

MISCONDUCT RISK

*Christina Parajon Skinner**

Financial misconduct and systemic risk are two critical issues in financial regulation today. However, for the past several years, financial misconduct and systemic risk have received markedly different treatment. After the global financial crisis, regulators responded to the traditional quantitative risks that banks pose—those found on their balance sheets and in their business models—with sweeping reforms on an internationally coordinated scale. Meanwhile, with respect to misconduct, regulators have reacted with a traditional enforcement approach—imposing fines and, in some cases, prosecuting individual malefactors. Yet misconduct is not only an isolated or idiosyncratic risk that can be spot treated with enforcement: misconduct can also be a significant source of risk to the financial system, particularly when it arises on an industry-wide basis.

This Article creates a framework for understanding how and under what circumstances misconduct imposes such broad social and economic costs: “misconduct risk.” This Article explores three features of the banking industry that, in combination, can give rise to misconduct risk—deficient accountability systems, performance-based compensation, and a fluid and transient labor market. Drawing on this conceptual foundation, this Article argues that misconduct risk requires a holistic and preventive approach on par with regulators’ efforts to reduce classic balance sheet risks. Specifically, this Article urges bank supervisors to design regulatory tools that proactively target these contagion mechanisms in order to combat misconduct risk. This Article proposes a novel supervisory tool—“compliance stress testing”—and suggests how this tool can be incorporated into the existing international framework for regulating global banks.

* Associate in Law, Columbia Law School. Yale Law School, J.D., 2010; Princeton University, A.B., 2006. For helpful conversations and comments, I am grateful to Miriam Baer, Pamela Bookman, Anu Bradford, John Coffee, Albert Choi, Richard Epstein, Erik Gerding, Victor Goldberg, Jeffrey Gordon, Zohar Goshen, Edward Greene, Jamal Greene, Henry Hansmann, Howell Jackson, Robert Jackson, Kathryn Judge, Alvin Klevorick, Julian Ku, Jerry Mashaw, Curtis Milhaupt, Geoffrey Miller, Henry Monaghan, Alan Morrison, David Pozen, Alex Raskolnikov, Michael Reisman, Daniel Richman, Roberta Romano, Daniel Schwarcz, Robert Scott, William Skinner, Kate Stith, William Wilhelm, and David Zaring. Thanks also to participants in the Oxford University Centre for Corporate Reputation 2015 Symposium, Seton Hall University Law School faculty workshop, and the ASIL Research Forum.

INTRODUCTION.....	1560
I. THE CONCEPT OF MISCONDUCT RISK.....	1565
A. <i>The 2008 Financial Crisis</i>	1567
B. <i>LIBOR</i>	1572
II. A THEORY OF CONTAGION	1576
A. <i>Interbank Contagion</i>	1577
1. Accountability.....	1577
a. <i>Hierarchy</i>	1577
b. <i>Complexity</i>	1578
2. Compensation	1580
3. Networks.....	1581
a. <i>Institution Cycling</i>	1581
b. <i>Banker Networks</i>	1582
B. <i>Structural Interventions</i>	1585
1. Prophylactics.....	1585
2. Complementarity.....	1586
III. REBALANCING THE BASEL REGIME	1588
A. <i>Regulating Capital</i>	1589
1. Basel's Pillars.....	1589
2. Operational Risk	1592
B. <i>Regulating Conduct</i>	1594
1. Bank Compliance.....	1595
2. Supervising Compliance	1598
a. <i>Imputed Responsibility to Managing Directors</i>	1602
b. <i>Per Se Clawbacks</i>	1603
c. <i>Mapping Networks</i>	1604
C. <i>International Regulatory Coordination</i>	1604
1. Stability.....	1606
2. Efficiency.....	1607
CONCLUSION.....	1610

INTRODUCTION

The Global Financial Crisis of 2008 (“the Crisis”) motivated a sweeping overhaul of financial regulation on an internationally coordinated scale. In this post-Crisis order, regulators have singled out large global banks as posing systemic risk—that is, the risk that distress in one global bank will spread broadly among other financial institutions, with further spillover

effects quite likely.¹ This concern with systemic risk has led to tighter restrictions on (and supervision over) banks' financial activity.²

Financial misconduct has received markedly different treatment. Although the world's major economies now agree that bank misconduct is a serious problem, they have yet to diagnose it as a market-wide risk that requires forward-looking, preventative, and well-coordinated solutions.³ Indeed, each jurisdiction still responds to misconduct with primarily an ex post enforcement approach.⁴ But misconduct is not only an isolated or idiosyncratic risk that can be spot treated with enforcement. When bankers and traders in large financial institutions manipulate or distort key information,⁵ that misconduct can pose broad macro risks. In some instances, such misconduct contributes to asset bubbles by fueling irrational demand; in others, it weakens large institutions by frustrating market

1. See John C. Coffee, Jr., *Systemic Risk After Dodd-Frank: Contingent Capital and the Need for Regulatory Strategies Beyond Oversight*, 111 COLUM. L. REV. 795, 797 (2011); Steven L. Schwarcz, *Systemic Risk*, 97 GEO. L.J. 193, 207 (2008).

2. *Hearing on Compensation Structure & Systemic Risk Before the H. Comm. on Fin. Servs.*, 111th Cong. 7 (2009) (written testimony of Prof. Lucian Bebchuk), <http://www.law.harvard.edu/faculty/bebchuk/Policy/FSC-written-testimony-June-11-09.pdf> [perma.cc/47ZG-ZC5Q].

3. See Mark J. Flannery, Chief Economist & Dir., Div. of Econ. & Risk Analysis, *Insights into the SEC's Risk Assessment Programs* (Feb. 25, 2015), <http://www.sec.gov/news/speech/insights-into-sec-risk-assessment-programs.html> (contrasting the SEC's mission to detect misconduct with its assessment of "market-wide" or "systemic" risks) [perma.cc/9YKR-5VNJ]; see also HM TREASURY, BANK OF ENG., FIN. CONDUCT AUTH., *FAIR AND EFFECTIVE MARKETS REVIEW: FINAL REPORT* (2015) [hereinafter *FAIR AND EFFECTIVE MARKETS REVIEW*], <http://www.bankofengland.co.uk/markets/Documents/femrjun15.pdf> (addressing misconduct as a problem, but not specifically through a systemic risk lens) [perma.cc/6BJG-AYHK]. But see EUR. SYSTEMIC RISK BD., *REPORT ON MISCONDUCT RISK IN THE BANKING SECTOR 3* (2015) [hereinafter *ESRB REPORT ON MISCONDUCT*], https://www.esrb.europa.eu/pub/pdf/other/150625_report_misconduct_risk.en.pdf (suggesting that misconduct may present systemic risks) [perma.cc/6PK8-KCQW].

4. See GRP. OF THIRTY, *BANKING CONDUCT AND CULTURE: A CALL FOR SUSTAINED AND COMPREHENSIVE REFORM* 43 (2015) [hereinafter *G30 CONDUCT AND CULTURE REPORT*] (noting that across jurisdictions "[t]here has been significant emphasis on prescriptive conduct rules" and "[t]his has led to an enforcement-led approach to supervised firms"); *id.* at 55 (noting the "current default approach . . . of almost sole reliance on deterrence and enforcement"); see also Miriam H. Baer, *Choosing Punishment*, 92 B.U. L. REV. 577, 585–611 (2012) (arguing that as a policy matter it is easier to punish than to regulate); David Zaring, *Litigating the Financial Crisis*, 100 VA. L. REV. 1405, 1450 (2014) (reviewing enforcement actions in the United States reacting to the Crisis).

5. Before proceeding further, some definitional clarification is needed. In its broadest sense, financial misconduct is difficult to define. As scholars have elsewhere noted, opportunistic or even deceptive conduct in commercial contexts is often not necessarily specified as illegal. See, e.g., Samuel W. Buell, *Novel Criminal Fraud*, 81 N.Y.U. L. REV. 1971, 1978–80 (2006). Moreover, the law is often unsuccessful in setting clear boundaries along the continuum of unethical to illegal behavior. This Article is not focused on all possible instances of misconduct; nor is its goal to write a code of conduct that defines specific acts that are or should be considered illegal or unethical. Rather, this Article's goal is to draw regulators' attention to the way in which information-distorting conduct has the potential to disrupt economic stability and therefore presents a "macroprudential" concern. See BEVERLEY HIRTLE ET AL., FED. RESERVE BANK OF N.Y., *STAFF REPORT NO. 409, MACROPRUDENTIAL SUPERVISION OF FINANCIAL INSTITUTIONS: LESSONS FROM THE SCAP 1* (2009).

discipline and regulatory supervision. At a minimum, misconduct can give rise to a range of social and economic costs by, for example, depressing market confidence or disrupting liquidity. On that view, much like the balance sheet risks that receive so much attention, financial misconduct is also a safety and soundness issue that bank regulators worldwide should seek to address.

This is a critical time to reevaluate the optimal design of banking regulation. Five years have passed since national bank regulators convened in the Basel Committee for Banking Supervision and agreed to the third Basel Accord (“Basel III”), a regime designed to reduce the systemic risks that banks pose.⁶ Pursuant to Basel III’s heightened standards, national bank regulators have steadily implemented its new capital and liquidity requirements—rules that increase banks’ equity cushion against (potential) financial shocks. These operate as a prophylactic of sorts to guard against the possibility of another financial-domino type crisis.⁷ Yet Basel III offers no comparably concrete standards for regulating banking conduct, leaving global markets exposed to a significant source of material risk and a lack of internationally coordinated standards to address it. Now, in 2016, regulators are becoming increasingly concerned about filling this gap.⁸

This Article’s goal is to motivate and inform a redesign of the existing regulatory regime to squarely address misconduct as an ongoing market-wide risk. To that end, Parts I and II build a framework for understanding misconduct as a distinct category of risk to the financial system: “misconduct risk.”⁹ This framework has two components. First, the framework defines misconduct risk: the intentional distortion of information that, when aggregated and synchronized across institutions, undermines market safety and soundness. Part I illustrates this definition with two case studies. The first case is the Crisis, which was triggered by an asset bubble. By illustrating the role of misconduct in the subprime mortgage bubble, Part I sheds light on the way in which misconduct can contribute to a systemic banking crisis. The second case is the London Interbank Offered Rate (LIBOR) scandal, in which banks colluded to

6. See BASEL COMM. ON BANKING SUPERVISION, *BASEL III: A GLOBAL REGULATORY FRAMEWORK FOR MORE RESILIENT BANKS AND BANKING SYSTEMS* 54–57 (2010; revised 2011) [hereinafter *BASEL III*], <http://www.bis.org/publ/bcbs189.pdf> [perma.cc/NP78-338P]. The Dodd-Frank Act authorized regulators to enact stricter standards on large global banks. See 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, 1059 (2012).

7. These rules require banks to maintain a certain amount of capital (equity) at all times (as a percentage of their outstanding liabilities). See Viral V. Acharya & Matthew Richardson, *Causes of the Financial Crisis*, 21 CRITICAL REV. 195, 198 (2009).

8. See, e.g., ESRB REPORT ON MISCONDUCT, *supra* note 3; FAIR AND EFFECTIVE MARKETS REVIEW, *supra* note 3; G30 CONDUCT AND CULTURE REPORT, *supra* note 4.

9. Although the concept of misconduct risk is original to the author, the Financial Stability Board and the European Systemic Risk Board also began using the term in a similar fashion while this Article was in draft. See ESRB REPORT ON MISCONDUCT, *supra* note 3; FIN. STABILITY BD., *MEASURES TO REDUCE MISCONDUCT RISK: PROGRESS REPORT* (2015), <http://www.fsb.org/wp-content/uploads/Misconduct-risk-progress-report.pdf> [perma.cc/7LPZ-WS97].

manipulate an international interest rate benchmark. The LIBOR case shows that, even short of full-blown crises, misconduct can have system-wide consequences. LIBOR also serves as an important reminder that misconduct has not been sufficiently addressed since the Crisis and therefore still could theoretically manifest in another systemic crisis if perpetrated in a different set of market and economic circumstances. Both cases, though examples of different kinds of market distortions, assumed a systemic quality largely because the misconduct *spread* among large financial institutions.

Accordingly, the second part of the framework provides a theory for why misconduct spreads so readily in the global banking sector. Part II focuses on three structural features of banks that have the potential to operate in tandem as a misconduct contagion. The first is a deficiency in internal accountability systems at the managing director level and where complexity is concerned. Here, because professional consequences can be disconnected from bad behavior, junior and mid-level bankers who are peripherally engaged in (or prone toward) profit-motivated misconduct are able to move freely among institutions. The second feature builds on the first and relates to the performance-based compensation structure that has become the industry standard. This compensation system can skew incentives, making the upside of misconduct loom larger than the estimated downside. Overall, weak accountability combined with performance-based compensation can make misconduct seem like a rational choice on an industry-wide basis.

The third feature relates to the fluid and transient nature of the banking labor market, in which bankers and traders move freely and frequently among institutions, building networks in the process. Ultimately, the highly networked nature of the banking sector creates an environment conducive to disseminating business norms through influence, which can, in certain situations, spread a social license for misconduct by making deviance normal. In identifying these mechanisms, this Article moves beyond the current regulatory debate that generally acknowledges misconduct as a problem and theorizes the structural and institutional drivers of systemically significant misconduct.

The framework set out in Parts I and II provides a foundation to critique the current architecture of global banking regulation as insufficiently addressed to misconduct risk. Part III begins with this critique: that Basel relies too heavily on quantitative risk management to deal with balance sheet risks and pays scant attention to misconduct risk. It then offers a solution for rebalancing this regime. Designing a regulatory tool that is likely to be effective in reducing misconduct risk requires a careful assessment of regulators' abilities and weaknesses when it comes to preventing misconduct. As compared to the banks themselves, regulators have less expertise, information, and resources required to understand how and where banks are vulnerable to misconduct. By contrast, regulators, through their supervisory tools, have the ability to activate the private market and harness its resources.

Based on that comparative assessment, Part III proposes a novel regulatory tool—what I call “compliance stress testing”—for incorporating misconduct-related goals into the existing regime of global bank regulation. Compliance stress testing draws on both quantitative and qualitative methods of existing stress tests. The process involves regulators gathering information from banks about their existing compliance programs and requiring banks to respond to scenario-based exercises designed to identify their vulnerabilities to misconduct risk. In a broad sense, the argument for compliance stress testing responds to other scholars who seek a more robust discussion of compliance in legal academic literature.¹⁰ In a narrower sense, however, the specific proposal to enhance regulatory supervision over banks’ compliance parts ways from other scholars who have viewed the intervention of government regulators in corporate compliance with skepticism.¹¹

This Article concludes with a blueprint for achieving international coordination around this new supervisory tool. Focusing on the Basel Committee as a key fulcrum for national regulatory action, Part III urges Basel to incorporate compliance stress testing into the Basel III regime.¹² To overcome the political economy obstacles to coordination over new regulatory goals, this Article proposes that the Basel Committee use risk-weighted capital ratios—specifically, the discretion to reduce them—as carrots to spur states to adopt compliance stress testing.

Using capital to motivate states’ regulatory action has two main benefits. The principal benefit is that it strengthens Basel’s standards for reducing misconduct risk and coordinates adoption of those standards. An ancillary benefit is the possibility to lessen the externalities that the current level of capital restrictions has caused.¹³ Broadly speaking, this prescription for using Basel’s capital rules to coordinate international regulatory behavior suggests that this informal institution of international financial regulation is more powerful than others have thought¹⁴: it has the potential to structure incentives among sovereign states, which can lead to desirable regulatory

10. See, e.g., GEOFFREY PARSONS MILLER, *THE LAW OF GOVERNANCE, RISK MANAGEMENT, AND COMPLIANCE* (2014).

11. See, e.g., Miriam Hechler Baer, *Governing Corporate Compliance*, 50 B.C. L. REV. 949 (2009); Sean J. Griffith, *Corporate Governance in an Era of Compliance* (unpublished manuscript) (May 31, 2015) (on file with author). But see Kristin N. Johnson, *Addressing Gaps in the Dodd-Frank Act: Directors’ Risk Management Oversight Obligations*, 45 U. MICH. J.L. REFORM 55, 92–100 (2011) (arguing that Dodd-Frank did not go far enough in regulating compliance).

12. See Anne-Marie Slaughter, *Sovereignty and Power in a Networked World Order*, 40 STAN. J. INT’L L. 283, 285 (2004) (conceptualizing “new sovereignty” as “the capacity to participate in the international and transgovernmental regimes, networks, and institutions that are now necessary to allow governments to accomplish through cooperation with one another what they could once only hope to accomplish acting alone within a defined territory”); see also HAL S. SCOTT & ANNA GELPERN, *INTERNATIONAL FINANCE: TRANSACTIONS, POLICY, AND REGULATION* (20th ed. 2014).

13. See *infra* Part III.B (discussing the possible decline in liquidity and growth of shadow banking system that has followed increased capital requirements).

14. See, e.g., CHRIS BRUMMER, *SOFT LAW AND THE GLOBAL FINANCIAL SYSTEM: RULE MAKING IN THE 21ST CENTURY* (2d ed. 2015).

convergence. In making this proposal, this Article joins other scholars who have argued that Basel's current one-size-capital-fits-all approach is neither the most economically efficient nor the most prudentially sound.¹⁵

Ultimately, conceptualizing misconduct risk as a distinct category of risk to the financial system should prompt bank regulators, like central banks, to more readily embrace the need for new tools to supervise banking conduct. Moreover, the specific tool that this Article proposes shows that regulators can effectively and efficiently incorporate misconduct risk into existing regulatory frameworks.¹⁶

I. THE CONCEPT OF MISCONDUCT RISK

After the Crisis, financial regulation in the world's most significant financial economies pivoted toward a "macroprudential approach."¹⁷ Whereas prior to the Crisis, regulation was concerned principally with firm-level stability, the post-Crisis framework has become much more mindful of how regulation should be designed to address threats to the "financial system as a whole."¹⁸ Among other things, this macroprudential philosophy stimulated intense attention to the myriad sources of systemic risk. Not surprisingly, as the focus on systemic risk has grown, so too has the debate over the definition of that term.

Classically, systemic risk was viewed as the possibility that institutional distress—traditionally, a bank failure—could have a domino-type effect, leading to other firm failures and an overall contraction of the financial system.¹⁹ More recently, scholars have entertained a slightly looser

15. See Roberta Romano, *For Diversity in the International Regulation of Financial Institutions: Critiquing and Recalibrating the Basel Architecture*, 31 YALE J. ON REG. 1 (2014). Notably, however, Romano urges greater regulatory diversity within the Basel regime, "challeng[ing] the present-day enthusiasm for international regulatory harmonization and the notion that harmonization is a panacea for systemic risk." *Id.* at 5.

16. Framing misconduct as a market failure that is caused by market participants' strategic behavior also extends the classic debate on government intervention in markets and relative transaction costs to the context of financial misconduct. See, e.g., A.C. PIGOU, *THE ECONOMICS OF WELFARE* (1920) (discussing the theory of market failure); R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960) (suggesting that transaction costs are lower when private institutions, rather than government regulators, allocate resources).

17. See Ben S. Bernanke, Chairman, Bd. of Governors of the Fed. Reserve Sys., *Implementing a Macroprudential Approach to Supervision and Regulation* (May 5, 2011), <http://www.federalreserve.gov/newsevents/speech/bernanke20110505a.pdf> (explaining this approach as one that "supplements traditional supervision and regulation of individual firms or markets with explicit consideration of threats to the stability of the financial system as a whole") [perma.cc/M7CB-MQ53].

18. Samuel G. Hanson et al., *A Macroprudential Approach to Financial Regulation*, 25 J. ECON. PERSPECTIVES 3, 3 (2011); see Anil K. Kashyap et al., *The Macroprudential Toolkit*, 59 IMF ECON. REV. 145 (2011).

19. See Kathryn Judge, *Fragmentation Nodes: A Study in Complex Financial Innovation, Complexity, and Systemic Risk*, 64 STAN. L. REV. 657, 664–65 (2012); Serafín Martínez-Jaramillo et al., *Systemic Risk, Financial Contagion and Financial Fragility*, 34 J. ECON. DYNAMICS & CONTROL 2358, 2359 (2010) (conceptually modeling systemic risk as involving "first, an initial random shock which affects . . . one or more financial institutions and second, a contagion mechanism which transmits such negative effects to other institutions on the system"); Schwarcz, *supra* note 1, at 204 (defining systemic risk as an

definition of the term by including indirect threats to the proper functioning of markets, which may not themselves cause bank failures or systemic crises, but do increase the possibility of those outcomes.²⁰ Under either view, misconduct has been largely excluded.²¹

The goal of Part I is to draw attention to the ways in which misconduct can give rise to the type of negative externalities that motivate post-Crisis regulatory interventions on macroprudential (or systemic risk) grounds.²² Through the Crisis example, Part I.A sheds light on at least one link between misconduct and classic systemic risk—namely, that misconduct can contribute to asset bubbles, which may, in turn, lead to a systemic banking crisis. In Part I.B, a second example, involving the manipulation of LIBOR and the foreign exchange markets (“forex”), shows that misconduct continues to manifest in various and unanticipated ways since the Crisis, outmaneuvering the existing regulatory apparatus. Although these later cases did not in the end result in systemic consequences, they illustrate that the *risk* of such a seismic outcome continues to exist. Overall, the examples in Part I help sharpen the distinction between misconduct risk (a macro concern) and misconduct that is idiosyncratic, rogue, or epiphenomenal.

economic shock that triggers a chain of institutional or market failures that results in an increased cost of capital or decreased availability of capital).

20. See, e.g., Judge, *supra* note 19, at 659–60, 665 (defining complexity as systemic risk and also noting that “the notion of what constitutes a ‘systemic risk’ has broadened”); Robert C. Hockett & Saule T. Omarova, *Systemically Significant Prices*, 2 J. FIN. REG. (forthcoming 2016) (manuscript at 24) (on file with author), <http://ssrn.com/abstract=2580078> (defining key markets and prices as systemic risk) [perma.cc/EYL2-7U58]; Geoffrey P. Miller & Gerald Rosenfeld, *Intellectual Hazard: How Conceptual Bias in Complex Organizations Contributed to the Crisis of 2008*, 33 HARV. J.L. & PUB. POL’Y 807, 808 (2011) (defining intellectual hazard as systemic risk).

21. For the body of legal and finance scholarship on systemic risk since the Crisis, see, for example, Iman Anabtawi & Steven L. Schwarcz, *Regulating Systemic Risk: Towards an Analytical Framework*, 86 NOTRE DAME L. REV. 1349, 1370–1412 (2011) (studying the challenges of regulating systemic risks); John Armour & Jeffrey N. Gordon, *Systemic Harms and Shareholder Value*, 6 J. LEGAL ANALYSIS 35, 35 (2014) (referring to systemic risks posed by management practices); Coffee, Jr., *supra* note 6, at 1050 (suggesting that systemic risk was a product of a “too big to fail” subsidy for large financial institutions); Julie A.D. Manasfi, *Systemic Risk and Dodd-Frank’s Volcker Rule*, 4 WM. & MARY BUS. L. REV. 181, 205–11 (2013) (arguing that “the blending of commercial banking and investment banking produce[s] . . . systemic risk”); Miller & Rosenfeld, *supra* note 20, at 808 (arguing that “the tendency of behavioral biases to interfere with accurate thought and analysis within complex organizations” is a source of systemic risk); Saule T. Omarova, *The Merchants of Wall Street: Banking, Commerce, and Commodities*, 98 MINN. L. REV. 265, 343–46 (2013) (suggesting that banks’ nontraditional activities pose systemic risks); Schwarcz, *supra* note 1, at 198–204 (offering the first scholarly definition of systemic risk); Daniel Schwarcz & Steven L. Schwarcz, *Regulating Systemic Risk in Insurance*, 81 U. CHI. L. REV. 1569 (2014) (studying previously unrecognized systemic risk in the insurance industry).

22. To be sure, not all bank misconduct generates macroprudential or systemic risk concerns. “If a bank loses money from a risky investment, that is not systemic. But institutional failure, market seizure, infrastructure breakdown[,] or even a sharp rise in the cost of financial services can have serious adverse implications for many other market participants. In these cases, there is a systemic dimension.” Jaime Caruana, *Systemic Risk: How to Deal With It?*, BANK FOR INT’L SETTLEMENTS (Feb. 2010), <http://www.bis.org/publ/othp08.htm#P1> [perma.cc/RZ4Z-WRWM].

A. *The 2008 Financial Crisis*

Asset bubbles are one of the most common historical causes of systemic crises, and misconduct has played a key role in some of these.²³ The South Sea Bubble of 1720 may be the earliest example of a severe market crash precipitated by an asset bubble that was fueled by fraud and deception. In the early eighteenth century, the English House of Lords gave the South Sea Company a monopoly over South American trade, positioning it to rival the East India Trading Company.²⁴ The company's business was, however, "blighted from the outset"—saddled with insufficient experience, delivery failure, and, eventually, war with Spain.²⁵ In order to perpetuate the illusion of profit, the company's directors circulated "fanciful tales of South Sea riches."²⁶ These false but "extravagant rumors"²⁷ stoked demand for the stock and incited a period of investor mania, driving the share's value to nearly ten times what it was probably worth.²⁸ When the bubble finally burst, individuals and institutions were ruined, and the Bank of England was forced to bail out the company to spare the national economy from debilitating harm.²⁹

Fast-forwarding 275 years, the Crisis was similarly fueled by an asset bubble.³⁰ The conventional narrative of the Crisis is by now relatively well-settled. As the Financial Crisis Inquiry Commission succinctly recounted,

[I]t was the collapse of the housing bubble—fueled by low interest rates, easy and available credit, scant regulation, and toxic mortgages—that was the spark that ignited a string of events, which led to a full-blown crisis in the fall of 2008.³¹

23. See Erik F. Gerding, *Laws Against Bubbles: An Experimental-Asset-Market Approach to Analyzing Financial Regulation*, 2007 WIS. L. REV. 977, 982 (noting that "[e]conomists generally define asset-price bubbles as the divergence of the price of an asset or asset class from its fundamental value"). See generally Markus K. Brunnermeier & Martin Oehmke, *Bubbles, Financial Crises, and Systemic Risk* (Nat'l Bureau of Econ. Res., Working Paper No. 18398, 2012).

24. Ellen Castelow, *South Sea Bubble*, HISTORIC UK, <http://www.historic-uk.com/HistoryUK/HistoryofEngland/South-Sea-Bubble/> (last visited Feb. 26, 2016) [perma.cc/6PEN-JDDX]; James Narron & David Skeie, *Crisis Chronicles: The South Sea Bubble of 1720—Repackaging Debt and the Current Reach for Yield*, FED. RESERVE BANK N.Y. (Nov. 8, 2013), <http://libertystreeteconomics.newyorkfed.org/2013/11/crisis-chronicles-the-south-sea-bubble-of-1720repackaging-debt-and-the-current-reach-for-yield.html#.VX3TeflVhBc> [perma.cc/4WBF-D5VE].

25. See RICHARD DALE, *THE FIRST CRASH: LESSONS FROM THE SOUTH SEA BUBBLE* 49–50 (2004).

26. *South Sea Bubble Short History*, HARV. BUS. SCH., <http://www.library.hbs.edu/hc/ssb/history.html> (last visited Feb. 26, 2016) [perma.cc/72JR-W227].

27. DAVID E. Y. SARNA, *HISTORY OF GREED: FINANCIAL FRAUD FROM TULIP MANIA TO BERNIE MADOFF* 25 (2010); see Castelow, *supra* note 24.

28. SARNA, *supra* note 27, at 25–26; *South Sea Bubble Short History*, *supra* note 26.

29. CHARLES P. KINDLEBERGER, *A FINANCIAL HISTORY OF WESTERN EUROPE* 76 (1984).

30. See Eric S. Rosengren, Pres. & CEO, Fed. Reserve Bank of Bos., *Asset Bubbles and Systemic Risk* (Mar. 3, 2010), <https://www.bostonfed.org/news/speeches/rosengren/2010/030310> [perma.cc/7KKP-43YR].

31. FIN. CRISIS INQUIRY COMM'N, *THE FINANCIAL CRISIS INQUIRY REPORT: FINAL REPORT OF THE NATIONAL COMMISSION ON THE CAUSES OF THE FINANCIAL AND ECONOMIC*

The Crisis involved a secondary bubble as well, surrounding the securities that large, global banks created from these toxic loans—mortgaged-backed securities³² (MBS). Over the past several years, scholars, policymakers, and commentators have offered various explanations for the Crisis, which range from moral hazard to housing policy.³³ Among them is misconduct, insofar as misconduct played some contributing role in both bubbles by loosening the credit supply and by fueling supply and demand for (unsustainable) securitized mortgage products.³⁴

In particular, a body of research has emerged discussing the Crisis as a “supply-side phenomenon,” that is, the byproduct of a significant loosening of credit.³⁵ As Alejandro Justiniano and his coauthors explained, “The housing boom that preceded the Great Recession was the result of an increase in credit supply driven by looser lending constraints in the mortgage market.”³⁶ Some scholars, courts, and commentators have since concluded that misconduct contributed to this loosening.³⁷ Blackburn and

CRISIS IN THE UNITED STATES xvi (2011), <https://www.gpo.gov/fdsys/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf> [perma.cc/Y8FX-2DT5].

32. See Judge, *supra* note 19, at 693 (noting that the Crisis was “two related but distinct bubbles—one in real estate and a second in mortgage securities”).

33. See, e.g., Coffee, Jr., *supra* note 1, at 800 (arguing that a “too big to fail” subsidy developed, which stoked moral hazard in big banks); see Lucian A. Bebchuk & Holger Spamann, *Regulating Bankers’ Pay*, 98 GEO. L.J. 247, 265–66 (2010) (showing empirically that executive compensation gave rise to asymmetrical incentives and fueled excessive risk taking); John B. Taylor, *Getting Back on Track: Macroeconomic Policy Lessons from the Financial Crisis*, 92 FED. RESERVE BANK ST. LOUIS REV. 165, 166–67 (2010) (arguing that departures in monetary policy from the so-called Taylor Rule led to build up of debt and excessive risk taking); Norbert J. Michel, *Government Policies Caused the Financial Crisis and Made the Recession Worse*, HERITAGE FOUND. (Jan. 28, 2015), <http://www.heritage.org/research/commentary/2015/1/government-policies-caused-the-financial-crisis-and-made-the-recession-worse> (discussing the role of housing policy and government-sponsored enterprises in contributing to the bubble) [perma.cc/G5F7-35Q3]; Peter J. Wallison, *Fannie, Freddie Caused the Financial Crisis*, AM. ENT. INST. (Nov. 25, 2011), <https://www.aei.org/publication/fannie-freddie-caused-the-financial-crisis> (discussing the role of housing policy in contributing to the bubble) [perma.cc/BU7H-JGZP].

34. See William C. Dudley, Pres. & CEO, Fed. Reserve Bank of N.Y., *Asset Bubbles and the Implications for Central Bank Policy* (Apr. 7, 2010), <http://www.bis.org/review/r100409c.pdf> (noting that there were two innovations related to the housing boom: “innovations . . . in housing finance, where subprime lending made mortgage credit available to households that were much less creditworthy, and . . . in structured finance instruments such as [CDOs]”) [perma.cc/QR8Q-8RWS].

35. Adam J. Levitan & Susan M. Wachter, *Explaining the Housing Bubble*, 100 GEO. L.J. 1177, 1181 (2012); see ALEJANDRO JUSTINIANO ET AL., FED. RESERVE BANK OF N.Y., STAFF REPORT NO. 709, CREDIT SUPPLY AND THE HOUSING BOOM (2015).

36. JUSTINIANO ET AL., *supra* note 35, abstract.

37. See, e.g., McKinley L. Blackburn & Todd Vermilyea, *The Prevalence and Impact of Misstated Incomes on Mortgage Loan Applications*, 21 J. HOUSING ECON. 151, 151 (2012) (“One of the explanations that is commonly offered for the increased rates of lending in the mid-2000s is a lack of diligence in documenting income on mortgage loan applications by lending institutions.”); Atif R. Mian & Amir Sufi, *Fraudulent Income Overstatement on Mortgage Applications During the Credit Expansion of 2002 to 2005*, at 14 (Kreisman Working Paper Series in Housing L. & Pol’y, No. 21, 2015) (providing examples where “the mortgage originator and buyer work together to commit fraud” and noting that “during the mortgage credit expansion from 2002 to 2005, we know originators failed to monitor and

Vermilyea, for example, provide one of the first academic studies “that reflect[s] the degree to which incomes in mid-2000 home-purchase mortgage loan applications were overstated relative to the true incomes of mortgage applicants.”³⁸

Likewise, a 2015 paper from Princeton economist Atif Mian and Chicago Booth School’s Amir Sufi studied income falsification and its connection to the subprime housing bubble.³⁹ Consistent with the supply-side theory, they concluded that “the expansion of credit in subprime zip codes was more likely due to a fundamental credit supply shock than exogenous increases in house price expectations in these neighborhoods,” which created “vicious cycle[s] where a housing bubble pulled in even more credit.”⁴⁰ In part, they credit the correlation between this “boom-bust cycle” and the subprime market to “fraudulent reporting of income[s],” which “becomes more necessary when house prices are higher because of the need to meet debt-to-income restrictions.”⁴¹

Although smaller banks and originators were involved in these practices, so too were larger institutions. One internal memorandum to loan officers at J.P. Morgan instructed: “If you do not get [approval], try resubmitting with slightly higher income. Inch it up \$500 to see if you can get the findings you want. Do the same for assets.”⁴² For similar such conduct, the

screen potential borrowers” and that in some cases they “falsified income information by borrowers without the borrowers’ knowledge”); *see also* Complaint ¶ 1, SEC v. J.P. Morgan Securities LLC, No. 1:12-cv-01872 (RLW) (D.D.C. Nov. 16, 2012) (alleging that Bear, Stearns & Co. did not disclose its practice “in connection with [residential] MBS offerings[] of negotiating cash settlements with mortgage loan originators that violated the representations, warranties, and covenants made to Bear by the originators after the loans were securitized [and not] notifying the trusts that owned the loans”); Complaint ¶ 2, United States v. Bank of America Corp., No. 12-cv-1422 (JSR) (S.D.N.Y. Oct. 24, 2012) (alleging that Countrywide sold bad loans to Fannie and Freddie by “eliminat[ing] every significant checkpoint on loan quality and compensated its employees solely based on the volume of loans originated, leading to rampant instances of fraud and other serious loan defects, all while Countrywide was informing the GSEs [Fannie and Freddie] that it, too, had tightened its underwriting guidelines”); Complaint ¶ 1, FDIC v. Killinger, No. 2:11-cv-459 (W.D. Wash. Mar. 16, 2011) (alleging that executives were “focused on short term gains to increase their own compensation, with reckless disregard for WaMu’s longer term safety and soundness”); Complaint ¶¶ 2–8, SEC v. Mozilo, No. CV09-03994 VBF AJWX (C.D. Cal. June 4, 2009) (alleging that three Countrywide executives failed to disclose the risks associated with their underwriting practices and the fact that its business model, which depended on selling its loans into the secondary mortgage market, was unsustainable); Chris Dolmetsch & Dakin Campbell, *U.S. Files Civil Mortgage Fraud Suit Against Wells Fargo*, BLOOMBERG BUS. (Oct. 10, 2012), <http://www.bloomberg.com/news/articles/2012-10-09/u-s-files-civil-mortgage-fraud-suit-against-wells-fargo> [perma.cc/E6PD-63ND]; Shayndi Raice, *Jury Decides Against BofA on ‘Hustle’ Program*, WALL STREET J. (Oct. 23, 2013), <http://www.wsj.com/articles/SB10001424052702303615304579153900661389242> [perma.cc/4TW7-FDYA]; Landon Thomas Jr., *Jury Finds Bank of America Liable in Mortgage Case*, N.Y. TIMES: DEALB%K (Oct. 23, 2013), http://dealbook.nytimes.com/2013/10/23/jury-finds-bank-of-america-liable-in-mortgage-case-nicknamed-the-hustle/?_r=0 (reporting on the Bank of America “HSSL” program) [perma.cc/C4F5-TJVN].

38. Blackburn & Vermilyea, *supra* note 37, at 152.

39. *See* Mian & Sufi, *supra* note 37.

40. *Id.* at 31.

41. *Id.* at 32.

42. Blackburn & Vermilyea, *supra* note 37, at 151.

Federal Reserve Bank (“the Fed”) assessed an \$85 million civil penalty against Wells Fargo; its employees had allegedly “falsified income information in mortgage applications.”⁴³ As the *New York Times* reported, “Some of the nation’s largest lenders, including Countrywide, Wells Fargo[,] and Ameriquest,⁴⁴ overstated the income of borrowers—without telling them—to qualify them for larger loans than they could afford.”⁴⁵ The result was a sizable (oversized) body of so-called “toxic” subprime loans, which large financial institutions desired as the “raw material[s]” for their “mortgage machine”⁴⁶—the creation of MBS and financial products structured from these MBS,⁴⁷ like collateralized debt obligations (CDOs).

Here, too, in the market for securitized mortgage products, misconduct may have played a role in exacerbating the Crisis. In some cases, bankers failed to adequately perform due diligence with respect to the loans they were including in their securitized and structured products or with respect to the mortgage originators and their practices. At least two international banks, Nomura and the Royal Bank of Scotland, were found by Judge Denise Cote to have enticed Fannie Mae and Freddie Mac to buy mortgage securities by misrepresenting (or not fully disclosing) the risks associated with the underlying collateral.⁴⁸ Under federal securities law, Regulation AB requires disclosure of the originators’ practices and a description of the underwriting criteria.⁴⁹ Yet, in that case, Nomura “failed to subject thousands of the loans at issue . . . to genuine credit or valuation diligence, opting instead to use less expensive screening mechanisms. And once the

43. Press Release, Bd. of Governors of Fed. Reserve Sys. (July 20, 2011), <http://www.federalreserve.gov/newsevents/press/enforcement/20110720a.htm> [perma.cc/3NDT-2KEJ]; see Order to Cease and Desist and Order of Assessment of a Civil Money Penalty Issued Upon Consent, *In re Wells Fargo & Co.*, Nos. 11-094-B-HC1, 11-094-I-HC1, 11-094-B-HC2, 11-094-I-HC2 (July 20, 2011).

44. As the Financial Crisis Inquiry Commission noted, fraud at institutions like Ameriquest (a California-based subprime lender) was “emulated” throughout the industry. FIN. CRISIS INQUIRY COMM’N, *supra* note 31, at 12. These practices included inflating home appraisals, misleading investors about the nature of their interest rates, or switching the interest rates altogether. *Id.*

45. Binyamin Appelbaum, *How Mortgage Fraud Made the Financial Crisis Worse*, N.Y. TIMES: UPSHOT (Feb. 12, 2015), http://www.nytimes.com/2015/02/13/upshot/how-mortgage-fraud-made-the-financial-crisis-worse.html?_r=0 [perma.cc/2E3V-EEYF]. This is not to suggest that borrowers had no fault; in many cases, they were complicit.

46. FIN. CRISIS INQUIRY COMM’N, *supra* note 31, at 102–03.

47. Robert Khuzami, director of the SEC’s Enforcement Division, has stated that “mortgage products such as [residential] MBS were ground zero in the financial crisis” and that “[m]isrepresentations in connection with the creation and sale of mortgage securities contributed greatly to the tremendous losses suffered by investors once the U.S. housing market collapsed.” Press Release, SEC, SEC Charges J.P. Morgan & Credit Suisse with Misleading Investors in RMBS Offerings (Nov. 16, 2012), http://www.sec.gov/News/PressRelease/Detail/PressRelease/1365171486012#.VSP_qfnF940 [perma.cc/RH8L-RG9U].

48. *Fed. Housing Fin. Agency v. Nomura Holding Am., Inc.*, 104 F. Supp. 3d 441, 537 (S.D.N.Y. May 11, 2015) (“[T]he origination and securitization of these defective loans not only contributed to the collapse of the housing market, the very macroeconomic factor that defendants say caused the losses, but once that collapse started, improperly underwritten loans were hit hardest and drove the collapse even further.”).

49. 17 C.F.R. § 229.110 (2014).

loans were on Nomura's books . . . [it] performed no further diligence.”⁵⁰ The court also referred to the Royal Bank of Scotland's diligence as “perfunctory.”⁵¹

In many cases, however, the banks' (or, more precisely, certain bankers') conduct may *not* have been illegal. Even so, the bankers' behavior may have been an unethical breach of their professional duty to ensure the integrity of the information that their clients and counterparties were relying on to make financial decisions. There are several known examples of this kind of misconduct. One journalist, Felix Salmon, documented the practice of third-party diligence, which a company called Clayton Holdings frequently performed.⁵² After a bank obtained a pool of mortgages, Clayton would re-diligence a representative sample.⁵³ In one case, for example, even though Clayton rejected 45 percent of the loans in the sample, the bank did not perform further diligence on the remaining loans or pass this information on to investors.⁵⁴ Based on his research, Salmon concluded, “[I]t [is] clear that the banks had price-sensitive information on the quality of the loan pool which they failed to pass on to investors in that pool.”⁵⁵

In one case (and there appears to be more),⁵⁶ traders at Citigroup were alleged to have committed securities fraud in connection with the structuring and marketing of a CDO “squared”—a synthetic CDO that contains a credit default swap (CDS) that references other CDOs.⁵⁷ The product was structured and marketed in 2007, when the housing market had already begun to decline.⁵⁸ Aware of the direction the market was headed, Citigroup allegedly decided to take a short position in the CDO by buying protection against it.⁵⁹ Despite the fact that it was betting against the very assets it had selected, Citigroup allegedly failed to disclose that fact to investors.⁶⁰ Ultimately, the investors in the CDOs lost all of their principal investment.⁶¹ The U.S. Securities and Exchange Commission (SEC) brought a civil securities fraud suit against Citigroup, which it settled for

50. *Nomura*, 104 F. Supp. 3d at 470.

51. *Id.*

52. Felix Salmon, *The Enormous Mortgage-Bond Scandal*, REUTERS (Oct. 13, 2010), <http://blogs.reuters.com/felix-salmon/2010/10/13/the-enormous-mortgage-bond-scandal> [perma.cc/36VA-MCPQ].

53. *See id.*

54. *See id.*

55. *Id.*

56. U.S. SENATE, PERMANENT SUBCOMM. ON INVESTIGATIONS, COMM. ON HOMELAND SEC. & GOVERNMENTAL AFFAIRS, WALL STREET AND THE FINANCIAL CRISIS: ANATOMY OF A FINANCIAL CRISIS 330 (2011), http://www.hsgac.senate.gov/imo/media/doc/Financial_Crisis/FinancialCrisisReport.pdf?attempt=2 [perma.cc/SR9E-B5Q3].

57. Complaint, SEC v. Stoker ¶ 1, No. 11-cv-7388 (S.D.N.Y. Oct. 18, 2011).

58. *Id.*

59. *See id.* ¶¶ 17–18, 23–34.

60. *See id.* ¶ 60.

61. *See id.* ¶ 77.

\$285 million (and without admitting misconduct).⁶² Again, even assuming the Citigroup traders' behavior was consistent with the letter of the securities law, the distortion of information involved was probably unethical and certainly had economically distorting effects.

This sketch of the Crisis and the various kinds (and degrees) of misconduct involved is in no way intended as a comprehensive accounting of the misbehavior that took place in the run-up to the Crisis. Rather, this brief sampling is offered to illustrate the systemic quality of misconduct involved: by spreading broadly across institutions, fraud and other forms of information distortion can exacerbate bubbles and contribute to dangerous risk correlation by amplifying and synchronizing demand for an unsustainable asset.⁶³

B. LIBOR

As William Dudley of the New York Fed has noted, "The pattern of bad behavior did not end with the Crisis, but continued despite the considerable public sector intervention that was necessary to stabilize the financial system."⁶⁴ The following case study of the manipulation of the LIBOR benchmark and forex illustrates that even short of contributing to crises, misconduct can nonetheless assume systemic significance by imposing other social and economic costs on market participants and the real economy. The case also underscores that misconduct risk is an evolving and shape-shifting problem. As misconduct continues to manifest in various (even unexpected) ways, the existing regulatory framework must also adapt, both to reduce the costs on third parties that misconduct imposes and to minimize the possibility that misconduct will contribute to another systemic event.

LIBOR is an interest rate benchmark that is one of the most important indices in the world. Trillions of dollars of assets and loans are pegged to this rate and it serves as the basis for public and private contracts worldwide.⁶⁵ For these reasons, Robert Hockett and Saule Omarova have referred to LIBOR as a "systemically significant price" that demands enhanced prudential regulation on par with that imposed on systemically

62. See Chad Bray, *Judge Unloads on Deal SEC Struck with Citi*, WALL STREET J., (Nov. 10, 2011), <http://www.wsj.com/articles/SB10001424052970204224604577028564166670848> [perma.cc/A8FB-PZ6N].

63. Risk correlation—where large financial institutions pursue the same asset strategy—implies that the failure of one will result in the distress of the others, like a chain of "financial dominos." Coffee, Jr., *supra* note 6, at 1057; see also Richard Squire, *Shareholder Opportunism in a World of Risky Debt*, 123 HARV. L. REV. 1151, 1156–63 (2010) (arguing that firms engage in "correlation-seeking" by incurring contingent debt that correlates with its insolvency risk).

64. William C. Dudley, Pres. & CEO, Fed. Reserve Bank of N.Y., Remarks at the Workshop on Reforming Culture and Behavior in the Financial Services Industry (Oct. 20, 2014), <http://www.newyorkfed.org/newsevents/speeches/2014/dud141020a.html> [perma.cc/Z85U-5DEP].

65. *The Rotten Heart of Finance*, ECONOMIST (July 7, 2012), <http://www.economist.com/node/21558281> [perma.cc/4U34-GJR3].

important institutions.⁶⁶ To compile the rate, the British Bankers' Association (BBA) would ask a panel of six or more large international banks each day: "[A]t what rate could you borrow funds [in the interbank market] just prior to 11 [a.m.]"⁶⁷ The methodology was simple and clean, albeit based in a loose honor system, as banks were not required to substantiate their answers. In 2012, the public discovered that several of the large contributing banks had manipulated the benchmark—beginning as early as 2005.⁶⁸

Traders manipulated these rates for two different reasons. The first was for profit—small changes in the LIBOR rate could yield substantial swings in profit, given the notional value of many contracts that used the LIBOR rate.⁶⁹ The other reason was to inflate institutional health during the troubled Crisis years. There was a (not unfounded) fear that if a bank was perceived as weak—unable to raise funds in the interbank market—it might fall prey to runs, the likes of which had claimed Bear Stearns.⁷⁰ It was for that reason that one Barclays manager told a submitter not to “stick its head above the parapet.”⁷¹

To those ends, traders colluded with others inside and outside of their firms to manipulate the daily submissions. Many exchanges were captured in emails and instant messaging and provide a startling window into the norms and camaraderie that arose from manipulating these rates. Messages show how traders not only condoned, but encouraged, one another and created a certain cachet around making money by cheating.

In one series of exchanges, for instance, a Barclays trader in New York requested to a Barclays trader in London:

This is the [book's] risk. We need low 1M and 3M libor. Pls ask [submitter] to get 1M set to 82. That would help a lot.⁷²

Submitters, who ultimately received the traders' requests, would frequently agree to such requests:

For you . . . anything . . .⁷³

66. See Hockett & Omarova, *supra* note 20.

67. WHEATLEY REVIEW OF LIBOR: FINAL REPORT 61 (2012) [hereinafter WHEATLEY REVIEW], https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/191762/wheatley_review_libor_finalreport_280912.pdf [perma.cc/63SD-CTJR]; see Gabriel Rauterberg & Andrew Verstein, *Index Theory: The Law, Promise, and Failure of Financial Indices*, 30 YALE J. ON REG. 1, 16–17 (2013).

68. See WHEATLEY REVIEW, *supra* note 67, at 81.

69. See Dan Awrey, *The Limits of Private Ordering Within Modern Financial Markets*, 34 REV. OF BANKING & FIN. L. 183, 228 (2014); Jesse Colombo, *This New Libor 'Scandal' Will Cause a Terrifying Financial Crisis*, FORBES (June 3, 2014), <http://www.forbes.com/sites/jessecolombo/2014/06/03/this-new-libor-scandal-will-cause-a-terrifying-financial-crisis> [perma.cc/4SFL-BCU5].

70. Awrey, *supra* note 69, at 229.

71. *Id.* (quoting settlement with the U.K. Financial Services Authority).

72. Complaint at 9, *In re Barclays PLC*, Order Instituting Proceedings Pursuant to Sections 6(c) and 6(d) of the Company Exchange Act, as Amended, Making Findings and Imposing Remedial Sanctions, CFTC No. 12-25 (June 27, 2012) (quoting a March 27, 2006, exchange from a New York trader to a London trader).

73. *Id.* at 10 (quoting a March 16, 2006, exchange).

Always happy to help, leave it with me, Sir.⁷⁴

The Swiss bank UBS was also involved.⁷⁵ The British Financial Services Authority found that traders at UBS made over 1000 requests to six different brokerage houses, and U.S. regulators found that UBS colluded with at least four other banks that contributed to the LIBOR panel.⁷⁶ In a conversation between a UBS trader and a cash broker, the broker stated:

mate yur getting bloody good at this libor game . . . think of me when yur on yur yacht in monaco wont yu.⁷⁷

In another instance, one trader remarked: “Dude, I owe you big time! . . . I’m opening a bottle of Bollinger.”⁷⁸

The evidence shows that LIBOR manipulation had become well-known and broadly accepted as normal at these global institutions.⁷⁹ Indicative of the norm, rate manipulation among large global banks extended beyond LIBOR. Traders at these institutions were also discovered to have manipulated the second most widely used benchmark, Euribor, as well as the Swiss Franc London Interbank Offered Rate.⁸⁰

Of particular note was the subsequent discovery of manipulation in the exchange market for forex.⁸¹ Like LIBOR, the forex market is enormous and touches trillions of dollars in transactions each day—in fact one financial commentator has referred to the forex market as “the biggest and the most interwoven one of them all.”⁸² Again, global banks including Citigroup, J.P. Morgan, Barclays, the Royal Bank of Scotland, and possibly

74. *Id.* (quoting a March 20, 2006, exchange).

75. In addition to those institutions where employees were proven to have manipulated LIBOR, others admitted attempts to manipulate it. *See* Rauterberg & Verstein, *supra* note 67, at 3.

76. Jill Treanor, *UBS Libor Case Uncovers Tangled Web of Bank-Broker Relations*, *GUARDIAN* (Dec. 19, 2012, 4:15 PM), <http://www.theguardian.com/business/2012/dec/19/ubs-libor-case-fine-emails> [perma.cc/3XBN-RZGU].

77. Plea Agreement at 24, *United States v. UBS AG*, No. 3:15-cr-76 (D. Conn. May 20, 2015).

78. *The Rotten Heart of Finance*, *supra* note 65; *see* PRICEWATERHOUSECOOPERS LLP, *THREATS TO THE FINANCIAL SERVICES SECTOR* 16 (2014), <https://www.pwc.com/gx/en/financial-services/publications/assets/pwc-gecs-2014-threats-to-the-financial-services-sector.pdf> (noting that “in the LIBOR case, employees [were] not encouraged to also challenge social conformity”) [perma.cc/5AE8-34DP].

79. *See* PRICEWATERHOUSECOOPERS LLP, *supra* note 78, at 16.

80. *See* DAVID HOU & DAVID SKEIE, *FED. RESERVE BANK OF N.Y., STAFF REPORT NO. 667, LIBOR: ORIGINS, ECONOMICS, CRISIS, SCANDAL, AND REFORM* 3 (2014); Tom Fairless, *J.P. Morgan Fined by EU Regulators Over Rate Rigging, Operating Cartel*, *WALL STREET J.* (Oct. 21, 2014, 12:20 PM), <http://www.wsj.com/articles/j-p-morgan-fined-by-eu-regulators-over-rate-rigging-operating-cartel-1413896931> [perma.cc/9LZT-XH38].

81. *See* Chad Bray et al., *Big Banks Are Fined \$4.25 Billion in Inquiry into Currency-Rigging*, *N.Y. TIMES: DEALB%K* (Nov. 12, 2014, 2:24 AM), <http://dealbook.nytimes.com/2014/11/12/british-and-u-s-regulators-fine-big-banks-3-16-billion-in-foreign-exchange-scandal> [perma.cc/MN2G-GLR2]; *Six Banks Fined £2.6bn by Regulators Over Forex Failings*, *BBC NEWS* (Nov. 12, 2014), <http://www.bbc.com/news/business-30016007> [perma.cc/ZKC5-NF2P].

82. Bray et al., *supra* note 81.

UBS were involved in the manipulative misconduct.⁸³ In 2014, government authorities uncovered that traders at these banks had been colluding to fix the prices of particular currencies for higher profits.⁸⁴

And again, the conduct was not only collusive, but also collaborative and collegial.⁸⁵ By one account, a Citigroup trader made a profit of \$99,000 in thirty-three seconds by coordinating with other brokers over a series of trades in the euro against the dollar.⁸⁶ That trader worked with other traders to build up his book of trades, which enabled him to increase the price at a critical point in time when prices are set—known as the “fix”—above that which the trader had been paying all day in the open market.⁸⁷ And traders at other firms helped the Citigroup trader do this.⁸⁸

This misconduct arguably impaired the integrity and soundness of the global financial markets in at least two different ways. First, manipulating the benchmarks distorted the market equilibrium of numerous contracts. With trillions of dollars in derivatives, swaps, and loans referencing LIBOR alone, manipulating rates necessarily had consequences in the real economy.⁸⁹ Perhaps most obviously, a falsely inflated LIBOR rate meant that any debt instrument in the world that referenced LIBOR as its benchmark became more expensive for the borrower—but not by the invisible hand of free market forces. More broadly, as Hockett and Omarova suggest, by exploiting their influence over benchmarks, financial institutions can distort the “‘natural’ long-term equilibrium” that the market expects, causing other market actors to engage in a socially suboptimal number of transactions, in transactions on unfair or inefficient terms, or to interact in the marketplace in irrational or destabilizing ways when their suspicions of rate rigging are eventually confirmed.⁹⁰

Second, the fines imposed for wrongdoing may have weakened the culpable—but systemically important—banks. In the past few years alone,

83. See Michael Corkery & Ben Protess, *Rigging of Foreign Exchange Market Makes Felons of Top Banks*, N.Y. TIMES: DEALB%K (May 20, 2015, 11:25 AM), http://www.nytimes.com/2015/05/21/business/dealbook/5-big-banks-to-pay-billions-and-plead-guilty-in-currency-and-interest-rate-cases.html?_r=0 [perma.cc/MTW9-5HXT].

84. See Sebastian Chrispin, *Forex Scandal: How to Rig the Market*, BBC (May 20, 2015), <http://www.bbc.com/news/business-26526905> [perma.cc/4L2L-3UYP].

85. In his annual Mansion House speech in the city of London, Bank of England Governor Mark Carney remarked that “[u]nethical behavior went unchecked, proliferated[,] and eventually became the norm.” Caroline Binham & Martin Arnold, *Bank of England Governor Mark Carney to Extend Market Abuse Rules*, FIN. TIMES (June 11, 2015, 7:14 AM), <http://www.ft.com/intl/cms/s/0/d24ce466-0f8b-11e5-b968-00144feabdc0.html#axzz3x49A8O00> [perma.cc/WM9D-UK8G].

86. See Bray et al., *supra* note 81.

87. *Id.*

88. *Id.*

89. Some have pointed out that the upward manipulation of LIBOR increased mortgage rates, adding to the debt burden of homeowners with adjustable-rate-mortgages. See, e.g., CHRIS LAUER, UNDERWATER: OPTIONS WHEN YOUR MORTGAGE IS UPSIDE DOWN 152 (2012); see also ERIC L. TALLEY, FINANCIAL REGULATION AND THE WORLD’S MOST IMPORTANT NUMBER: LIBOR REPORTING BEHAVIOR DURING THE CREDIT CRISIS 33 (2014) (on file with author) (discussing market implications of the LIBOR rate-fixing scandal).

90. Hockett & Omarova, *supra* note 20, at 10–11.

UBS was fined £940 million for its role in LIBOR;⁹¹ Deutsche Bank, also for its role in LIBOR, paid £227 million to the U.K.'s Financial Conduct Authority, \$775 million to the U.S. Department of Justice, \$800 million to the Commodity Futures Trading Commission, and \$600 million to the New York Department of Financial Services;⁹² UBS, J.P. Morgan Chase, HSBC, and the Royal Bank of Scotland, collectively, paid \$4.25 billion in fines to U.S., British, and Swiss regulators for their involvement in forex rigging⁹³—and the list goes on.⁹⁴

The weight of these fines—to say nothing of the related litigation expenses—has invariably cut into banks' earnings and challenged them to keep up with their regulatory capital requirements. As the European Systemic Risk Board has found in connection with the largest European banks, "Past fines and ones in the near future erase all the capital issued by EU globally systemically important banks (G-SIBs) during the last five years. The Common Equity Tier 1 ratios of these banks would be, on average, around two percentage points higher without such fines."⁹⁵ And as the results of the Fed's 2014 supervisory stress tests show, losses associated with "operational risk" (most of which related to litigation losses) for twenty-five U.S. banks was about \$150 billion over nine quarters.⁹⁶ This suggests that misconduct-related fines directly impede banks' ability to fortify their balance sheets against economic shocks as the post-Crisis framework intends.⁹⁷ And to the extent that fines cause a bank to struggle to meet these capital requirements, the fines invariably divert the bank's resources from other operational priorities, such as information infrastructure, internal compliance, and productive innovation.

II. A THEORY OF CONTAGION

The burden of Part I was to anchor the concept of misconduct risk: the possibility that misconduct, when widespread among financial institutions, gives rise to significant social and economic costs. It urged that in these cases, misconduct is a macro (market-wide) risk that requires regulatory intervention—because the negative externalities that result from misconduct risk are neither concentrated in, nor fully internalized by, the individual institutions involved. From that vantage point, just as regulators are

91. See Treanor, *supra* note 76.

92. See *Deutsche Bank Pays Record Fine for LIBOR Manipulation*, FIN. TIMES (Apr. 23, 2015, 6:43 PM), <http://www.ft.com/intl/cms/s/0/ccf7af08-e904-11e4-a71a-00144feab7de.html#axzz3ZZf0E9Ao> [perma.cc/59JA-LGYC].

93. See Bray et al., *supra* note 81.

94. The *Wall Street Journal* reported that the six largest U.S. bank holding companies have paid nearly \$130 billion in fines, settlements, and other costs related to the Crisis and mortgages. Justin Baer, *Top Wall Street Lawyer Slams Regulatory Environment*, WALL STREET J. (Mar. 18, 2015, 6:49 PM), <http://www.wsj.com/articles/top-wall-street-lawyer-slams-regulatory-environment-1426718956> [perma.cc/HER2-7EJK].

95. ESRB REPORT ON MISCONDUCT, *supra* note 3, at 14–15.

96. G30 CONDUCT AND CULTURE REPORT, *supra* note 4, at 20.

97. See Ryan Tracy et al., *Fed Lifts Capital Requirements for Banks*, WALL STREET J. (July 20, 2015, 8:29 PM), <http://www.wsj.com/articles/fed-set-to-finalize-amount-of-capital-big-banks-must-maintain-1437410401> [perma.cc/RDB2-BUP8].

concerned about the mechanisms that transmit balance sheet distress between banks, so too should they be worried about the mechanisms that spread or synchronize misconduct in the banking sector.⁹⁸

Building on the case studies explored in Part I, Part II provides the second component of a framework for understanding misconduct risk. Specifically, Part II explores several possible structural or institutional reasons why misconduct risk arises. First, Part II.A discusses three features of the banking sector that can enable misconduct on an industry-wide basis. Then, Part II.B explores the advantages of a regulatory strategy that targets, *ex ante*, structural sources of contagious misconduct.

A. *Interbank Contagion*

What follows is a discussion of three structural or institutional aspects of the banking sector: deficiencies in accountability, performance-based compensation, and the homogenous and hyperfluid nature of the banker labor market. These features are likely to be key drivers of misconduct risk because, together in interaction, they have the potential to first incentivize, and then spread, misconduct across the financial services industry.

1. Accountability

As a baseline, there may be certain deficiencies in accountability in the banking sector that decrease the likelihood that regulators or firm management will detect misconduct that goes on in deal teams or on trading floors. Though not an exhaustive list, two such deficiencies stand out: the lack of hierarchical responsibility at the managing director level and insufficient individual responsibility in connection with complex financial activities.

a. *Hierarchy*

In general, banking lacks a formalized structure for holding managing directors responsible for the conduct of analysts, associates, and vice presidents below them. Consider recent scandals involving the sale of MBS in the Crisis and the false submissions in LIBOR. Legal accountability for the misconduct in those cases tended to concentrate at two ends of the hierarchical spectrum—with firm managers, like bank CEOs, at one end and relatively junior level bankers at the other.⁹⁹ One important question is whether the managing directors who were not directly involved, but must

98. See Hal S. Scott, *Interconnectedness and Contagion—Financial Panics and the Crisis of 2008* (June 26, 2014) (unpublished manuscript), <http://ssrn.com/abstract=2178475> (providing a comprehensive analysis of contagion and interconnectedness in the Crisis) [perma.cc/9KS5-Q9B2].

99. See, e.g., Mark Broad, *LIBOR Trader: Who Is Tom Hayes?*, BBC NEWS (Aug. 3, 2015), <http://www.bbc.com/news/business-33635340> [perma.cc/7KAM-6EAQ]; *Former Barclays Employees Named in LIBOR Criminal Case*, BBC NEWS (Feb. 17, 2014), <http://www.bbc.com/news/business-26228635> [perma.cc/86EK-GX3P].

have (at least informally) signed off on this conduct, still remain in their jobs.¹⁰⁰

To the extent that banks did not hold managing directors accountable for the misconduct that they sanctioned or acknowledged during the Crisis or rate-fixing scandals, such lapse may reflect a lack of an industry-wide structure, policy, or ethical code that presumes managing directors are responsible for the conduct of their subordinates. Instead, accountability may still be too fractured insofar as mid-level managers, like managing directors, are not systematically subject to serious professional or reputational consequences if and when their subordinates engage in misconduct.

Such disconnect in professional responsibility may be unique to the banking profession. Other skill-based professions, like law or medicine, recognize that senior practitioners are responsible (either formally or informally) for the professional choices of their less experienced junior colleagues. In the practice of law, for example, well-established rules of professional conduct hold senior attorneys ethically responsible for the actions of their subordinates.¹⁰¹ In a similar ethos, medical doctors begin as residents and hone their skills under the supervision and guidance of attending physicians. These supervising physicians are not just technical teachers, but also guide their subordinates with respect to ethical questions or conflicts.¹⁰² But in finance, as much a profession that deals in public trust as law and medicine, similar hierarchical accountability appears sparse.

b. Complexity

Accountability may also be deficient where complexity is concerned—and a good deal of banking today is highly complex.¹⁰³ Broadly speaking, banks' transactions today are multifaceted and multilayered. Deals typically involve multiple teams within a bank and multiple bankers on each team. It is rare in high finance today for any one (or two or three) individual to have ownership for all of the work streams in a transaction. While there may be a figurehead nominally running the deal, no one single banker is likely to be intimately familiar with all of its moving pieces. Consequently, when the big picture suggests that the transaction was tainted

100. See Liam Vaughan & Gavin Finch, *Was Tom Hayes Running the Biggest Financial Conspiracy in History?*, BLOOMBERG BUS. (Sept. 14, 2015), <http://www.bloomberg.com/news/articles/2015-09-14/was-tom-hayes-running-the-biggest-financial-conspiracy-in-history-> [perma.cc/4PUY-J7TQ].

101. See, e.g., N.Y. RULES OF PROF'L CONDUCT r. 5.1.

102. See Tara JT Kennedy et al., *Clinical Oversight: Conceptualizing the Relationship Between Supervision and Safety*, 22 SOC'Y GEN. INTERNAL MED. 1080, 1080–81 (2007); Julie R. Rosenbaum et al., *Sources of Ethical Conflict in Medical Housestaff Training: A Qualitative Study*, 116 AM. J. MED. 402 (2004).

103. See Dan Awrey, *Complexity, Innovation, and the Regulation of Modern Financial Markets*, 2 HARV. BUS. L. REV. 235 (2012); Kathryn Judge, *Interbank Discipline*, 60 UCLA L. REV. 1262, 1275–77 (2013) (discussing the rise of banks' complexity); Judge, *supra* note 19.

with misrepresentation, omission, or manipulation, it can be difficult for management or regulators to hold individuals accountable, each of whom played only some small, nondispositive role.

This diffusion of responsibility is perhaps most apparent in structured finance. Recall that structured finance was at the heart of the Crisis. It involved an asset bubble surrounding securitized mortgages, whereby banks packaged subprime mortgages into securities and then further packaged those securities into products like CDOs and CDS. That process did not end with the Crisis—structured finance is alive and well today, while securitization is still a bread-and-butter process for banks.¹⁰⁴

And such complex financial activity wears accountability thin. Not only does structured finance typically involve multiple layers of deal teams—all contributing their parts along the assembly line—but it also involves multiple stakeholders on the other side of the deal. As Kate Judge has written, securitized products (and CDOs) “transform[.]” traditional bilateral relationships between assets and investors into something more dispersed—fragmented, as she terms it—in a way that increases and disperses the counterparties involved.¹⁰⁵ At each stage in the structuring and restructuring process, counterparties become more removed from the underlying collateral, and therefore their incentives to gather information and monitor asset quality is further and further reduced.¹⁰⁶ The result, overall, is a system of scattered responsibility on the securitization side combined with low levels of monitoring on the investor side, making any one individual banker’s perception of responsibility minimal at best. Indeed, the notion that the length of the “chain” is inversely related to accountability also finds support in the research of Alan Morrison, William Wilhelm, and their coauthors.¹⁰⁷ Their empirical work suggests that the various technological shifts in the investment banking industry, which increased arm’s length transactions, ultimately lowered institutions’ concern for their reputations of propriety.¹⁰⁸

Together, these two accountability gaps—which flow from banks’ hierarchy and complexity—reduce the likelihood that misconduct will be detected. By splintering responsibility for a transaction quite broadly, complexity makes it difficult to allocate responsibility appropriately. Again, this can reduce transparency, which, in turn, decreases the likelihood that any one group of stakeholders—in the bank or on the buy side—is sufficiently motivated to monitor for misconduct. Similarly, a lack of hierarchical responsibility reduces the incentives for senior and experienced bankers to invest sufficient professional resources (i.e., time, mental energy,

104. See, e.g., David McLaughlin et al., *Auto Loan Securitization Probed by U.S., States, Yates Says*, BLOOMBERG BUS. (Feb. 24, 2015), <http://www.bloomberg.com/news/articles/2015-02-24/justice-department-probing-auto-loan-securitization-yates-says> [perma.cc/XB4E-SDM7].

105. See Judge, *supra* note 19, at 676–77.

106. *Id.* at 698–99.

107. Alan D. Morrison et al., *Investment Banking Relationships: 1933–2007* (May 8, 2015) (unpublished manuscript) (on file with author).

108. *Id.* at 32.

creativity) in monitoring their deal teams and trading desks. In the absence of sufficient resources dedicated to and with a capacity for monitoring for misconduct, bankers are more likely to estimate the risk that misconduct will be detected as relatively low.

2. Compensation

If deficient accountability decreases the risks associated with engaging in legally or ethically questionable behavior, the compensation structures in banks can increase the potential reward. The homogeneity of the largest global banks is key to understanding why. Bank holding companies like Goldman Sachs, Morgan Stanley,¹⁰⁹ Citigroup, Credit Suisse, Deutsche Bank, HSBC, Bank of America, J.P. Morgan, and others have nearly identical business lines: commercial banking, securities underwriting, dealing and brokerage activities, investment management, and derivatives business.¹¹⁰ As a result, these banks recruit from a relatively homogenous labor pool of bankers and traders who are qualified with similar hard (quantitative) and soft (interpersonal) skills.¹¹¹

One byproduct of this homogeneity is an industry-wide standard of performance-based compensation, wherein the bulk of compensation is paid in the form of a discretionary annual bonus—rather than a fixed salary. This discretionary bonus is based on performance; it reflects some combination of how well the individual employee and the bank performed over the course of the year. That compensation packages have become standardized across big banks, in the performance-based model, should not be surprising in light of their homogeneity: a compensation package that achieves desired results in bank *A* (by motivating high performance) will also be likely to have the same result in bank *B*. But performance-based compensation can produce socially suboptimal results as well. Scholars like Lucian Bebchuk and Holger Spamann have shown empirically that performance-based compensation gives rise to a moral hazard that incentivizes excessive risk taking.¹¹² To the extent bankers are compensated with equity, they argue, bankers have incentives “to take gambles that have a negative present value but that, due to the insulation of common shareholders from downside risks, carry a positive expected value to these shareholders.”¹¹³

109. Goldman Sachs and Morgan Stanley, both investment banks, converted to bank holding companies during the Crisis.

110. See generally Citigroup Inc., Form 10-K (Feb. 20, 2015); Goldman Sachs Group, Inc., Form 10-K (Feb. 25, 2015); HSBC USA Inc., Form 10-K (Feb. 23, 2015); J.P. Morgan Chase & Co., Form 10-K (Feb. 24, 2015); Morgan Stanley, Form 10-K (Mar. 2, 2015).

111. KAREN HO, LIQUIDATED: AN ETHNOGRAPHY OF WALL STREET 13 (2009) (writing that “elite universities [are] the only sites from which Wall Street investment banks recruit and hire”).

112. Bebchuk & Spamann, *supra* note 33.

113. *Id.* at 262.

It should not be surprising that performance-based compensation can give rise to a similar set of incentives for misconduct.¹¹⁴ From an individual banker's perspective, dispensing with ethical standards or manipulating prices or markets can, in the short term, yield higher (group, division, or institutional) profits that could result in higher compensation. Meanwhile, as discussed above, if accountability structures are deficient, the risk of detection may appear small. And where detection of misconduct appears unlikely, the projected consequences of misconduct—professional or legal—will likewise seem negligible. Overall, the result is that bankers and traders may be prone to a risk-reward calculus that rationalizes misconduct. Stated differently, insofar as deficient accountability and a heavily performance-based compensation system are structural features of the industry, they have the potential not only to incentivize individual decisions to engage in misconduct, but also *norms* of misconduct in the global financial services sector.

3. Networks

Together, as the foregoing discussion suggests, accountability deficiencies and performance compensation structures can rationalize misconduct for a profit-maximizing—even risk-averse—banker or trader in a large financial institution. And to the extent accountability deficiencies and performance-based compensation are structural features of the *industry* as a *whole*, these incentive effects will arise simultaneously, affecting the cultural fabric of the industry, not only an individual's actions. Still, aside from the structural reasons why certain cultural norms of misconduct develop and stick, there is the additional question of how it is that these norms of misconduct can *spread* among financial institutions. This phenomenon of misconduct contagion may very well perpetuate through networks in the banker labor market.

a. Institution Cycling

The banker labor market is highly fluid and transient. As Karen Ho documents in her ethnography of Wall Street investment banks, bankers use their “multiple connections,” “clout,” and “reputation” to move from one bank to another.¹¹⁵ As one of Ho's analyst-interviewees explained the system: “It's very easy, especially for a senior person, to move from company A to company B.”¹¹⁶ And, after a time, “if they don't like the company they're working for or they don't see eye-to-eye on the strategy, don't like the individuals, they can probably move again.”¹¹⁷ It is also relatively common for junior bankers to move from institution to institution

114. See Kimberly D. Krawiec, *The Return of the Rogue*, 51 ARIZ. L. REV. 127, 157 (2009); *Pay and Performance: Bonus Points*, ECONOMIST, Apr. 15, 1995, at 71–72 (noting compensation structures can create incentives for misconduct).

115. HO, *supra* note 111, at 267.

116. *Id.* at 268.

117. *Id.*

—indeed, a junior-level transition is perhaps easier than transitioning is for a senior banker, given that their labor is relatively cheaper and skill set more malleable. Combined with low levels of institutional loyalty, the turnover tradition in the industry creates a transient labor market.¹¹⁸

The industry's compensation structure—oriented around performance pay—is one possible reason for its fluidity.¹¹⁹ When a bank's bonuses are announced in December or January, news among the various banks travels quickly.¹²⁰ At that point, bankers begin to reassess their competitive position and the desirability of their current employment.¹²¹ Simply, banks that pay the highest bonuses become the most sought after employers. And inasmuch as bankers seek higher bonus-paying banks, the banks also use lower bonuses to signal to low-performing employees that they should move elsewhere.¹²² In this environment, bankers will try to trade up, just as banks are competing with one another for top labor in a highly competitive labor market. One straightforward result of this compensation-driven transience is that business practices or norms—including those involving misconduct—will also, with the bankers themselves, cycle through the various institutions.

b. Banker Networks

Relatedly, as bankers move between institutions, they grow their social and professional networks. By virtue of changing jobs (and changing them often), bankers have the ability to develop a wide, but close-knit, professional network. These networks are then solidified through constant and repeating interbank professional interactions. After all, much of the business of large, complex banks today is comprised of transactions with other banks. Whereas traditionally the bulk of banks' interactions involved simple lending and deposit-taking activities with consumers and companies, today complex banks lend and borrow substantially with other banks.¹²³ Bankers thus have substantial opportunity to build and maintain

118. MICHAEL LEWIS, *THE BIG SHORT: INSIDE THE DOOMSDAY MACHINE* 64 (2010) (quoting one bond trader shortly before the Crisis as saying “I don’t have any particular allegiance to Deutsche Bank . . . I just work there” and remarking that “[t]his was not an unusual attitude”).

119. See HO, *supra* note 111, at 267 (discussing bonus chasing in the industry).

120. See, e.g., Martin Arnold, *Bankers Fight Over Smaller Bonus Pool*, *FIN. TIMES*, Jan. 12, 2015, at 17.

121. See Simone M. Sepe & Charles K. Whitehead, *Paying for Risk: Bankers, Compensation, and Competition* 3–4 (Cornell L. Fac., Working Paper No. 114, 2012) (arguing that given the “market’s demand for talent[,] . . . firms are expected to adjust compensation in line with market demand, assessing and paying employees based on their relative ability to generate returns”).

122. See HO, *supra* note 111, at 266–67.

123. See Judge, *supra* note 103, at 1264; see also Charles W. Calomiris, *Blueprints for a New Global Financial Architecture*, in *INTERNATIONAL FINANCIAL MARKETS: THE CHALLENGE OF GLOBALIZATION* 259, 270–72 (Leonardo Auernheimer ed., 2003).

professional bonds with their counterparts, who “play similar roles in the same network.”¹²⁴

In many cases, these professional networks strengthen already existing social networks. As explained, bankers and traders are a relatively homogenous group. Many have similar elite educational (as well as professional) backgrounds. They tend to share personal characteristics as well, viewing themselves collectively as smart, aggressive, and successful.¹²⁵ Over time, repeatedly hiring similar people into financial services jobs has a compounding effect—homophily; that is, similar people tend to gravitate toward one another.¹²⁶ As such, this “elite kinship creates a bridge or network.”¹²⁷ The effect is not only to connect bankers and traders, but also to connect the banks for whom they work: “[I]ndividuals connected to the same organization are, in a sense, connected to each other through those organizations. In the same way, organizations are connected to each other through the people they attract as members.”¹²⁸ And these networks can serve as conduits for influence and norm transmission.¹²⁹

The impact of these networks may best be understood through a sociological frame and social network theory in particular, which teaches that people who are connected tend to influence one another’s behavior.¹³⁰ Indeed, variants of social network theory have been instructive in the corporate setting. Relying on data from a 1985 study of Minneapolis CEOs, for example, Martin Kilduff and Wenpin Tsai hypothesized that the social connections that CEOs formed through membership in the same clubs and boards influenced their corporate decisions.¹³¹ In a similar vein, Cesare Fracassi has found a causal relationship between social ties and corporate finance decisions and thus argues that “companies are influenced in their policy decision making process by their nearest social

124. MARTIN KILDUFF & WENPIN TSAI, *SOCIAL NETWORKS AND ORGANIZATIONS* 59 (2003); *see also* Daniel J. Brass et al., *Relationships and Unethical Behavior: A Social Network Perspective*, 23 *ACADEMY OF MGMT. REV.* 14, 25 (1998) (noting that “individuals compare themselves with, and adopt similar attitudes and the behavior of, those others who occupy equivalent positions in the network”).

125. *See* Ho, *supra* note 111, at 17; PARLIAMENTARY COMM’N ON BANKING STANDARDS, *CHANGING BANKING FOR GOOD: REPORT OF THE PARLIAMENTARY COMMISSION ON BANKING STANDARDS (VOLUME II)*, 2013–14, HL 27-II, at 134 (UK), <http://www.parliament.uk/documents/banking-commission/Banking-final-report-vol-ii.pdf> (recounting an assessment given by the Chartered Institute of Personnel and Development that the banking industry created “a somewhat self-reinforcing, monolithic working culture . . . with the same types of people recruited time and again”) [perma.cc/QU56-354C].

126. *See* KILDUFF & TSAI, *supra* note 124, at 50; Brass et al., *supra* note 124, at 18 (noting that “[r]esearch has supported the general observation that similar people tend to interact and that interaction leads to further similarity”).

127. HO, *supra* note 111, at 13; *see* CHARLES KADUSHIN, *UNDERSTANDING SOCIAL NETWORKS: THEORIES, CONCEPTS, AND FINDINGS* 9 (2012).

128. KILDUFF & TSAI, *supra* note 126, at 21.

129. *See* Brass et al., *supra* note 124, at 15. *See generally* TOM R. TYLER, *WHY PEOPLE OBEY THE LAW* (2006).

130. KADUSHIN, *supra* note 127, at 9.

131. KILDUFF & TSAI, *supra* note 126, at 21–23.

neighbors.”¹³² And more recently, corporate law scholars have paid significant attention to networks between interlocking boards of directors. Michal Barzuza and Quinn Curtis found in their 2013 study that the networks created between interlocking directors served to influence corporate decisions about director indemnification.¹³³ Surveying this body of literature, John Bizjak and his coauthors concluded that “social networks . . . play an important role in facilitating the exchange of information between firms and in determining the types of practices adopted across firms and industries.”¹³⁴ Overall, this research on CEO and board relationships, and the sociological theories on which it draws, gives one reason to think that the professional and social networks among bankers can serve as a conduit for interbank influence surrounding norms of misconduct.¹³⁵

In theory, then, banker networks may at least in part be responsible for the spreading of misconduct norms: where profit- or reputational-driven misconduct takes hold in one corner of an institution, it can spread readily through these social and professional networks. This contagious spreading can have a powerful normalizing effect, which can be seen in cases like LIBOR, where the traders involved appeared to believe that what they were doing was routine—not extraordinary or subversive.¹³⁶ If so, the phenomenon whereby wrongdoing in a society becomes ordinary may also be at work in the global banking sector due in part to this networking effect. As Saira Mohamed points out in the international criminal law context, those who engage in reprehensible acts are often “regular people who succumb to the pressure of situational coercion[,] . . . people who had no prior intention to do anything wrong.”¹³⁷

Evidence does in fact suggest that misconduct in the banking sector may be situational, not a manifestation of a deep rotten character of the individuals involved. In fact, one recent experiment on banking culture—the first of its kind—found that when bankers’ professional identities were primed, they were more likely to act dishonestly than when they were

132. Cesare Fracassi, *Corporate Finance Policies and Social Networks*, MGMT. SCI. (forthcoming) (manuscript at 2, 24), <http://ssrn.com/abstract=1121503> [perma.cc/5543-928E].

133. See Michal Barzuza & Quinn Curtis, *Interlocking Board Seats and Protection for Directors After Schoon* (Va. L. & Econ. Research Paper No. 2013-11, Oct. 1, 2013), <http://ssrn.com/abstract=2282142> [perma.cc/57DT-Y8LW].

134. John Bizjak et al., *Option Backdating and Board Interlocks*, 22 REV. FIN. STUDS. 4821, 4826 (2009).

135. See Brass et al., *supra* note 124, at 17 (discussing the “assumption that organizational actors are embedded within a network of relationships” and that “[t]hese ongoing social relationships provide the constraints and opportunities that, in combination with characteristics of individuals, issues, and organizations, may help explain unethical behavior in organizations”).

136. Sung Hui Kim has suggested that the key to understanding “extraordinary behavior” (i.e., misconduct) in a firm is to take account of what is perceived to be “ordinary behavior” among its employees. Sung Hui Kim, *The Banality of Fraud: Re-Situating the Inside Counsel As Gatekeeper*, 74 FORDHAM L. REV. 983, 997 (2005).

137. Saira Mohamed, *Deviance, Aspiration, and the Stories We Tell: Reconciling Mass Atrocity and the Criminal Law*, 124 YALE L.J. 1628, 1648 (2015).

not.¹³⁸ Ultimately, this suggests that holistic, ex ante structural regulation can be much more effective at reducing financial misconduct than ad hoc and reactive enforcement, which views misconduct as an individualized, even bad apples, type problem.

B. Structural Interventions

A structural diagnosis leads naturally to a structural prescription, which, in contrast to traditional approaches to bank misconduct, can be forward looking in design while forging key partnerships between regulators and private market institutions.

1. Prophylactics

Structural solutions lend themselves to preventive or prophylactic responses. Whereas regulatory policies focused entirely on changing conduct through deterrence (i.e., conduct rules coupled with enforcement) tend to be reactionary and ex post, structural solutions can be proactive and ex ante. By identifying the structures that tend to give rise to or manifest in misconduct, regulators can be forward looking in their approach—thinking creatively about what can be done to diagnose and then forestall risks that could contribute to the next crisis. Applied here, such a forward-looking approach would involve tools that seek to modify gaps in accountability or suboptimal compensation structures in ways that might successfully prevent the incidence of misconduct in the first place. It would also entail a better understanding of networks and their potential to spread business norms. Ultimately, when dealing with potentially systemic risks, a prophylactic approach is likely to be much less costly than sole reliance on ex post consequences, which are of little utility in a crisis situation.¹³⁹

In the universe of prophylactic options, focusing on structure appears at least in theory to be a more efficient use of limited regulatory resources than trying to change more amorphous problems like bank culture. Very recently, as regulators have more seriously begun to appreciate the need for holistic approaches to misconduct, the conversation about misconduct in banks has become steeped in questions of culture.¹⁴⁰ But having diagnosed misconduct as a cultural problem, regulators are now hard-pressed to find

138. See Alain Cohn et al., *Business Culture and Dishonesty in the Banking Industry*, 516 NATURE 86 (2014).

139. Cf. Katharina Pistor, *A Legal Theory of Finance*, 41 J. COMP. ECON. 315, 328–29 (2013) (noting that one “major lesson” of her theory is the need for “safety valves,” else we must “put our faith into central banks—their willingness and ability to do the right thing ex post facto”).

140. See Stephen Dockery, *Regulators’ Emphasis on ‘Culture’ Spurs Hunt to Measure It*, WALL STREET J. (Feb. 4, 2016), <http://blogs.wsj.com/riskandcompliance/2016/02/04/regulators-emphasis-on-culture-spurs-hunt-to-measure-it/> [<https://perma.cc/M4VW-PCBM>]; Alberto G. Musalem, Exec. V.P., Fed. Reserve Bank of N.Y., *Why Focus on Culture* (Nov. 23, 2015), <https://www.newyorkfed.org/newsevents/speeches/2015/mus151123> (remarking that “[t]he New York Fed has, for the last two years, been part of an international dialogue on the reform of culture in the financial services industry”) [perma.cc/QY3K-HS38].

satisfactory solutions within their existing toolkit.¹⁴¹ The Governor of the Bank of England, Mark Carney, has disclaimed the ability of public regulation to fix culture, stating that “[v]irtue cannot be regulated” and that “[e]ven the strongest supervision cannot guarantee good conduct.”¹⁴² Likewise, Fed Chair Janet Yellen has conceded that “changing the culture of organizations is not something that we can achieve through supervision.”¹⁴³

Because a cultural diagnosis surpasses regulators’ institutional capacity for treatment, a cultural discourse implicitly puts the onus on banks to fix their own behavior. While self-assessment and self-correction are no doubt necessary, the problem with an emphasis on culture is that it may ultimately take the problem almost entirely out of regulators’ hands. Bringing structure to the fore, however, gives regulators an entry point for tackling what may at root be a cultural problem, but nonetheless has concrete drivers. In sum, a regulatory strategy that focuses on structural problems and accompanying solutions has significant normative and practical appeal. Structural weaknesses can be relatively well-defined and progress toward reform observable even if not perfectly measurable at first. Such strategy also lends itself to a complementarity approach, whereby regulators expend their resources in areas in which they have a comparative advantage, while leveraging the knowledge and resources of the private sector where their capacities fall short.

2. Complementarity

Regulatory tools that engage the private market reflect what some scholars have referred to as a “complementarity” approach, which neither delegates regulatory authority (in a classic private ordering sense) nor relies wholly on top-down approaches or “belt-and-suspenders style

141. William C. Dudley of the New York Federal Reserve recently described firm culture in the following ambiguous terms: “Like a gentle breeze, culture may be hard to see, but you can feel it.” William C. Dudley, Pres. & CEO, Fed. Reserve Bank of N.Y., *Enhancing Financial Stability by Improving Culture in the Financial Services Industry* (Oct. 20, 2014), <https://www.newyorkfed.org/newsevents/speeches/2014/dud141020a.html> [perma.cc/DX6X-FPVE]; see also Thomas C. Baxter, Exec. V.P. & Gen. Counsel, Fed. Reserve Bank of N.Y., *Compliance—Some Thoughts About Reaching the Next Level* (Feb. 9, 2015) (expressing the importance of culture, but noting difficulties of measurement).

142. William D. Cohan, *Can Bankers Behave?*, ATLANTIC (May 2015), <http://www.theatlantic.com/magazine/archive/2015/05/can-bankers-behave/389558> [perma.cc/UH69-7GZ2].

143. John Heltman, *Yellen: Fed Can’t Change Bank Culture Through Supervision*, AM. BANKER (Mar. 18, 2015), <http://www.americanbanker.com/news/law-regulation/yellen-fed-cant-change-bank-culture-through-supervision-1073318-1.html> [perma.cc/4J3G-X3SS]; see also Gwendolyn Gordon & David Zaring, *Ethical Bankers* 24 (unpublished manuscript) (on file with author) (arguing that when regulators turn to ethical standards, it suggests a “fascinating concession” that “sensible supervision alone is unlikely to realize the regulatory mission of a relatively stable banking system”).

duplication.”¹⁴⁴ Regulators and the private market work in tandem, each expending their resources according to their relative strengths.

In a similar but slightly more self-regulatory vein, other scholars, like Cary Coglianese and David Lazer, have developed a regulatory theory of “management-based regulation”¹⁴⁵ (MBR). The general idea of MBR is closely related to the notion of complementarity: regulators specify an objective, but then allow firms to self-evaluate and develop a set of internal rules that are consistent with achieving the regulator’s objectives.¹⁴⁶ So, for example, under an MBR model, the EPA requires regulated industries that use certain chemicals “to develop risk management plans” for their use.¹⁴⁷ And the FDA requires food processors “to use a flow chart to evaluate production process[], identify possible sources of [pathogen] contamination, and evaluate and implement alternatives for reducing contamination risk.”¹⁴⁸ In one analogous setting, legislation surrounding the Foreign Corrupt Practices Act mandates that firms implement control systems that provide “reasonable assurances” that the use of corporate assets will not be used for improper means in foreign business transactions.¹⁴⁹ This approach reflects the realization that “U.S. regulators lack[] the enforcement resources to police business units in far-flung corners of a globalized economy.”¹⁵⁰

One can readily see how defining the problem as structural is conducive to complementarity-style regulatory tools. Indeed, as in these other contexts, if not more so, complementarity is ideally suited to the problems presented by misconduct in complex financial institutions. For one, regulators are often handicapped when it comes to assessing large banks’ vulnerabilities to misconduct.¹⁵¹ As the Crisis taught us, regulators frequently lack the real-time information to anticipate the types of activity that may lead to misconduct until significant damage is done.¹⁵² Similarly, given the complexity of the industry, regulators tend to lag behind the private sector in their expertise with new or emerging financial products

144. Judge, *supra* note 103, at 1295–96; *see also* Jonathan R. Macey, *The Regulator Effect in Financial Regulation*, 98 CORNELL L. REV. 591 (2013) (discussing how regulators incorporate and adapt market devices into regulatory tools).

145. *See* Cary Coglianese & David Lazer, *Management-Based Regulation: Prescribing Private Management to Achieve Public Goals*, 37 L. & SOC’Y REV. 691 (2003).

146. *See id.* at 695 (developing a theory of “management-based regulation,” which “place[s] responsibility for decisionmaking with those who possess the most information about risks and potential control methods”).

147. Lori Snyder Benneer, *Evaluating Management-Based Regulation: A Valuable Tool in the Regulatory Tool Box?*, in LEVERAGING THE PRIVATE SECTOR: MANAGEMENT-BASED STRATEGIES FOR IMPROVING ENVIRONMENTAL PERFORMANCE 51, 52 (Cary Coglianese & Jennifer Nash eds., 2006).

148. *Id.*

149. 15 U.S.C. § 78m(b)(2)(B) (2012).

150. Robert F. Weber, *An Alternative Story to the Law and Regulation of Risk Management*, 15 U. PA. J. BUS. L. 1005, 1027 (2013).

151. Christina Parajon Skinner, *Whistleblowing and Financial Innovation*, 94 N.C. L. REV. (forthcoming 2016) (manuscript at 26–29) (on file with author).

152. *See id.* (arguing that informational asymmetries delay or impede regulatory anticipation of misconduct).

and strategies, making it difficult for them to anticipate where misconduct might creep in.¹⁵³ Finally, when it comes to devising solutions to misconduct in banks, as outsiders, it is likely challenging for regulators to accurately assess which types of internal firm structures, policies, or systems would be more or less effective at reducing misconduct.

The relative strengths of the private market in all of these areas suggest two things for regulatory design. First, the private market is in the better position to know precisely how to address the industry's structural problems relating to accountability gaps and the ways in which compensation may create perverse incentives. Second, attempting to devise top-down rules for banks with respect to their conduct may, like so much financial regulation, focus on past examples of misconduct, while failing to anticipate future problems. Regulation by fiat thus runs the risk of being misdirected or counterproductive. Arguably, then, the most productive use of finite regulatory resources is for regulators to identify a general objective and then to leverage the private sector's insights and resources to develop and implement the solution.

Complementarity approaches are not only desirable because they efficiently allocate regulatory resources, but also because they tend to be parsimonious in scope. Regulatory tools that work in concert with existing private market efforts will naturally be less costly than either top-down rules that aim to mandate or preclude certain conduct, or ex post enforcement actions that seek to shape behavior through punishment and deterrence. And managing the added costs of regulation is becoming increasingly important in the post-Crisis regulatory order. Five years into the new regime, various unintended consequences and negative side effects of the ever-expanding regulatory framework are beginning to surface.¹⁵⁴ As the regulatory ground continues to shift and the ultimate effects of this new framework remain unknown, prudence counsels caution when contemplating regulatory expansion.

In sum, a regulatory strategy that focuses on the various structural aspects of the banking sector that incentivize and then spread misconduct has normative appeal as a resource-wise prophylactic with potential to reduce misconduct risk. The next part critiques the current regulatory framework for missing this opportunity—by focusing on the quantitative risks that banks pose and deploying an almost exclusively capital-oriented arsenal of regulatory tools. It then suggests how this framework might be revised to incorporate the use of innovative regulatory tools, which would better reflect the theoretical insights offered in Parts I and II.

III. REBALANCING THE BASEL REGIME

Until this point, the goal of this Article has been to establish a framework for regulators to understand how and under what circumstances misconduct risk arises. This Article illustrated the potential for misconduct to generate

153. *Id.*

154. *See infra* Part III.C (discussing these externalities in greater detail).

economic and social costs (and even contribute to systemic risk) in Part I and theorized the structural roots of misconduct risk in Part II. The balance of this Article addresses some remaining questions of regulatory and institutional design. The principal goal of Part III is to critique the Basel regime—which sets international standards for global banks—as insufficiently addressed to the problem of misconduct risk.

To that end, Part III.A briefly describes the current Basel framework, highlighting the problems with its predominantly quantitative approach to managing risk in banks. Part III.B and III.C then offer a potential path toward a more balanced Basel regime, that is, one that weighs quantitative risks alongside the qualitative risks posed by misconduct in an effort to reach a more efficient regulatory equilibrium. Part III.B suggests a new supervisory tool that may be effective at reducing misconduct risk in global banks—compliance stress testing—and Part III.C proposes a way to offset capital ratios where such a supervisory tool is adopted. These suggestions in Part III.B and III.C are necessarily preliminary in nature and mainly intended not as a silver bullet, but to prompt conversation about the optimal balance between the capital regulation and supervision of globally active banks.

A. Regulating Capital

Basel III was the international regulatory community's response to the Crisis.¹⁵⁵ It responded to concerns that the pre-Crisis capital regime had been far too lax.¹⁵⁶ Its heightened capital and liquidity requirements were thus intended as a “comprehensive set of reform[s]” to “strengthen the regulation, supervision and risk management of the banking sector.”¹⁵⁷

1. Basel's Pillars

Basel III uses capital and liquidity requirements both to incentivize more prudent risk taking and to shore up a firm's defenses (i.e., its cushion) against potential future losses. In other words, the Basel regime relies on quantitative restrictions both to reduce the likelihood of a shock in the first

155. In general, since the Crisis, international financial regulation has grown increasingly more important. See Robert B. Thompson, *Financial Regulation's Architecture Within International Economic Law*, 17 J. INT'L ECON. L. 807, 808 (2014) (noting that “the post-crisis years have also witnessed the most intense efforts since Bretton Woods to construct a new international economic order”); see also David Zaring, *Sovereignty Mismatch and the New Administrative Law*, 91 WASH. U. L. REV. 59 (2013).

156. Lax capital ratios were faulted as a significant cause of the Crisis. Basel's rules at the time did not strictly define capital, and banks were permitted to use forms of debt that could not absorb losses in the way that equity could. Moreover, banks were permitted to use their own internal models to calculate the riskiness of their assets. See *Origins of the Financial Crisis*, ECONOMIST (Sept. 7, 2013), <http://www.economist.com/news/schoolsbrief/21584534-effects-financial-crisis-are-still-being-felt-five-years-article> [perma.cc/ZE4X-QJ48].

157. *International Regulatory Framework for Banks (Basel III)*, BANK FOR INT'L SETTLEMENTS, <http://www.bis.org/bcbs/basel3.htm?m=3%7C14%7C572> (last visited Feb. 26, 2016) [perma.cc/Q347-R3FH].

instance, by attempting to reduce risk in the financial system, and to guard against possible contagion, by ensuring that shocks can be contained. To that end, although Basel III, like the Basel II regime before it, included *three* pillars of reform—oriented around capital, supervision, and market discipline—the “centerpiece” of this regime is the capital-focused Pillar 1.¹⁵⁸

The Pillar 1 reforms imposed an across-the-board increase in the quality and quantity of regulatory capital that banks are required to hold. Previously under Basel II, banks were required to maintain 4 percent of their risk-weighted assets in so-called Tier 1 capital (the safest and most liquid forms of capital).¹⁵⁹ Basel III now requires them to retain 6 percent of that valuable Tier 1 capital—and of that, 4.5 percent in common equity.¹⁶⁰ Basel III introduced several new additional requirements, beyond the standard minimum capital rules. For one, it added a countercyclical capital buffer, which requires banks to increase their regulatory capital an additional 2.5 percent during periods of strong economic growth.¹⁶¹ National authorities have additional discretion to require even more conservation during such periods of credit growth.¹⁶² It also added a 2.5 percent conservation buffer that can be drawn down in times of stress.¹⁶³ And as an additional measure for the largest global banks, Basel III developed a capital surcharge for “too big to fail” institutions.¹⁶⁴ The consequence of breaching capital requirements is, among other things, regulatory restrictions on an institution’s ability to pay dividends and repurchase shares.¹⁶⁵

Basel III also added three “backstop” measures to complement the risk-based capital requirements.¹⁶⁶ One is a new leverage ratio (also subsumed

158. Romano, *supra* note 15, at 24 (referring to the Basel II regime).

159. See Federal Reserve Board, Notice of Proposed Rulemaking: Calculation of Tier 1 Capital and Total Qualifying Capital (Sept. 25, 2006) (to be codified at 12 C.F.R. pts. 3, 208, 225, 325, 566), http://www.federalreserve.gov/generalinfo/basel2/npr_20060905/npr_section_4.htm [perma.cc/CM86-BXRS].

160. BASEL III, *supra* note 6, at 64. Basel III also reconfigured the way in which risk-weights are calculated for many types of tradable assets. For a graphical summary for Basel III reforms, see BASEL COMM. ON BANKING SUPERVISION REFORMS, BASEL III, <http://www.bis.org/bcbs/basel3/b3summarytable.pdf> (last visited Feb. 26, 2016) [perma.cc/Z3AZ-AQSW].

161. BASEL III, *supra* note 6, at 57–59.

162. *See id.*

163. *See id.* at 54–57.

164. *See* BASEL COMM. ON BANKING SUPERVISION, THE G-SIB ASSESSMENT METHODOLOGY—SCORE CALCULATION (2014), <http://www.bis.org/bcbs/publ/d296.pdf> [perma.cc/F4EZ-G3EP]; *see also* Press Release, Fed. Reserve (July 20, 2015), <http://www.federalreserve.gov/newsevents/press/bcreg/20150720a.htm> (detailing the Fed’s final rule regarding the GSIB surcharge) [perma.cc/V5M6-F3G8].

165. *See* BEVERLY HIRTLE & ANDREAS LEHNERT, FED. RESERVE BANK OF N.Y., STAFF REPORT NO. 696, SUPERVISORY STRESS TESTS 18 (2014); *see also* Julie Andersen Hill, *Bank Capital Regulation by Enforcement: An Empirical Study*, 87 IND. L.J. 645 (2012) (discussing post-Crisis capital regulation and enforcement in the United States).

166. The Financial Stability Board (FSB) has also focused on ways to use capital requirements to manage the “too big to fail” risk. The FSB, which acts as the regulatory arm of the G20’s most powerful economies, has recently established a Total Loss Absorbency

under Pillar 1), which is set at three percent of capital to total assets.¹⁶⁷ The second two reforms, ancillary but outside of Pillar 1, deal with liquidity. Pursuant to a “Liquidity Coverage Ratio,” banks must now maintain enough liquid assets to withstand a thirty-day funding freeze.¹⁶⁸ And a “net stable funding ratio” further requires banks to maintain adequate levels of long-term sources of funding, such as long-term debt and deposits, to counteract their pre-Crisis tendency to over-rely on short-term sources of wholesale funding, such as repurchase agreements or “repos.”¹⁶⁹ Though implementation is not yet complete (with a timetable running through 2019), so far, regulators both in the United States and abroad have begun to implement Basel III’s various requirements.¹⁷⁰

Pillars 2 and 3, on supervision and market discipline respectively, should in theory address issues surrounding misconduct, but are actually quite weak on those scores. Even the most recent Pillar 2 and 3 reforms only obliquely deal with misconduct. Pillar 3 added new disclosure requirements to improve market discipline, which were finalized in January 2015.¹⁷¹ These requirements purport to “enable market participants to access key information relating to a bank’s regulatory capital and risk

Capacity (TLAC) capital requirement for the largest global banks. TLAC requires G-SIBs to increase their regulatory capital and long-term unsecured debt to at least 16 percent of their risk-weighted assets by January 2019 and 18 percent by January 2022. Press Release, Fin. Stability Bd., FSB Issues Final Total Loss-Absorbing Capacity Standard for Global Systemically Important Banks (Nov. 9, 2015), <http://www.fsb.org/wp-content/uploads/20151106-TLAC-Press-Release.pdf> [perma.cc/Y3BC-2L44].

167. BASEL III, *supra* note 6, at 61–63; *see also* BASEL COMM. ON BANKING SUPERVISION, BASEL III LEVERAGE RATIO FRAMEWORK AND DISCLOSURE REQUIREMENTS (2014), <http://www.bis.org/publ/bcbs270.pdf> (setting out updated requirements of the leverage ratio framework) [perma.cc/4UEH-WYGR].

168. BASEL III, *supra* note 6, at 9 (noting that the purpose of the LCR is to “help ensure that global banks have sufficient unencumbered, high-quality liquid assets to offset the net cash outflows it could encounter under an acute short-term stress scenario”); BASEL COMM. ON BANKING SUPERVISION, BASEL III: THE LIQUIDITY COVERAGE RATIO AND LIQUIDITY RISK MONITORING TOOLS ¶ 1 (2013), <http://www.bis.org/publ/bcbs238.pdf> [perma.cc/MX2S-VWEA].

169. BASEL III, *supra* note 6, at 9.

170. *See* 78 Fed. Reg. 62,018, 62,030–38 (Oct. 11, 2013) (requiring, among other things, that all banking organizations comply with Basel III’s 4.5 percent capital to risk-weighted assets ratio and Basel III’s leverage ratio (for advanced approaches banking institutions), maintain a capital conservation buffer of 2.5 percent of additional common equity Tier 1 capital over regulatory minimums, and adopt a countercyclical conservation buffer of up to 2.5 percent). The EU is also working toward implementing Basel III’s capital requirements through a newly created framework that took effect in January 2014. Basel III was implemented in Europe via the Fourth Capital Requirements Directive (CRD IV) and the Capital Requirements Regulation (CRR) in EU Member States implementing Basel III. BASEL COMM. ON BANKING SUPERVISION, ASSESSMENT OF BASEL III REGULATIONS—EUROPEAN UNION 8 (2014), <http://www.bis.org/bcbs/publ/d300.pdf> [perma.cc/SRQ3-GZHP].

171. BASEL COMM. ON BANKING SUPERVISION, REVISED PILLAR 3 DISCLOSURE REQUIREMENTS (2015) [hereinafter BASEL III DISCLOSURE REQUIREMENTS], <http://www.bis.org/bcbs/publ/d309.pdf> [perma.cc/LC5M-6JKN]; *see* Luigi L. De Ghenghi, *Overview of Basel Committee’s Revised Pillar 3 Disclosures*, DAVIS POLK CAPITAL & PRUDENTIAL STANDARDS BLOG (Jan. 30, 2015), <http://blog.usbasel3.com/overview-of-basel-committees-revised-pillar-3-disclosures-2> [perma.cc/65UM-EM54].

exposures in order to increase transparency and confidence about a bank's exposure to risk."¹⁷² But these revised Pillar 3 disclosure requirements do not specifically mention misconduct as a distinct type of risk to be disclosed.¹⁷³

Pillar 2, on supervision, does speak to corporate governance more generally and envisions a role for supervisors in "foster[ing] good corporate governance in banks."¹⁷⁴ Still, the July 2015 revisions to these Pillar 2 principles provide little guidance on how supervisors can regulate misconduct as a *risk*. They provide barely a page on compliance and a few pages suggesting how supervisors should oversee boards and senior management.¹⁷⁵ Ultimately, as a document that provides "guidance," these Pillar 2 principles are likely to remain in Pillar 1's shadow, with relatively less attention and commitment from national regulators than Pillar 1's capital rules have garnered.

2. Operational Risk

At best, Basel addresses misconduct in its framework for operational risk—which is defined as "the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events."¹⁷⁶ Though the interpretation of that definition varies, the Basel Committee appears to have intended it to refer to a wide range of unanticipated and exogenous risks to the business.¹⁷⁷ Core examples of operational risk include external fraud (like hacking), workplace safety or hardware failures, or data entry errors.¹⁷⁸ As far as employee misbehavior is concerned, operational risk includes the possibility of bank losses that arise from rogue or aberrational behavior, like employee theft or presumably other kinds of *ultra vires* activity.¹⁷⁹ Pursuant to Basel II operational risk requirements (left intact and unmodified by Basel III), banks are responsible for calculating this component of risk, using a combination of historical data and information about the bank's business environment and its internal

172. BASEL III DISCLOSURE REQUIREMENTS, *supra* note 171, at 1.

173. Interestingly, an earlier consultative document had, in fact, mentioned fraud as a potential miscellaneous form of "other risk" for management to assess and disclose. But it was noted to be beyond the scope of the consultative document. *See* BASEL COMM. ON BANKING SUPERVISION, REVIEW OF THE PILLAR 3 DISCLOSURE REQUIREMENTS 81 (2014), <http://www.bis.org/publ/bcbs286.pdf> [perma.cc/HTZ8-RAUS].

174. BASEL COMM. ON BANKING SUPERVISION, CORPORATE GOVERNANCE PRINCIPLES FOR BANKS 38 (2015), <http://www.bis.org/bcbs/publ/d328.pdf> [perma.cc/ZR7U-EMYJ].

175. *See id.* at 31, 38–40.

176. BASEL COMM. ON BANKING SUPERVISION, INTERNATIONAL CONVERGENCE OF CAPITAL MEASUREMENT AND CAPITAL STANDARDS: A REVISED FRAMEWORK ¶ 644 (2004), <http://www.bis.org/publ/bcbs107.pdf> [perma.cc/MX9R-TDAR].

177. BASEL COMM. ON BANKING SUPERVISION, SOUND PRACTICES FOR THE MANAGEMENT AND SUPERVISION OF OPERATIONAL RISK 1–2 (2003), <http://www.bis.org/publ/bcbs96.pdf> [perma.cc/CJE4-PS9X].

178. *Id.* at 2.

179. *Id.* Basel refers to this as internal fraud, such as "intentional misreporting of positions, employee theft, and insider trading on an employee's own account." *Id.*

control systems.¹⁸⁰ Banks are then assessed an additional capital surcharge based on that estimate.¹⁸¹

As a tool for treating misconduct risk, however, operational risk is wide of the mark. To begin, operational risk is a crude (indeed inaccurate) proxy for genuine misconduct risk, as the two are qualitatively quite different. Whereas operational risk is concerned with the possibility of financial *loss* to the *institution*, misconduct risk addresses potential economic *harm* to the *system* (like bubbles and crises, distorted markets, and decreased consumer and interbank lending). Because their focal points are very different—operational risk on the firm and misconduct risk on the market—the two risk categories overlap only slightly—and in many cases, not at all.¹⁸² As a result, operational risk does not focus banks or regulators on the varied types of misconduct that can have market-distorting potential and certainly not on the industry-wide structural drivers of misconduct. Consequently, this Basel risk category captures at best only a fraction of the type of socially suboptimal behavior that can give rise to misconduct risk. It is, overall, an antiquated view of misconduct that has not been updated to reflect the post-Crisis macroprudential approach.

The distinction is deeper than definitional. Even if Basel were to expand its conception of operational risk to include these various aspects of misconduct risk, fundamental problems would still remain. For one, as currently understood, operational risk assumes that banks can accurately identify and estimate, based on historical incidents, the likelihood that misconduct will expose them to future loss. But such a premise ignores the evolving and complex nature of misconduct and the resulting reality that past incidents will not accurately predict current vulnerabilities. Moreover, even if firms did correctly estimate their internal vulnerability to misconduct, human behavior (overconfidence and hubris) suggests that they are likely to improperly revise downward that estimate. Under the existing “advanced approaches” regime, large banks are not only permitted to calculate their own operational risk based on historical incidents, they are then entitled to adjust the final calculation based on a self-assessment of the effectiveness of their internal controls.¹⁸³ This discretion and subjectivity

180. See, e.g., BASEL COMM. ON BANKING SUPERVISION, OPERATIONAL RISK—SUPERVISORY GUIDELINES FOR THE ADVANCED MEASUREMENT APPROACHES (2011), <http://www.bis.org/publ/bcbs196.pdf> [perma.cc/FAQ4-KJYH].

181. See Maïke Sundmacher, *Operational Risk Capital Charges for Banks: Consideration and Consequences*, (May 2004) (unpublished manuscript), <http://ssrn.com/abstract=963227> [perma.cc/VG8L-LADT].

182. For example, operational risk would likely not capture any unethical distortion of information that took place in global banks in the years preceding the Crisis, even though that conduct may have had a macroeconomically destabilizing effect (as well as legal and reputational costs to the firm).

183. See BASEL COMM. ON BANKING SUPERVISION, *supra* note 180, at 51. *But see* JOINT COMM. EUR. SUPERVISORY AUTHS., JOINT COMMITTEE REPORT ON RISKS AND VULNERABILITIES IN THE EU FINANCIAL SYSTEM 13 (2015), <https://www.eba.europa.eu/documents/10180/950548/JC+2015+007+JC+Report+on+Risks+and+Vulnerabilities+in+the+EU+Financial+System.pdf> (recommending supervisory benchmarks for conduct risk within the operational risk framework) [perma.cc/T8DB-Q457]. Moreover, using historical losses

thus enables banks to overestimate the efficacy of their internal control systems, while underestimating the risk of misconduct-related loss, arriving at risk estimates in various and unpredictable ways.

Ultimately, the inadequacy of operational risk goes to the root of the Basel critique. Operational risk reflects Basel's bedrock assumption about managing risk in banks: that risk can be controlled, or at least reduced, by imposing higher capital adequacy requirements. But there are limits to what capital can accomplish as a regulatory tool. The diagnosis of misconduct as a market-wide risk implicates a complicated interaction between accountability, compensation, and networks in banks that can, in combination, give rise to norms of misconduct that spread broadly. While increasing capital ratios might marginally increase institutional incentives to improve internal control systems, it seems quite unlikely to effect a meaningful revision of individual and group incentives on the ground—at the deal team and trading floor levels.

Overall, Basel's emphasis on quantitative, measureable risk has resulted in a failure of imagination about how to regulate misconduct risk.¹⁸⁴ The Basel regime has focused regulators and academics on quantifiable—known and observable—risks. It has largely disregarded the structural drivers and contagions of misconduct and, consequently, failed to broker international regulatory cooperation to combat its industry-wide spread.¹⁸⁵ The remainder of this Article suggests one possible way of incorporating misconduct risk more prominently into the Basel regime, while mindful of institutions' overall regulatory burden.

B. Regulating Conduct

Thus far, this Article has urged that misconduct is an underappreciated source of market-wide risk. This section now suggests a way to introduce misconduct as a risk priority in the Basel III regime. To that end, this section argues that Basel III should adopt new supervisory requirements aimed at misconduct risk. What follows is a preliminary design proposal for such a supervisory tool.

to calculate operational risk is inherently backward looking. See Mehrsa Baradaran, *Regulation by Hypothetical*, 67 VAND. L. REV. 1247, 1279 (2014) (noting that banks' internal risk assessment has historically failed to account for "black swan"—i.e., low probability, high magnitude—events); Krawiec, *supra* note 114, at 130 (noting that "[t]he nature and scarcity of some types of operational loss events, combined with the relatively preliminary state of operational risk modeling, means that the enforcement arm of this particular enforced self-regulatory regime is apt to be lacking").

184. Some scholars have argued that the Dodd-Frank Act in the United States, which was also aimed at curtailing systemic risk, had too little to say on misconduct and, specifically, the board's oversight of financial firms' compliance function. See Johnson, *supra* note 11.

185. See Romano, *supra* note 15, at 25 (observing that Basel is not focused on unknown or unknowable risk).

1. Bank Compliance

A preliminary question is whether regulatory intervention to manage misconduct risk is necessary in light of existing private market efforts. To be sure, global banks have made considerable effort in recent years to expand their compliance departments.¹⁸⁶ Generally speaking, a bank's compliance function serves two main purposes. First, compliance is supposed to ensure that bankers adhere to laws and regulation. As the Basel Committee describes it, compliance is “[a]n independent function that identifies, assesses, advises on, monitors and reports on” the range of risks associated with failure to comply with “applicable laws, regulations, codes of conduct and standards of good practice.”¹⁸⁷ Its second purpose is to propagate ethical norms throughout the firm.¹⁸⁸

Perhaps not surprisingly, in the wake of recent misconduct scandals, banks' compliance departments have exploded.¹⁸⁹ So quickly has compliance ramped in the past few years that the *Wall Street Journal* has referred to it as one of the “hotter” careers in America today.¹⁹⁰ J.P. Morgan and HSBC—the two largest G-SIBS—have alone made enormous expenditures. J.P. Morgan employed more than 8000 employees for anti-money laundering compliance alone in 2014 (and planned to add 13,000 for compliance overall),¹⁹¹ and in 2013, HSBC added 1600 new compliance employees.¹⁹² Aside from expanding manpower, banks have also begun to experiment with new ideas for making compliance effective. Barclays, for example, created a compliance “academy” in partnership with a U.K. business school.¹⁹³ And recent industry surveys confirm that many institutions have restructured their compliance departments so that the chief

186. In the United States, the Dodd-Frank Act requires large financial institutions to have a compliance framework. Prohibitions and Restrictions on Proprietary Trading and Certain Interests in, Relationship with, Hedge Funds and Private Equity Funds, 12 C.F.R. § 248, subpart D (2014).

187. BASEL COMM. ON BANKING SUPERVISION, THE COMPLIANCE FUNCTION IN BANKS 3 (2003) (emphasis omitted), <http://www.bis.org/publ/bcbs103.pdf> [perma.cc/ARQ7-7F78].

188. Baer, *supra* note 11, at 959. Compliance can be thought of as a subset of enterprise risk management, which is more generally concerned with the firm's mechanisms for “agency cost control,” among other risks to the business. See Stephen M. Bainbridge, *Caremark and Enterprise Risk Management*, 34 J. CORP. LAW. 967, 981 (2009).

189. Much of this compliance initiative has been driven by requirements in deferred prosecution agreements and nonprosecution agreements, which condition forbearance on compliance reform. See Griffith, *supra* note 11.

190. Gregory J. Millman & Samuel Rubinfeld, *Compliance Officer: Dream Career?*, WALL STREET J. (Jan. 15, 2014), <http://www.wsj.com/articles/SB10001424052702303330204579250722114538750> [perma.cc/3E4S-3XL2].

191. Rachel Louise Ensign, *Lenders Bolster Risk and Compliance Staff*, WALL STREET J. (May 4, 2014), <http://www.wsj.com/articles/SB10001424052702304163604579531263107487566> [perma.cc/PG32-KUSS].

192. Millman & Rubinfeld, *supra* note 190.

193. *Barclays Sets Up Elite Compliance Academy*, FIN. TIMES: FASTFT (July 3, 2014), <http://www.ft.com/fastft/2014/07/03/post-176152/> [perma.cc/UA3Y-K5TH].

compliance officer (CCO) reports directly to the board of directors (rather than to a chief legal officer or the management team).¹⁹⁴

However, there are both empirical and theoretical reasons that suggest banks do (and will) underinvest in compliance. First, as an empirical matter, the timeline of events since the Crisis supports that supposition. Even after regulators disciplined banks for their behavior in the Crisis—through investigations (which impose costs irrespective of the conclusion on wrongdoing), historically large civil fines, criminal prosecutions, and deferred prosecution agreements—misconduct in banks continued. As earlier discussed, banks continued to manipulate LIBOR and other benchmarks through 2012.¹⁹⁵

Then, even after regulators detected banks' LIBOR misconduct, they discovered that banks were manipulating the forex markets. Indeed, as the *Economist* aptly noted, the timing of “the currency-market skullduggery . . . suggests banks were slow to clean up the rotten culture on their trading floors, or that they genuinely thought their colluding ways had been officially endorsed.”¹⁹⁶ More recently, incidents involving known or alleged international money laundering,¹⁹⁷ tax evasion,¹⁹⁸ corruption,¹⁹⁹

194. A 2015 survey by Deloitte found that of its 364 respondent institutions, 57 percent report that their CCO reports directly to either the CEO or the board (reflecting an upward trend from previous years), and 55 percent regularly brief the board on ethics and culture. DELOITTE, COMPLIANCE WEEK: IN FOCUS: 2015 COMPLIANCE TRENDS SURVEY 5 (2015), <http://www2.deloitte.com/content/dam/Deloitte/us/Documents/regulatory/us-aers-reg-crs-2015-compliance-trends-survey-051515.pdf> [perma.cc/J3CP-DK5Q]. A 2014 Accenture survey found that nearly one-third of their respondents had compliance reporting to the board and 40 percent to the CEO. *Compliance's Seat at the Table—Hard to Earn, Hard to Retain*, ACCENTURE CONSULTING, <https://www.accenture.com/us-en/insight-2014-compliance-risk-study-banking-summary> (last visited Feb. 26, 2016) [perma.cc/2PHD-ATFV].

195. Notably, at least three of the global banks that received federal bailouts were also involved or alleged to be involved in the LIBOR scandal. See *Bailed Out Banks*, CNNMONEY, <http://money.cnn.com/news/specials/storysupplement/bankbailout> (last visited Feb. 26, 2016) [perma.cc/8E2J-ABYJ]; Trefis Team, *FDIC Sues 16 Global Banks for Roles in Manipulating LIBOR*, FORBES (Mar. 18, 2014), <http://www.forbes.com/sites/greatspeculations/2014/03/18/fdic-sues-16-global-banks-for-roles-in-manipulating-libor> [perma.cc/XUK8-Y3VJ].

196. *Bank, Fix Thyself*, ECONOMIST (Mar. 8, 2014), <http://www.economist.com/news/finance-and-economics/21598678-bank-england-faces-questions-over-its-role-rigged-forex-deals-bank-fix?fsrc=rss|fec> [perma.cc/94GF-M6E7].

197. See, e.g., Rachel Louise Ensign & Max Colchester, *HSBC Struggles in Battle Against Money Laundering*, WALL STREET J. (Jan. 12, 2015), <http://www.wsj.com/articles/hsbc-struggles-in-battle-against-money-laundering-1421100133> [perma.cc/Q93S-CS5B]; *HSBC Exposed U.S. Financial System to Money Laundering, Drug, Terrorist Financing Risks*, HOMELAND SECURITY & GOVERNMENTAL AFFAIRS: PERM. SUBCOMM. ON INVESTIGATIONS (July 16, 2012), <http://www.hsgac.senate.gov/subcommittees/investigations/media/hsbc-exposed-us-financial-system-to-money-laundering-drug-terrorist-financing-risks> [perma.cc/A7LB-KLR3]; Samuel Rubinfeld, *U.S. Seeks to Compensate Victims of BNP Paribas Violations*, WALL STREET J. (May 1, 2015), <http://blogs.wsj.com/riskandcompliance/2015/05/01/u-s-seeks-to-compensate-victims-of-bnp-paribas-violations> [perma.cc/R76P-9T6X].

198. See, e.g., John Letzing, *HSBC Hit by Fresh Details of Tax Evasion Claims*, WALL STREET J. (Feb. 9, 2015), <http://www.wsj.com/articles/hsbc-hit-by-fresh-details-of-tax-evasion-claims-1423482612> [perma.cc/7RHQ-9MYW].

and the manipulation of the swaps market²⁰⁰ have also come to light. And although these later incidents of misconduct did not give rise to systemic consequences, per se, they nonetheless circumstantially suggest that banks may lack sufficient incentives to invest adequate resources in compliance.²⁰¹

From a strategy perspective, there is also some reason to think that banks' compliance efforts are still too uncreative.²⁰² For example, a 2015 Deloitte survey of 364 global firms found that the three most common responsibilities of a CCO are compliance training, code of conduct, and the whistleblower hotline.²⁰³ These tasks, while important, are all inward looking and surface level. None of these goals proactively targets the potential ways in which misconduct can spread. Basic compliance, it seems, ignores the larger question of how misconduct can be transmitted in and out of a bank. Without digging deeper, standard compliance programs such as these will not become agile enough to address the reasons why incentive structures, accountability systems, labor markets, or interbank networks perpetuate misconduct risk throughout the banking sector.

Moreover, from a theoretical standpoint, regulators should worry that banks' efforts, no matter how seemingly robust, will be insufficient from a social welfare perspective. As Steven Schwarcz explains, regulatory intervention is almost always appropriate where systemic risks are concerned because "banks . . . will protect themselves but not the stability of the banking system."²⁰⁴ With misconduct also, the social costs of a market failure to rein in misconduct risk—including contraction of liquidity in the interbank market, contract and asset-price distortion, and possibly even asset bubbles²⁰⁵—extend beyond the costs experienced by individual financial institutions.

The problem can be framed in terms of cost internalization: a misbehaving bank bears only a fraction of the resulting costs. To the extent the misconduct is profitable, bankers/traders can benefit from misconduct in the short and medium term, but bear only a fraction (if any) of the longer-term costs; those are imposed on other firms, the industry, and the economy

199. See, e.g., Chris Cumming, *FIFA Scandal Will Test Banks' Anti-Money-Laundering Liability*, AM. BANKER (May 28, 2015), <http://www.americanbanker.com/news/national-regional/fifa-scandal-will-test-banks-anti-money-laundering-liability-1074580-1.html> [perma.cc/S5Q7-4SL9].

200. See, e.g., Katy Burne, *Big Banks Agree to Settle Swaps Lawsuit*, WALL STREET J. (Sept. 12, 2015), <http://www.wsj.com/articles/banks-wall-street-groups-agree-to-settle-credit-swaps-antitrust-case-1441988741> [perma.cc/NNV9-4NE8].

201. See Baer, *supra* note 11, at 952 (noting that today "corporations are no more transparent or ethical than their predecessors"). Moreover, even if enforcement authorities in the United States and Europe may be highly focused on compliance today, once the agreed-to compliance reforms are made, enforcement's focus will naturally move elsewhere. See Griffith, *supra* note 11 (describing the increase in compliance mandated in nonprosecution and deferred prosecution agreements).

202. See Kimberly D. Krawiec, *Cosmetic Compliance and the Failure of Negotiated Governance*, 81 WASH. U. L.Q. 487, 487, 491 (2003).

203. DELOITTE, *supra* note 194, at 5.

204. Schwarcz, *supra* note 1, at 206.

205. See *supra* Part I (discussing macroeconomic costs associated with misconduct).

more broadly. Thus typical, rational bank managers may choose to underinvest in measures to reduce misconduct among their employees.²⁰⁶ On that rationale, it may be both socially desirable and economically productive for regulators to intervene in the private market to ensure that banks spend a sufficient amount of their limited strategic and financial resources on compliance.²⁰⁷

2. Supervising Compliance

The preceding sections provided a descriptive and theoretical account of why regulatory intervention in banking conduct is desirable. This section offers a preliminary policy proposal as to how bank regulators might do so within the Basel III framework. Specifically, Basel III's Pillar 2 admonishes national supervisors to have an "effective system of banking supervision."²⁰⁸ The following proposal joins two supervisory tools that Pillar 2 endorses—compliance programs and stress testing—to suggest how supervision might be more effectively used to address misconduct risk in the global banking sector: through compliance stress testing.

Stress testing is a well-established supervisory tool. It essentially involves a review of how well a bank can withstand a hypothetical scenario of stress; and that assessment is generally oriented around capital—what a bank's balance sheet looks like after experiencing a test shock. After the Crisis, many national regulators required global banks to conduct company-run stress tests, the results of which are used to inform bank supervision.²⁰⁹ Basel's Pillar 2 in fact provided guidance on how national regulators should supervise these internal stress tests (as written in the Basel II regime).²¹⁰

In addition to institution-run stress tests, bank regulators also began to stress test banks a few years after the Crisis. Now, many national regulators conduct supervisory stress testing that is not necessarily required by Basel III.²¹¹ In the United States, the Fed conducts a supervisory stress test, formally called the "Comprehensive Capital Analysis and Review"

206. See Schwarcz, *supra* note 1, at 206 (referring to a tragedy of the commons type situation with respect to banks' incentive to minimize systemic risk).

207. Ongoing supervision on the federal level is an important, arguably necessary supplement to duties imposed by state corporate law. See *In re Caremark Intern. Inc. Deriv. Litig.*, 698 A.2d 959, 961–62, 969 (Del Ch. 1996).

208. BASEL COMM. ON BANKING SUPERVISION, CORE PRINCIPLES FOR EFFECTIVE BANKING SUPERVISION 10 (2011), <http://www.bis.org/publ/bcbs213.pdf> [perma.cc/T4FJ-6YF2].

209. See BASEL COMM. ON BANKING SUPERVISION, PRINCIPLES FOR SOUND STRESS TESTING PRACTICES AND SUPERVISION (2009), <http://www.bis.org/publ/bcbs155.pdf> (providing guidance for banks' stress testing practices) [perma.cc/XR5D-H74T]; see also Baradaran, *supra* note 183, at 128–88 (providing a history of stress testing); *Dodd-Frank Act Stress Test (Company-Run)*, OFF. COMPTROLLER CURRENCY, <http://www.occ.gov/tools-forms/forms/bank-operations/stress-test-reporting.html> (last visited Feb. 26, 2016) [perma.cc/6WWU-S8BG].

210. See BASEL COMM. ON BANKING SUPERVISION, *supra* note 209, at 18.

211. In the United States, the first stress test (the Supervisory Capital Assessment Program) was conducted on nineteen U.S.-owned bank holding companies in 2009. HIRTLE & LEHNERT, *supra* note 165, at 9. Comprehensive Capital Analysis and Review (CCAR), now an annual exercise, began in 2011. *Id.* at 16. The 2014 CCAR tested thirty bank holding companies with assets of at least \$50 billion. *Id.*

(CCAR), on large American bank holding companies and foreign bank subsidiaries.²¹² The European Banking Authority (EBA) also conducts stress tests biannually, with a transparency exercise performed in off years.²¹³ And the Bank of England also conducts a stress test to assess the system-wide health of the U.K. financial sector.²¹⁴ For these central bank regulators, the purpose of the supervisory stress test is to produce a “quantitative view” of a bank under a hypothetical scenario of “adverse external events, such as changes in real estate or capital markets prices, or unanticipated deterioration in a borrower’s repayment capacity.”²¹⁵

These annual or biannual tests involve banks’ submission of a “capital plan” to their supervisors, which includes information about the bank’s governance over those plans.²¹⁶ With that information, supervisors then model projected bank losses and incomes in the event of the hypothetical scenario of stress.²¹⁷ Stress testing thus serves as a forward-looking, prophylactic tool; it is a “diagnostic” that is used to “drive the design of future regulation.”²¹⁸

212. This Article limits its discussion of U.S. stress testing to the CCAR. The Fed is also responsible for administering the Dodd-Frank Act stress tests (DFAST). *Id.* at 12–16. DFAST has only a quantitative component. *Id.*

213. Letter from Andrea Enria, Chairperson, Eur. Banking Auth., to Martin Schulz, Pres., Eur. Parliament, Decision by the EBA Board of Supervisors Regarding an EU-Wide Stress Test in 2015 (Mar. 2, 2015), <https://www.eba.europa.eu/documents/10180/999733/EBA+letter+to+EP++EC++and+Council+-+Decision+EU-wide+stress+test+2015.pdf> [perma.cc/KX9A-MG6Q].

214. See BANK OF ENG., STRESS TESTING THE UK BANKING SYSTEM: 2015 RESULTS 5 (2015), <http://www.bankofengland.co.uk/financialstability/Documents/fpc/results011215.pdf> (noting that the 2015 stress scenario “represents a coherent tail-risk scenario designed specifically to assess the resilience of UK banks” and in particular to assess their capital adequacy in light of the hypothetical adverse shock) [perma.cc/Q5RJ-4B4Y]; see also Oliver Burrows et al., *RAMSI: A Top-Down Stress Testing Model Developed at the Bank of England*, 52 Q. BULL. 204, 204–05 (2012).

215. ROBERT LONG, SR. EXAMINATION SPECIALIST, FDIC, STRESS TESTING AND MODEL GOVERNANCE 5 (2013) (on file with author); see HIRTLE & LEHNERT, *supra* note 165, at 2; see also Baradaran, *supra* note 183, at 1283–88 (explaining how stress tests in the United States work).

216. HIRTLE & LEHNERT, *supra* note 165, at 16. Capital plans generally include a detailed description of the firm’s internal capital planning process and governance over that process; its capital policy governing capital actions such as dividends, repurchases, and share issuance; its planned capital actions for the next nine quarters under both baseline and stressed economic conditions; and a set of company-run stress test projections under three scenarios provided by the Federal Reserve . . . and under two bank-determined scenarios, including a baseline and “BHC stress” scenario intended to stress the firm’s unique vulnerabilities based on its portfolio and business focus.

Id. at 16–17.

217. See Baradaran, *supra* note 183, at 1287.

218. *Id.* at 1286; see BD. OF GOVERNORS OF THE FED. RESERVE SYS., DODD-FRANK ACT STRESS TEST 2013: SUPERVISORY STRESS TEST METHODOLOGY AND RESULTS 3 (2013), http://www.federalreserve.gov/newsevents/press/bcreg/dfast_2013_results_20130314.pdf [perma.cc/6GX3-QC8B].

The Fed's CCAR also includes a qualitative component.²¹⁹ Unlike the quantitative component that involves a hypothetical scenario with objectively measurable results, the qualitative component appears to involve more evaluation than simulation.²²⁰ In general, it is focused on how well a bank's "capital planning process appropriately captures the specific risks and vulnerabilities faced by the firm under stress."²²¹ In 2015, the Fed was especially focused on the comprehensiveness of a bank's "process for identifying the full range of relevant risks arising from its exposures and business mix."²²² The qualitative component also considers how well banks implement internal stress testing models, based on their own "unique vulnerabilities arising from their particular business strategies."²²³ But the qualitative aspect of the CCAR stress tests has not, to date, been highly focused on banks' processes for assessing and managing *misconduct risk* through their compliance infrastructure. Expanding qualitative stress testing in this direction could, however, provide bank supervisors with an ongoing institutional framework for evaluating banks' resilience against misconduct risk.

In particular, qualitative stress testing could be used to test the strength of banks' compliance functions, as a proxy for assessing a bank's susceptibility to misconduct risk—that is, by testing the likelihood that misconduct will originate from or be imported to that bank. While there are

219. See Bd. of Governors of the Fed. Reserve Sys., *Comprehensive Capital Analysis and Review 2016: Summary Instructions 15–16* (2016).

220. Hirtle & Lenhart, *supra* note 165, at 17 (noting that the "qualitative component involves assessments of the firms' internal processes for determining how much capital they need to have"). As one commentator sarcastically remarked, failing the Fed's stress tests for qualitative reasons is "when the Fed rejects your capital plan not because it leaves you with too little capital, but because it thinks you're generally inept at capital planning, or doesn't like the smug look on your face during this stress test." Matt Levine, *Goldman Sachs Is Cutting It Close on the Stress Test*, *BLOOMBERG VIEW* (Mar. 11, 2015), <http://www.bloombergview.com/articles/2015-03-11/goldman-sachs-is-cutting-it-close-on-the-stress-test> [perma.cc/TKJ4-XMAL].

221. Bd. of Governors of the Fed. Reserve Sys., *Comprehensive Capital Analysis and Review 2015: Assessment Framework and Results 7* (2015) [hereinafter 2015 CCAR Results], <http://www.federalreserve.gov/newsevents/press/bcreg/bcreg20150311a1.pdf> [perma.cc/HH6G-TDYY]; see Bd. of Governors of the Fed. Reserve Sys., *Comprehensive Capital Analysis and Review 2014: Summary Instructions and Guidance 24–25* (2013), <http://www.federalreserve.gov/newsevents/press/bcreg/bcreg20131101a2.pdf> [perma.cc/RLD4-8JD5]; Peter Eavis, *U.S. Banks Pass Stress Tests, Some with an Asterisk*, *N.Y. TIMES: DEALB%K* (Mar. 11, 2015), http://www.nytimes.com/2015/03/12/business/dealbook/us-banks-pass-stress-tests-but-not-without-some-checkmarks.html?_r=0 (reporting that Deutsche Bank and Santander failed for qualitative reasons in 2015 "because of broad and deep deficiencies in how they planned for adverse market conditions and an economic downturn") [perma.cc/MW9E-WRGT]. As Governor Tarullo has explained, the qualitative assessment of CCAR includes "the extent to which the design of a firm's internal scenario captures the specific risks from the firm's activities, the firm's methods for projecting losses under stress scenarios, and how the firm identifies appropriate capital levels and plans for distributions." Gov. Daniel K. Tarullo, *Stress Testing After Five Years* (June 25, 2014), <http://www.federalreserve.gov/newsevents/speech/tarullo20140625a.htm#f12> [perma.cc/CN4T-ZS4E].

222. 2015 CCAR Results, *supra* note 221, at 8.

223. Hirtle & Lenhart, *supra* note 165, at 17.

likely many different ways that regulators could design such a qualitative stress test, as a start, regulators could follow their current methodology for conducting quantitative stress tests—scenario or simulation exercises. Regulators could, for example, attempt to design a misconduct simulation (i.e., a hypothetical scenario) to which banks would have to respond with detailed action plans mapping out the policies in place to hold managing directors accountable, stymie the unsocial use of banker networks that may have contributed to the incident, and address compensation incentives that may have played a role.

Relatedly, as part of a misconduct simulation, regulators could require bank managers to conduct a misconduct premortem.²²⁴ Such an exercise would be the “hypothetical opposite of a postmortem.”²²⁵ Together with compliance, bank management would “brainstorm” every conceivable area in which the institution is vulnerable to misconduct—thinking about the possibility of misconduct in, for example, high profit-generating groups, teams with highly concentrated or individual discretion, and groups that structure or trade bespoke and especially niche or complex products. Lastly, to supplement the information gathered from the scenario-based exercise, banks should also provide regulators with a general “compliance plan” in conjunction with their capital plans.²²⁶

Compliance stress testing would be an experimental regime. It allows banks to take the lead in designing internal compliance policies and procedures to meet general regulatory objectives that are aimed at the drivers of misconduct risk. It thus gives institutional stakeholders the opportunity to advise regulators about what types of compliance systems work best—and then to prove their success—before top-down regulation is imposed, if at all.²²⁷ It thus reflects, at base, a complementarity or management-based regulation approach in which regulators deploy their relative expertise at goal or agenda setting on an industry-wide basis, and the private market deploys its relative advantage in knowing the nuances of the industry and intimate understanding of what motivates its employees’ behavior and why. Although regulators should be mindful not to let flexible standards become “sticky,” ideally, they should encourage the kinds of experiments that address the drivers of misconduct and its contagion.²²⁸ Below are a few examples of what regulators might look for in evaluating a bank’s performance during a compliance stress test.

224. See Gary Klein, *Performing a Project Premortem*, HARV. BUS. REV., Sept. 2007, at 18.

225. See *id.* at 18.

226. Admittedly this information may be somewhat redundant with information already provided to regulators (local or federal) in conjunction with existing supervisory schemes but should nonetheless be incorporated into the Fed’s determination as to whether the bank passes the compliance stress test. Over time, regulatory redundancies or overlap could be eliminated.

227. See generally Charles F. Sabel & Jonathan Zeitlin, *Experimentalist Governance*, in THE OXFORD HANDBOOK OF GOVERNANCE 169–83 (David Levi-Faur ed., 2012).

228. See *supra* Part II.

a. Imputed Responsibility to Managing Directors

Clarifying the consequences of misconduct at the managing director level can help reduce the extent to which complexity is used as an “accountability firewall.”²²⁹ Specifically, making responsibilities broader and clearer can strip away the ability to hide behind complexity. The United Kingdom provides an interesting model. Regulators there recently designed a “Senior Managers and Certification Regime,” in force as of March 7, 2016.²³⁰ Pursuant to this new regime, covered financial firms are required to submit to regulators a “Statement of Responsibilities” and a “Management Responsibilities Map” setting out the areas in which managers are responsible.²³¹ For a time, the U.K. certification regime also included a “presumption of responsibility” against which managers would be held for any issues of misconduct unless they could show that they took steps to prevent it, but recent legislation replaces that reverse burden with a statutory duty of responsibility.²³² The theory behind the U.K. accountability regime seems promising: by ramping hierarchical accountability, managers are better incentivized to understand and closely monitor even the most complex transactions. Following this U.K. experiment, supervisors in the United States and elsewhere might use compliance stress testing to encourage banks to experiment with a similar responsibility regime, which the banks themselves could establish and govern internally.

Regulators might also use compliance stress testing to encourage banks to experiment with more creative ways to link professional misconduct to bankers’ reputation. An apocryphal story has it that the CEO of a large private investment company once told his employees that if they ever engaged in a whiff of misconduct, he would use all of the resources at his disposal to ensure that the person never worked in finance again. The lesson to take away from that anecdote is that bank managers could exploit the value of their bankers’ and traders’ social capital and treat it like a form of reputational compensation paid and earned in a prestige-driven industry.

229. PARLIAMENTARY COMM’N ON BANKING STANDARDS, CHANGING BANKING FOR GOOD: REPORT OF THE PARLIAMENTARY COMMISSION ON BANKING STANDARDS (VOLUME I), 2013–14, HL 27-II, at 16 (UK), <http://www.parliament.uk/documents/banking-commission/Banking-final-report-volume-i.pdf> [perma.cc/DV74-ZJKT].

230. See FIN. CONDUCT AUTH., CP15/22, STRENGTHENING ACCOUNTABILITY IN BANKING 5–6 (2015), <https://www.fca.org.uk/static/documents/consultation-papers/cp15-22.pdf> [perma.cc/2EL5-PDNA]; SHEARMAN & STERLING LLP, IMPLEMENTATION ISSUES ARISING FROM THE REVISED UK SENIOR MANAGER AND CERTIFICATION REGIME 2 (2015), <http://www.shearman.com/~media/Files/NewsInsights/Publications/2015/11/Implementation-Issues-Arising-from-the-Revised-UK-Senior-Manager-and-Certification-Regime-FIA-100215.pdf> [perma.cc/X5VF-XFU2].

231. See FIN. CONDUCT AUTH., *supra* note 230, at 112.

232. MAYER BROWN LLP, THE UK’S NEW REGULATORY REGIME FOR INDIVIDUALS PART 3: THE BANK OF ENGLAND AND FINANCIAL SERVICES BILL 2015, at 1 (2015), https://www.mayerbrown.com/files/Publication/cc394777-75ce-44db-87de-e2c866716baa/Presentation/PublicationAttachment/99ccc8ff-0b2c-4ad1-b067-ecbddacca029/UK-new-regulatory-regime-for-individuals-Part-3_oct1615.pdf [perma.cc/CH9V-GLE7]; SHEARMAN & STERLING LLP, *supra* note 230, at 2–3.

Stated differently, if bank managers exact a reputational price for misconduct, which costs bankers and traders their professional mobility, such consequences may not only disincentivize misconduct, but also inhibit the spread of unethical norms throughout the industry.

b. Per Se Clawbacks

Much ink has been spilled on the topic of executive compensation and how best to structure compensation to avoid serious agency and moral hazard problems.²³³ Financial reform legislation in the United States has commonly required that companies instate clawback policies as a way to incentivize proper conduct. However, the most prominent of these clawback provisions—found both in the Sarbanes-Oxley Act of 2002 and the Dodd-Frank Act of 2010—have been rather narrow in scope, limited to accounting misstatements by senior executives.²³⁴ Europe, in contrast, has recently expanded its clawback regime to include misconduct more broadly. Capital Requirements Directive IV requires banks to make up to 100 percent of discretionary pay subject to malus or clawbacks “in situations where the employee contributed to conduct which resulted in significant losses to the institution or failed to meet appropriate fit and proper standards.”²³⁵ In the United Kingdom, under new rules in effect on January 1, 2015, all firms regulated by the Prudential Regulatory Authority must clawback compensation “in instances of misconduct” for up to seven years after the compensation is awarded.²³⁶ Following those examples, institutionally arranged clawback policies may be another feature that regulators could “test” during a compliance stress test. In particular, regulators might view favorably simulation responses that demonstrated clear policies for clawing back compensation from both the junior bankers directly involved in misconduct as well as from the managing directors overseeing the teams.

Increasing accountability through clawback policies, at the middle manager level especially, could be a fruitful experiment in enhancing accountability. Clawing back managing directors’ compensation could have a far-reaching incentive effect in a bank. For managing directors, the

233. See, e.g., Bebchuk & Spamann, *supra* note 33; Roberta Romano & Sanjai Bhagat, *Reforming Executive Compensation: Focusing and Committing to the Long-Term*, 26 YALE J. REG. 359 (2009).

234. Sarbanes-Oxley Act of 2002 § 304, 15 U.S.C. § 7243 (2012); Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, Pub. L. No. 111-203, 124 Stat. 1376, § 954 (2010); see Press Release, SEC, SEC Proposes Rules Requiring Companies to Adopt Clawback Policies on Executive Compensation (July 1, 2015), <http://www.sec.gov/news/pressrelease/2015-136.html> [perma.cc/CNK8-XTE7].

235. Will Pearce & Michael Sholem, *Remuneration in the Financial Services Industry 2015*, HARV. CORP. L. & GOVERNANCE BLOG (Sept. 18, 2015), <http://corpgov.law.harvard.edu/2015/09/18/remuneration-in-the-financial-services-industry-2015> [perma.cc/XGF7-692L]; see Directive 2013/36/EU, of the European Parliament and of the Council of 26 June 2013 on Access to the Activity of Credit Institutions and the Prudential Supervision of Credit Institutions and Investment Firms and Amending Directive 2002/87/EC and Repealing Directives 2006/48/EC and 2006/49/EC, art. 94(n), 2013 O.J. (L 176) 338, 389.

236. Pearce & Sholem, *supra* note 235.

prospect of several years of lost compensation would likely motivate—strongly—these senior bankers to monitor more closely the transactions within their zones of responsibility. The increased oversight could in turn change the status quo in which junior bankers have come to expect that profits from misconduct can inflate their compensation well before misconduct is discovered or linked to that individual's actions. Consequently, if managing directors are more aggressively incentivized to oversee their subordinates—and be ethical mentors more broadly—then junior bankers' risk-reward calculus changes significantly, and misconduct seems like a much less rational choice.²³⁷

Though less studied, linking compensation to value-based goals may also have potential. This linkage has some precedent outside the financial services industry. Wal-Mart, for example, has used executive compensation to further diversity goals.²³⁸ In 2004, a class action was filed against Wal-Mart for discrimination.²³⁹ Before the class was certified, Wal-Mart announced that, as a compliance initiative, it would tie compensation to diversity goals regarding women and other minorities.²⁴⁰ Something similar might work in banks, where executive or managerial compensation is tied to conduct-related goals. Measuring improvement would, of course, be a real challenge in the short term; but the experiment itself may prompt more work to be done on finding good metrics to assess changes in conduct.

c. Mapping Networks

Lastly, because a major pipeline for interbank misconduct is social, it is important for the CCO to understand and be able to map the social and professional networks of the bank's employees. This requires a shift in the current hierarchical and inward focus of compliance departments. Becoming familiar with bankers' and traders' employment and educational backgrounds would be a good first start in understanding whom they may be speaking to and how they might be influenced.

C. International Regulatory Coordination

As earlier noted, Part III's principal goal is to urge national bank regulators—like central banks—to strengthen Basel III's existing Pillar 2 in order to better address misconduct risk in the global banking sector. Part III also offered one preliminary suggestion for how this might be done through qualitative stress testing. Going forward, the remainder of Part III is largely architectural: it provides a second policy proposal for achieving international cooperation around a new Pillar 2 supervisory rule. To that

237. See Sepe & Whitehead, *supra* note 121.

238. See Constance L. Hays, *Wal-Mart Plans Changes to Some Labor Practices*, N.Y. TIMES, June 5, 2004, at C2.

239. See Steven Greenhouse & Constance L. Hays, *Wal-Mart Sex-Bias Suit Given Class-Action Status*, N.Y. TIMES, June 23, 2004, at A1.

240. Michael Barbaro, *Wal-Mart Promises to Do Better*, WASH. POST, June 5, 2004, at E01.

end, Part III.C first presents a proposal for using the Basel regime as a vehicle for brokering international regulatory coordination around enhanced supervision of misconduct risk. Part III.C concludes with a suggestion, albeit speculative, that the trade-off proposed would enhance stability and efficiency in the global banking sector.

The basic proposal builds on an argument made by Professor Roberta Romano for a “diversity mechanism” in Basel: that Basel requirements “operate as ‘off the rack’ defaults” that could be altered in any direction, subject to a peer review and ongoing monitoring.²⁴¹ The proposal here is to modify Basel III to give states discretion to depart from the current capital regime (say, from the Tier 1 or the buffer requirement) *in exchange for* implementing supervisory exercises that monitor for misconduct risk—such as compliance stress testing or another agreed upon supervisory program that accomplished the same goals.²⁴² In this way, Pillar 1 would be used to set a baseline as it currently does, from which national regulators could depart downward by some preapproved amount, upon undertaking additional supervision.

Why would states agree to do this? For one, as Romano has pointed out, national regulators, it appears, *want* to cooperate with Basel.²⁴³ For the most part, major financial jurisdictions have not (visibly) cheated with respect to the Basel III regime in this post-Crisis order, despite the competitive gains that cheating in this system could yield for any one country’s national banks.²⁴⁴ Quite likely, regulators perceive Basel as necessary to their collective economic stability. At the same time, states are also surely aware of the economic advantages of lower capital ratios for their banks. Taken together, lower capital ratios should be attractive to national regulators, but only if such abatement neither sacrifices stability of the global economic environment in which their banks do business nor risks the ire of their economic partners. A capital-for-supervision regulatory tradeoff could serve those dual objectives.

Having sketched out the basic idea of a capital-supervision tradeoff, the remainder of Part III.C briefly explains why using Pillar 1 to incentivize national regulatory action under Pillar 2—i.e., creating a capital-for-supervision tradeoff—is desirable for stability and efficiency reasons.²⁴⁵

241. Romano, *supra* note 15, at 6–7 (urging greater experimentation in the Basel regime, whereby states “present [a] contemplated departure” to Basel for the Committee’s approval, which, if accepted, would be subject to “ongoing monitoring and periodic reassessment”).

242. For an explanation of how Basel arrived at the Basel III capital ratios for Tier 1 common equity and the buffer, see Beverly Hirtle, *How Were the Basel 3 Minimum Capital Requirements Calibrated?*, FED. RES. BANK N.Y. (Mar. 28, 2011), http://libertystreeteconomics.newyorkfed.org/2011/03/calibrating-regulatory-minimum-capital-requirements.html#.VV_ARU_BzRY [perma.cc/7PQQ-PMVS].

243. Romano, *supra* note 15, at 10–11.

244. *Cf.* Anu Bradford, *International Antitrust Negotiations and the False Hope of the WTO*, 48 HARV. INT’L L.J. 383 (2007) (applying a game theoretic lens to analyze ongoing negotiations between the United States and European Union regarding whether the World Trade Organization should be expanded to include antitrust issues).

245. *See* Schwarcz, *supra* note 1, at 208 (noting that these goals should animate and constrain systemic risk regulation).

1. Stability

There are several reasons why supervising misconduct risk should be an internationally coordinated effort. For one, the institutions that perpetuate misconduct risk are *global*. While most of these banks have operations in the United States, and are thus subject to Fed supervision as “foreign bank operations” (FBOs), the FBOs’ primary regulators are of course foreign; the mothership operations are outside the Fed’s supervisory purview. Coordination between host and home regulators is therefore of practical necessity to ensure that any one global bank is, as a whole, resilient against misconduct risk. Related is the problem of regulatory arbitrage, whereby, in the absence of international coordination, a global bank can evade new supervisory standards for conduct simply by shifting its activities to an (or less-) regulated jurisdiction.²⁴⁶

Yet absent compelling incentives, international coordination around enhanced supervisory standards may be difficult to negotiate. From the perspective of European regulators and their legislatures, at least, creating more regulation in the current political environment may be too unpalatable.²⁴⁷ Public authorities may fear that more regulation, now, will weaken the competitiveness of the national financial industry or that reluctant states will defect and refuse to go along when push comes to shove.²⁴⁸ Moreover, one might expect the financial industry itself to lobby against added measures out of concern for growing compliance costs and the perceived inefficiencies of additional government involvement. Such private sector resistance would further impede regulators’ (or politicians’) willpower to implement additional misconduct-related measures.

With respect to qualitative stress testing specifically, consider the difference in stress testing that already exists between the United States and Europe—two of the most significant financial services jurisdictions. The

246. See Saule T. Omarova, *Wall Street As Community of Fate: Toward Financial Industry Self-Regulation*, 159 U. PA. L. REV. 411, 416 (2011) (referring to regulatory arbitrage as the phenomenon “whereby financial institutions find new ways to get around government rules, thus creating a never-ending spiral of rulemaking and rule evading”).

247. Both France and Germany appear to have resisted increased capital requirements in the Basel III accord. See Alex Barker & Brooke Masters, *EU Ministers Set for Clash Over Banking Rules*, FIN. TIMES, May 2, 2012, at 2; Donna Borak, *Bair Details Inside Story of Regulatory Clash Over Basel III*, AM. BANKER (Sept. 25, 2012), http://www.americanbanker.com/issues/177_186/bair-details-inside-story-of-regulatory-clash-over-basel-1053019-1.html [perma.cc/9C2R-KLJG].

248. As the Deutsche Bundesbank has said,

The supervisory review process represents a great challenge for banking supervisors in Germany. In the international context it is crucial to achieve greater harmonisation not only of major rules, such as the capital requirements imposed on banks, but also of prudential practices to ensure a level playing field for banks in different countries.

Pillar 2: The Supervisory Review Process (SRP), DEUTSCHE BUNDESBANK, http://www.bundesbank.de/Navigation/EN/Tasks/Banking_supervision/Basel2/Supervisory_review_process/supervisory_review_process.html (last visited Feb. 26, 2016) [perma.cc/9C2R-KLJG]; see Pierre-Hughes Verdier, *Mutual Recognition in International Finance*, 52 HARV. INT’L L.J. 55, 67 (2011) (discussing financial regulation as a prisoner’s dilemma).

EBA has not yet adopted a qualitative component of stress testing.²⁴⁹ And, regardless, its standards in general have seemed lax since stress testing began in Europe in 2010. European officials admitted that the 2014 exercise was too soft, as was made all too clear after Ireland's two largest banks were bailed out by the government only two weeks after passing the test.²⁵⁰ (Other banks have also failed after passing the EBA's test.²⁵¹) But Europe may nonetheless resist an expansion of its stress testing regime. European officials have registered their disagreement with the way in which the Fed stress tests European FBOs and criticized the qualitative component of CCAR as subjective.²⁵² This suggests that using capital ratios as carrots may be the most effective way to motivate nations to agree to collectively undertake a supervisory exercise like compliance stress testing.

2. Efficiency

Efficiency provides a second reason for offering Pillar 1 capital reductions where a new Pillar 2 supervisory rule is adopted. To begin, a capital-for-supervision tradeoff makes intuitive economic sense. Removing risk from the system by reducing misconduct should enable a reduction in firms' capital requirements—which are, after all, designed to protect banks from hypothetical stress, including that which might be caused by systemically significant misconduct. Therefore, if a jurisdiction reduces misconduct risk from its financial environment, its national banks will on average withstand less stress and should, therefore, require a lower capital reserve as a buffer.²⁵³

Moreover, regulators may soon be looking for safe ways to lower Pillar 1's capital requirements in the coming years. The Basel regime (along with

249. See EUR. BANKING AUTH., MAIN FEATURES OF THE 2014 EU-WIDE STRESS TEST (2014), <https://www.eba.europa.eu/documents/10180/563711/Communication+on+the+2014+EU-wide+stress+test.pdf> [perma.cc/C4VD-FE28]; EUR. BANKING AUTH., RESULTS OF THE 2014 EU-WIDE STRESS TESTS (2014), <http://www.eba.europa.eu/documents/10180/669262/2014+EU-wide+ST-aggregate+results.pdf> [perma.cc/6BVR-XTR4]. It is important to note, however, that in the 2016 stress test, the European Banking Authority is planning to include a conduct risk component in the exercise, which will require “[b]anks [to] project the P&L impact of losses arising from conduct risk and other operational risks, using, when relevant, their internal models and, in the case of conduct risk, available qualitative information.” EUR. BANKING AUTH., EU-WIDE STRESS TEST 2016: DRAFT METHODOLOGICAL NOTE 76 (2015), <http://www.eba.europa.eu/documents/10180/1259315/DRAFT+2016+EU-wide+ST+methodological+note.pdf> [perma.cc/7C6Z-EB8C].

250. See Viktoria Dendrinou & Stephen Fidler, *EU Regulator Wary of Fed Capital Rules*, WALL STREET J. (Feb. 24, 2015), <http://www.wsj.com/articles/european-banks-neednt-also-go-through-feds-stress-test-eu-official-says-1424800563> (reporting that earlier stress tests “didn’t address issues addressed by the Fed’s [stress] test, including how the banks are governed, risk management and other more qualitative factors”) [perma.cc/GK69-EJ99].

251. P.W., *Setting the Exam*, ECONOMIST (Jan. 31, 2014), <http://www.economist.com/blogs/freeexchange/2014/01/european-banking-stress-tests> [perma.cc/4D82-CDLY].

252. Dendrinou & Fidler, *supra* note 250.

253. Note that because capital ratios are principally concerned with bank failure, the political and economic rationale for trading capital requirements off for compliance stress testing lies in the possibility that misconduct risk contributes to systemic banking crises, as was seen in the Crisis.

the Dodd-Frank Act in the United States) appears to have had some unintended consequences.²⁵⁴ A recent report by the Office of Financial Research, an independent arm of the Treasury, indicated that inventories of fixed-income assets are down in the broker-dealers.²⁵⁵ Shrinking inventories implies that financial institutions will be less able to keep liquidity flowing in the event of a stressful shock.²⁵⁶

There is also some reason to think that the costs of complying with the Basel regime may be weakening banks' defenses against other threats to their stability. A study conducted by the market research group Federal Financial Analytics found that U.S. banks alone absorb \$70.2 billion a year in post-Crisis regulatory costs.²⁵⁷ These costs detract from the resources that banks have to deal with other operational risks, like cyber-attacks and information failure.²⁵⁸ In fact, regulators now fear that "banks simply lack the resources with which to meet new rules, support credit demand, and simultaneously increase their resilience to cyber-attack and undertake other costly information-technology improvements."²⁵⁹ And this strain on the global banking sector has implications for financial stability more broadly:

254. See FED. FINANCIAL ANALYTICS, INC., WHAT HATH ALL THE RULES WROUGHT? ASSESSING THE SUCCESS OF THE POST-CRISIS FRAMEWORK (2015), http://www.fedfin.com/images/stories/client_reports/Assessing%20the%20Success%20of%20the%20Post-Crisis%20Framework.pdf [perma.cc/JMP6-XF4M]; Rob Blackwell, *The Seven Risks That Could Aggravate the Next Crisis*, AM. BANKER (Apr. 29, 2015, 12:44 PM), <http://www.americanbanker.com/news/law-regulation/the-seven-risks-that-could-aggravate-the-next-crisis-1074063-1.html> [perma.cc/3J3Y-2SAC]; John Heltman, *Regulators Worry New Rules May Freeze Markets*, AM. BANKER (June 12, 2015), <http://www.americanbanker.com/news/law-regulation/regulators-worry-new-rules-may-freeze-markets-1074851-1.html> (noting concern that Basel III rules have tightened market liquidity) [perma.cc/F279-M5PG]; Stephen A. Schwarzman, *How the Next Financial Crisis Will Happen*, WALL STREET J., June 10, 2015, at A15 (arguing that this "expansive and untested regulatory framework . . . may well fuel the next financial crisis as well as slow U.S. economic growth").

255. OFFICE OF FIN. RESEARCH, 2014 ANNUAL REPORT 31–32 (2015), <https://financialresearch.gov/annual-reports/files/office-of-financial-research-annual-report-2014.pdf> (citing, among various reasons for declining liquidity, that "[r]egulations requiring banks to hold more capital and more restrictive constraints on leverage have increased the cost of securities financing activities and reduced incentives to maintain them") [perma.cc/KGM5-98ND].

256. John Heltman, *Data Agency Sees Hazards in Liquidity, Treasury Market*, AM. BANKER (June 26, 2015), <http://www.americanbanker.com/news/law-regulation/data-agency-sees-hazards-in-liquidity-treasury-market-1075109-1.html> [perma.cc/UW3W-UZAK]. As Heltman writes, "Those observations echo many made by industry and government officials, who have grown increasingly concerned that liquidity in the fixed-income markets is drying up and that the Dodd-Frank regulatory apparatus is largely to blame." *Id.* But see John Heltman, *Is Regulation the Reason Liquidity Is So Unstable?*, AM. BANKER (Aug. 24, 2015), <http://www.americanbanker.com/news/law-regulation/is-regulation-the-reason-liquidity-is-so-unstable-1076270-1.html> (noting that whether recent regulation is causing the lack of liquidity in bond markets is a contested matter) [perma.cc/3X5L-DXK8].

257. FED. FINANCIAL ANALYTICS, INC., *supra* note 254, at 9; see Martin Arnold, *Tougher Regulation Is a Foot on the Jugular for Investing Powerhouses*, FIN. TIMES, Mar. 10, 2015, at 14 (noting that "[t]here are many reasons why these powerhouses [Citigroup, Bank of America, Merrill Lynch, Credit Suisse, Barclays, and Morgan Stanley], which regularly generated pre-crisis returns above 20 per cent, now struggle to earn more than their cost of capital. But the biggest one is clear: tougher regulation").

258. FED. FINANCIAL ANALYTICS, INC., *supra* note 254, at 9.

259. *Id.* at 8.

“To the extent operational resilience is weakened at banking organizations, financial-market operational resilience will be similarly strained, especially in complex, cross-border, and/or capital markets operations.”²⁶⁰

Lastly, the growth of the “shadow banking” sector may be another side effect of heightened capital requirements. The shadow banking system consists of an unregulated (or laxly regulated) system of financial intermediation, much of which involves securitization and wholesale funding.²⁶¹ Some have argued that financial activity is migrating to the shadow banking sector in response to (i.e., to avoid) the cost of new regulation imposed on traditional banks.²⁶² The expanse of shadow banking has regulators worried—and possibly, with good reason. It makes the economy vulnerable to destabilizing events like asset bubbles; shadow banking also increases “liquidity discontinuity” (because it, like the traditional banking sector, “provides short-term funding for long-term capital needs”), which can lead to events that mimic a classic bank run.²⁶³ And the growth of this system may also increase misconduct risk insofar as these institutions’ opacity (and diffusion) make monitoring for misconduct difficult.²⁶⁴ For all of these reasons and others, Mark Carney named shadow banking as “the greatest danger to the world economy,” and the *Economist* described it as a “huge, fast-growing,” “little understood,” and “potentially explosive” area.²⁶⁵

Ultimately, it is somewhat speculative to say that reducing capital ratios will reduce or slow the growth of the shadow banking system or will restore liquidity. But the proposal for a capital-for-supervision trade-off should, at a minimum, prompt regulatory thought about the optimal balance between

260. *Id.*

261. See Steven L. Schwarcz, *Regulating Shadow Banking*, 31 REV. BANKING & FIN. L. 619, 621 (2012). Former Federal Reserve Board Chairmen Ben Bernanke defined shadow banking as “compris[ing] a diverse set of institutions and markets that, collectively, carry out traditional banking functions—but do so outside, or in ways only loosely linked to, the traditional system of regulated depository institutions.” Ben S. Bernanke, Chairman, U.S. Fed. Reserve, *Some Reflections on the Crisis and the Policy Response* (Apr. 13, 2012), <http://www.federalreserve.gov/newsevents/speech/bernanke20120413a.htm> [perma.cc/LX2B-3WBU].

262. See, e.g., Gary Gorton & Andre Metrick, *The Federal Reserve and Panic Prevention: The Roles of Financial Regulation and Lender of Last Resort*, 27 J. ECON. PERSP. 45, 58 (2013) (noting the growth of the shadow banking sector); Schwarcz, *supra* note 261, at 624; Howard Mustoe, *Casting Light on Shadow Banking*, BBC (June 17, 2014), <http://www.bbc.com/news/business-27868278> [perma.cc/E5A5-99N5]; *The Lure of Shadow Banking*, *ECONOMIST*, May 10, 2014, at 11 (explaining that shadow banking has proliferated because traditional banks are “on the back foot, battered by losses incurred during the financial crisis and beset by heavier regulation, higher capital requirements, endless legal troubles and swingeing fines”).

263. Schwarcz, *supra* note 261, at 625; see ZOLTAN POSZAR ET AL., FED. RESERVE BANK OF N.Y., STAFF REPORT NO. 458: SHADOW BANKING I (2010; revised 2012).

264. Awrey, *supra* note 103, at 275 (arguing that complexity and innovation create a relatively more hospitable environment for “fraud, misconduct, and other opportunistic behavior on the part of financial intermediaries”); see Judge, *supra* note 19; see also POSZAR ET AL., *supra* note 263, at 10–12 (explaining the various steps involved in structured intermediation).

265. *The Lure of Shadow Banking*, *supra* note 262.

capital and supervision—and challenge the assumption that Basel II has struck it.

CONCLUSION

This Article has offered a framework for understanding misconduct as a distinct category of risk to the global markets—misconduct risk. It has argued that misconduct risk is underaddressed in the current architecture of global banking regulation, embodied in the Basel regime. In particular, this Article critiqued the imbalance in this international framework: that it focuses on the quantitative sources of risk in banks but neglects the systemic significance of misconduct risk. Given the costs that misconduct risk imposes, striking a better balance should be a high priority for banking regulation today.

Yet in order for regulators to most effectively deploy their finite resources to reduce misconduct risk, they must first understand the drivers of that risk. This Article explored three structural features of the banking sector that, together, give rise to misconduct risk in the global banking sector. It then offered a policy proposal to address it: to modify Pillar 2 of the Basel III regime to include standards for “compliance stress testing,” which would leverage the private sector’s efforts to reduce misconduct risk by inhibiting its industry-wide growth and transmission. Ultimately, it suggested how that revision might be coordinated among Basel’s members.