (2009) (advocating "light-touch regulation" because "intrusive regulation is likely to cause behavioural changes that could usher in the next crisis"); JILL M. HENDRICKSON, REGULATION AND INSTABILITY IN U.S. COMMERCIAL BANKING: A HISTORY OF CRISES 231, 242–43 (2011) (correlating increased regulation with increased instability in the commercial banking industry); CHARLES P. KINDLEBERGER & ROBERT Z. ALIBER,

tightening financial regulation, requiring banks to raise more capital, and applying stricter rules to larger and potentially systemically significant financial institutions.[4] There is no consensus on the kind of institutions that may be needed to

MANIAS, PANICS, AND CRASHES: A HISTORY OF FINANCIAL CRISES 193 (5th ed. 2011) ("Most of the rules for sound banking are already incorporated in the regulations or are implicit in the banking tradition."); PERRY MEHRLING, THE NEW LOMBARD STREET: HOW THE FED BECAME THE DEALER OF LAST RESORT 9–10 (2011) (advocating a balance between discipline and elasticity in credit markets); ANDREAS F. LOWENFELD, INTERNATIONAL ECONOMIC LAW 733 (2d ed. 2008) (stating that the International Monetary Fund "remains an indispensable organization, as coordinator, law-giver, and *crisis manager*"); Anders Aslund, *Lessons from the East European Financial Crisis, 2008–10*, 2011 PETERSON INST. INT'L ECON. 1, 5 ("Today after the crisis, . . . effective pan-European bank regulation is needed."); John C. Coffee, Jr., *The Political Economy of Dodd-Frank: Why Financial Reform Tends to Be Frustrated and Systemic Risk Perpetuated*, 97 CORNELL L. REV. 1019, 1022–27, 1078–79 (2012) ("The key and recurring debate over financial reform is between those who distrust both legislation and regulation . . . and those who believe restraining systematic risk necessitates strong regulation."); Nicola Gennaioli et al., *Neglected Risks, Financial Innovation, and Financial Fragility*, 104 J. FIN. ECON. 452, 466 (2012) ("[R]ecent policy proposals, while desirable in terms of their intent to control leverage and fire sales, do not go far enough. It is not just the leverage, but the scale of financial innovation and of creation of new claims itself, that might require regulatory attention."); Gary Gorton & Andrew Metrick, *Regulating the Shadow Banking System*, 2010 BROOKINGS PAPERS ON ECON. ACTIVITY 261, 262 (stating that money market mutual funds, securitization, and sale-and-repurchase agreements are in need of further regulation; Jean Tirole, *Illiquidity and All Its Friends*, 49 J. ECON. LITERATURE 287, 308–09 (2011) (proposing a "delineat[ion of] a regulated sphere . . . in which the regulators defend the interests of unsophisticated investors" as an alternative to enlarging the scope of regulation).

4. *See* DEP'T OF THE TREASURY, FINANCIAL REGULATORY REFORM: A NEW FOUNDATION 2–4 (2009), *available at* http://www.treasury.gov/initiatives/Documents/FinalReport_web.pdf (arguing that an increase in the supervision and regulation of the banking industry would increase the industry's transparency and fairness, and advocating the rise of international regulatory standards and improved international cooperation); *Getting a Grip: How Financial Regulation is Being Tightened*, GUARDIAN (June 18, 2009, 4:24 PM), http://www.guardian.co.uk/business/2009/jun/18/financial-regulation-america-uk-europe (detailing the new reforms and market supervision regulations introduced by the United States, United Kingdom, and European Union); Patrick Jenkins & Brooke Masters, *RBS and Lloyds to Raise Extra £9bn*, FIN. TIMES (Mar. 27, 2013, 10:34 PM), http://www.ft.com/intl/cms/s/0/a9c5e900-96c2-11e2-a77c-00144feabdc0.html#axzz2XjhFwNT1 ("The [Financial Policy Committee], which is charged with spotting and defusing threats to the financial system, said supervisors should also consider even higher capital requirements for banks with concentrated exposures to risky areas or large trading books.").

adequately monitor and temper the financial industry.[5] There is also no broad agreement on the appropriate level of intensity for rules governing financial institutions.[6]

Financial regulation is usually enacted in the aftermath of financial crises.[7] Reinhart and Rogoff have demonstrated that bank crises are, and will likely continue to be, an integral part of economic cycles.[8] Financial regulation has followed most financial crises in the history of the United States.[9] Since 1792, the United States has experienced more than a dozen bank crises, including panics, bank runs, credit crises, and the collapse of Long-Term Capital Management.[10] Since 2002, corporate governance in the

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5. *See* Porter, *supra* note 2 ("[T]here is still so much uncertainty about what policies are needed to prevent another financial shock from tipping the world economy into the abyss again a few years down the road.").

6. *See* Howell E. Jackson, *Variation in the Intensity of Financial Regulation: Preliminary Evidence and Potential Implications*, 24 YALE J. ON REG. 253, 253 (2007) ("Compared to at least the United Kingdom and Germany, the intensity of securities enforcement actions in the United States appears to be strikingly higher. Not only are there more financial regulators in the United States, but they also carry bigger sticks than their foreign counterparts. While the laws on the books may be converging, the level of enforcement efforts seems to vary widely across national boundaries and even within regions such as Europe.").

7. *See* STUART BANNER, ANGLO-AMERICAN SECURITIES REGULATION: CULTURAL AND POLITICAL ROOTS, 1690–1860, at 281–89 (1998) ("[E]very so often, something outside the legal system changes profoundly—a war occurs, economic arrangements change, social norms change, something important is invented—and that external change influences the law."); Stuart Banner, *What Causes New Securities Regulation? 300 Years of Evidence*, 75 WASH. U. L. Q. 849, 850 (1997) ("If new technology doesn't cause new securities regulation, what does? In a nutshell, crashes."); Coffee, *supra* note 3, at 1020 ("[O]nly after a catastrophic market collapse can legislators and regulators overcome the resistance of the financial community and adopt comprehensive 'reform' legislation.").

8. *See generally* CARMEN M. REINHART & KENNETH ROGOFF, THIS TIME IS DIFFERENT: EIGHT CENTURIES OF FINANCIAL FOLLY (2011).

9. *See* Governor Daniel K. Tarullo, Speech at the Peterson Institute of International Economics, Financial Regulation in the Wake of the Crisis, (June 8, 2009), *available at* http://www.federalreserve.gov/newsevents/speech/tarullo20090608a.htm ("Following the banking crisis of the early 1930s, and the famous bank holiday declared by President Roosevelt soon after his inauguration, Congress enacted dramatic new measures that would define financial regulation for decades.").

10. *See, e.g.*, 1 HISTORY OF FINANCIAL DISASTERS, 1763–1995 (Stefan Altorfer ed., 2006); KINDLEBERGER & ALIBER, *supra* note 3, at 8 (listing the "big ten financial bubbles"); SCOTT B. MACDONALD & JANE E. HUGHES, SEPARATING FOOLS FROM THEIR MONEY: A HISTORY OF AMERICAN FINANCIAL SCANDALS (2007); REINHART & ROGOFF, *supra* note 8; *see also "Black Monday," The Stock Market Crash of October 19, 1987: Hearings Before the Comm. on Banking, Housing, & Urban Affairs*, 100th Cong. 35 (1988) (detailing the crash of 1987); *Learning*

From The Past: Lessons From the Banking Crises of the 20th Century: Hearing Before the Cong. Oversight Panel, 111th Cong. 65–67 (2009) (detailing the Savings and Loan Crisis of the 1980s); YOUSSEF CASSIS, CRISES AND OPPORTUNITIES: THE SHAPING OF MODERN FINANCE (2011); GAGARI CHAKRABARTI & CHITRAKALPA SEN, ANATOMY OF GLOBAL STOCK MARKET CRASHES: AN EMPIRICAL ANALYSIS vii–viii, 1–3 (2012) (discussing the crash of 2008 and giving a brief history of worldwide economic crashes leading up to the crashes of the modern economic world); RICHARD DALE, THE FIRST CRASH: LESSONS FROM THE SOUTH SEA BUBBLE 1 (2004) (listing some of modern America's market crashes); MATHIAS DEWATRIPONT ET AL., BALANCING THE BANKS: GLOBAL LESSONS FROM THE FINANCIAL CRISIS 1–4 (2010) (listing the modern crash, the Great Depression, the savings and loan crisis of the 1980s, and the collapse of Long Term Capital Management); ECONOMIC DISASTERS OF THE TWENTIETH CENTURY 51–52, 133, 194 (Michael J. Oliver & Derek H. Aldcroft eds., 2007) (discussing the Great Depression, the OPEC crisis, and the banking crisis of the late 1980s and early 1990s); MAURY KLEIN, RAINBOW'S END: THE CRASH OF 1929, at 207–39 (2001) (detailing the 1929 crash that led to the Great Depression); JOHAN A. LYBECK, A GLOBAL HISTORY OF THE FINANCIAL CRASH OF 2007–2010 xiv–xv (2011) (analyzing the cause and impact of the 2008 crash); PANIC: THE STORY OF MODERN FINANCIAL INSANITY 3–4 (Michael Lewis ed., 2009) (examining the economic crashes of the 1990s and 2000s by linking them back to the crash of 1987); THE PANIC OF 2008: CAUSES, CONSEQUENCES AND IMPLICATIONS FOR REFORM 1–4 (Lawrence E. Mitchell & Arthur E. Wilmarth, Jr. eds., 2010) (describing the cause and impact of the 2008 crash). Massive hedge fund failures include Amaranth Advisors (most significant loss of value), Bailey Coates, Cromwell Fund, Marin Capital, Aman Capital, Tiger Funds, and Long-Term Capital Management ("LTCM"), the most famous hedge fund collapse. *See* THE PRESIDENT'S WORKING GRP. ON FIN. MKTS., HEDGE FUNDS, LEVERAGE, AND THE LESSONS OF LONG-TERM CAPITAL MANAGEMENT 1, 10–22 (1999), *available at* http://www.treasury.gov/resource-center/fin-mkts/Documents/hedgfund.pdf (discussing the LTCM incident and recommending a number of measures to constrain excessive leverage); U.S. GEN. ACCOUNTING OFFICE, LONG-TERM CAPITAL MANAGEMENT: REGULATORS NEED TO FOCUS GREATER ATTENTION ON SYSTEMIC RISK 5–7 (1999), *available* at http://www.gao.gov/assets/230/228446.pdf [hereinafter LTCM Report] (detailing a history of LTCM's collapse, and the General Accounting Offices's proposed reforms in reaction to the collapse); ROGER LOWENSTEIN, WHEN GENIUS FAILED: THE RISE AND FALL OF LONG-TERM CAPITAL MANAGEMENT (2000); Franklin R. Edwards, *Hedge Funds and the Collapse of Long-Term Capital Management*, 13 J. ECON. PERSP. 189, 197–200 (1999) (detailing the collapse of LTCM); Christopher J. Green, *'The Day the Music Died': The Financial Tsunami of 2007–09*, *in* THE FINANCIAL CRISIS AND THE REGULATION OF FINANCE 16–17 (Christopher J. Green et al. eds., 2011) (analyzing the cause and impact of the 2008 crash); Michael R. King & Philipp Maier, *Hedge Funds and Financial Stability: Regulating Prime Brokers Will Mitigate Systemic Risks*, 5 J. FIN. STABILITY 283, 288 (2009) ("Prominent victims of funding illiquidity are LTCM, Amaranth Advisors, Bear Stearns and Lehman Brothers. In all cases, their asset positions had a positive mark-to-market value, but they were unable to meet margin calls."); Linda Chatman Thomsen et al., *Hedge Funds: An Enforcement Perspective*, 39 RUTGERS L.J. 541, 545–47 (2008) (explaining LTCM, its collapse, and the aftermath); Joseph G. Haubrich, *Some Lessons on the Rescue of Long-Term Capital Management* 3–6

United States has been, not just once but twice, substantially upgraded in response to crises, after more than seventy years of comparative regulatory inactivity. At the most general level, the Sarbanes-Oxley Act ("SOX") of 2002 aimed at increasing board independence, fixing the audit process, and improving disclosure and transparency.[11] Only eight years after enacting SOX, Congress again substantially overhauled the corporate governance regime via the Dodd-Frank Act.[12] Although SOX and the Dodd-Frank Act address different concerns precipitated by different causes, in different market environments and different world economic outlooks, it seems striking that so much regulatory activity was necessary in such a comparatively short timespan.

The literature on financial regulation may not have addressed the underlying causes and consequences of cyclical regulation adequately. Since the early 1980s, trends in the law and finance literature have been changing roughly every five years. In the 1980s, the Law and Economics movement gained substantial influence in legal academia, the courts, and the legislature.[13] In the

(Fed. Reserve Bank of Cleveland Policy Discussion Paper No. 19, 2007), *available at* http://ssrn.com/abstract=987558 (reviewing the restructuring and recapitalization of LTCM).

11. PAUL S. SARBANES, PUBLIC COMPANY ACCOUNTING REFORM AND INVESTOR PROTECTION ACT OF 2002, S. REP. NO. 107-205, at 1–2 (2002); *see also* Public Company Accounting Reform and Investor Protection ("SOX") Act of 2002, Pub. L. No. 107-204, 116 Stat. 745 (codified as amended in scattered sections of 18 U.S.C.); STEPHEN M. BAINBRIDGE, CORPORATE GOVERNANCE AFTER THE FINANCIAL CRISIS 141–42 (2011) ("Section 301's focus on the audit committee is broadly consistent with the general thrust of the Sarbanes-Oxley Act, which as a whole is mainly concerned with accounting and auditing issues."); Larry E. Ribstein, *Market vs. Regulatory Responses to Corporate Fraud: A Critique of the Sarbanes-Oxley Act of 2002*, 28 J. CORP. L. 1, 11–18 (2002) (critiquing the SOX's response to corporate fraud); Roberta Romano, *The Sarbanes-Oxley Act and the Making of Quack Corporate Governance*, 114 YALE L.J. 1521, 1529–33 (2005) (providing an evaluation of the SOX's substantive corporate governance mandates).

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

13. *See* Richard A. Posner, *The Law and Economics Movement*, 77 AM. ECON. REV. 1, 3–5 (1987) (defining the "law and economics" movement); *see also* MILTON FRIEDMAN & ROSE FRIEDMAN, FREE TO CHOOSE (1980); MILTON FRIEDMAN & ROSE FRIEDMAN, TYRANNY OF THE STATUS QUO 75–79 (1984) (looking at lawmaking as a method to avoid "waste"); ANTHONY T. KRONMAN & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF TORT LAW (1987); WILLIAM LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF TORT LAW vii (1987) (stating that "common law rules can be best explained as if they were designed to increase economic efficiency"); ANTHONY T. KRONMAN & RICHARD A. POSNER, THE ECONOMICS OF CONTRACT LAW 1 (1979) ("Since buying and selling—and related transactions, such as leasing and borrowing, which are also governed by contract law—are quintessentially economic activities, it would seem that economics should have something useful to say to students of contract law.");

early 1990s, Bernard Black precipitated a new wave of legal scholarship that emphasized the role of institutional investors in

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RICHARD A. POSNER, THE ECONOMICS OF JUSTICE vii (1981) (describing the role of economic analysis in understanding "a number of important political, economic, social, and legal arrangements"); PAUL H. RUBIN, BUSINESS FIRMS AND THE COMMON LAW: THE EVOLUTION OF EFFICIENT RULES 3 (1983) (noting a relation between the efficiency of the common law presumed by Richard Posner and the use of the courts to settle a dispute); Robert Cooter, *The Cost of Coase*, 11 J. LEGAL STUD. 1, 4–14 (1982) (proposing the use of liability law, taxes, and transferable property rights to correct externalities); Robert D. Cooter & Thomas S. Ulen, *An Economic Case for Comparative Negligence*, 61 N.Y.U. L. REV. 1067, 1069 (1986); David D. Friedman, *An Economic Analysis of Alternative Damage Rules for Breach of Contract*, 32 J.L. & ECON. 281, 282–83, 303–04 (1989) (debating the efficiency of compensating sellers for lost profits when awarding damages in breach of contract actions); Charles J. Goetz & Robert E. Scott, *Principles of Relational Contracts*, 67 VA. L. REV. 1089, 1149–50 (1981) (explaining the role of cost-minimizing incentives in negotiating executory contracts); Jack Hirshleifer, *The Expanding Domain of Economics*, 75 AM. ECON. REV. 53, 64 (1985) (discussing the theory that litigating conflicts ultimately leads to an efficient allocation of resources); Herbert Hovenkamp, *Rationality in Law and Economics*, 60 GEO. WASH. L. REV. 293, 293–94 (1992) (stating that the law and economics movement has added two important insights to the basic economic notions of rationality, including "that a person's calculation of the utility maximizing course of conduct is affected by the presence of legal penalties or rewards . . . [and] that many more encounters between people permit opportunities for bargaining behavior than economics has traditionally admitted . . ."); Robin Paul Malloy, *Invisible Hand or Sleight of Hand?: Adam Smith, Richard Posner and the Philosophy of Law and Economics*, 36 U. KAN. L. REV. 209, 258–59 (1988) (comparing Adam Smith's classical liberalism with Richard Posner's wealth maximization theory and exploring both theories' contributions to the law and economics movement); A. Mitchell Polinsky, *Resolving Nuisance Disputes: The Simple Economics of Injunctive and Damage Remedies*, 32 STAN. L. REV. 1075, 1080–81 (1980) (examining the use of injunctive remedies and damages to pursue efficiency and distributional equity); Richard A. Posner, *An Economic Theory of the Criminal Law*, 85 COLUM. L. REV. 1193, 1193 (1985) (describing "an outpouring of economic work on criminal law" concentrated in "the optimal tradeoff between certainty and severity of punishment, the comparative economic properties of fines and imprisonment, the economics of law enforcement and criminal procedure, and above all the deterrent and preventive effects of criminal punishment"); George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1, 4–5 (1984) (proposing a model of the litigation process regarding the relationship between the set of litigated disputes and the set of settled disputes which states that the determinants of litigation and settlement are solely economic); Robert E. Scott, *A Relational Theory of Secured Financing*, 86 COLUM. L. REV. 901, 903 (1986) ("[T]he impetus for secured financing derives from the financing relationship itself and from the parties' desire to exploit it fully."); John Shepard Wiley Jr., *Antitrust and Core Theory*, 54 U. CHI. L. REV. 556, 556–57 (1987) ("[V]irtually all courts and commentators accept economic efficiency as at least one relevant antitrust consideration."). *But see generally* Ronald M. Dworkin, *Is Wealth a Value?*, 9 J. LEGAL STUD. 191 (1980) (discussing the normative aspect of the economic analysis of law in the process of rejecting the theory, primarily as proposed by Richard Posner).

corporate governance.[14] In the late 1990s, the debate on global convergence in corporate governance preoccupied many leading legal minds.[15] The next wave of legal scholarship in the post-Enron era

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14. Robert C. Illig, *What Hedge Funds Can Teach Corporate America: A Roadmap for Achieving Institutional Investor Oversight*, 57 AM. U. L. REV. 225, 227 (2007); *see also* Bernard S. Black, *Agents Watching Agents: The Promise of Institutional Investor Voice*, 39 UCLA L. REV. 811, 886–87 (1992) ("Institutional voice is potentially valuable because of the need for *someone* to monitor corporate managers, with financial intermediaries as the only available candidates."); Bernard S. Black, *The Value of Institutional Investor Monitoring: The Empirical Evidence*, 39 UCLA L. REV. 895, 896 (1992) ("If legal rules, conflicts of interest, and manager agenda control keep financial institutions passive, then legal reform could invigorate institutional oversight of corporate managers."); John C. Coffee, Jr., *Liquidity Versus Control: The Institutional Investor as Corporate Monitor*, 91 COLUM. L. REV. 1277, 1336–38 (1991) (describing the optimal corporate monitor as having no conflicts of interest, a large stake in the corporation, and a long-term preferred investment horizon); Jill E. Fisch, *Relationship Investing: Will It Happen? Will It Work?*, 55 OHIO ST. L.J. 1009, 1047 (1994) ("[T]he value of the institutional investor depends on its decision to participate actively in corporate monitoring."); Ronald J. Gilson & Reinier Kraakman, *Reinventing the Outside Director: An Agenda for Institutional Investors*, 43 STAN. L. REV. 863, 905 (1991) ("Institutional investors must merely decide to act."); Joseph A. Grundfest, *Just Vote No: A Minimalist Strategy for Dealing with Barbarians Inside the Gates*, 45 STAN. L. REV. 857, 936 (1993) ("[A]ctivist shareholders can invigorate boards that would otherwise fail to confront incumbent CEOs or refuse to rethink corporate strategy."); Arthur Pinto, *Corporate Governance: Monitoring the Board of Directors in American Corporations*, 46 AM. J. COMP. L. 317 (1998); Stephen Thurber, *The Insider Trading Compensation Contract as an Inducement to Monitoring by the Institutional Investor*, 1 GEO. MASON L. REV. 119 (1994). *But see* Edward B. Rock, *The Logic and (Uncertain) Significance of Institutional Shareholder Activism*, 79 GEO. L.J. 445, 452–53 (1991) (arguing that the "optimists' vision of the institutional investor as the shareholders' champion . . . will prove illusory"); Mark J. Roe, *A Political Theory of American Corporate Finance*, 91 COLUM. L. REV. 10, 11, 66–67 (1991) (arguing that corporate finance laws in the United States in conjunction with the "politics of corporate finance structure" prevent the institutional investor from playing a large role in corporate governance); Roberta Romano, *Public Pension Fund Activism in Corporate Governance Reconsidered*, 93 COLUM. L. REV. 795, 796, 798–99 (1993) ("[T]here are no practical solutions to the problem of political influence on public pension funds short of a substantial restructuring of the funds toward defined contribution plans. Yet, such restructuring reduces, rather than increases, public funds' activism in corporate governance."); Manuel A. Utset, *Disciplining Managers: Shareholder Cooperation in the Shadow of Shareholder Competition*, 44 EMORY L.J. 71, 76–77, 115 (1995) (arguing that the institutional investors' involvement in corporate governance will be hindered by the competition for information that occurs when shareholders interact within a capital market).

15. Douglas M. Branson, *The Very Uncertain Prospect of "Global" Convergence in Corporate Governance*, 34 CORNELL INT'L L.J. 321, 323 (2001); Jeffrey N. Gordon, *Pathways to Corporate Convergence? Two Steps on the Road*

discussed the role of SOX and the function of gatekeepers, such as lawyers and accountants.[16] With the appearance of the 2007 credit

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to Shareholder Capitalism in Germany, 5 COLUM. J. EUR. L. 219, 219 (1999); Edward B. Rock, *America's Shifting Fascination with Comparative Corporate Governance*, 74 WASH. U. L. Q. 367, 367 (1996); *see also* Thomas J. André, Jr., *Cultural Hegemony: The Exportation of Anglo-Saxon Corporate Governance Ideologies to Germany*, 73 TUL. L. REV. 69, 69 (1998) (analyzing U.S. institutional investors' imposition of U.S. governance standards on foreign companies); William W. Bratton & Joseph A. McCahery, *Comparative Corporate Governance and the Theory of the Firm: The Case Against Global Cross Reference*, 38 COLUM. J. TRANSNAT'L L. 213, 213–14 (1999) (arguing that the corporate governance systems across the globe are "tied together by a complex incentive structure"); Brian R. Cheffins, *Current Trends in Corporate Governance: Going from London to Milan via Toronto*, 10 DUKE J. COMP. & INT'L L. 5, 5 (1999) (arguing that corporate governance should be studied on a global level rather than studying each country in isolation); John C. Coffee, Jr., *The Future as History: The Prospects for Global Convergence in Corporate Governance and Its Implications*, 93 NW. U. L. REV. 641, 650–53 (1998); Lawrence A. Cunningham, *Commonalities and Prescriptions in the Vertical Dimension of Global Corporate Governance*, 84 CORNELL L. REV. 1133, 1147–55 (1999) (discussing the trend toward a shareholder market model in Europe and Asia and a more global model in the United States); Henry Hansmann & Reinier Kraakman, *The End of History for Corporate Law*, 89 GEO. L.J. 439, 468 (2001) ("We predict, therefore, that as equity markets evolve in Europe and throughout the developed world, the ideological and competitive attractions of the standard model will become indisputable . . . . And as the goal of shareholder primacy becomes second nature even to politicians, convergence in most aspects of the law and practice of corporate governance is sure to follow."); Mary E. Kissane, *Global Gadflies: Applications and Implementations of U.S.-Style Corporate Governance Abroad*, 17 N.Y.L. SCH. J. INT'L & COMP. L. 621, 672–73 (1997).

16. *See* JOHN C. COFFEE JR., GATEKEEPERS: THE PROFESSIONS AND CORPORATE GOVERNANCE 1–3 (2006); *see also* Stephen M. Bainbridge et al., *Managerialism, Legal Ethics, and Sarbanes-Oxley Section 307*, 2004 MICH. ST. L. REV. 299, 326 ("Neither section 307 nor the new ABA rules will solve the problem of management-captured boards of directors."); Lawrence A. Cunningham, *Beyond Liability: Rewarding Effective Gatekeepers*, 92 MINN. L. REV. 323, 326 (2007) (recommending rewards for effective gatekeepers); Donald C. Langevoort, *Chasing the Greased Pig Down Wall Street: A Gatekeeper's Guide to the Psychology, Culture, and Ethics of Financial Risk Taking*, 96 CORNELL L. REV. 1209, 1212 (2011) (discussing the gatekeeping task for corporate lawyers); Donald C. Langevoort, *Seeking Sunlight in Santa Fe's Shadow: The SEC's Pursuit of Managerial Accountability*, 79 WASH. U. L. Q. 449, 452 (2001) ("[T]he Commission has focused more and more of its attention recently on gatekeeper strategies, seeking to enlist lawyers, directors, and especially accountants as its agents in the battle."); Lisa H. Nicholson, *A Hobson's Choice for Securities Lawyers in the Post-Enron Environment: Striking a Balance Between the Obligation of Client Loyalty and Market Gatekeeper*, 16 GEO. J. LEGAL ETHICS 91, 151 (2002) ("As a matter of public policy, it would be prudent to allow all lawyers the discretionary ability to disclose client misconduct, particularly when such conduct involves the use of the lawyers' professional services."); Richard W. Painter, *Convergence and Competition in Rules Governing Lawyers*

crisis, legal scholars moved on to discuss the causes of the crises and possible regulatory responses.[17] Some scholars have begun to question the existing regulatory paradigm.[18] However, initiatives for sustainable financial regulation are still largely missing. Anticipation of unknown future contingencies and the preemption of possible future crises do not play a significant role in the current regulatory framework or in the literature on financial regulation.

A common denominator of regulatory responses to crises is the reliance on stable and presumptively optimal rules.[19] Congress, financial regulators, and the literature on financial regulation rely almost exclusively on "stable" and presumptively "optimal" rules.[20]

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and Auditors, 29 J. CORP. L. 397, 426 (2004) (recommending different gatekeeping requirements for auditors and lawyers).

17. *See* Lucian Arye Bebchuk et al., *Managerial Power and Rent Extraction in the Design of Executive Compensation*, 69 U. CHI. L. REV. 751, 751 (2002) (arguing that the "role managerial power plays in the design of executive compensation" should be taken into account when examining corporate governance); Thomas W. Briggs, *Corporate Governance and the New Hedge Fund Activism: An Empirical Analysis*, 32 J. CORP. L. 681, 685 (2007); Jie Cai & Ralph A. Walkling, *Shareholders' Say on Pay: Does It Create Value?*, 46 J. FIN. & QUANTITATIVE ANALYSIS 299, 334 (2011) ("Proponents argue that the bill will increase shareholder democracy and align owner-manager interests. Opponents argue that it will usurp power that is best left to the management and boards of specific firms."); Jeffrey N. Gordon, *"Say on Pay": Cautionary Notes on the U.K. Experience and the Case for Shareholder Opt-In*, 46 HARV. J. ON LEGIS. 323, 366–67 (2009).

18. *See* KATHLEEN C. ENGEL & PATRICIA A. MCCOY, THE SUBPRIME VIRUS: RECKLESS CREDIT, REGULATORY FAILURE, AND NEXT STEPS 255 (2011) (assessing whether the Dodd-Frank Act adequately addresses agency inaction and whether federal regulators will effectively use their newly implemented enforcement powers); Coffee, *supra* note 3, at 1079 (noting aggressive resistance to both SOX and the Dodd-Frank Act); Charles K. Whitehead, *The Goldilocks Approach: Financial Risk and Staged Regulation*, 97 CORNELL L. REV. 1267, 1267 (2012) (warning against adopting new financial risk regulation "without first assessing its broader impact on risk taking"); Brett McDonnell, *Dampening Financial Regulatory Cycles* 2 (Minn. Legal Studies Research Paper Series, Research Paper No. 13-09, 2013), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2217806 (arguing that the current regulatory response to financial crisis is not the ideal response);Roberta Romano, *Regulating in the Dark* 31 (Yale Law & Econ. Research Paper No. 442, 2012), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1974148 (arguing that the current way Congress legislates during a financial crisis is "not conducive to high-quality decisionmaking [sic]").

19. *See* Wulf A. Kaal, *Evolution of Law: Dynamic Regulation in a New Institutional Economics Framework* 2–3 (Univ. of St. Thomas (Minn.) Legal Studies Research Paper No. 13-17, 2013), *available at* http://ssrn.com/abstract=2267560 ("[T]he institutional infrastructure for rulemaking was geared towards the creation of rules for governing a relatively stable society with less upward mobility and relatively stable economic and market environments.").

20. *See id.* at 8.

Economic and market conditions and the corresponding requirements for optimal and stable rules are constantly evolving and create substantial future contingencies for rulemaking. Although they do not take unknown future contingencies into account, stable and presumptively optimal rules remain the uniform response to financial crises.[21] To attain certainty and increase predictability, rulemakers discount or often willingly accept unknown future contingencies and the inevitable need for rule revision, amendments, and retractions.[22] If and when future contingencies are realized and the existing sets of rules prove to be suboptimal, Congress and financial regulators propose and enact additional stable sets of rules to address shortcomings in financial regulation. In an increasingly innovative, complex, and globalized financial environment, future financial crises may require perhaps even more extensive governance adjustments.

A regulatory framework that relies exclusively on stable and presumptively optimal rules may not be able to adequately address future challenges. Amendments, revisions, and retractions of existing rules create substantial transaction costs and uncertainty. Rules established in reaction to financial crises also inevitably fail to soften, curtail, or preempt the effects of financial crises, because reactive rules are mostly tailored to the economic and regulatory issues at the time of their enactment and often ignore possible future contingencies. A preferable solution would avert the downsides of cyclical and merely responsive regulation.

This Essay outlines the possible role of dynamic elements in financial regulation. Dynamic regulation may supplement the existing regulatory framework and may help remedy its shortcomings, such as the need for perpetual rule enactment, adjustment, and revision. Dynamic elements in the regulatory structure may allow regulators to continually adapt to new market environments, financial innovation, and changes in financial markets as a result of financial regulation. Dynamic regulation may help create a governance mechanism that is constantly evolving and adapting to the given market environment, financial innovation, and regulatory environment. Although the implementation of dynamic elements in regulatory structures is uncertain, some promising regulatory tools with dynamic elements already exist, including contingent capital securities, corporate integrity agreements, and deferred prosecution agreements.

The concept of dynamic regulation supports a regulatory structure that curtails the regulatory sine curve and its negative

21. *Id.* at 8, 13.
22. *See id.* at 13 (describing "*ex-ante* experimentation" in rulemaking).

and costly consequences.[23] The regulatory sine curve illustrates rulemaking following financial crises and the inevitable relaxation, retraction, and revision of established rules thereafter.[24] While the sine curve may be inevitable, its costly and suboptimal regulatory effects can be limited. Dynamic regulation as a supplemental optimization process for rulemaking can help curtail the negative effects and regulatory outcomes generated by the sine curve of regulation. The author shows how dynamic elements in financial regulation could help change the relationship between the occurrence and timing of common elements of financial crises and the regulatory sine curve. Including dynamic elements in regulation changes the relationship between the sine curve of financial regulation and common elements of financial crises. The author evaluates these possible changes by depicting the sine curve, with and without dynamic elements, in relation to the phase-shifted first derivative ("cosine curve"), describing common elements of financial crises. As events in the real economy ("cosine curve") spiral towards financial disaster, the dynamically enhanced regulatory sine curve expands. Accordingly, dynamic elements could facilitate rulemaking when it is most needed—ex-ante before crises—to curtail the effects of crises and suboptimal regulatory outcomes ex-post after crises.

After a short introduction, Part I introduces the literature on the political economy of financial regulation, delineates common denominators of financial crises, and illustrates the sine curve of financial regulation by discussing examples of regulatory expansion and contraction post SOX and Dodd Frank. In Part II, the author discusses the concept of dynamic regulation of the financial services industry. The author suggests that the existing regulatory sine curve could be optimized with dynamic elements and outlines how dynamic elements in financial regulation could change the relationship between the regulatory sine curve and the occurrence and timing of common elements of financial crises. Part III outlines possible implementation alternatives for dynamic regulation with a focus on contingent capital securities, deferred prosecution agreements, and corporate integrity agreements.

I. THE POLITICAL ECONOMY OF FINANCIAL REGULATION

Financial crises throughout history,[25] including the Great Depression and the 2007 financial crisis, have demonstrated that financial rulemaking does not happen when it is most needed.

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23. *See id.* ("This process can help minimize *ex-post* trial-and-error experimentation with stable and presumptively optimal rules after previous stable rules have emerged as failures.").

24. Coffee, *supra* note 3, at 1029.

25. *See generally* REINHART & ROGOFF, *supra* note 8.

Rather, it takes place when it is politically opportune.[26] Financial rulemaking is most needed ex-ante financial crises not ex-post, when crises have created steep costs on the economy, impacted markets and financial institutions, and affected the rulemaking process.

The aftermath of financial crises creates suboptimal conditions ("shock conditions") for rulemaking.[27] Rulemaking takes place in an economic, political, and legal environment that creates a sense of urgency for rulemaking and may not permit a full evaluation of the possible consequences for all constituencies. Shock conditions that call for rulemaking often have not been appropriately analyzed and absorbed in a systematic fashion and are thus often associated with high levels of incomplete information.[28] The bounded rationality of public rulemakers—who are satisfying their respective constituencies rather than all affected parties and therefore may be more willing to act in an environment of incomplete information—can aggravate shock conditions during the rulemaking process.

The literature on the financial economy of financial regulation has attempted to conceptualize the processes that are involved in the existing framework for rulemaking.[29] Financial regulation is

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26. Coffee, *supra* note 3, at 1021–22.

27. Romano, *supra* note 18, at 1.

28. *See id.* at 2 ("In such a context, even the most informed regulatory response . . . will be prone to error, and is likely to produce backward-looking regulation that takes aim at yesterday's perceived problem, rather than tomorrow's, for regulators necessarily operate under considerable uncertainty and at a lag behind private actors.").

29. *See, e.g.*, BANNER, *supra* note 7; FINANCIAL MARKET REGULATION IN THE WAKE OF FINANCIAL CRISES: THE HISTORICAL EXPERIENCE (Alfredo Gigliobanco & Gianni Toniolo eds., 2009); HENDRICKSON, *supra* note 3, at 10–14 (discussing the influence of various theories during the process of developing economic regulation); SIMON JOHNSON & JAMES R. KWAK, 13 BANKERS: THE WALL STREET TAKEOVER AND THE NEXT FINANCIAL MELTDOWN (2010); Gary S. Becker, *A Theory of Competition Among Pressure Groups for Political Influence*, 98 Q. J. ECON. 371, 371 (1983) (explaining the influence of "the competition for political favors" on market regulation); Efraim Benmelech & Tobias J. Moskowitz, *The Political Economy of Financial Regulation: Evidence from U.S. State Usury Laws in the 19th Century*, 65 J. FIN. 1029, 1029 (2010) (arguing that regulation is created in part as a result of economic and political policies "favoring wealthy political incumbents"); Christopher Carrigan & Cary Coglianese, *Oversight in Hindsight: Assessing the U.S. Regulatory System in the Wake of Calamity*, *in* REGULATORY BREAKDOWN: THE CRISIS OF CONFIDENCE IN U.S. REGULATION 1, 9–11 (Cary Coglianese ed., 2012) (discussing the implications of America's current tendency to pass regulation "in the wake of calamities"); Stephen J. Choi & A.C. Pritchard, *Behavioral Economics and the SEC*, 56 STAN. L. REV. 1, 21–36 (2003) (looking at the seven behavioral biases of the SEC and their potential impact on the creation of regulations); John C. Coffee, Jr., *Systemic Risk After Dodd-Frank: Contingent Capital and the Need for Regulatory Strategies Beyond Oversight*, 56 STAN. L. REV. 795, 819 (2011) (arguing that regulatory disparities enabled the "U.S. financial industry to insist on maintaining the deregulation of the OTC derivatives and the limited oversight of investment bank leverage");

characterized and controlled by a classic collective action problem. As a result, regulatory oversight is never constant. In the competition to shape policies and attain the most favorable conditions for themselves via rulemaking, small and well-organized special interest groups (such as the financial industry) dominate latent groups (such as dispersed investors).[30] During and after crises, however, political entrepreneurs assume the transaction costs of organizing the otherwise disinterested latent groups to temporarily overcome the predominance of special interest groups in the rulemaking process.[31] Following crises, the process is reversed

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Coffee, *supra* note 3, at 1020–23 (explaining the passage of reform legislation during financial crises); Zachary J. Gubler, *Public Choice Theory and the Private Securities Market*, 91 N.C. L. REV. 745, 750 (2013) (noting that regulators and lawmakers are able to pursue their own interests when their actions and the legislation are not scrutinized by the electorate); Eric Helleiner & Stefano Pagliari, *The End of Regulation? Hedge Funds and Derivatives in Global Financial Governance*, *in* GLOBAL FINANCE IN CRISIS: THE POLITICS OF INTERNATIONAL REGULATORY CHANGE 74, 87–90 (Eric Helleiner et al. eds., 2010) (predicting the end of hedge fund and derivative market self-regulation); David Hirshleifer, *Psychological Bias as a Driver of Financial Regulation*, 14 EUR. FIN. MAN. 856, 856 (2008) (arguing that "regulation is the result of psychological biases on the part of political participants"); Randall S. Kroszner, *On the Political Economy of Banking and Financial Regulatory Reform in Emerging Markets*, 10 RES. FIN. SERVICES 33 (1998); John Nugee, *Current Issues in Financial Regulation, and the Return of the Political Economy*, 11 J. INT'L BUS. & L. 333, 334 (2012) (arguing that the new approach of the authorities as "pro-active agents of change" is a sharp departure from the regulatory approach leading up to the crash in 2007); Marco Pagano & Paolo Volpin, *The Political Economy of Finance*, 17 OXFORD REV. ECON. POL'Y 502, 517 (2001) (applying the political-economy approach to understand the differences in financial regulation across the globe); Jeffrey J. Rachlinski & Cynthia R. Farina, *Cognitive Psychology and Optimal Government Design*, 87 CORNELL L. REV. 549, 553 (2002) (stating that bad public policy can be attributed to flawed human judgment); George J. Stigler, *The Theory of Economic Regulation*, 2 BELL J. ECON. & MGMT. SCI. 3, 3 (1971) ("[A]s a rule, regulation is acquired by the industry and is designed and operated primarily for its benefit."); Pierre-Hugues Verdier, *The Political Economy of International Financial Regulation*, 88 IND. L.J. (forthcoming 2013); Whitehead, *supra* note 18, at 1268–69 (arguing that U.S. financial regulation is often adopted without a full understanding of the possible implications); McDonnell, *supra* note 18, at 1–2 (noting that the government creates regulation in response to crises to reduce speculative bubbles and to avoid further crises); Katharina Pistor, *On the Theoretical Foundations for Regulating Financial Markets* 1 (Columbia Law Sch. Pub. Law & Legal Theory Working Paper No. 12-304, 2012), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2113675 ("How we think about financial markets determines how we regulate them."); Romano, *supra* note 18, at 2–3 (arguing that understanding human nature is essential to understanding the regulation created during crises).

30. MANCUR OLSON, THE LOGIC OF COLLECTIVE ACTION 2–3 (1965) (arguing that small groups are generally more successful than large groups at achieving their goals).

31. ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION 41 (1990).

and regulatory oversight diminishes as societies and markets return to their prior equilibrium. As a result of this dichotomy, reform and deregulatory legislation are often enacted in quick succession. Balanced and sustainable rulemaking is largely elusive.

A. *Common Denominators of Financial Crises*

The causes of bank instability and financial crises are manifold; pinpointing a particular cause may be impossible. Some scholars point to the structure of commercial banking and argue that the structure of banking and banking practices were determined by suboptimal regulation and regulatory policy, not by market forces.[32] Others contend that the health of the banking sector is related to the health of the real estate sector and view bank failures as an inevitable part of the contraction in consumer spending.[33] Central Bank policies may be another possible explanation for bank (in)stability.[34] There is some evidence that banking instability and crises characterized the early history of U.S. commercial banking,[35] while the creation of the Federal Reserve Bank in later years created stability and resulted in fewer crises.

Bank crises share several core characteristics. The common characteristics include the following core elements: (1) an exogenous shock, (2) a favorable response to the exogenous shock, (3) favorable conditions dissipate, and (4) a systemic rise in bank failures.[36] An exogenous shock in the economy often starts this sequence of events by creating conditions for optimism in the real and financial sectors of the economy.[37] Exogenous shocks often include fundamental technological advancements.[38] The response to exogenous shocks

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32. Charles W. Calomiris & Gary Gorton, *The Origins of Banking Panics: Models, Facts, and Bank Regulation*, *in* FINANCIAL MARKETS AND FINANCIAL CRISES 109, 166 (R. Glenn Hubbard ed., 1991); Mark Carlson & Kris James Mitchener, *Branch Banking as a Device for Discipline: Competition and Bank Survivorship During the Great Depression*, 117 J. POL. ECON. 165 (2009); Richard S. Grossman, *The Shoe that Didn't Drop: Explaining Banking Stability During the Great Depression*, 54 J. ECON. HIST. 654, 654 (1994).

33. *See generally* PETER TEMIN, DID MONETARY FORCES CAUSE THE GREAT DEPRESSION? (1976); Grossman, *supra* note 32, at 655–66.

34. KINDLEBERGER & ALIBER, *supra* note 3, at 74.

35. *Id.* at 258–62.

36. HENDRICKSON, *supra* note 3, at 5–6.

37. *Id.* at 5.

38. For instance, the advent of the telegraph, the telephone and the Internet, as well as the sixty consecutive years of rising real estate prices at around ten percent, may all be viewed as exogenous shocks. Other examples include the vast expansion of the U.S. railway system and fundamental shifts in production methods, such as automation and mass production. Henry Benavides Puerto, *Evolution from Invention to Technological Innovation and Influence of "Objects" on Economic Cycles and on Paradigms*, *in* INNOVATION AND TECHNOLOGY — STRATEGIES AND POLICIES 61 (Oliverio D. D. Soares et al. eds.,

historically entailed an expansion of credit.[39] By lowering credit requirements in an economic environment in which loans were perceived as less risky, bankers capitalized on the new opportunities created by entrepreneurs who were ready to seize on the expectation of future profits.[40] In more recent years, rapid financial innovation accompanied this credit expansion.[41] An inevitable loss in

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1997); *see also* Eugene N. White, *Bubbles and Busts: The 1990s in the Mirror of the 1920s, in* THE GLOBAL ECONOMY IN THE 1990S: A LONG-RUN PERSPECTIVE 193, 202 (Paul W. Rhode & Gianni Toniolo eds., 2006); Roger W. Ferguson Jr. & William L. Wascher, *Distinguished Lecture on Economics in Government: Lessons from Past Productivity Booms*, 18 J. ECON. PERSP. 3, 7 (2004). For an in-depth discussion of major increases in stock prices that have coincided with the advent of new technology, see Kevin J. Lansing, *Speculative Growth, Overreaction, and the Welfare Cost of Technology-Driven Bubbles*, 83 J. ECON. BEHAV. & ORG. 461, 464 (2012).

39. HENDRICKSON, *supra* note 3, at 5.

40. Leading up to the 2007 credit crisis, the credit expansion was facilitated and accelerated by "covenant-lite loans" and public policies that allowed creditors who previously would not have qualified for loans to participate in the value creation. MARCO ANNUNZIATA, THE ECONOMICS OF THE FINANCIAL CRISIS: LESSONS AND NEW THREATS 27 (2011); A. David Austill, *Legislation Cannot Replace Ethics in Regulatory Reform*, 2 INT'L J. BUS. & SOC. SCI. 61, 62 ("It was during President Bill Clinton's administration with Andrew Cuomo as Housing and Urban Development (HUD) Secretary when the rules for home ownership financing became relaxed . . . ."); Michael D. Bordo & Christopher M. Meissner, *Does Inequality Lead to a Financial Crisis?*, 31 J. INT'L MONEY & FIN. 2147, 2149 (2012) ("During this period, lending standards were relaxed and practices like NINJA and NODOC loans were condoned. These developments led to the growth of subprime and Alt A mortgages which were securitized and bundled into mortgage backed securities and then given triple A ratings which contributed to the financial fragility."); Albert Choi & George Triantis, *Market Conditions and Contract Design: Variations in Debt Contracting*, 88 N.Y.U. L. REV. 51, 53–54 (2013) ("Covenant-lite deals became increasingly common through the 2000s until the onset of the financial crisis in 2007. Market observers attributed this to an excess supply of credit."); Charles K. Whitehead, *The Evolution of Debt: Covenants, the Credit Market, and Corporate Governance*, 34 J. CORP. L. 641, 656 (2009); Matthew T. Billett et al., *Bank Skin in the Game and Loan Contract Design: Evidence from Covenant-Lite Loans* 1 (June 27, 2013) (working paper), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2169624 ("[C]ovenant-lite loans lack financial maintenance covenants, granting the issuer greater flexibility, but leaving the lender with little recourse in the event the issuer's condition deteriorates."); Justin Yifu Lin & Volker Treichel, *The Unexpected Global Financial Crisis: Researching its Root Cause* 11 (The World Bank, Pol'y Research Working Paper No. 5937, 2012) ("With signs that the incessant rise in real estate was coming to an end, banks decided to . . . ask borrowers . . . to start paying off debt . . . . [A]s the downturn in house prices intensified, mortgage delinquencies, charge-offs and defaults accelerated.").

41. *See* Alternative Net Capital Requirements for Broker-Dealers that Are Part of Consolidated Supervised Entities, 69 Fed. Reg. 34,428, 34,429 (June 21, 2004) (codified at 17 C.F.R. pts. 200 & 240) (citing changes in both the U.S. and international financial markets as the impetus behind the new rules); Stephen Labaton, *Agency's '04 Rule Let Banks Pile Up New Debt*, N.Y. TIMES, Oct. 3, 2008, at A1, *available at* http://www.nytimes.com/2008/10/03/business/03sec

confidence often followed the favorable conditions because of a fall in real estate prices, a sharp decline in the stock markets, or large business or bank failures, among many other factors. These factors exposed the fragility of credit expansion and financial innovation and resulted in a significant and often systemic rise in bank failures.

B. Regulatory Sine Curve

The cyclical nature of public rulemaking under conditions of incomplete information and bounded rationality is costly and can produce suboptimal regulatory outcomes, often with long-term implications for financial markets and the economy.[42] Regulatory cycles also make it nearly impossible to adequately address financial regulatory concerns. Systemic risk is particularly difficult to address if rules are enacted in a cyclical and reactive format.[43]

The regulatory sine curve describes governance adjustments in reaction to financial crises and the inevitable relaxation, revision, and retraction of rules that were enacted as part of the governance adjustment.[44] The phrase "regulatory sine curve" means

> that (1) regulatory oversight is never constant but rather increases after a market crash, and then wanes as, and to the extent that, society and the market return to normalcy, and (2) the public's passion for reform is short-lived and the support it gives to political entrepreneurs who seek to oppose powerful interest groups on behalf of the public also wanes after a brief window of opportunity.[45]

Others have described "regulatory sine curves" as a budgetary phenomenon: regulatory budgets increase after a downturn and drop when markets rebound.[46] The sine curve reflects competing demands and desires.[47] The public demands tough regulation with a large role for the regulator after crises.[48] In the absence of crises,

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.html?pagewanted=all&_r=; Ross Levine, *An Autopsy of the U.S. Financial System* 20–22 (Nat'l Bureau of Econ. Research, Working Paper No. 15956, 2010) (describing three policy decisions that "contributed to the onset, magnitude, and breadth of the financial crisis").

42. Romano, *supra* note 18, at 4–5.

43. Coffee, *supra* note 3, at 1020–21.

44. *Id.* at 1029–30.

45. *Id.* at 1029.

46. Howell E. Jackson & Mark J. Roe, *Public and Private Enforcement of Securities Laws: Resource-Based Evidence* 26–27 (Harvard Law Sch. Pub. Law & Legal Theory, Paper No.638, 2009), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1000086.

47. Eric J. Pan, *Understanding Financial Regulation* 40 (Jacob Burns Inst. for Advanced Legal Studies, Working Paper No. 329, 2011) *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1805018.

48. *Id.*

however, the intensity of regulation diminishes, because regulators are unable to commit to long-term regulatory strategies and instead use private strategies like self-regulation to overcome resource constraints.[49]

1. Expansion

The New Deal securities legislation, which defined the structure of financial regulation for the better part of the twentieth century and continues to define it today, was largely a legislative response to the Great Depression, banking panics, and the overabundance of leverage in equity markets.[50] Twenty years prior to the enactment of the New Deal legislation, the creation of the Federal Reserve had been intended as both a financial stability measure in response to crises and as an instrument of monetary policy.[51] Banking law reforms enacted after the 1980s savings and loan crisis emphasized the regulation of depository institutions.[52] Financial stability, while partially motivating these reforms, was not a major aspect of the reform legislation following the 1980s savings and loan crisis.[53]

SOX and the Dodd-Frank Act are the two most substantial regulatory upgrades to the New Deal legislation,[54] and they illustrate the regulatory expansion that follows crises. SOX's focus

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49. *Id.* at 41.

50. BANNER, *supra* note 7.

51. *Id.*; *see also* Kara Karlson, *Checks and Balances: Using the Freedom of Information Act to Evaluate the Federal Reserve Banks*, 60 AM. U. L. REV. 213, 219–20 (2010).

52. Michael P. Malloy, *Nothing to Fear but FIRREA Itself: Revising and Reshaping the Enforcement Process of Federal Bank Regulation*, 50 OHIO ST. L.J. 1117, 1117–18 (1989).

53. *Id.* at 1118.

54. *See* SANJAY ANAND, ESSENTIALS OF THE DODD-FRANK ACT 7 (2011) ("The Dodd-Frank Act . . . is one of the most ambitious regulated reforms that has governed the financial industry since the Great Depression era."); E. NORMAN VEASEY & CHRISTINE T. DI GUGLIELMO, INDISPENSABLE COUNSEL: THE CHIEF LEGAL OFFICER IN THE NEW REALITY 14–26 (discussing the implications of SOX and the Dodd-Frank Act to the role of general counsel); FIN. REGULATORY REFORM WORKING GRP., WEIL, GOTSHAL, & MANGES LLP, FINANCIAL REGULATORY REFORM: AN OVERVIEW OF THE DODD-FRANK WALL STREET REFORM AND CONSUMER PROTECTION ACT I (2010), *available at* http://www.weil.com/files/upload/Weil%20Dodd-Frank%20Overview.pdf (calling the Dodd-Frank Act a package of financial regulatory reforms "unparalleled in scope and depth since the New Deal"); Elisabeth Bumiller, *Bush Signs Bill Aimed at Fraud In Corporations*,N.Y. TIMES, July 31, 2002, at A1, *available at* http://www.nytimes.com/2002/07/31/business/corporate-conduct-the-president-bush-signs-bill-aimed-at-fraud-in-corporations.html?src=pm ("[President George W. Bush] called [SOX] 'the most far-reaching reforms of American business practices since the time of Franklin Delano Roosevelt.'"). *But see* Stephen M. Bainbridge, *Dodd-Frank: Quack Federal Corporate Governance Round II*, 95 MINN. L. REV. 1779, 1794 (2011) ("[B]oth SOX and Dodd-Frank simply represent additional milestones in a process of gradual federalization.").

on investor protection, while far-reaching in many respects, makes it a traditional piece of securities regulation. By contrast, the Dodd-Frank Act expands the framework for securities and financial regulation in an unprecedented fashion.[55] By creating new supervisory entities with an emphasis on systemic risk,[56] among other measures, the Dodd-Frank Act attempts to address systemic concerns that regulators in the United States largely ignored in the decades preceding the 2007 credit crisis.[57] European financial regulation, following financial crises, displays similar characteristics and illustrates the inevitable regulatory expansion and contraction that follows crises.[58] An evaluation of European regulatory trends is, however, beyond the scope of this Essay.

2. *Contraction*

The regulatory expansion that follows crises inevitably leads to amendments, revisions, and retractions of previously established rules. For instance, the changes in financial and banking laws in the 1980s and 1990s were mostly deregulatory.[59] Deregulation in the late 1990s culminated in the Gramm-Leach-Bliley Act of 1999, which allowed the combination of investment banking, commercial banking, and insurance services[60] by partially repealing the Glass-Steagall Act of 1933.[61] These deregulatory laws, in combination

55. *See* Cheryl D. Block, *A Continuum Approach to Systemic Risk and Too-Big-to-Fail*, 6 BROOK. J. CORP. FIN. & COM. L. 292, 292–93 (2012) (noting the Dodd-Frank Act's significance for systemic risk regulation).

56. Section 111 of the Dodd-Frank Act established the Financial Stability Oversight Council, whose mission is to identify risks and respond to emerging threats to financial stability. 12 U.S.C. § 5321 (2012). Section 152 of the Dodd-Frank Act established the Office of Financial Research, which collects data, conducts research, and develops new tools to measure and monitor risk. *Id.* § 5342. Section 1011 created the Bureau of Consumer Financial Protection to implement consumer financial laws. *Id.* § 5491.

57. *See* Jeffrey N. Gordon & Christopher Muller, *Confronting Financial Crisis: Dodd-Frank's Dangers and the Case for a Systemic Emergency Insurance Fund*, 28 YALE J. ON REG. 151, 177–78 (2011) ("[I]t is hard to believe that regulators were unaware of declining standards in the underwriting of subprime mortgages, the increased exposure of firms to subprime securitization, and the systemic risks of the rapidly escalating CDS marketplace.").

58. *See* Jennifer Welch, *The Financial Crisis in the European Union: An Impact Assessment and Response Critique*, 2 EUR. J. RISK REG. 481, 483–84 (2011) (describing the upheaval of the financial markets in the European Union in 2007).

59. Philip E. Strahan, *The Real Effects of U.S. Banking Deregulation*, 85 REV. FED. RES. BANK OF ST. LOUIS 111, 111–13 (2003).

60. *See* Lawrence J. White, *The Gramm-Leach-Bliley Act of 1999: A Bridge Too Far? Or Not Far Enough?*, 43 SUFFOLK U. L. REV. 937, 937, 942–43 (2010) (describing the implications of the Gramm-Leach-Bliley Act for commercial and investment banking).

61. *Id.* at 938.

with administrative actions that implemented and often preceded them, removed many restrictions on the geographic reach of commercial banks as well as their activities and affiliations.[62]

Both SOX and the Dodd-Frank Act were amended and revised. Some of their most controversial provisions were not enforced. A few highlights include the lack of enforcement of congressional pronouncements in sections 307 and 402 of SOX,[63] the partial repeal of section 404 of SOX[64] via the Dodd-Frank Act, and the repeal of certain provisions of the Dodd-Frank Act and SOX via the Jumpstart our Business Startups ("JOBS") Act.[65]

Section 307, which can be traced back in large part to a proposal penned by Richard Painter,[66] was implemented as part of SOX.[67] Section 307 requires the SEC to adopt standards for the professional conduct of attorneys who represent public companies before the SEC.[68] The reporting requirement under section 307 requires attorneys to report material violations of federal or state securities laws or breaches of fiduciary duty to the issuer's chief legal officer or to its chief executive officer.[69] If the issuer fails to take action, the attorney may be required to report "up the ladder" to the company's audit committee,[70] and under more limited circumstances, the attorney may be permitted to disclose a material violation of the law to the SEC.[71] Although some lawyers were inevitably aware of executive misconduct in numerous instances,[72] there is no evidence

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62. Strahan, *supra* note 59, at 111.

63. Sung Hui Kim, *Naked Self-Interest? Why the Legal Profession Resists Gatekeeping*, 63 FLA. L. REV. 129, 132–33 (2011) (addressing the enforcement of section 307); Robert A. Prentice & David B. Spence, *Sarbanes-Oxley as Quack Corporate Governance: How Wise is the Received Wisdom?*, 95 GEO. L.J. 1843, 1896 (2007) (addressing the enforcement of section 402).

64. 15 U.S.C. § 7262 (2012).

65. Jumpstart Our Business Startups ("JOBS") Act, Pub L. No. 112-106, §§ 102(B)(3), 103, 104, 126 Stat. 306, 309–10 (codified as amended in scattered sections of 15 U.S.C.).

66. Richard W. Painter & Jennifer E. Duggan, *Lawyer Disclosure of Corporate Fraud: Establishing a Firm Foundation*, 50 SMU L. REV. 225, 261–63 (1996).

67. SOX, Pub. L No. 107-204 § 307, 116 Stat. 745, 784 (2002) (codified as amended at 15 U.S.C. § 7245 (2012)).

68. *Id.*

69. *Id.*

70. *Id.*

71. *See* 17 C.F.R. § 205.3(d)(2) (2003) (listing the circumstances warranting the disclosure of a material violation of the law to the SEC).

72. Lawyers were implicated in misconduct involving violations of the federal securities laws in the context of the mutual fund market timing scandal and the stock option backdating scandal. *See* John E. Isselmann, Jr., Exchange Act Release No. 50428, 83 SEC Docket 2413 (Sept. 23, 2004) (cease-and-desist order); *In re* Google, Inc. & David C. Drummond, Securities Act Release No. 8523, 84 SEC Docket 2293 (Jan 13, 2005) (cease-and-desist order);

that the SEC ever charged an attorney with a violation of section 307.[73]

Section 402 of SOX prohibits public companies from providing credit to their directors or officers.[74] Section 402 is codified in section 13(k) of the Securities Exchange Act of 1934[75] and precludes issuers from extending or maintaining credit as well as arranging for the extension of credit or the renewal of any extension of credit.[76] The SEC, however, never actually interpreted section 402 and merely acquiesced with a law firm memorandum interpreting section 402.[77] In effect, private entities fulfilled the SEC mandate in section 402. While not a formal retraction, the SEC's lack of interpretation underscores that section 402 provides another

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J. Kenneth Alderman et al.,Investment Company Act Release No. 30300, 105 S.E.C. Docket 693 (Dec. 10, 2012) (cease-and-desist order); Tamar Frankel & Lawrence A. Cunningham, *The Mysterious Ways of Mutual Funds: Market Timing*, 25 ANN. REV. BANKING & FIN. L. 235, 262–63 (2006) ("The industry, like corporate top management, lawyers and accountants, became captive to the greed and culture of the 1990s, which may have started a decade or more earlier."); Daniel J. Morrissey, *The Path of Corporate Law: Of Options Backdating, Derivative Suits, and the Business Judgment Rule*, 86 OR. L. REV. 973, 996 (2007) ("[C]onsiderable skepticism exists about the bona fide motivations of shareholder-plaintiffs or more particularly about the motivations of their counsel."); Press Release, U.S. Sec. & Exch. Comm'n, SEC Files Settled Enforcement Actions Against UnitedHealth Group and Former General Counsel in Stock Options Backdating Case (Dec. 22, 2008), *available at* http://www.sec.gov/news/press/2008/2008-302.htm; Jean Eaglesham & Kirsten Grind, *Fund Directors Are Feeling the Heat*, WALL ST. J. (Mar. 24, 2013, 7:36 PM), http://online.wsj.com/article/SB10001424127887323466204578380502371722698.html.

73. David B. Bayless & Tammy Albarrán, *Recent SEC Enforcement Actions Against In-House Lawyers: An Ominous Trend for the Legal Profession*, 13 ANDREWS LITIG. REP. 1, 4 (2007) ("In the first eight months of 2007, the SEC has settled one enforcement action against a former general counsel, and filed eight other enforcement actions against former in-house counsel of public companies (and, in one of these actions, it also sued the company's top in-house securities lawyer)—an unprecedented event. Historically, the Commission has not pursued enforcement actions against lawyers (much less against general counsel) as aggressively as it has in the last eight months.").

74. SOX § 402, 116 Stat. at 787.

75. Securities Exchange Act of 1934, 15 U.S.C. § 78m(k) (2012).

76. *Id.*

77. *See generally* Memorandum from Sullivan & Cromwell on Sarbanes-Oxley § 402—Interpretations Issued by 25 Law Firms (Oct. 15, 2002), *available at* http://www.adrbnymellon.com/files/climail4.pdf ("The purpose of the [memorandum] is to prepare a blueprint for a consensus among practitioners on these issues. . . . Section 402 contains substantial ambiguities and has not been the subject of any official guidance."). Other major law firms later joined the memorandum.

instance of politically motivated rulemaking that later has to be scaled back.[78]

The partial repeal of section 404 of SOX[79] via the Dodd-Frank Act is another example that illustrates how broad rules enacted during times of political expediency are often retracted. Section 404 required the SEC to adopt and management to prepare a report on internal controls and to disclose this report as part of issuers' annual reports.[80] Additionally, section 404 (b) of SOX required the issuer's outside auditor to report on, and attest to, the issuer's annual report filed by management.[81] Subsequently, the Public Company Accounting Oversight Board ("PCAOB") in its Auditing Standard No. 2 required the auditor[82] to evaluate the design and operating effectiveness of the issuer's internal controls in addition to the traditional audit of the company's financial statements. While profitable for the accounting profession, Auditing Standard No. 2 proved to be rather controversial.[83] Issuers, lobbyists, and others called for Auditing Standard No. 2 to be curtailed soon after its enactment. Foreign issuers began to delist from U.S. exchanges after the enactment of section 404,[84] and referred to this section as a leading cause for their decision to delist.

In reaction to this criticism, the SEC created an exemption from section 404 of SOX for companies with a market capitalization

78. *See* Romano, *supra* note 11, at 1586–87 (describing the political backdrop behind the enactment of the SOX, especially in relation to the Act's implementation of criminal penalties).

79. SOX § 404, 116 Stat. at 789; *see* 15 U.S.C. § 7262.

80. *See* SOX § 404, 116 Stat. at 789.

81. *Id.*

82. *See* Pub. Co. Accounting Oversight Bd., Exchange Act Release No. 34-49884, 83 SEC Docket 212 (June 17, 2004) ("The Board's proposed Auditing Standard No. 2 provides the professional standards and related performance guidance for independent auditors to attest to, and report on, management's assessment of the effectiveness of internal control over financial reporting under Section 404 of the Act.") Section 404(b) authorized the Public Company Accounting Oversight Board to adopt this rule by stating, "[E]ach registered public accounting firm that prepares or issues the audit report for the issuer shall attest to, and report on, the assessment made by the management of the issuer. An attestation . . . shall be made in accordance with the standards for attestation engagements issued or adopted by the Board." SOX § 404(b), 116 Stat. at 789.

83. *See* Sarah Johnson, *PCAOB to Scrap AS2, Start Over*, CFO (Dec. 5, 2006), http://www.cfo.com/article.cfm/8378237 (calling the Auditing Standard No. 2 both "flawed" and "controversial").

84. *See* Allison Sentar, Sarbanes-Oxley and Auditing Standards II: Criticism and Revision 3 (Sept. 1, 2007) (unpublished Honors College Thesis, Pace University) (on file with DigitalCommons, Pace University) *available at* http://digitalcommons.pace.edu/honorscollege_theses/53 ("The work and costs associated with compliance discourage foreign firms from doing business in the United States.")

under $125 million.[85] To reduce audit costs,[86] especially for smaller companies, the PCAOB soon also replaced Auditing Standard No. 2 with Auditing Standard No. 5, in effect diluting the requirements.[87] Despite these existing partial retractions of section 404 of SOX, Congress further softened section 404 of SOX via section 989G of the Dodd-Frank Act,[88] which exempts issuers with a market capitalization of $75 million or less from filing the auditor's attestation to the managements' evaluation of internal controls.[89]

Another powerful example of the regulatory sine curve and the impact of crises-driven regulation is the retraction of several governance provisions set out in the Dodd–Frank Act.[90] The JOBS

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85. Final Report of the Advisory Committee on Smaller Public Companies to the U.S. Securities and Exchange Commission, Securities Act Release No. 8666, Exchange Act Release No. 533855, 87 SEC Docket 1138 (Apr. 23, 2006).

86. *See* PUB. CO. ACCOUNTING OVERSIGHT BD., PCAOB RELEASE NO. 2007-005A, AUDITING STANDARD NO. 5—AN AUDIT OF INTERNAL CONTROL OVER FINANCIAL REPORTING THAT IS INTEGRATED WITH AN AUDIT OF FINANCIAL STATEMENTS AND RELATED INDEPENDENCE RULE AND CONFORMING AMENDMENTS (2007) [hereinafter AUDITING STANDARD NO. 5], *available at* http://pcaobus.org /Rules/Rulemaking/Docket%20021/2007-06-12_Release_No_2007-005A.pdf (amending Auditing Standard No. 2 after determining that "[c]osts have been greater than expected and, at times, the related effort has appeared greater than necessary to conduct an effective audit of internal control over financial reporting"); Order Approving Proposed Auditing Standard No. 5, An Audit of Internal Control Over Financial Reporting that is Integrated with an Audit of Financial Statements, a Related Independence Rule, and Conforming Amendments, Exchange Act Release No. 56152, 91 SEC Docket 522 (July 27, 2007) ("[T]he Commission believes that Section 404 compliance costs, for both management's evaluation as well as the external audit, will decrease as a result of the Commission's efforts and Auditing Standard No. 5."); Dechun Wang & Jian Zhou, *The Impact of PCAOB Auditing Standard No. 5 on Audit Fees and Audit Quality* (working paper 2012), *available at* http://papers.ssrn.com/sol3 /papers.cfm?abstract_id=1434141 ("Using a large sample of accelerated filers subject to AS5, we find evidence that audit fees decrease upon the adoption of AS5. More importantly, even though AS5 adoption reduces audit fees for our test sample, we find no evidence of a decrease in audit quality. In summary, we document evidence that AS5 improves the efficiency of internal control audits.").

87. *See* AUDITING STANDARD NO. 5, *supra* note 86, at 2–3 ("[T]he Board proposed for comment a new standard on auditing internal control . . . that would replace Auditing Standard No. 2.").

88. *See* Dodd-Frank Act Pub., L. No. 111-203 § 989G, 124 Stat. 1376, 1948 (2012) (codified as amended at 15 U.S.C. § 7262) (adding section 404(c) to SOX).

89. *See* Internal Control Over Financial Reporting in Exchange Act Periodic Reports of Non-Accelerated Filers, Securities Act Release No. 9072, Exchange Act Release No. 60813, 96 SEC Docket 2855 (Oct. 13, 2009) (stating that filers other than "accelerated filers" or "large accelerated filers" are still required to include managers' evaluation of its internal controls in their annual Form 10-K filings but are freed from an audit under the PCAOB rules).

90. *See* Eric Lipton, *Banks Resist Strict Controls of Foreign Bets*, N.Y. TIMES, May 1, 2013, at A1 ("Industry players have spent tens of millions of

Act[91] exempts Emerging Growth Companies[92] from section 404(b) of SOX[93] and section 14A ("Say-on-Pay") of the '34 Act,[94] which mandate a shareholder advisory vote on executive compensation at least once every three years.[95] The Act also exempts these companies from section 953(b)(1) of the Dodd-Frank Act, which requires companies to disclose the median annual total compensation of all their employees.[96] Congress reasoned that these exemptions were necessary to increase the creation of new jobs and to incentivize smaller growth companies' initial public offerings.[97] These exemptions again illustrate the easing of constraints imposed on the financial services industry after a crisis. Several other

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dollars to avert, delay or weaken new rules that are being drafted as part of the [Dodd-Frank Act].").

91. JOBS Act, Pub. L. No. 112-106 §§ 102(B)(3), 103, 104, 126 Stat. 306 (codified as amended in scattered sections of 15 U.S.C.)

92. For a definition of an "emerging growth company," see *Jumpstart Our Business Startups Act Frequently Asked Questions*, SEC (Sep. 28, 2012), http://www.sec.gov/divisions/corpfin/guidance/cfjjobsactfaq-title-i-general.htm ("An 'emerging growth company' is defined in the Securities Act and the Exchange Act as an issuer with 'total annual gross revenues' of less than $1 billion during its most recently completed fiscal year.").

93. SOX, Pub. L. No. 107-204, § 404(b), 116 Stat. 745, 789 (2012); *see* 15 U.S.C. § 7262 (2012).

94. Dodd-Frank Act, Pub. L. No. 111-203 § 951, 124 Stat. 1376, 1899 (2012) (codified as amended at 15 U.S.C. § 78n-1) ("The Securities Exchange Act of 1934 (15 U.S.C. 78a et seq.) is amended by inserting after section 14 (15 U.S.C. 78n) the following . . ."); *see also* Press Release, U.S. Sec. & Exch. Comm'n, SEC Adopts Rules for Say-on-Pay and Golden Parachute Compensation as Required Under Dodd-Frank Act (Jan. 25, 2011), *available at* http://www.sec.gov/news/press /2011/2011-25.htm.

95. Dodd-Frank Act § 951(a)(2), 124 Stat. at 1899 (codified as amended at 15 U.S.C. § 78n-1(a)(2)) (requiring any publicly traded company to hold a shareholder vote at least once every six years on the frequency of the say-on-pay vote). The first such vote on the frequency of executive compensation approval took place in 2011. Under the Dodd-Frank Act, the longest permitted interval between say-on-pay votes is three years. *Id.* § 951(a)(1).

96. Memorandum from Dorsey Whitney on Dodd-Frank Wall St. Reform and Consumer Prot. Act 11 (May 17, 2010), *available at* http://www.dorsey.com /files/upload/DoddFrankOverview.pdf.

97. *See* Press Release, Office of the Press Sec'y, Remarks by the President at JOBS Act Bill Signing (Apr. 5, 2012), *available at* http://www.whitehouse.gov /the-press-office/2012/04/05/remarks-president-jobs-act-bill-signing ("Because of this bill, start-ups and small business will now have access to a big, new pool of potential investors—namely, the American people."); IPO TASK FORCE, REBUILDING THE IPO ON-RAMP: PUTTING EMERGING COMPANIES AND THE JOB MARKET BACK ON THE ROAD TO GROWTH 1–3 (2011), *available at* http://www.sec.gov/info/smallbus/acsec/rebuilding_the_ipo_on-ramp.pdf.

exemptions and regulatory retractions, often intended to address unintended consequences of the Dodd-Frank Act, are still pending.[98]

C. *Financial Crises and the Regulatory Sine Curve*

An evaluation of the relationship between the common elements of financial crises and the regulatory sine curve may help researchers understand possible optimization processes for financial regulation.

FIGURE 1. COMMON ELEMENTS OF FINANCIAL CRISES VS. REGULATORY SINE CURVE

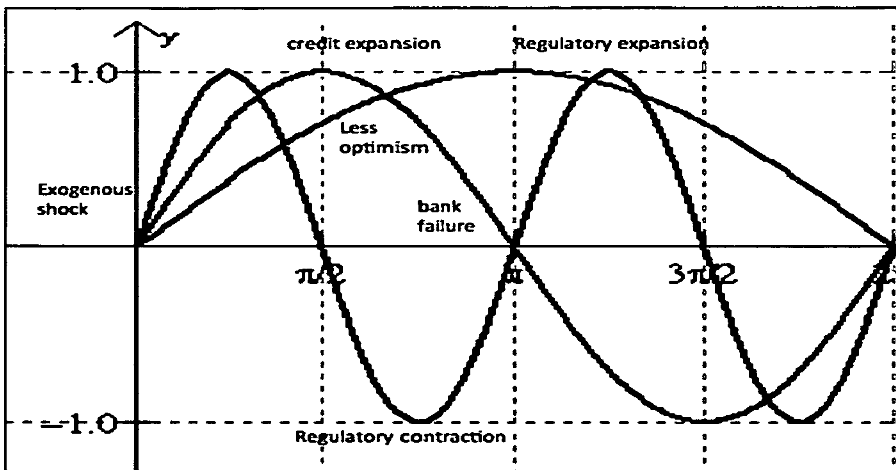

Figure 1 shows the relationship between the common elements of banking and financial crises and the regulatory sine curve. The black line illustrates the core common elements of financial crises: (1) an exogenous shock, (2) credit expansion (or other favorable response to the exogenous shock), (3) less optimism (favorable conditions dissipate), and (4) bank failure (often a systemic rise in bank failures).[99] The exogenous shock precipitates an expansion in credit and/or other measures such as financial innovation or sales of risky financial products such as CDOs. The favorable economic conditions peak and then dissipate. As the favorable conditions for credit expansion and/or other favorable conditions dissipate, the probability of systemic bank failures increases.

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98. *See* DAVID SKEEL, THE NEW FINANCIAL DEAL: UNDERSTANDING THE DODD-FRANK ACT AND ITS (UNINTENDED) CONSEQUENCES 191–92 (2011) (stating that, without more regulatory interference, "innovation will be stifled and the systematically important banks will be able to borrow more cheaply than their smaller, would-be competitors").

99. *See* discussion *supra* Subpart I.A.

The blue line represents the regulatory sine curve and illustrates the relationship between governance adjustments in reaction to financial crises and their inevitable relaxation, revision, and retraction.[100] The regulatory sine curve (blue line) starts its upward slope when the positive economic conditions following the exogenous shock dissipate, resulting in conditions that are more likely to cause systemic bank failures (illustrated by the black line). The upward slope of the blue line is motivated by an upsurge in regulatory activity as a result of increasing bank failures.[101] When the blue and black lines intersect, the level of regulatory activity has not reached its peak, yet bank failures are increasing. As more banks fail, regulatory activity continues to increase but reaches its peak in the aftermath of bank failures or financial crises.

The relationships delineated by the three lines in Figure 1 help illustrate the suboptimal relationship between the regulatory sine curve and common elements of banking and financial crises (and/or other events influencing economic conditions that could lead to financial crises).[102] The author does not claim that any of the lines in Figure 1 accurately describe the relationship between common elements of banking and financial crises and the regulatory sine curve. Rather, the different lines (black and red) demonstrate that multiple different relationships may exist between the common elements of financial crises and the regulatory sine curve (blue line). In the current regulatory environment a suboptimal relationship exists between the regulatory sine curve and the common elements of banking and financial crises.

II. DYNAMIC REGULATION OF THE FINANCIAL SERVICES INDUSTRY

Future financial crises may be inevitable. Factors such as globalization, financial innovation, ethical challenges, suboptimal institutional designs, and the bounded rationality of decision makers may create conditions that result in future crises. Future crises may require perhaps even more extensive governance adjustments. These factors, in combination with the suboptimal relationship between common elements of banking and financial crises (including other possible indicators for financial crises) and the regulatory sine curve, may justify an evaluation of optimization procedures for rulemaking. While business and regulatory cycles are bound to persist, optimizing the relationship between indicators for financial crises and the regulatory sine curve, especially the timing of regulatory responses to crises, could soften some of the effects of regulatory crises.

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100. Coffee, *supra* note 3, at 1029.

101. *See* discussion *supra* Subpart I.A (discussing the collective action problem of rulemaking).

102. *See supra* Fig. 1.

The concept of dynamic regulation supports a regulatory structure that curtails the regulatory sine curve and its negative, costly consequences. Increasing the availability of relevant information for rulemaking in a countercyclical and dynamic process could be a starting point for improved rulemaking. Dynamic regulation may be seen as the antithesis of static, stable, and presumptively "optimal" regulation, and it may help counterbalance the effects of stable and presumptively optimal rules.[103] Synonyms for the word "dynamic" in the context of regulation may include self-motivated, vibrant, energetic, and forceful. Dynamic elements in regulation have previously been described as "dynamic games,"[104] "regulatory dialectic," and "dynamic adjustment process."[105] Economists have used this concept in the context of innovation and learning by doing,[106] principal-agent and adverse selection problems,[107] continuing regulatory relationships,[108] and regulation of quality.[109] The majority of scholars who discuss the concept of dynamic regulation, however, do so in the context of the telecommunications industry.[110] The rapid pace of technological developments in telecommunication appears to have necessitated

103. *See* Kaal, *supra* note 19, at 3–4 ("Dynamic elements in the rulemaking process can thus improve public rulemaking by curtailing public trial-and-error rulemaking.").

104. Edward J. Kane, *Extracting Nontransparent Safety Net Subsidies by Strategically Expanding and Contracting a Financial Institution's Accounting Balance Sheet*, 36 J. FIN. SERVICES RES. 161, 161 (2009).

105. Edward J. Kane, *Interaction of Financial and Regulatory Innovation*, 78 AM. ECON. REV. 328, 333 (1988).

106. *See* Tracy R. Lewis & Huseyin Yildirim, *Learning by Doing and Dynamic Regulation*, 33 RAND J. ECON. 22, 23–24 (2002) ("Innovation is more rapid when current service is increased, enabling the supplier to accelerate his rate of learning.").

107. *See generally* JOHN M. LITWACK, DYNAMIC REGULATION, DEMAND INFORMATION AND MARKET PRICES (1992).

108. David P. Baron & David Besanko, *Commitment and Fairness in a Dynamic Regulatory Relationship*, 54 REV. ECON. STUD. 413, 413 (1987); David P. Baron & David Besanko, *Regulation and Information in a Continuing Relationship*, 1 INFO. ECON. & POL'Y 267, 267 (1984).

109. Stephane Auray et al., *Dynamic Regulation of Quality*, 42 RAND J. ECON. 246, 246 (2011).

110. *See* Johannes M. Bauer & Erik Bohlin, *From Static to Dynamic Regulation: Recent Developments in US Telecommunications Policy*, 2008 INTERECONOMICS 38, 40–42 (discussing competition in telecommunications); Paul W.J. de Bijl & Martin Peitz, *Dynamic Regulation and Entry in Telecommunications Markets: A Policy Framework*, 16 INFO. ECON. & POL'Y 411, 411 (2004); Memorandum from Machiel van Dijk & Machiel Mulder, CPB Neth. Bureau for Econ. Policy Analysis, on Regulation of Telecomm. and Deployment of Broadband 1 (Dec. 2005), *available at* http://www.cpb.nl/sites/default/files/publicaties/download/memo131.pdf (exploring whether telecommunication regulations encourage or hamper new technological development).

the use of dynamic elements in regulation.[111] The increasing volatility of financial markets in combination with financial innovation shows some parallels to the pace of technological developments in telecommunications markets.

Scholarly proposals for curtailing the effects of regulatory cycles include a preference for general exemptive authority under section 36 of the '34 Act,[112] agency independence,[113] regulatory contrarians,[114] mandated studies,[115] automatic triggers,[116] mandatory sunset provisions,[117] a general state law preference,[118] and possible synergies in regulatory cooperation.[119] Brett McDonnell classifies scholarly contributions in the context of regulatory cycles into three general categories:[120] (1) scholars who argue that regulators overreact during regulatory expansion and regulatory contraction,[121] (2) scholars who argue that overregulation follows crises,[122] and (3) scholars who argue that there is excessive deregulation during booms.[123]

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111. Bauer & Bohlin, *supra* note 110, at 38.

112. Coffee, *supra* note 3, at 1035.

113. McDonnell, *supra* note 18, at 29.

114. Brett McDonnell & Daniel Schwarcz, *Regulatory Contrarians*, 89 N.C. L. REV. 1629, 1629 (2011).

115. McDonnell, *supra* note 18, at 1.

116. Wulf A. Kaal, *Contingent Capital in Executive Compensation*, 69 WASH. & LEE L. REV. 1821, 1821 (2012) [hereinafter *Contingent Capital*]; Wulf A. Kaal, *Initial Reflections on the Possible Application of Contingent Capital in Corporate Governance*, 26 NOTRE DAME J.L. ETHICS & PUB. POL'Y 281, 284–85 (2012) [hereinafter *Initial Reflections*]; McDonnell, *supra* note 18, at 1.

117. Romano, *supra* note 18, at 14.

118. ERIN A. O'HARA & LARRY E. RIBSTEIN, THE LAW MARKET 19–20 (2009). *But see* Larry E. Ribstein, *Limited Liability and Theories of the Corporation*, 50 MD. L. REV. 80, 82–83 (1991) (rejecting the limited liability concept as a state-conferred privilege).

119. *See generally* Kenneth M. Rosen, *Who Killed Katie Couric? And Other Tales from the World of Executive Compensation Reform*, 76 FORDHAM L. REV. 2907 (2008).

120. McDonnell, *supra* note 18, at 2–3.

121. *Id.* at 2; *see generally* ERIK F. GERDING, BUBBLES, LAW AND FINANCIAL REGULATION (2013); *see also* George J. Benston, *Federal Regulation of Banking: Historical Overview*, *in* DEREGULATING FINANCIAL SERVICES: PUBLIC POLICY IN FLUX 1, 2 (George G. Kaufman & Roger C. Kormendi eds., 1986) (advocating the abolishment of most federal regulation); Coffee, *supra* note 3, at 1030 ("[T]he likelihood of legislative errors and misjudgments hardly merits Draconian measures . . . ."); Edward J. Kane, *Changing Incentives Facing Regulators*, 2 J. FIN. SERV. RES. 265, 267 (1986).

122. Bainbridge, *supra* note 54, at 1782 (characterizing U.S. federal regulation as having a "boom-bust-regulate" pattern); McDonnell, *supra* note 18; Larry E. Ribstein, *Bubble Laws*, 40 HOUS. L. REV. 77 (2003); Romano, supra note 18, at 1.

123. ENGEL & MCCOY, *supra* note 18, at 191 (criticizing Alan Greenspan's extreme antipathy toward regulation); JOHNSON & KWAK, *supra* note 29;

While some regulators use the term "dynamic regulation" in the context of SEC exemptive powers,[124] the literature on financial regulation mostly ignores dynamic elements for regulation. Lyman Johnson has considered dynamic elements in the context of corporate law.[125] Some scholars recognize that the existing regulatory framework does not adequately address the concerns pertaining to regulatory cycles.[126] This Essay adds to and expands that literature. The author identifies common elements of regulatory crises and suggests normatively that regulatory cycles could benefit from supplementing the existing regulatory framework with dynamic elements.

A. *Rulemaking with Dynamic Elements*

Similar to economic dynamics,[127] the concept of dynamic financial regulation describes the study of financial regulatory phenomena in relation to preceding and succeeding events. Rulemaking is no longer a mere reactive process based only on

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Kimberly D. Krawiec, *Don't Screw "Joe the Plumber": The Sausage-Making of Financial Reform*, 55 ARIZ. L. REV. 53, 53 (2013) (suggesting that the notice and comment process facilitate transparency to the public as federal agencies engage in rulemaking); McDonnell, *supra* note 18.

124. Luis A. Aguilar, Comm'r, U.S. Sec. & Exch. Comm'n, Speech at the North American Securities Administrators Association's Winter Enforcement Conference: Empowering the Markets Watchdog to Effect Real Results (Jan. 10, 2009), *available at* http://www.sec.gov/news/speech/2009/spch011009laa.htm ("Personally, I support the SEC's model of regulation, which focuses on investors and markets, and provides for strong and broad regulatory authority and vigorous enforcement, coupled with flexible *exemptive power* to permit *dynamic regulation* where needed.") (emphasis added).

125. *See* Lyman Johnson, *Dynamic, Virtuous Fiduciary Regulation* 1–2 (Washington & Lee Pub. Legal Studies, Research Paper No. 13-23, 2013), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2273869 (discussing the uncertainty in Delaware law in regard to LLC entities as an example of dynamic regulation).

126. *See* Krawiec, *supra* note 123, at 83–84; Whitehead, *supra* note 18, at 1307–08 ("The Goldilocks approach strikes a compromise between finalizing new rules at the outset and implementing new rules with sunset provisions. The former forces regulators to assess the effect of new rules with incomplete information; the latter increases the risk of regulatory capture around the time a sunset period ends. Staging new regulation—so long as the criteria used to assess regulation, and the procedures used to monitor and modify regulation, are specified up front—can help minimize unanticipated consequences and create more effective rules based on more complete information. Moving the regulatory process in that direction may be particularly timely in light of recent concerns over ineffective cost-benefit analyses undertaken by financial regulators under the Dodd-Frank Act.").

127. *See* WILLIAM J. BAUMOL, ECONOMIC DYNAMICS: AN INTRODUCTION 4 (1951) (defining "dynamics" as "the study of economic problems where the time axis is not abstracted").

preceding events and driven by the collective-action problem of rulemaking. Rather, rulemaking in a dynamic framework increasingly utilizes institution-specific and decentralized information reflecting preceding events and attempting to anticipate succeeding future contingencies.[128]

Rulemaking with dynamic elements increases the adaptive capabilities of financial regulation through the increasing use of institution-specific information. This may include information on the functioning of financial institutions. Information pertaining to how financial institutions or decision makers in financial institutions actually act and how they are expected to react to unforeseen contingencies in the future helps incorporate dynamic elements into financial regulation. Social and mental properties of decision makers in financial institutions together with the incentive structure in the respective institutional setups can help determine a financial institution's adaptive capability.

Dynamic elements in financial regulation could help facilitate a regulatory structure that curtails the regulatory sine curve and its negative and costly consequences, in addition to supporting regulators in their efforts to continually adapt to new market environments, financial innovation, and the given regulatory environment. Dynamic elements in financial regulation may also support regulators in anticipating future changes and challenges and cause them to adapt stable rules accordingly.[129]

To improve quality and sustainability of legal rules, dynamic regulation may facilitate experimentation with different combinations of stable and dynamic elements in rulemaking. Experimentation with different combinations of regulatory approaches can be effective when several different approaches can be tried simultaneously in different jurisdictions. A mixture of market solutions, private ordering, and mandatory rules in different jurisdictions could help increase adaptive capabilities of rulemaking.[130] These dynamic changes in rulemaking could help create a governance mechanism that is constantly adapting to market environment, financial innovation, and regulatory environment.

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128. Kaal, *supra* note 19, at 13.

129. Contrasting dynamic regulation with other forms of governance and enforcement; private ordering focuses on the sharing of regulatory authority with private actors, self-regulation emphasizes the voluntary abiding by stricter standards, and self-policing highlights the monitoring of own adherence to legal and ethical standards.

130. Kaal, *supra* note 19, at 13.

B. *Optimizing the Regulatory Sine Curve*

The concept of the regulatory sine curve describes the phenomenon of rulemaking following financial crises and the inevitable relaxation, retraction, and revision of established rules thereafter.[131] This Essay suggests that while the regulatory sine curve may be inevitable and public rulemaking will likely continue to be subject to the collective action problem, the suboptimal effects of the collective action problem of rulemaking and the regulatory sine curve can be curtailed. Dynamic elements in financial regulation as a supplemental optimization process for rulemaking may help curtail the negative effects and regulatory outcomes generated by the sine curve of regulation.

Dynamic elements in financial regulation may enable regulation to more accurately trace developments that may lead to financial crises. Dynamic elements in financial regulation may even help anticipate and preempt financial crises by changing the timing, availability and quality of information, and the emphasis of regulation. Dynamic regulation could thus help optimize the regulatory sine curve.[132] If appropriately implemented, the sine curve of regulation, supplemented and optimized with dynamic elements, may become an optimized sine curve in relation to the phase-shifted first derivative (cosine curve) that describes common elements of financial crises. Financial regulation (sine curve) would, thus, expand before financial crises occur (cosine curve). Through dynamic elements, rulemaking takes place when it is most needed—ex-ante crises—to help curtail the effects of crises and of suboptimal regulatory outcomes ex-post crises.

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131. Coffee, *supra* note 3, at 1029–30.

132. *See* Kaal, *supra* note 19, at 13 ("[T]he combination of these feedback processes can result in a sequence of mutually-reinforcing, information-enhancing events.").

1. *Trailing Sine Curve*

The relationship between the regulatory sine curve and common elements of banking and financial crises can be optimized.[133] Dynamic elements in financial regulation may enable regulation to more accurately trace developments that may lead to financial crises.

FIGURE 2. TRAILING SINE CURVE

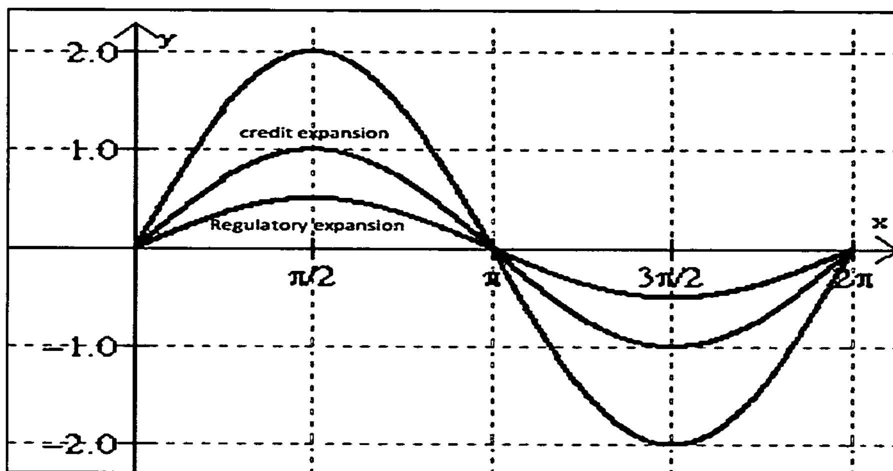

Figure 2 shows a possible relationship between the regulatory sine curve (blue line) in relation to the common elements of banking and financial crises (black and/or red line). Figure 2 suggests that the sine curve of regulation could merely trace the common elements of banking and financial crises such as credit expansion and other events and indicators for events in the real economy that signal possible crises. As the black/red line starts its downward slope, suggesting a systemic rise in bank failures, financial regulation with dynamic elements, as illustrated by the enhanced regulatory sine curve (blue line), may not necessarily increase disproportionally to avert the events signaling pending crises. The author does not claim that there would be a particular relationship or that the lines in Figure 2 accurately describe the possible relationship(s). Figure 2 merely illustrates a possible effect of adding dynamic elements to financial regulation.

2. *Anticipatory Sine Curve*

Dynamic elements in financial regulation could also help optimize the regulatory sine curve to include anticipatory elements. A core problem for financial regulation is its timing. Governance

133. *See supra* text accompanying notes 43–49.

improvements are not enacted when they are most needed—before crises. Rather, because of the collective action problem, financial regulation is mostly reactive, following business cycles.[134] Financial rulemaking also often utilizes centralized rather than decentralized information.[135] Dynamic elements in financial regulation may help adjust the timing of rule enactment and increase the availability and quality of information for financial rulemaking.[136] In effect, financial regulation that incorporates dynamic elements could help create an anticipatory regulatory response before financial crises occur. Dynamic elements in financial regulation could change the relationship between the regulatory sine curve and the occurrence and timing of common elements of financial crises. By including dynamic elements, the sine curve of financial regulation becomes an anticipatory sine curve in relation to the phase-shifted first derivative ("cosine curve") that describes common elements of financial crises.

FIGURE 3. ANTICIPATORY SINE CURVE

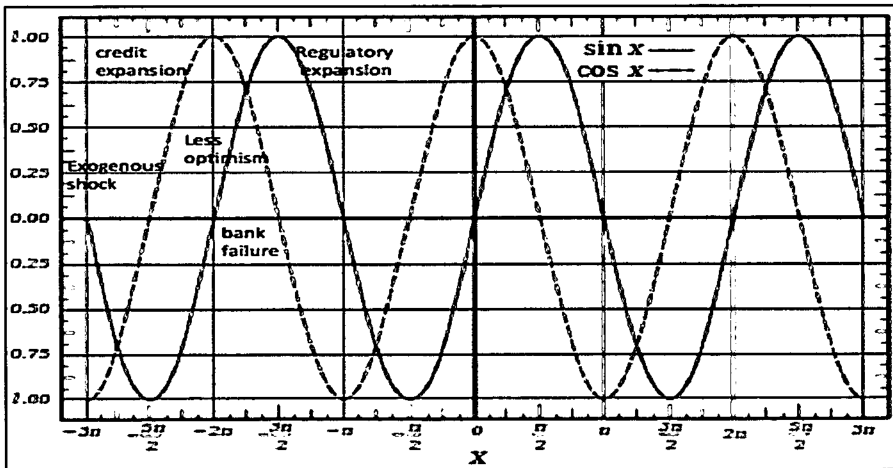

Figure 3 describes how dynamic elements in financial regulation could help improve the relationship between the regulatory sine curve (red line) and common elements of financial crises (including other indicators for events in the real economy that signal possible crises), illustrated by the cosine curve (dotted blue line). The cosine curve (dotted blue line) describes the core common elements of financial crises: (1) exogenous shock, (2) credit expansion (or other favorable response to exogenous shock such as increased financial innovation), (3) less optimism (favorable conditions dissipate), and (4) bank failure (often systemic rise in

134. *See supra* text accompanying notes 30–31.
135. Kaal, *supra* note 19, at 4.
136. *Id.* at 6.

bank failures).[137] The sine curve of regulation (red line) describes the intensity of financial regulatory supervision via the enactment of rules.

Figure 1 has demonstrated that without dynamic elements, the regulatory sine curve starts its ascent, and regulatory activity increases, when banks fail or other indicators of financial crises are more prevalent. By contrast, Figure 3 suggests that dynamic elements in financial regulation could optimize the relationship between the regulatory sine curve and the common elements of banking and financial crises. Figure 3 shows the sine curve in a dynamic regulation framework (red line). The regulatory engagement increases as credit becomes more readily available and other favorable responses to the exogenous shock occur—the cosine curve starts its descent. As the downward sloping line of the cosine curve continues its descent, describing the systemic rise in bank failures, the sine curve of regulation in a dynamic framework reaches its peak, regulatory engagement reaches its highest level.

Figure 3 illustrates that a regulatory framework supplemented with dynamic elements could help create an anticipatory regulatory response, because financial rulemaking takes place when it is most needed—ex-ante crises. Dynamic regulation could thus help flatten out and dampen the volatility of both the cosine curve and the regulatory sine curve.

III. IMPLEMENTATION

Dynamic regulation can be more than a theoretical concept. While outlining strategies and procedures for implementing different forms of dynamic regulation is beyond the scope of this Essay, several governance mechanisms with dynamic elements already exist and merit a short introduction. If combined with existing stable, and presumptively optimal, rules in the regulatory framework and rulemaking process, these governance mechanisms, among others, could become part of a dynamic optimization and supplementation process for rulemaking.

The theoretical framework outlined above suggests that adding dynamic elements to the rulemaking process could help increase the adaptive capabilities of financial regulation. This may be accomplished by including institution specific rules in financial rulemaking. Institution specific rules could be facilitated through the increasing use of institution specific information and private ordering.[138] Contingent Capital Securities ("CoCos"), Corporate Integrity Agreements ("CIAs"), and Deferred Prosecution

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137. *See* discussion *supra* Subpart II.A.

138. *See* Steven L. Schwarcz, *Private Ordering*, 97 NW. U. L. REV. 1, 1–3 (Mar. 15, 2002) (unpublished manuscript), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=298409 (defining and explaining private ordering).

Agreements ("DPAs") are among the governance mechanisms that can provide institutions specific information for financial rulemaking.[139]

CoCos are debt securities that convert into equity or are written down upon a triggering event.[140] Depending on the respective CoCo designs, CoCos can function as an early warning system to preempt financial crises.[141] Through their trigger design, CoCos can help assess the risk of institution-specific credit expansion, among other indicators, before financial crises.[142] Institution-specific transactional and automatic triggers are privately negotiated terms for CoCo triggering events.[143] These triggers can convert debt into equity when a certain capital ratio, stock price, index value, CDS spread, or other institution specific trigger is reached.[144] Because institution-specific automatic triggers are independent from

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139. *See Initial Reflections*, *supra* note 116, at 284; Lawrence A. Cunningham, *Deferred Prosecutions and Corporate Governance: An Integrated Approach to Investigation and Reform* 3 (George Washington Law Sch. Pub. Law & Legal Theory, Research Paper No. 2013-74, 2013), *available at* http://ssrn.com/abstract=2256624 (arguing that prosecutors should "consider governance carefully in determining how to proceed ex-ante and articulate rationales for governance changes in DPAs ex-post"); *Corporate Integrity Agreement FAQ*, U.S. DEPARTMENT OF HEALTH & HUM. SERVICES, https://oig.hhs.gov/faqs/corporate-integrity-agreements-faq.asp (last visited Aug. 4, 2013) (defining a "Corporate Integrity Agreement" as "a document that outlines the obligations an entity agrees to as part of a civil settlement").

140. *See Contingent Capital*, supra note 116, at 1840; *Initial Reflections*, *supra* note 116.

141. *Initial Reflections*, *supra* note 116. CoCos have already been successfully issued by European Systemically Important Financial Institutions. *Contingent Capital*, *supra* note 116, at 1821.

142. *Contingent Capital*, *supra* note 116, at 1859.

143. *Id.* at 1859–60.

144. *See* Coffee *supra* note 29, at 805; Mark J. Flannery, No Pain, No Gain? Effecting Market Discipline via "Reverse Convertible Debentures" 15 (Nov. 2002) (unpublished manuscript), *available at* http://bear.warrington.ufl.edu /flannery/No%20Pain,%20No%20Gain.pdf ("Frequent trigger evaluations eliminate moral hazard incentives and expose the RCD to surprisingly low default risk."); Mark J. Flannery, Stabilizing Large Financial Institutions with Contingent Capital Certificates 11–12 (Oct. 6, 2009) (working paper), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1485689; Paul Glasserman & Behzad Nouri, Contingent Capital with a Capital-Ratio Trigger 1 (Aug. 31, 2010) (working paper), *available at* http://ssrn.com/abstract=1669686 (analyzing the case of contingent capital with a capital-ratio trigger and partial and on-going conversion); Robert L. McDonald, Contingent Capital with a Dual Price Trigger 2 (Feb. 15, 2010) (working paper), *available at* http://ssrn.com /abstract=1553430 (proposing "a form of contingent capital for financial institutions that converts from debt to equity if two conditions are met: the firm's stock price is at or below a trigger value and the value of a financial institutions index is also at or below a trigger value").

regulatory discretion, they have the advantage of being flexible and can be tailored to the parties' respective needs.[145]

CoCos can help signal the need for regulatory action and may help facilitate an incentive structure that allows regulators to rely partially on private ordering, effectuating increased adaptability of the rulemaking process. Managers are incentivized to manage their respective entities to avoid CoCo triggers, which can help optimize governance of financial institutions.[146] While the threat of conversion of CoCos alone could help institute governance improvements, should CoCos ever get triggered in a specific institutional setting, the resulting conversion from debt to equity could enable rule makers to evaluate the need for regulatory action pertaining to other institutions or the industry at large.[147] While regulators have other means of monitoring debt/equity ratios and capital adequacy ratios, a CoCo triggering event signals that management was unable to avoid the triggering event, suggesting that regulatory action may be needed. Because CoCos can thus signal the institution-specific need for regulatory action, rule makers can act with more institution-specific information and draw conclusions as to whether stable rulemaking is needed for the market segment in which the affected entity operates. CoCo issuances with institution-specific automatic triggers may thus help facilitate dynamic elements in the rulemaking process and increase the adaptability of rules.

Deferred Prosecution Agreements ("DPA")[148] and Corporate Integrity Agreements ("CIAs"), among other forms of cooperation,[149] may be able to provide institution-specific information and feedback effects between the affected entities, the markets or market segments in which they operate, and regulators. This can help facilitate cooperation between regulators, between regulators and

145. *See Contingent Capital*, *supra note* 116, at 159–68 (stating that accounting-based measures in institution-specific automatic triggers may not be able to respond adequately in financial crises because they are too infrequently updated, but market-based measures could be susceptible to market manipulation and banking runs).

146. *Id.* at 162–63 (assessing the role of CoCos as a new power player in corporate governance).

147. For a discussion of incentive optimization through the use of CoCo triggers, see *Initial Reflections*, *supra* note 116, at 174–75 and *Contingent Capital*, *supra* note 116, at 294–96.

148. Cunningham, *supra* note 139, at 3.

149. David A. Katz et al., *Wachtell Lipton Discusses the SEC and "Exceptional" Cooperation*, CLS BLUE SKY BLOG (Apr. 26, 2013), http://www.wlrk.com/webdocs/wlrknew/AttorneyPubs/WLRK.22453.13.pdf (describing a recent announcement that the SEC would be entering into its fourth publicly reported NPA since it announced that it would begin using such agreements—and the first such agreement in an FCPA case—illustrating the potential benefits of cooperation).

financial institutions, and between regulators and the public. Through increased institution-specific information, feedback effects, and cooperation, DPAs and CIAs may provide dynamic elements for financial regulation.

DPAs allow financial institutions to negotiate cooperative settlements with prosecutors. Prosecutors are increasingly using DPAs.[150] In the context of a particular allegation of corporate misconduct, the prosecutor agrees to defer or refrain from prosecuting a financial institution in return for the institutions' agreement to undertake reforms such as increased compliance programs, governance changes, and public disclosures of information pertaining to the matter in question.[151] While prosecutors may not have the necessary expertise to negotiate high-level,corporate governance changes, such as personnel changes and internal corporate and compliance procedures, DPAs can successfully address externalities such as the adverse collateral consequences of corporate prosecution and conviction.[152]

Important for the use of DPAs in the context of dynamic regulation, DPAs can generate institution-specific information and provide institution-specific solutions for governance shortcomings[153] while at the same time creating a signaling effect for regulators. With the institution-specific and decentralized information generated by DPAs, regulators may be able to better understand shortcomings in a particular market segment or industry. Rulemaking can thus be more narrowly tailored and adjusted to the specific circumstances of the respective institution, industry, or market segment. With the increased availability of reliable institution-specific information, rules may become more adaptable over time.

CIAs are in many ways comparable to DPAs. CIAs are compliance programs primarily used for healthcare companies that are enforced by the government but funded by the respective institution that negotiated the CIA with the government.[154] To facilitate the detection of compliance issues, a CIA gives the

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150. Almost 300 DPAs have been executed since 2003. Before 2003, DPAs were rarely used. *See Federal Organizational Prosecution Agreements*, VA. L. LIBR., http://lib.law.virginia.edu/Garrett/prosecution_agreements/ (last visited July 8, 2013) (providing a list of scanned DPAs).

151. *See* Deferred Prosecution Agreement, United States v. BP Am., Inc., (N.D. Ill. 2007) (No. 07 CR 683), *available at* http://www.justice.gov/criminal/vns/docs/2007/oct/10-25-07bpameriac-dpa.pdf.

152. Cunningham, *supra* note 139, at 15.

153. *Id.* at 3.

154. Wulf A. Kaal & Elizabeth Malay, *The Role of Corporate Integrity Agreements in the Expansion of Fiduciary Duties*, WAKE FOREST J. BUS. & INTELL. PROP. (forthcoming 2013).

government improved access to the respective institution.[155] Institutions that are subject to a CIA agree to increased government supervision during the term of the CIA,[156] which can result in costly, additional, mandatory compliance measures and may carry the risk of further penalties.[157] Penalties for the breach of a CIA may include exclusion from federally funded healthcare programs, criminal prosecution, fines, and additional CIAs.[158] In a civil or criminal trial, CIAs can heighten the legal standards for the respective institution[159] and may thus facilitate its prosecution. The government can more easily reopen a case for an institution that was subject to a CIA,[160] especially if the government finds that certifications required under the terms of a CIA misstate the institution's true compliance. The ease of prosecution, the increased scrutiny by the government, and the potential for crippling penalties can improve boards' and managements' knowledge of pertinent issues in the institution and its monitoring. CIAs can thus improve corporate governance.

If broadly applied to financial institutions, DPAs and CIAs could help increase the adaptive capabilities of financial regulation. The threat of heightened scrutiny for institutions subject to a DPA/CIA may help optimize incentives, because financial institutions would be subjected to increased monitoring by government regulators only after a first-time offense had occurred. Financial institutions would have incentives to comply with governance requirements and to self-regulate to avoid being subjected to increased monitoring and continuous, heightened government scrutiny. Once a DPA/CIA is in place, the increased scrutiny by the government for institutions that operate under a

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155. *Corporate Integrity Agreement FAQ*, *supra* note 139.

156. *Id.*

157. For instance, an institution that operates under a CIA may give the Office of the Inspector General ("OIG") permission to inspect their compliance documents and conduct on-site inspections to assess the company's compliance with the CIA. Greg Luce, *Defending the Health Care Industry Against the Government's Expanding and Novel Theories of Liability*, ASPATORE, at 9, Sept. 2011, *available at* 2011 WL 4453324.

158. The $2.3 billion Pfizer settlement in 2009 illustrates the significant ramifications of illegal activity while operating under a CIA. *See In re* Pfizer Inc., 722 F. Supp. 2d 453, 457 (S.D.N.Y. 2010).

159. *See* Gabriel L. Imperato & Marc S. Raspanti, *Compliance and Governance for Health Care Organizations and Marketing and Sales Activities*, 11 J. HEALTH CARE COMPLIANCE 5, 7 (2009) (illustrating the benefits of addressing compliance proactively and reactively in the health care industry, and explaining the ramifications of providing inadequate compliance instructions and guidance).

160. James N. Czaban, *Meeting the Challenge of Increased Enforcement for Food and Drug Industry Clients*, ASPATORE, Nov. 2011, at 3, *available at* 2011 WL 5833342.

DPA/CIA can provide enhanced institution-specific information for regulators that would otherwise not be available. With more institution-specific information available, regulators can improve their understanding as to when institution-specific regulatory action may be needed and how it may be adequately implemented. Regulators can draw conclusions as to whether stable rulemaking is needed for the particular market segment in which the affected institution operated. DPAs and CIAs may thus help increase the adaptability of rules and facilitate dynamic elements in the rulemaking process.

CONCLUSION

This Essay makes a contribution to the literature on financial regulation and the literature on the political economy of financial regulation. Rules established in reaction to financial crises mostly fail to curtail or preempt the effects of financial crises. The resulting amendments, revisions, and retractions of existing rules create substantial transaction costs and uncertainty. A preferable regulatory solution would avert the downsides of cyclical and merely responsive regulation.

Dynamic elements to financial regulation as a supplemental optimization process for rulemaking could help facilitate effective and anticipatory rulemaking before crises. Dynamic elements in financial regulation could help support regulators in their efforts to continually adapt to financial innovation and new market environments. A mixture of mandatory rules, market solutions, and private ordering could help increase the adaptive capabilities of rulemaking, curtail the effects of the collective action problem of rulemaking, and dampen regulatory cycles.

Epitomizing the adaptive and anticipatory capabilities of dynamic regulation, dynamic elements in financial regulation could change the relationship between the occurrence and timing of the common elements of financial crises and the regulatory sine curve. By adding dynamic elements to financial regulation, the sine curve of financial regulation may start its upward slope before the occurrence of financial crises. Dynamic regulation could thus help dampen regulatory cycles.