
ARTICLES

PAY FOR REGULATOR PERFORMANCE

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ABSTRACT

Few doubt that executive compensation arrangements encouraged the excessive risk taking by banks that led to the recent Financial Crisis. Accordingly, academics and lawmakers have called for the reform of banker pay practices. In this Article, we argue that regulator pay is to blame as well, and that fixing it may be easier and more effective than reforming banker pay. Regulatory failures during the Financial Crisis resulted at least in part from a lack of sufficient incentives for examiners to act aggressively to prevent excessive risk. Bank regulators are rarely paid for performance, and in atypical cases involving performance bonus programs, the bonuses have been allocated in highly inefficient ways. We propose that regulators, specifically bank examiners, be compensated with a debt-heavy mix of phantom bank debt and equity, as well as a separate bonus linked to the timing of the decision to take over a bank. Our pay-for-performance approach for regulators would help reduce the incidence of future regulatory failures.

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*Why did the [regulatory] system fool itself?*¹

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1. *As Banks Boomed, Watchdogs Got Big Bonuses*, CBS NEWS (Mar. 18, 2010, 8:30 AM), <http://www.cbsnews.com/stories/2010/03/18/national/main6310518.shtml> (quoting Ellen Seidman, former head of the Office of Thrift Supervision).

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I. INTRODUCTION

Conventional wisdom holds that executive compensation practices helped precipitate the Great Financial Crisis. As a result, pay reform has been a central focus for policymakers and scholars.² We agree that pay practices likely contributed to the Crisis, but the problems were not confined to Wall Street bankers' pay. The pay of Wall Street *regulators* is to blame as well. Myriad tales of regulatory inertia preceding the Crisis strongly suggest that regulators simply had insufficient incentive to act aggressively in the face of banks' excessive risk taking.³ We propose a solution—performance pay for bank regulators.

Some note that banker pay may have been too high powered—too focused on shareholder value and insufficiently sensitive to potential losses, which would ultimately be borne by taxpayers.⁴ We assert that bank

2. See Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 1011(a), 124 Stat. 1376, 1964 (2010) (codified in scattered sections of U.S.C.); PATRICK BOLTON, HAMID MEHRAN & JOEL SHAPIRO, FED. RESERVE BANK OF N.Y., STAFF REP. NO. 456, EXECUTIVE COMPENSATION AND RISK TAKING (2010), available at http://www.newyorkfed.org/research/staff_reports/sr456.pdf; Lucian A. Bebchuk & Holger Spamann, *Regulating Bankers' Pay*, 98 GEO. L.J. 247 (2010); Sanjai Bhagat & Roberta Romano, *Reforming Executive Compensation: Focusing and Committing to the Long-Term*, 26 YALE J. ON REG. 359 (2009); Rudiger Fahlenbrach & Rene M. Stulz, *Bank CEO Incentives and the Credit Crisis*, 99 J. FIN. ECON. 11 (2011); Frederick Tung, *Pay for Banker Performance: Structuring Executive Compensation for Risk Regulation*, 105 NW. U. L. REV. 1205 (2011); Frederick Tung & Xue Wang, *Bank CEOs, Inside Debt Compensation, and the Global Financial Crisis* (Boston Univ. Sch. of Law, Working Paper No. 11-49, 2011).

3. See *infra* Part III.B.2–3.

4. Taxpayers bear the ultimate responsibility for failed banks, either from explicit insurance

regulators' pay is not high powered *enough* and therefore, ironically, is also insufficiently sensitive to potential losses to taxpayers. Currently, regulators' pay is not in any way linked to performance. Bank regulators are civil servants paid a fixed salary that does not depend on whether their actions improve banks' performance, protect banks from failure, or increase social welfare.⁵

In this Article, we show how bureaucratic pay for bank regulators can lead to suboptimal regulatory action, and we propose incentive pay as a solution. Specifically, we propose that in addition to salary, bank examiners should receive incentive pay based on changes in the value of a debt-heavy portfolio of the debt and equity securities of the banks they regulate.⁶ In addition, should a bank have to be taken over, the examiner would receive a bonus related to the timing of the takeover decision. Giving examiners a stake in bank performance, both upside and downside, will create better incentives to promote optimal regulations, to intervene where necessary to reduce bank risk taking, and to innovate to improve regulatory efficiency. If incentives are well calibrated, examiners can capture some of the benefits that accrue from making banks more valuable, while suffering as well some of the negative consequences when banks fail.

For each of the largest banks, one or more permanent examiners are assigned to supervise the bank as their full-time job. They have offices and support staff at the bank, and they spend a good part of their working lives as a regular presence at the bank they supervise.⁷ These permanent examiners and the large banks they supervise are our focus.⁸ The idea of incentive pay could be generalized to higher-level bank regulators (and

provided by the Federal Deposit Insurance Corporation or implicit insurance seen in the bailout of Citigroup, Bear Stearns, AIG, and other financial institutions. *See infra* Part III.B.

5. *See infra* Part III.

6. As described below, we propose that examiners be paid with "phantom" securities—cash payments based on the market performance of their regulated banks' stock and debt securities—instead of actual securities of their banks. This approach avoids potential insider trading issues and the specter of government control of banks. The equity securities we rely on are the publicly traded equity securities of the bank holding company parent of the bank. Almost every large bank is held as a wholly owned subsidiary of a bank holding company. *See infra* Part V.B.

7. Aaron Lucchetti, *The Regulator Down the Hall*, WALL ST. J., June 20, 2011, at C1.

8. Insofar as authority to supervise, control bank conduct, and impose regulatory sanctions rests elsewhere, either as a matter of course or for a particular bank, then incentives should be placed there as well. We discuss this in the context of the bank shutdown decision. *See infra* Part V.C. Where there is more than one senior-level examiner, it might make sense to have incentive compensation for each examiner above a certain level, just as many high-tech firms award stock options widely among employees, or it might be more sensible to have only one examiner so compensated. In general, we leave it to agency heads to decide the overall scope for the implementation of performance pay. *See infra* Part VI.F.

incentive pay may be needed there as well).⁹ For logistical reasons,¹⁰ however, our specific proposal centers on bank examiners. Given the novelty of our proposal, we are content to advocate primarily for focused experimentation with bank examiners. More powerfully incentivized bank examiners may also reduce the need for market-based incentives at higher levels. Incentivized bank examiners could be expected to push more aggressively against a suboptimal status quo than examiners not so incentivized.¹¹

Our proposal offers a partial remedy for some widely recognized infirmities that routinely plague the administration of regulatory systems. These include capture, indifference or slack, a lack of creativity or innovation, a selection bias in who takes government jobs, and a mismatch between skills and regulatory assignments. We believe incentives for regulators could go a long way toward improving regulatory efficiency without upsetting too much the current civil service system or the culture of public service at bank regulatory agencies.

In the absence of high-powered incentives, it is assumed that those individuals who self-select into regulatory jobs will value public service and will do the work of aligning performance with desired social welfare outcomes. But this proxy is obviously not perfect: some will choose government jobs because the job demands may be less severe than in the private sector; some may value public service but not in ways consistent with social welfare-maximizing regulation; and some who would be great regulators may be put off by the lack of incentives and absolute levels of pay. There is undoubtedly some variation across regulators. Given this and the seniority-based system of low-powered incentives, even those regulators with the best motives and skills would not necessarily rise to the top. This approach may not be the optimal way to motivate regulators, and, in fact, we present strong evidence that it is suboptimal.

9. See *infra* Part VLF (discussing the possible application of our proposal to higher-level regulators).

10. The major logistical hurdle for applying our proposal to higher-level regulators is that unlike permanent examiners, these regulators typically oversee multiple banks. Holding a portfolio of debt and equity securities of multiple banks may create perverse incentives for regulators. For example, they may be tempted to favor the most promising bank over others, instead of minding the safety and soundness of each bank. See *infra* Part VLF.

11. Our focus on examiners also requires that we limit the scope of our proposal to the period before and including the decision to shut down a bank. Admittedly, important decisions are made after the shutdown decision that affect bank creditor recoveries and the amount of losses left with taxpayers. Because banks' securities are typically worthless once banks fail, however, and because examiners play little or no role in the conduct of the receiverships that resolve failed banks' assets and liabilities, our proposal's scope is necessarily limited to the period before and including shutdown.

We do not dismiss the value of attracting regulators imbued with a desire for public service. We are mindful of the risk that financial incentives might crowd out regulators' public-spirited motivations toward conscientious regulation: putting a price on diligence might encourage some regulators to slack.¹² At the same time, however, regulators' dismal performance in the Crisis makes us skeptical that public-spirited motivations are sufficient incentive. At scores of banks, examiners and other regulators were well aware of operational deficiencies and excessive risk taking several years before those banks failed.¹³ But regulators stood still in the face of this information. They utterly failed to demand corrective action by banks. Instead, examiners continued to rate these risky institutions as "fundamentally sound." Washington Mutual, the largest bank failure in U.S. history at the time of its failure, enjoyed a "fundamentally sound" rating until six days before its collapse.¹⁴ Defending regulators' existing incentive structure seems quite problematic after the Crisis.¹⁵

We propose to improve regulators' incentives by adding or subtracting pay based on an algorithm designed to better track the social welfare interest in bank regulation. By paying regulators with a mix of securities reflecting the full range of a bank's balance sheet, our proposal incentivizes regulators toward striking a socially optimal balance between increasing bank values and credit and reducing the costs of bank failure.

This could mean more or less regulation, depending on the bank and the circumstances. For instance, examiners who gain from increases in bank values (by having pay tied to bank equity values) may take steps to make the examination process more efficient, to get the amount and type of disclosures right, and to encourage valuable lending and risk taking.¹⁶ Examiners who lose from decreases in the value of bank debt may pursue a more interventionist approach in some cases, since they bear some of the losses arising from the socially inefficient risk that exists on their watch. Regulators incentivized to worry about losses to taxpayers may be more

12. See *infra* Part VI.A.1.

13. In the three years before Washington Mutual Bank failed, examiners spent over 100,000 hours over 400 days inspecting its assets and operations. See *infra* note 96 and accompanying text.

14. See *infra* note 102 and accompanying text.

15. Moreover, changing the financial incentive structure is also likely to affect the composition of banking regulatory agencies over time. Performance-based pay may attract candidates different from those who currently self-select into banking regulation under existing compensation schemes with low-powered incentives. See *infra* Part VI.A.1.

16. The debt component of this incentive pay helps to ensure that risk taking internalizes the expected social costs of insurance.

diligent in their supervision of bank assets and management, may be more aggressive in assuring that corrective recommendations are implemented, may encourage or require changes to bank balance sheets, and so on. The mix of debt and equity securities (or phantom securities) will be key to achieving the appropriate types and levels of examiner activity.

An added benefit is that the market will be fooled less often because examiners will have incentive to act promptly when signs of trouble arise. Examiners will marshal the private information they learn on the job to improve regulation and their own compensation, and examiners' actions will be reflected in the securities markets, albeit indirectly and over time.

Pay reforms to date have focused on the regulated, not the regulators. The so-called "pay czar," Kenneth Feinberg, enjoyed wide authority to dictate pay at banks receiving emergency funding under the Troubled Asset Relief Program ("TARP").¹⁷ The Wall Street Reform and Consumer Protection Act of 2010 ("Dodd-Frank") adopted several reform proposals targeting banker pay. For example, "say on pay" provisions require banks (along with other public companies) to conduct regular advisory shareholder votes on executive pay.¹⁸

Academics have proposed other approaches as well. For instance, Lucian Bebchuk and Holger Spamann argue that bankers should be paid not just with equity but with a slice of the entire capital structure of their bank holding company in order to better internalize the actual costs of corporate decisions on various stakeholders.¹⁹ One of us has argued elsewhere that a better approach would be to pay bankers with subordinated debt of their banks.²⁰ These academic proposals intend to link banker pay more closely with the social welfare outcomes expected from banking activity levels and risks.

Our approach has a similar goal, though regulators would have a

17. Aaron Lucchetti, David Enrich & Joann S. Lublin, *Fed Hits Banks with Sweeping Pay Limits*, WALL ST. J., Oct. 23, 2009, at A1.

18. Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 951, 124 Stat. 1376, 1899-1907 (2010) (codified in scattered sections of U.S.C.). In addition, banks must disclose incentive-based compensation tied to financial outcomes, *id.* § 953, and must adopt a three-year claw-back policy in the event of a subsequent financial restatement that suggests incentive payments should not have been made, *id.* § 954. The policy must require return of incentive payments that would not have been awarded under the restated financial statements. *Id.* The penalty for noncompliance is delisting. *Id.* Interestingly, only the regulated parties suffer the claw-back possibility; regulators, who also received bonuses during the inflation of the housing and finance bubble, get to keep theirs.

19. Bebchuk & Spamann, *supra* note 2, at 271.

20. Tung, *supra* note 2, at 1207.

greater focus on avoiding losses under our approach than CEOs would have under these other academic proposals. The reason is straightforward: CEOs should be focused mostly on creating individual firm value, while regulators should be mostly focused on minimizing risk. In other words, CEOs have control of the accelerator, while regulators man the brake. While the optimal pay package for CEOs should contain a bit of brake, as we explain below, the optimal pay package for regulators should include a bit of accelerator. Moreover, a well-structured incentive pay arrangement for regulators would respond to the structure of bank CEO incentives, since regulators must lean against the risk-inducing features of bank CEO pay. Finally, though the reform of regulator pay and bank CEO pay are not mutually exclusive, our proposed regulator pay reform offers potentially significant advantages over proposed banker pay reforms, including relative ease of implementation.²¹

We do not view our project as a search for perfect regulatory incentives. Instead, we believe that incorporating incentive-based pay as one component of regulators' compensation works an improvement over current practice. The key is finding metrics for measuring "good" and "bad" performance in government, and deploying them in ways that will not make things worse. Fortunately, as we show below, reasonable metrics exist in banking regulation, making this a good test case for a more general commitment to pay for regulatory performance. As has been the case with executive pay, we fully expect there will be learning over time as inevitable problems arise with our proposal. But much has already been learned from the trials and errors in designing executive compensation, so that implementation of our proposal would hopefully avoid some obvious pitfalls of incentive compensation.

While we leave it to agency heads to develop optimal compensation practices over time, we believe even small steps in the direction of our proposal could have large effects on the efficiency of banking regulation. The need to incentivize regulators is especially important after Dodd-Frank, whose say-on-pay provision is likely to generate even higher-powered incentives for managers to maximize shareholders' private interests. High-powered bank CEO incentives require a corresponding impetus for regulators to proactively constrain bank risk taking.²²

21. See *infra* Part VI.C.

22. See Sharon Hannes, *Compensating for Executive Compensation: The Case for Gatekeeper Incentive Pay*, 98 CALIF. L. REV. 385, 421 (2010) (proposing equity-based incentive pay for auditors in order to counteract the effect of high-powered equity incentives for executives that encourage securities fraud and financial misreporting).

To make our case, we proceed as follows. Part II offers background and context for our incentive pay proposal for regulators. In Part III, we describe the current incentive model for banking regulators, its failure in the Financial Crisis, and theoretical criticisms of this model. In Part IV, we elaborate the theoretical case for paying banking regulators according to their performance. We also define what good and bad performance looks like, tying these to objective metrics that can be used to design pay systems. Part V then describes in more detail what exactly a pay-for-performance contract might look like for a bank examiner, including a discussion of the mix of consideration types that could be used. In Part VI, we offer some qualifications and address some limitations to our proposal. Part VII concludes.

II. REGULATORS' PAY AND ITS DISCONTENTS

This part sets the context for our reform proposal. It recounts early discussions of the possibility of incentive pay for government officials, as well as recent innovations in regulator pay.

A. A SHORT HISTORY OF PERFORMANCE PAY FOR REGULATORS

We are not the first to point out the problems with the standard pay structure for bureaucrats. Four decades ago, Gary Becker and George Stigler published their seminal article arguing for incentive pay for the enforcement of laws.²³ Others extended the argument, developing various economic models demonstrating the potential efficiency gains from introducing market-based incentives in the compensation of government officials.²⁴ Susan Rose-Ackerman authored an important contribution in support of this idea, noting that regulators need to be “both competent and motivated.”²⁵ She pointed out how economic incentives could do important

23. Gary S. Becker & George J. Stigler, *Law Enforcement, Malfeasance, and Compensation of Enforcers*, 3 J. LEGAL STUD. 1 (1974).

24. See, e.g., Milton Harris & Artur Raviv, *Some Results on Incentive Contracts with Applications to Education and Employment, Health Insurance, and Law Enforcement*, 68 AM. ECON. REV. 20, 28–29 (1978) (detailing the conditions under which incentive pay for law enforcement officials is efficient). A related question is whether and how best to hold public actors, like the police, school officials, and other bureaucrats liable for constitutional violations. After all, holding someone liable ex post for bad conduct is similar to adjusting their pay ex ante to pay only for good conduct. For a comparison between the public and private approaches to this problem, see M. Todd Henderson, *Qualified Immunity for Corporate Directors* (unpublished manuscript) (on file with authors).

25. Susan Rose-Ackerman, *Reforming Public Bureaucracy Through Economic Incentives?*, 2 J.L. ECON. & ORG. 131, 131 (1986).

work in providing motivation.²⁶ Importantly, she explored the delicate tradeoffs implicated by the deployment of market-based incentives in bureaucratic environments.²⁷

Unfortunately, these academic insights have found no purchase among policymakers: forty years later, bureaucrats are still paid like bureaucrats. The timing of these articles (roughly 1974 to 1986) was probably inauspicious: during this period, CEOs were paid like bureaucrats too. It was not until four years after Rose-Ackerman's proposal that Michael Jensen and Kevin Murphy published their path-breaking article in the *Harvard Business Review* arguing for incentive pay for CEOs.²⁸ Summarizing pay practices of publicly traded companies at the time, they concluded that "corporate America pays its most important leaders like bureaucrats," instead of owners.²⁹ They advocated for a dramatic increase in the use of stock option compensation.³⁰ Unlike the academic proposals on incentivizing government actors, the Jensen and Murphy article triggered a decades-long process of fundamental change in the structure of executive pay. Although some gripe at imperfections in current executive compensation practices,³¹ no one doubts that CEOs now have greater incentives to act in the interests of shareholders than they did before the advent of incentive compensation.

We propose to apply that learning to the regulatory context to improve regulator performance. Giving regulators a medium- to long-term stake in the value of the regulated entity may encourage regulatory decisions that improve social welfare. The key is to ensure that regulator pay properly accounts for the social component of banking risk. The banker pay reforms discussed above have traction because they include a social welfare component in banker pay. These lessons can be applied to regulator pay as well.

26. *Id.* at 132.

27. *Id.* at 133–34.

28. See Michael C. Jensen & Kevin J. Murphy, *CEO Incentives—It's Not How Much You Pay, But How*, HARV. BUS. REV., May 1990, at 138.

29. *Id.*

30. *Id.* at 141.

31. To be sure, there are problems with current pay practices in the private sector, but the consensus view is that the linkage between pay and performance has been a hugely valuable change for social welfare. Even the strongest critics object to the implementation rather than the theory. See, e.g., LUCIAN A. BEBCHUK & JESSE FRIED, *PAY WITHOUT PERFORMANCE: THE UNFULFILLED PROMISE OF EXECUTIVE COMPENSATION* (2004).

B. TOWARD REGULATOR PAY FOR PERFORMANCE

Our regulatory incentive-compensation proposal borrows not only from the neglected economics literature of the past, but also finds hope in changed pay practices for government officials implemented in the last few years. The Obama administration has dramatically increased regulators' salaries. According to public records, the number of federal government officials earning six-figure salaries has skyrocketed. In the Department of Transportation, for example, only one employee earned a salary exceeding \$170,000 at the start of the recession.³² Eighteen months later, that number had ballooned to 1690 employees.³³ The number of civilian employees in the Defense Department earning \$150,000 or more jumped from 1868 in December 2007 to 10,100 in the succeeding eighteen months.³⁴

A plausible impetus for this trend is the belief that greater pay will bring better talent. Here, the federal government is simply following the model that other governments have used. Most famously, Singapore has used large pay increases to improve the quality of its regulators.³⁵ While such pay increases may be important in attracting talented people, paying more does not necessarily generate optimal incentives.³⁶ If it did, the problem of CEO pay identified by Jensen and Murphy would not have existed.³⁷ CEOs were highly paid in 1990; they were just not paid for doing the things their principals would want them to do.

Bank regulatory agencies have begun using bonuses ostensibly tied to performance. During the period 2003 to 2006, three bank regulators—the Federal Deposit Insurance Corporation (“FDIC”), Office of Thrift Supervision (“OTS”), and the Office of the Comptroller of Currency (“OCC”)—paid out nearly \$20 million in retention and performance bonuses to bank examiners and other regulators.³⁸ In 2006 alone, the FDIC

32. Dennis Cauchon, *For Feds, More Get 6-Figure Salaries*, USA TODAY, Dec. 11, 2009, at 1A.

33. *Id.*

34. *Id.*

35. Singapore's top ministers were paid nearly \$1.3 million in 2007, based on a calculation that pays two-thirds of the median of the top eight professionals in several top fields. Seth Mydans, *Singapore Announces 60 Percent Pay Raise for Ministers*, N.Y. TIMES (Apr. 9, 2007), <http://www.nytimes.com/2007/04/09/world/asia/09iht-sing.3.5200498.html>.

36. Higher salaries may improve performance insofar as dismissal becomes more costly for employees. See Becker & Stigler, *supra* note 23, at 6 (“This cost [of dismissal] can more than offset the gain from malfeasance.”). The job protection afforded by civil service rules, however, diminishes the risk of dismissal considerably. See *infra* note 111 and accompanying text.

37. See Jensen & Murphy, *supra* note 28, at 141 (“In most large companies, cash compensation for CEOs is treated more like an entitlement program than as a way to motivate outstanding performance.”).

38. Matt Apuzzo, *Government Bank Regulators Got Big Bonuses*, HUFFINGTON POST (Mar. 18,

gave bonuses to 2000 bank examiners.³⁹

This very modest move toward pay for regulator performance, while perhaps a step in the right direction, has several shortcomings. First, although \$20 million seems like a lot of money, across three years, three agencies, and thousands of regulators, most of the bonuses were likely quite small and unlikely to provide much incentive to dramatically change behavior.⁴⁰ Second, the use of ex post bonuses may not yield incentives as high powered as with other techniques, such as the mix of equity, debt, and bonuses that we propose. At the time Jensen and Murphy wrote, CEOs routinely received cash bonuses, and yet pay and performance were not as tightly linked as when stock and stock options came into use.⁴¹ Ex post bonuses do not generate as much accountability as ex ante incentive contracts tied to outside metrics. To the extent that ex post bonus payments are discretionary, they allow for the intrusion of non-performance-based criteria, such as favoritism, political affiliation, racial or gender bias, and so on. The linkage between bonuses and conduct that maximizes social welfare may therefore be tenuous.⁴² To be sure, there is a tradeoff between accountability and the ex ante costs of designing and implementing transparent incentive structures. As explained below, however, banking regulation may be an area where the objective elements of good and bad performance make the ex ante design costs small relative to the potential efficiency gains. Finally, ex post bonuses are likely to be one sided—that is, paid in good times but not recouped in bad times. This is likely to bias regulation in a particular direction.⁴³

2010, 6:02 PM), http://www.huffingtonpost.com/2010/03/18/government-bank-regulator-bonus_n_503712.html.

39. *Id.*

40. Exact individual figures are not available. Although one examiner was reported to have received a bonus of about \$40,000 on a salary of about \$180,000, the large number of recipients means the average bonus per year was likely more on the order of a few thousand dollars. *See id.*

41. *See* Jensen & Murphy, *supra* note 28, at 139 (discussing cash bonuses and pay for performance).

42. A recent audit of the Securities and Exchange Commission (“SEC”) by the Office of the Inspector General shows the general nature of the problem. *See* OFFICE OF AUDITS, SEC. & EXCH. COMM’N, REP. NO. 492, AUDIT OF SEC’S EMPLOYEE RECOGNITION PROGRAM AND RECRUITMENT, RELOCATION, AND RETENTION INCENTIVES 4–5 (2011), available at <http://www.sec-oig.gov/Reports/AuditsInspections/2011/492.pdf> (“[T]he SEC had only partially achieved the outcome of creating a reward environment that is beyond compensation and benefits which contributes to attracting, retaining, and motivating employees.”). The report details numerous flaws in the agency’s current compensation practices. For instance, the SEC paid a bonus to an employee “who played a key role in the investigation that failed to uncover Bernard Madoff’s massive long-running Ponzi scheme.” BUREAU OF NAT’L AFFAIRS, OIG AUDIT SPURS CHANGES TO PLAN FOR EMPLOYEE RECOGNITION, RECRUITMENT, 43 SEC. REG. & L. REP. 1623 (2011).

43. Claw-back rules for regulators similar to the Dodd-Frank provision would be one way of

In the next part, we consider how these pay practices and a lack of high-powered incentives for regulators may have contributed to regulatory failure in the Financial Crisis.

III. REGULATORS' PAY AND THE GREAT FINANCIAL CRISIS

There is widespread agreement that regulators failed to act aggressively enough during the Financial Crisis. As detailed below, the problem was not one primarily of access to information, lack of expertise, or resource constraints. Reports on bank failures by various inspectors generally reach the same conclusion: regulators did a satisfactory job of identifying problems well in advance of failure, but failed to act aggressively enough to remedy those situations.⁴⁴ The problem, in our view, was incentives. Regulators did not have the right incentives to turn their recommendations into actual reforms of bank policies.

Bank examiners are paid a fixed salary and have very stable employment. Although a primary mission is to avoid losses to the federal deposit insurance fund ("DIF"), they are not paid based on this metric. In addition, with pay delinked from an objective performance metric, regulators may naturally focus on bureaucratic tasks with observable outcomes, rather than on more aggressive and costly actions with more complex and less transparent cause-and-effect relationships. If a bank fails, there are multiple causes to which blame can be assigned. But there is only the examiner to blame if reports are not accurately completed and done well. Under existing incentives, examiners might naturally conclude that their job is well done simply by accurately describing problems and bringing them to the attention of management and senior regulators. They have no stake in doing more. Doing less, by contrast, means less work, less hassle, less political pushback, and less risk, all for the same wage and career results.

reducing this bias. *See supra* note 18 and accompanying text.

44. *See, e.g.*, OFFICE OF INSPECTOR GEN., FED. DEPOSIT INS. CORP., AUD-09-008, MATERIAL LOSS REVIEW OF SILVER STATE BANK, HENDERSON, NEVADA 1 (2009), [hereinafter SILVER STATE REPORT], available at <http://www.fdicog.gov/reports09/09-008.pdf> ("[A]lthough the FDIC identified SSB's loan concentrations and funding sources as potential high-risk areas of concern in examinations completed as early as 2005, the FDIC took limited actions to mitigate the bank's aggregate level of risk exposure."). The same phenomenon occurred during the S&L Crisis of the 1980s. *See* FED. DEPOSIT INS. CORP., AN EXAMINATION OF THE BANKING CRISES OF THE 1980S AND EARLY 1990S, at 24 (2000), [hereinafter FDIC REPORT] ("[T]he analysis in this chapter shows that for most failed banks that had had recent examinations, ratings generally did a satisfactory job of identification well in advance of failure.").

To see how this problem manifested during the Financial Crisis and how pay for performance might have solved some of the problems, we describe what bank regulators do and what they did wrong during the Financial Crisis.

A. WHAT BANK REGULATORS DO

This section offers a thumbnail sketch of the basics of day-to-day prudential bank regulation, since the individuals doing this work—bank examiners—are the focus of our proposed compensation reforms.

1. The Bank Examination Process

Several federal agencies supervise banks: the OCC supervises national banks; the Federal Reserve (“Fed”) supervises state member banks and bank holding companies; and the FDIC supervises state nonmember banks and FDIC-insured savings banks.⁴⁵ Although the rules, regulations, and approaches of the various agencies differ, the basic approach is relatively uniform. Regulators assess the safety and soundness of banks through annual examinations of bank assets and operations.⁴⁶ A senior bank examiner (the “examiner in charge” or “EIC”) leads an examination team, which varies in size and composition based on the size and complexity of the regulated bank.⁴⁷ Importantly, the senior bank examiner leading the team is delegated tremendous authority over the examination and the regulated bank.⁴⁸

There are several levels of hierarchy in the typical bank regulatory agency. At the OCC, for example, EICs for large banks are overseen by Deputy Controllers for Large Bank Supervision (“DCLBS”).⁴⁹ A DCLBS “[e]valuates and approves the EIC’s recommendations, including

45. FDIC REPORT, *supra* note 44, at 463 (“The FDIC also has back-up supervisory responsibility for monitoring the condition of national banks and state member banks, and in fulfilling these responsibilities it works with the other two federal regulatory agencies. Under the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (“FIRREA”), it also has back-up authority to examine thrift institutions as well. State banking departments supervise state-chartered banks.”).

46. *Id.*

47. *Id.* at 462–63. The resources can be quite extensive. For example, the equivalent of twenty full-time employees were involved in the supervision of Washington Mutual. *See infra* note 55 and accompanying text.

48. *Id.* at 463 (“This examiner has full responsibility for supervision of the entire examination process.”).

49. COMPTROLLER OF THE CURRENCY, BANK SUPERVISION PROCESS: COMPTROLLER’S HANDBOOK 9 (2007) [hereinafter COMPTROLLER’S HANDBOOK], available at http://www.occ.treas.gov/publications/publications-by-type/comptrollers-handbook/_pdf/banksupervisionprocess.pdf.

regulatory ratings and risk assessments” and “[a]pproves the supervisory strategy for each bank.”⁵⁰

The multistage examination process has two broad goals: review of the quality of bank assets, with special focus on the bank’s most important assets—its loans—and analysis of the bank’s financial condition and the quality of its management and operations.⁵¹ The examination typically occurs once per year.⁵² The process lasts from weeks to months, depending on the size and complexity of the bank, its assets, and operations.⁵³ The supervision of Washington Mutual (“WaMu”), one of the larger supervised banks under the OTS, included annual examinations from 2003 to 2008 averaging about two hundred days.⁵⁴ Reported hourly work data show that the equivalent of twenty full-time examiners or assistants of various kinds were devoted to supervising this one bank.⁵⁵

Examiners make local judgments about the credit quality of individual assets.⁵⁶ After discussion with loan officers and bank managers, examiners make final determinations about how to classify particular loans for input

50. *Id.* at 9–10. DCLBSs are part of the OCC Supervisory Office, which comprises higher-level regulators that oversee EICs. The Assistant Deputy Comptroller at OCC oversees the supervision of a portfolio of small or medium-sized banks. The ADC has authority to “ensur[e] that the banks address supervisory concerns, follow plans for corrective action, meet reporting requirements, and respond properly to enforcement actions.” *Id.* at 9. Although this seems like the locus of supervisory power for bank examinations, it may not be the case. As described in the text, line examiners have significant discretion in evaluating credit and management, and there is little an ADC can do if the examiner’s judgments in her analysis and reports do not reflect the actual risk at the bank.

51. FDIC REPORT, *supra* note 44, at 464. There are four stages of a typical examination: (1) off-site analysis; (2) on-site examination; (3) preparation and approval of an official report; and (4) use of informal or formal administrative actions designed to solve any problems or reduce losses to the insurance system. *Id.* at 463.

52. The frequency of examination varies by agency and over time. For instance, the National Bank Act of 1864 mandated that the OCC examine all national banks twice a year but allowed an extension to three examinations every two years. *Id.* at 423. This policy stood until 1974, when the OCC moved toward off-site examinations using statistical methods, and the average examination schedule was more like eighteen months. *Id.* at 423–24. With the passage of the Federal Deposit Insurance Corporation Improvement Act of 1991 (“FDICIA”), on-site examinations were required by law. *Id.* at 425. By the late 1980s, resident examiners were placed in the largest multinational banks, and by the 1990s, larger regional banks also got resident examiners. *Id.* at 424. Similar changes were also true of FDIC and Treasury examinations. FDIC examination periods varied from one to three years, depending on the CAMELS rating of the bank in question. *Id.* at 425. Like for the OCC, however, the FDICIA “mandated annual on-site examinations of all banks except highly rated small institutions, for which the interval could be extended to 18 months.” *Id.*

53. *Id.* at 425.

54. OFFICES OF INSPECTOR GEN., DEPT. OF TREASURY, EVAL-10-002, EVALUATION OF FEDERAL REGULATORY OVERSIGHT OF WASHINGTON MUTUAL BANK 16–19 (2010) [hereinafter WAMU REPORT], available at <http://fdicoig.gov/reports10%5C10-002EV.pdf>.

55. *Id.*

56. *Id.* at 464.

into a final supervisory rating.⁵⁷ Examiners also review loan portfolios as a whole for issues such as concentration risk, violations of legal rules, and deviations from bank loan and underwriting policies. They assess the behavior and impact of subsidiaries and affiliates, risks from litigation, the costs and benefits of off-balance-sheet activities, and the activities of insiders.⁵⁸

Once the on-site review is done, the examiner presents the findings to bank management, who are given opportunities to make comments, dispute findings, and commit to remedying any deficiencies.⁵⁹ Finally, the report is taken to the board of directors, outside of the presence of management. Directors are given a chance to express their views individually and as a group.⁶⁰ To the extent problems have been identified, examiners typically seek commitments from individuals or the entire board to take corrective actions.⁶¹

Based on this process, examiners determine the bank's CAMELS rating, which is the single metric used by regulators to capture safety and soundness.⁶² Examiners rate banks on a scale of 1 (good) to 5 (bad) in each of six areas—capital adequacy, asset quality, management, earnings, liquidity, and sensitivity to market risk—and then assign a composite score.⁶³ A score of 1 means a bank is performing far above average; 2, the most common score, means “fundamentally sound”; 3 means “some degree of supervisory concern”; 4 means generally unsafe and unsound conditions; and 5 means severe problems and likely failure within one year.⁶⁴

On-site review is meant to “identify the risk of failure in troubled institutions in sufficient time for supervisors to take corrective action.”⁶⁵ Another important tool available to examiners is a follow-up enforcement action, which is designed to “control the risk-taking behavior of problem

57. *Id.* at 465. “The examiner will either ‘pass’ a credit or assign it to one of the following categories: (1) special mention, (2) substandard, (3) doubtful, or (4) loss.” *Id.*

58. *Id.*

59. *Id.* at 465–66.

60. *Id.*

61. *Id.*

62. *See id.* at 465 (defining a “CAMEL” rating); COMPTROLLER’S HANDBOOK, *supra* note 49, at 10–11 (defining a “CAMELS” rating).

63. COMPTROLLER’S HANDBOOK, *supra* note 49, at 10–11; OFFICE OF THRIFT SUPERVISION, DEP’T OF TREASURY, EXAMINATION HANDBOOK §§ 070A.4–070A.4.13 (2011) [hereinafter EXAMINATION HANDBOOK], available at http://www.ots.treas.gov/_files/422010.pdf. All scores are reported. For example, 22122/2 would represent a typical rating.

64. *See* EXAMINATION HANDBOOK, *supra* note 63, § 070A.3–4 (defining the significance of each composite ranking level).

65. FDIC REPORT, *supra* note 44, at 432.

banks after they have been identified.”⁶⁶ This may be necessary because once the bank finds itself in peril, managers and shareholders have less to lose from high-risk strategies. They have incentives to engage in speculative lending or pursue other risky schemes, which reward shareholders if successful, but place losses primarily with creditors or the government if unsuccessful.⁶⁷ Follow-up enforcement therefore offers a sensible regulatory tool.

2. Regulators’ Power over Banks

Regulators have tremendous power to influence bank decisionmaking. Much of the actual power resides with bank examiners in their conduct of bank examinations. The lead bank examiner has wide discretion as to the volume of loans reviewed, the nature of the examination, the time spent on each analysis, and the consequences of the examination results. Examiners’ decisions classifying specific loans are effectively unreviewable. Moreover, the decision to drop a bank’s CAMELS rating from 2 to 3 (moving the bank from “fundamentally sound” to indicating “some degree of supervisory concern”) is largely, if not entirely, within the discretion of the bank examiner. The examiner accompanies this downgrade with informal actions, which include obtaining the bank’s written commitment to take corrective action.⁶⁸ Only when the bank has deteriorated significantly—say to a CAMELS rating of 4 or 5—do regulatory higher-ups get involved in meetings with the board of directors.⁶⁹ To get a sense of how rare this might be, WaMu kept its overall CAMELS rating of 3 until September 18, 2008;⁷⁰ it failed seven days later.⁷¹

The involvement of higher-level regulators typically includes the taking of formal legal actions that are enforceable in the courts.⁷² Although

66. *Id.*

67. *Id.* at 439. This, of course, is the classic asset substitution problem for creditors.

68. *Id.* at 441–42. This written commitment commonly comes in the form of a board resolution creating a Memorandum of Understanding between the bank and the regulator. *Id.*

69. *Id.*

70. WAMU REPORT, *supra* note 54, at 18.

71. Robin Sidel, David Enrich & Dan Fitzpatrick, *WaMu Is Seized, Sold Off to J.P. Morgan, in Largest Failure in U.S. Banking History*, WALL ST. J., Sept. 26, 2008, at A1.

72. FDIC REPORT, *supra* note 44, at 441–42. These include cease-and-desist orders, suspension or removal of officers and directors, and civil penalties. *Id.* at 444. Section 8 of the Federal Deposit Insurance Act is exemplary of the powers given to bank examiners in this area. It gives the FDIC board broad formal enforcement powers to terminate FDIC insurance protection, (§ 8(a)), to issue cease and desist orders, (§ 8(b)), and to remove or suspend individual officers or directors, (§ 8(e)). *Id.* at 444 tbl.12.6. The FDIC has delegated many of these powers to the regional or examiner level. Some triggers are automatic. For instance, FDIC policy requires formal action pursuant to section 8 when an insured state nonmember bank falls to a CAMELS rating of 4 or 5. *Id.* at 473–74. Historically, many formal

ultimate authority to enforce legal sanctions and modifications to bank activity resides at administrative levels above the bank examiner, even in that situation, examiners wield enormous influence because they control the inputs into this decisionmaking process. Since increased monitoring or regulatory intervention requires examiners to identify problems and pursue initial ratings downgrades, effective incentives for examiners to act are necessary for optimal regulation. Examiner passivity, by contrast, effectively insulates a troubled bank from higher-level scrutiny and corrective sanctions.

Not only do bank examiners and higher-level regulators have tremendous authority over a range of bank decisions, but they also control the general scope and intensity of the regulatory process as well. Regulators enjoy enormous discretion over critical decisions in the supervisory process.⁷³ They have wide latitude to decide, among other things, the amount of resources to devote to a particular examination,⁷⁴ how often to conduct examinations; whether to conduct on-site or off-site examinations; whether to focus on large or risky banks or large or risky assets within a given bank; how to weight particular geographic concentrations of banks or assets;⁷⁵ how to extrapolate from past

actions were taken pursuant to section 8 and other laws, such as the Prompt Corrective Action rules. *Id.* at 446 tbl.12.6. From 1980 to 1995, nearly 2400 formal actions were taken. Most were cease-and-desist orders under § 8(b) (1485 of these), termination of insurance under § 8(a) (394 of these), and removal of officers or directors under § 8(e) (369 of these). *Id.*

73. Consider the decision whether to shut down a failing bank, for example. Statutes generally limit shutdown to “insolvent” banks. *See, e.g.*, 12 U.S.C. § 1821(c) (2006) (describing grounds for appointment of a counselor or receiver). But the definition of insolvency is left to the discretion of the regulator. A report on bank failures of the 1980s noted that at that time, the OCC “had wide latitude to define insolvency and could have adopted a more flexible standard than it did.” FDIC REPORT, *supra* note 44, at 457.

74. *See* FDIC REPORT, *supra* note 44, at 426 (“From 1979 through 1984 both the FDIC and the OCC reduced their examiner resources: the FDIC’s field examination staff declined 19 percent, from 1,713 to 1,389, and the OCC’s declined 20 percent, from 2,151 to 1,722. The Federal Reserve’s examination capacity remained almost unchanged.”).

75. Geographic concentration of losses was true in both the S&L Crisis and the recent Financial Crisis. During the S&L Crisis, about 75 percent of all bank and thrift failings were in Texas and Oklahoma. *Id.* at 456. For a more complete discussion of the issue of examination frequency in Texas and the Southwest during the 1980s, see JOHN O’KEEFE, FED. DEPOSIT INSURANCE CORP., THE TEXAS BANKING CRISIS: CAUSES AND CONSEQUENCES 1980–1989, at 1–14 (1990), available at http://fraser.stlouisfed.org/docs/publications/texasbankcrisis_1980_1989.pdf (arguing that the decline in the frequency of Southwest bank examinations was a contributing factor in the banking crisis). During the recent Financial Crisis, loan losses in California, Florida, Nevada, and several other states account for the bulk of the original losses that led to downgrades of mortgage-backed securities. *See* Press Release, Mortg. Bankers Ass’n, Investor Loans Major Part of Defaults in States with Fastest Rising Delinquencies, MBA Says (Aug. 30, 2007), <http://www.mbaa.org/NewsandMedia/PressCenter/56535.htm>.

performance to predict future performance of banks, assets, or particular asset classes; and how and how often to share information with other government agencies and the market.⁷⁶ Although some of these are not under the control of individual examiners, examiners may at the very least influence how these issues are decided.

B. REGULATORY FAILURE IN THE FINANCIAL CRISIS

This section discusses the nature of regulatory failure in the Financial Crisis. It first offers a broad overview based on postmortem reports by the inspectors general of the various bank regulatory agencies. It then examines two emblematic bank failures during the Financial Crisis in order to highlight the impact that regulators' compensation structure may have had.

1. Anatomy of a Regulatory Failure

The reports of inspectors general of the Treasury Department conclude that regulators did not do enough to prevent multiple banks from taking excessive risk and failing. Although acute funding constraints were a precipitating factor for many bank failures, this shock was not sufficient to explain bank failures. One report explains that “[a]lthough the deterioration in the bank’s financial condition was severe in 2008, the underlying risks were evident in the preceding years.”⁷⁷ The consensus seems to be that if regulators were more aggressive, hundreds of billions in losses could have been avoided.

In general, regulatory failures fell into two broad but discrete categories that correspond to the supervisory functions. Supervision is designed (1) to recognize problems before they become significant, so that actions to return the bank to a sound financial footing can be achieved at reasonable cost, and (2) to limit losses to the government insurance funds by “closely monitoring troubled institutions, limiting their incentives to take excessive risks, and ensuring their prompt closure when they become insolvent or when their capital falls below some critical level.”⁷⁸

The first category is the failure to adequately inspect and supervise bank risk taking during “good” times, that is, periods without financial stress. We might think of this as a failure to do adequate preventive

76. Bank chartering authorities also have the power to appoint a conservator or receiver. *See* FDIC REPORT, *supra* note 44, at 457 n.57. The FDIC has the power to terminate or suspend deposit insurance. *Id.* at 443.

77. SILVER STATE REPORT, *supra* note 44, at 31.

78. FDIC REPORT, *supra* note 44, at 421.

medicine. The failure reports describe many instances in which the regulators did not meet even the basic obligations to understand bank risk taking, ensure compliance with basic risk policies, and restrict certain types of risk taking. For instance, regarding the failure of IndyMac in 2008, the Treasury Department Inspector General concluded that “examiners did not identify or sufficiently address the core weaknesses that ultimately caused the thrift to fail until it was too late.”⁷⁹ As noted above, problems often resulted from the failure to deploy regulatory tools as banks took increasingly large and risky positions.

The second category is the failure to react to signs of distress and intervene quickly enough to prevent further damage, which the \$2.5 billion collapse of NetBank illustrates. According to the Treasury Department Inspector General, the OTS “did not react in a timely and forceful manner to certain repeated indications of problems.”⁸⁰ A similar lapse preceded the \$2 billion failure of ANB Financial. The regulator—the OCC—“did not issue a formal enforcement action in a timely manner” after the bank began to suffer losses and experience distress.⁸¹

The failure reports show that in both categories of supervision, regulators engaged in more box checking and paperwork than aggressive oversight. For instance, WaMu’s regulator did not “formally track the status of examiner recommendations and [require] corrective actions.”⁸² Bank examiners did the important work of assessing bank assets and risk. They saw deficiencies and recommended changes, but then never followed up to see if these changes were being made. This same phenomenon recurred with shocking frequency in the recent bank failures.⁸³ A typical report “found that bank management did not effectively implement key examiner recommendations over several examination cycles regarding such

79. OFFICE OF INSPECTOR GEN., DEP’T OF THE TREASURY, AUDIT REPORT, SAFETY AND SOUNDNESS: MATERIAL LOSS REVIEW OF INDYMAC BANK 14 (2009), available at <http://www.scribd.com/doc/13059311/Indymac-Bank-Thrift-Financial-Report>. The summary of the regulators’ actions in the more than \$2 billion failure of ANB Financial National Association is typical: “OCC . . . was not aggressive enough in the supervision of ANB in light of the bank’s rapid growth.” Apuzzo, *supra* note 38. OIG reports also noted the failure of bank examiners and officials in the nearly \$1 billion failure of Omni National Bank (“OCC’s supervision of Omni National Bank was inadequate,” Treasury investigators concluded); the nearly \$2 billion collapse of New Frontier Bank (“In retrospect, a stronger supervisory response at earlier examinations may have been prudent,” FDIC’s inspector general concluded); and dozens more. *Id.*

80. *See id.*

81. *Id.*

82. WAMU REPORT, *supra* note 54, at 4.

83. *See* SILVER STATE REPORT, *supra* note 44, at 15 (“Greater supervisory emphasis could have been placed on the bank’s failure to ensure full compliance”).

controls as loan-to-value limits, interest reserve policies, stress testing and establishing meaningful concentration limits, and maintenance of a sufficient [allowance for losses] and adequate capital structure.”⁸⁴

A more in-depth examination of two failures offers context.

2. Silver State Bank

Silver State Bank was a Nevada bank regulated by the FDIC. Like many banks, it grew rapidly during the housing boom of the 2000s, betting heavily on residential and commercial real estate, especially in and around Las Vegas. When the bank failed in 2008, it cost the taxpayers about \$550 million, and obliterated over \$20 million in uninsured deposits.⁸⁵

Regulators knew the risks Silver State was taking and the fragility of its financial position for at least six years prior to its failure. Examiners knew of problems with Silver State’s board of directors and management as early as January 2002, and continued to report on them consistently through June 2008.⁸⁶ Though examiners repeatedly raised issues about the soundness of the bank’s business model, they “did not assertively address examination findings that were repeated areas of concern.”⁸⁷

The supervisory problem was not a lack of understanding but of inaction: “[W]hen needed, a more progressively stringent supervisory tone was not presented in the [reports of examinations], and actions were not taken.”⁸⁸ More specifically, although “the FDIC identified [the bank’s] loan concentrations and funding sources as potential high-risk areas of concern in examinations completed as early as 2005 . . . the FDIC took limited actions to mitigate the bank’s aggregate level of risk exposure.”⁸⁹

This inertia manifested most obviously in the CAMELS rating, the key driver of informal and formal regulatory action. Despite the fact that examiner reports expressed significant misgivings about the bank’s safety and soundness, the CAMELS rating remained a 2 (“fundamentally sound”) until May 2007, when the bank was on the verge of complete failure. While noting that examiners failed along many dimensions of data collection and

84. *Id.* at 30.

85. See Jake Bernstein & A.C. Thompson, *The Small Bank Bust*, PROPUBLICA (Jan. 26, 2009, 6:10 PM), <http://www.propublica.org/article/the-small-bank-bust-090126>.

86. SILVER STATE REPORT, *supra* note 44, at 15.

87. *Id.*

88. *Id.* at 15. “Nonetheless, our view remains that DSC could have exercised greater supervisory concern in the 2007 and prior examinations regarding SSB’s management, asset quality and liquidity and taken additional action to address both the conditions and risks in these areas.” *Id.* at 30.

89. *Id.* at 5–6.

analysis,⁹⁰ the inspector general concluded that the bank collapsed not because examiners did not know about the problems,⁹¹ but because they did too little to prevent them from growing. Examiners did not follow through and hold the bank to account for the failures and shortcomings identified.

The report does not offer compelling reasons why regulators would choose to be so diligent in diagnosis but relatively inattentive when it came to treatment. But it echoes a common theme with other failure reports: Examiners devoted far more attention and resources to figuring out what was wrong with banks than trying to fix them.⁹²

3. Washington Mutual

The failure of WaMu tells a similar story. WaMu was the largest financial institution supervised by the OTS.⁹³ Right before it failed in 2008, WaMu had over 40,000 employees working in over 2000 branch offices, servicing nearly \$200 billion in deposits and over \$125 billion in residential loans.⁹⁴ In the years before its failure, WaMu refashioned its business model to pursue higher risk. Management decided to shift away from originating plain-vanilla mortgages (fixed-rate, conforming loans) to higher-yield subprime loans.⁹⁵ When the housing bubble burst, this decision proved fateful, as it resulted in WaMu's collapse.

The problems at WaMu were not unknown to bank examiners in the years leading up to its collapse. In the three years before its failure,

90. *See id.* (noting that examiners failed to “[r]ecognize and/or analyze risk, set a proper tone in the [examination reports], or appropriately consider risk in CAMELS ratings,” “[e]nsure that proper controls and risk limitation and/or mitigation strategies were established and appropriately implemented,” “[i]dentify in a timely manner [the bank’s] increasing risk profile, including concentrations in targeted market areas, as a potential concern,” and “[d]eal assertively with bank management on examination findings and recommendations”).

91. *See id.* at 11. The examiner’s reports recommended numerous improvements and corrective actions. It “recommended that bank management improve its measuring, monitoring, and reporting of concentrations; internal routines and controls; loan underwriting and administration; . . . compliance with the FDIC’s Rules and Regulations . . . [and] improve the monitoring and reporting of its economic environment and the policies and procedures covering interest reserve loans.” *Id.*

92. Although some doctors, like the fictional Dr. House on the eponymous Fox television program, undoubtedly diagnose patients only for the fun of solving the puzzle, for almost all patients, the diagnosis is only relevant to treatment. As we discuss in the next section, examiners were paid mostly for diagnosis, and if healers are not paid to treat as well, there will be less treatment than if they are.

93. WAMU REPORT, *supra* note 54, at 16. At the time, banks effectively chose their regulators and paid regulators assessment revenue. From 2003 to 2008, WaMu represented 12 to 15 percent of OTS’s total assessment revenue. *Id.*

94. *See* WAMU REPORT, *supra* note 54, at 60 app.2.

95. *Id.* at 8.

examiners spent over 100,000 hours over 400 days pouring over WaMu's assets and operations.⁹⁶ As early as 2003, bank examiners had reported significant deficiencies in WaMu's underwriting process for residential loans, its core loan activity.⁹⁷ Specifically, examiners noted that organizational controls were weak and that the sales culture was aggressively focused on building market share at the expense of quality and process.⁹⁸ Over the next several years, examiners repeatedly criticized WaMu for its underwriting practices and overly risky incentive structures.⁹⁹ Examiners made nearly five hundred formal criticisms and recommendations during this period.¹⁰⁰ However, they did not follow up to assure that problems were remedied. They brought no enforcement actions against WaMu, despite the fact that the problems persisted and worsened. Crucially, many of these deficiencies were in core underwriting functions, which the OTS examination handbook describes as vital to safety and soundness of banks: the "first defense against excessive credit risk is the initial credit-granting process."¹⁰¹

Asset quality is the other essential component of safety and soundness. Here too, examiners raised numerous issues but took no action. Examiners "repeatedly identified issues and weaknesses associated with WaMu's asset quality," but "[n]evertheless . . . consistently assessed WaMu's asset quality as satisfactory, with a rating of 2 until [WaMu failed]."¹⁰²

The most likely explanation for the regulatory forbearance was the fact that during the period in question (2004 to 2006), WaMu appeared to be profitable. When asked by the inspector general why they did not act in the face of these numerous deficiencies, examiners responded, "even though underwriting and risk management practices were less than satisfactory, WaMu was making money and loans were performing [and] [a]ccordingly, the examiners thought it would have been difficult to lower WaMu's asset quality rating."¹⁰³

Although one might normally commend the humility of regulators in the face of market indicators, such a defense is flatly inconsistent with the nature of the government's role as an insurer of bank risk. Moreover, it

96. *Id.* at 17 tbl.5.

97. *Id.* at 21.

98. *Id.*

99. *Id.* at 21–22.

100. *Id.* at 19 tbl.7.

101. *Id.* at 20–21.

102. *Id.* at 19–20.

103. *Id.* at 20.

contravenes explicit regulatory policy, which instructs examiners against taking comfort in loan and market performance in the face of underwriting or concentration risks. If a bank “has a high exposure to credit risk, it is not sufficient to demonstrate that the loans are profitable or that the association has not experienced significant losses in the near term.”¹⁰⁴ As in the case of underwriting standards, the inspector general found it puzzling that examiners did not downgrade WaMu’s CAMELS rating in the face of these longstanding shortcomings.¹⁰⁵

The WaMu examination process was emblematic of the regulatory failures of the Financial Crisis. As with the failures of Silver State Bank, IndyMac, and countless others, the report criticizes examiners for not acting preventively, not tracking the implementation of corrective measures, and relying solely on persuasion and future threats instead of formal action.¹⁰⁶

C. A PUBLIC CHOICE ACCOUNT

In this section, we offer an answer to the questions raised by the WaMu report: Why would examiners, who repeatedly identified problem areas, continue to rate WaMu so highly in the face of such obvious shortcomings in its business model and practices? Why did examiners err so egregiously on the side of nonintervention in the face of specific policy guidance to the contrary? The answer is incentives.¹⁰⁷

104. *Id.*

105. *Id.* (“Given this guidance, the significance of single family residential lending to WaMu’s business, and the fact that the OTS repeatedly brought the same issues related to asset quality to the attention of WaMu management and the issues remained uncorrected, we find it difficult to understand how OTS could assign WaMu a satisfactory asset quality 2-rating for so long. Assigning a satisfactory rating when conditions are not satisfactory sends a mixed and inappropriate supervisory message to the institution and its board, and is contrary to the very purpose for . . . the CAMELS rating system.”).

106. *See id.* at 3 (“OTS’s supervision did not adequately ensure that WaMu corrected those problems early enough to prevent a failure of the institution. Furthermore, OTS largely relied on a WaMu system to track the thrift’s progress in implementing corrective actions on hundreds of OTS examination findings.”).

107. Another potential story of failure is that regulators were under-resourced. But this is difficult to square with the facts. Although the amount of resources devoted to examinations undoubtedly played a role in the failure of banks during the Financial Crisis, the numerous failure reports suggest the problem was as much one of incentives as it was hours devoted. For instance, the OIG report about WaMu’s demise describes the resources the OTS devoted to supervision. Over a six-year period leading up to WaMu’s failure, OTS examiners spent over 160,000 hours (about 27,000 per year on average) working exclusively on supervision of WaMu. *See id.* at 17 tbl.5. Examinations averaged about 150 days in length and were conducted by the equivalent of twenty full-time employees. *See id.* at 17 tbl.6.

1. Pay for Bureaucratic Performance

If an individual is paid regardless of performance, then the individual will likely maximize something other than performance. This might be leisure or something else, but it is unlikely to be the social welfare maximum.¹⁰⁸ Like everyone else, bank examiners maximize according to the incentive structure in which they find themselves. Bank examiners are paid almost entirely in fixed salary that varies primarily by seniority.¹⁰⁹ Examiners also cannot easily be terminated. They enjoy the special job security fashioned by the civil service rules. This employment arrangement may encourage examiners to perform the observable aspects of their charge carefully and conscientiously—like conducting the bank examination and filling out the required reports. But examiners may have insufficient incentive to pursue the less observable or more discretionary aspects of their charge with the same enthusiasm.

Job security for examiners may make some sense. With their fixed salaries, if examiners could be terminated for poor performance, they might be extremely risk averse. For example, if a bank failure on an examiner's watch significantly increased her risk of termination, the regulator's incentive would be to ensure that the bank was not taking much risk. Though good for the regulator, the social cost from reduced credit availability and lost bank profits might be quite high. Reduced job security might also subject examiners to political pressure for doing their jobs *too* well. Regulated banks might be able to bring political pressure to bear on conscientious regulators unwilling, say, to allow a failing bank to continue operating or to permit a bank's excessive risk taking.¹¹⁰

Job security reduces counterproductive risk aversion and the risk of political capture. It gives examiners discretion in applying regulation, perhaps in ways that improve social welfare. But without additional incentives, the civil service rules may also create perverse incentives by insulating regulators too well from the consequences of their job performance. So insulated, some may be encouraged to exert low effort or avoid courses of action likely to make more work for themselves.¹¹¹ Job

108. For instance, regulators might be envious of bankers, and therefore impose Draconian limitations on them, or regulators might be sympathetic to bankers (either out of familiarity or a desire for future employment) and therefore behave permissively. One cannot be sure how these incentives cut in any given case; behavior is likely to vary widely by individual and over time.

109. Alyssa Fetini, *A Brief History of the Keating Five*, TIME (Oct. 8, 2008), <http://www.time.com/time/business/article/0,8599,1848150,00.html>.

110. *Id.*

111. See Sean Gailmard & John W. Patty, *Slackers and Zealots: Civil Service, Policy Discretion*,

and salary security reduce incentives to do “good” work, however defined, since the consequences of “bad” work are reduced.

2. Bureaucratic Incentives

With a fixed salary independent of performance and a remote chance of termination, it is not surprising that examiners are not aggressive and focus more on observable processes than outcomes. Performing the examination and filling out examination reports is entirely within the examiners’ control. This output is subject to objective performance metrics (for example, whether the report is completed on time and in a competent manner). Without follow-up enforcement, the reports are not likely to generate collateral costs for examiners, such as political pushback, extra work for staff, and error costs.¹¹²

In contrast, aggressive follow-up enforcement is likely to raise the personal costs to examiners significantly with little or no personal benefit. Costs rise simply because the work moves from investigation to persuasion, both of higher-ups and the regulated party, each of which may push back strongly. Examiners may also fear making a mistake by restricting the lending of a seemingly successful bank. This problem may be exacerbated by the fact that examiners routinely work with the same bank for extended periods.¹¹³ They often go to work every day at the bank they are examining. While it is possible that familiarity breeds contempt, the opposite effect, akin to the Stockholm syndrome, may also skew regulatory decisions, especially where actions require confrontation. Collective action problems may also arise. Examiners or regulators who choose not to do the extra work could freeride to some extent on the more conscientious regulators, which reduces all regulators’ incentives to do the work in the first place. Examiners bear little or no risk from bank failure and gain little or nothing from bank success. After all, others are involved in determining success or failure. In the event of a failure, there is no shortage of other parties to blame. By contrast, if a report is not completed or done well, only the examiner is to blame.

Moreover, the relative secrecy surrounding bank examinations may also encourage regulatory inertia. Secrecy no doubt plays a useful role in encouraging bankers to be forthcoming with their examiners. Secrecy also

and Bureaucratic Expertise, 51 AM. J. POL. SCI. 873, 874 (2007) (positing that civil service rules select for both zealots and slackers).

112. See JAMES Q. WILSON, WHAT GOVERNMENT AGENCIES DO AND WHY THEY DO IT 42 (1989).

113. Lucchetti, *supra* note 7.

insulates banks from the possibility of public overreaction to negative assessments from bank examinations, thereby avoiding the runs that deposit insurance and banking regulation were meant to cure. At the same time, however, secrecy also insulates examiners and the examination process from public accountability. When the Securities and Exchange Commission or the Environmental Protection Agency issues an order or takes other regulatory action against a violator, that action attracts public scrutiny. Failure to act in the face of egregious circumstances similarly attracts public attention. While public perception may not always be a useful metric for evaluating regulatory action, at the least it forces regulators to explain their actions—or inactions. Bank supervision, by contrast, is largely free from this accountability because of the secrecy of bank examinations. Bad news about a bank's condition cannot be made public.¹¹⁴ So the public does not learn of either a serious downgrade to a bank's CAMELS rating or a failure to downgrade. Only when a bank has failed does the public ever learn about a bank's troubles, and by then, any direct consequences from regulatory inertia may be difficult to detect.

Bank examiners and regulators are subject to the same interest group pressures and incentives as other regulators. It is easier to please a concentrated interest at the expense of a diffuse opposition than vice versa. Concentrated interests make life difficult—they may sue, embarrass, and so forth—while diffuse interests rarely raise a fuss. For example, according to media accounts, around 2006, federal regulators noticed banks were lowering underwriting standards and amassing large concentrations of commercial and residential mortgage loans.¹¹⁵ Regulators issued very mild warnings to reduce the concentration risk and raise capital to act as a cushion against losses. The response was aggressive: “Though far from a crackdown, even that mild guidance was too much for banks. Thousands of industry comments poured in objecting to the regulators’ intrusion, and the FDIC and other agencies backed off, clarifying that they didn’t intend to impose limits.”¹¹⁶

Legal disputes may arise, and well-connected banks may be able to exert pressure through the political process in the form of budgetary restrictions for agencies or, worse, for individual examiners. Regulators

114. Studies do show that bank examination information does eventually leak out the public securities markets and over time is reflected in securities pricing. *See, e.g.*, Allen N. Berger & Sally M. Davies, *The Information Content of Bank Examinations* (Wharton Fin. Insts. Ctr., Working Paper No. 94-24, 1994), available at <http://fic.wharton.upenn.edu/fic/papers/94/9424.pdf>.

115. *See* Bernstein & Thompson, *supra* note 85.

116. *Id.*

interested in not appearing before congressional committees, defending budgets, and being forced to testify in court would likely err on the side of regulatory restraint, especially when they do not capture the upside from aggressive regulation and do not bear much of the downside cost of laxity.

Raw partisan politics might also influence regulatory decisions. The failure of Broadway Bank in Chicago is a recent example.¹¹⁷ Alexi Giannoulias was a former senior loan officer of the bank, which his family controlled. The bank failed and entered government receivership. At the time, Giannoulias was a candidate for the United States Senate from Illinois. Ordinarily, regulators issue a “material loss report” within six months of a bank’s failure that estimates losses to government insurance funds. In this case, however, regulators delayed issuing the report, which reflected negatively on Giannoulias and his family, until after the election.¹¹⁸

There is also the revolving door problem. Some regulators are bound to get some of their expected compensation from future employment with regulated banks. To the extent that future employment depends on acting in the public interest as regulators, then this form of deferred compensation might be a positive incentive. If banks prefer to hire former examiners with a good record in having helped banks avoid failure, then the deferred compensation from the revolving door would act as a socially beneficial incentive. If, on the other hand, banks prefer former examiners who acted in ways desirable to banks but ambiguous as to the public interest, then this could be a negative force pushing examiners to favor banks at the public expense. For instance, banks might prefer former examiners who are knowledgeable, who know the loopholes and the weaknesses of the regulatory agencies, and who above all do not raise a fuss. These traits might correspond with the kind of lax regulation described above, where regulators excelled at identifying problems but failed miserably at doing anything about them. In any event, there is no evidence that revolving door payouts are linked to socially optimal conduct by regulators.

The clear incentive in the existing environment is simply to perform the concrete tasks—like filling out forms and making recommendations—as well as possible, and to disregard implementation on the margin, since that is where costs are likely to exceed benefits. After all, it takes a great

117. See Ray Gibson, *Federal Report on Giannoulias Bank Will Come After Election*, CHI. TRIB. (Oct. 22, 2010), http://newsblogs.chicagotribune.com/clout_st/2010/10/federal-report-on-giannoulias-bank-will-come-after-election.html (discussing the bank failure).

118. *Id.*

effort to persuade a bank to act more conservatively, while there is little gain to the examiner from doing so, in terms of either pay or prestige. To be sure, some regulators would value doing the right thing and serving the public interest, but given the ambiguity of these terms and the potential for rationalization, the absence of monetary or reputational rewards or sanctions means examiners care less than they would in the presence of more high-powered incentives.

This is not to say that regulators were necessarily aware of these biases and distortions of their conduct. A common refrain in bank failure reports is the lack of awareness on the part of regulators. For instance, regarding IndyMac, which in 2008 became one of the largest bank failures in history, “[regulators] believed their supervision was adequate. We disagree.”¹¹⁹ We do not doubt the honesty or good faith of the regulators who felt that they were doing the best they could do. We simply observe that regulators are influenced in ways beyond their ken, just as we all are. They respond rationally to the incentives they face, and can rationalize their conduct to fit to these incentives.

As earlier discussed, regulators apparently recognize some need to improve individual incentives. Certain agencies adopted bonus structures in the period before the Financial Crisis,¹²⁰ but these one-sided bonus payments likely exacerbated the incentive problems instead of ameliorating them. As Ellen Seidman, the former head of the OTS, noted, “regulators were part of the problem, and the bonuses were a symptom.”¹²¹ Seidman attributed a large part of the regulatory failure to a lack of “standards for evaluating how well people in the regulatory system were doing” despite the fact that regulators thought they were doing so well.¹²²

Perhaps regulators thought they were doing well because they were maximizing to the best of their ability within their given incentive structure. We propose to change that incentive structure.

IV. INCENTIVIZING REGULATORS

We propose to rely on market-based incentives to improve banking regulation. Though our proposal may seem radical at first, we are not the first to propose regulator bonuses or even to recognize that pay increases

119. Apuzzo, *supra* note 38.

120. See *supra* note 38 and accompanying text.

121. Apuzzo, *supra* note 38 (quoting Ellen Seidman, research fellow, New America Foundation and the former head of OTS from 1997 to 2001).

122. *Id.*

may improve regulators' performance.¹²³ Even bank regulators support this approach.¹²⁴

In making compensation decisions, the OCC is mindful of the need to recruit and retain the very best people, and our merit system is aimed at accomplishing that. . . . We also believe it is important to reward those who worked so hard and showed such great professionalism throughout the crisis.¹²⁵

Our innovation is simply to offer an unbiased, market-based approach to allocating bonuses.

In this part, we first present a theoretical framework for thinking about incentive pay for regulators. We then offer a mapping of our proposed incentive structure, which illustrates that regulators' public-regarding incentives should be calibrated to respond to the structure of bank CEOs' private performance incentives. High-powered CEO incentives require high-powered regulator incentives. We next discuss incentive design issues: considerations in setting the level of regulators' incentives and anticipated ancillary benefits from regulatory innovation.

A. A THEORY OF INCENTIVE PAY FOR BANK REGULATORS

Bank examiners enjoy enormous discretion in their supervision of banks, and the quality of supervision depends in large measure on their judicious exercise of that discretion. Incentives for optimal action are therefore crucial.¹²⁶ These incentives could be achieved through a variety of means, including the use of ex ante performance metrics and ex post monitoring by more senior regulators, coupled with the use of various carrots and sticks, including promotions, titles, office space, number of employees supervised, money, and so on.

If superiors could design and implement this monitoring approach at an acceptable cost, there would be little need for variable pay tied to objective metrics.¹²⁷ But accomplishing this is often tricky, whether for

123. See *supra* Part II.B.

124. See Apuzzo, *supra* note 38 ("These [bonuses] are meant to motivate employees, have them work hard.") (quoting thrift office spokesman William Ruberry).

125. *Id.* (quoting OCC spokesman Kevin Mukri).

126. This is not to say this is the only place where incentives are important. Incentives matter throughout the hierarchy. The right form of incentives will depend on the relative costs and benefits of the different types applied at each stage.

127. If such a system were optimal, there would be no need for monetary incentives. If it were totally ineffective, the need for monetary incentives would be essential. Reality likely lies somewhere along the spectrum between these two extremes.

reasons of institutional inertia, workplace politics, or otherwise. Relying solely on a monitoring approach has failed to produce good outcomes. Monitoring may be enormously difficult, especially with respect to large banks, where bank examiners make innumerable discretionary decisions that are ultimately aggregated into all-encompassing safety and soundness ratings. Short of a bank failure—when much of the damage has already been done—these myriad discretionary decisions will be difficult to monitor or evaluate.¹²⁸ In this environment, the bureaucratic incentive structure earlier described may simply overwhelm whatever carrots and sticks are available to supervisors under the civil service rules. In this situation, it makes sense to rethink the fundamental design of the carrots and sticks. Organizations in this situation frequently resort to self-triggering pay mechanisms tied to external, objective metrics, like stock price.

Corporate executive compensation offers a useful analogy. CEOs act as agents for shareholders, and before the 1990s, shareholders (acting through boards of directors) tried a largely nonmonetary carrot-and-stick-plus-monitoring approach to reducing managerial agency costs.¹²⁹ This approach was only modestly successful. It generated perverse incentives for CEOs to game the metrics—for example, by empire building to maximize company size and the number of employees. Boards were often considered tools of their CEOs, and the payment of subjectively determined bonuses ostensibly tied to performance was often suspect. The pay-for-performance revolution in executive compensation arose because the costs of better monitoring were thought to be higher than an approach tying compensation to self-activating, objective metrics. It was far simpler and more effective to link manager pay directly with shareholders' desired outcomes (that is, to pay them like owners) than to design an *ex ante* set of performance metrics and then monitor to ensure the conscientious pursuit and achievement of those metrics.

The analogy to examiners is imperfect, however, since taxpayers are the principals and examiners do not sit at the top of their organizational hierarchies as do CEOs. But the incentive issues are generalizable to any case in which there is a tradeoff between design of internal metrics and monitoring on the one hand, and objective, external metrics on the other hand. Moreover, firms offer other examples more closely analogous to examiners. For instance, salespeople often enjoy incentive pay tied to

128. Moreover, a bank failure has multiple causes, so that even in that dramatic event, it may not be easy to tell whether examiners were at fault. *See supra* Part III.B.

129. *See supra* note 28 and accompanying text.

specific external metrics, like sales volume or even stock price, and oftentimes sales staffs are the only ones in the firm hierarchy to receive this kind of compensation. That is, salespeople may enjoy higher-powered incentives than their managers. This is because salespeople occupy the place in the distribution chain with the greatest independence and discretion and where the design and monitoring of behavior is likely to be the most difficult. Examiners occupy an analogous place in the bank supervision hierarchy. Examiners are at the sharp end of the regulatory stick. They enjoy wide discretion in evaluating banks' assets and operations, and as the Crisis demonstrated, their continuing blessing or indifference can shield a troubled bank from corrective action long past the point of salvageability.

B. MAPPING INCENTIVE PAY FOR REGULATORS

This section explains our approach to incentive pay for regulators. Figure 1 presents a conceptual framework for thinking about incentive compensation for bank regulators that incorporates the structure of bank CEO incentives. Regulators' incentives to constrain excessive bank risk taking must be adequately matched to bank CEO incentives to pursue excessive risk. Otherwise, regulators may be insufficiently motivated to fend off bankers' risk plays.¹³⁰

On the vertical axis is the level of effort exerted by the agent, be it bank CEO or regulator; on the horizontal axis is the purpose or end goal of that effort. At the left end of the horizontal axis is the private purpose of shareholder wealth maximization; at the right end is the public purpose to avoid losses to the government insurance fund. Both axes are measured from the point of view of the principal for the agent in question: shareholders and the public, respectively.

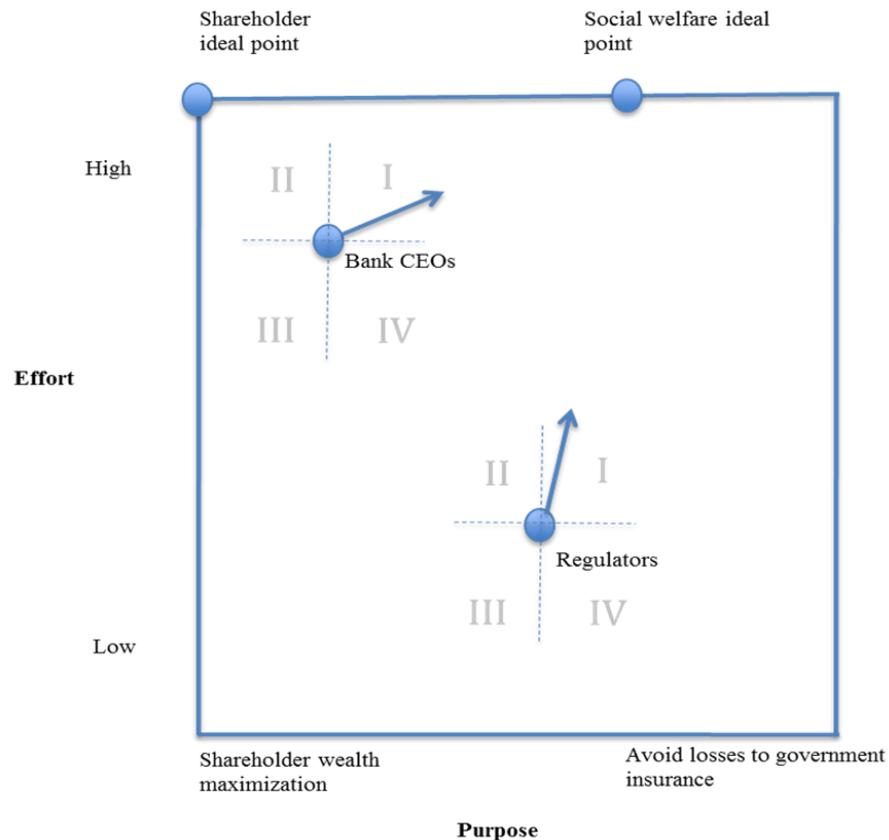
1. Performance Pay for Bankers

In this framework, the ideal point from the perspective of shareholders of an ordinary company would be high effort for the purely private interests of the company. This is the upper left corner of our Purpose-Effort compensation space in Figure 1. Compensation contracts we observe for public company executives aim for this corner solution, but given positive agency costs, the practical result is a deviation in the direction of lower effort. In addition, given the business judgment rule and other permissive

130. See Hannes, *supra* note 22, at 390 (proposing high-powered, equity-based incentives for auditors in order to counter managers' incentives to artificially inflate share prices).

rules that enable corporate agents to pursue goals other than shareholder wealth maximization, there may be deviation toward public purposes as well.

FIGURE 1.



Prior to the Financial Crisis, bank CEOs were roughly in the same part of the Figure 1 compensation space as CEOs of nonfinancial firms, since the CEOs of large multinational corporations and large bank holding companies had very similar compensation contracts. CEOs of both kinds were paid mostly in stock and stock options, which are designed to move CEOs as close to the shareholder ideal point as is efficient given monitoring costs.

The Financial Crisis, however, brought into clear focus the need to alter bankers' pay packages to include a greater element of public purpose.

Given the government guarantees—either implicit, as in the bailouts of Citigroup and AIG, or explicit, as with FDIC insurance—undergirding bank risk taking, bank shareholders do not suffer the full costs from the risk taking that comes with paying bank CEOs to maximize shareholder value. Bank shareholders therefore have even stronger incentives than shareholders of nonfinancial firms to push their agents toward the shareholder ideal point. In this context, paying bank CEOs to maximize bank shareholder value may result in socially inefficient levels of risk, including systemic risk.

Though banks are private companies, their importance to the economy and to the public, as well as their fragility in the face of runs, provide the justification for government guarantees. At the same time, however, the socially ideal point for banks in Figure 1 cannot be the shareholder ideal point. Instead, because social goals as well as private goals should inform banks' conduct, the social welfare ideal point toward which banks should strive is somewhere to the right of the shareholder ideal point—that is, away from private shareholder wealth maximization on the horizontal axis and toward the public goal of avoiding losses to the government insurance fund. We are agnostic about the appropriate proximity of the social welfare ideal point to the corner solution of avoiding all losses to the government insurance fund. We leave space between the social welfare ideal point and the upper right corner in order to account for the real possibility that maximizing social welfare may require a level of bank risk taking greater than what would assure no losses to the government insurance fund. Moreover, the location along the horizontal axis of this social welfare ideal point likely varies by the type of financial institution, market context, individual CEO, and other factors. We can only be confident that it lies somewhere to the right of the shareholder ideal point.

Because of the public as well as private purposes that animate banking and government support for banking, CEOs of banks, bank holding companies, and other systemically important financial institutions should be given incentives to take account of the social costs of bank risk taking and bank failure.¹³¹ It is unlikely that bank CEO compensation was optimally set prior to the Financial Crisis. Understandably then, the various academic proposals for banker pay reform discussed earlier seek to move the average bank CEO's compensation contract in the direction of greater public purpose, that is, toward the social welfare ideal point and away from

131. For CEOs of public companies, by contrast, issues of systemic risk are largely irrelevant. Therefore, no public purpose need be included as part of their optimal compensation contract.

the shareholder ideal point.

The Bank CEOs arrow in Figure 1 illustrates proposed reforms' attempt to move CEO compensation contracts from their current location somewhere into quadrant I.¹³² Any move in quadrant I increases the public purpose of CEO effort and would therefore be a valuable change according to these reforms.¹³³ In general, moves in the direction of the social welfare ideal point are likely to be social welfare improvements.

Moves into quadrant IV, which also increase the public purpose of CEO actions, might also be improvements, but this would depend on the tradeoff with reduced CEO effort. It might be that the gains from being more public welfare regarding would be greater than the efficiency losses from increased slack, but it is uncertain. What is clear is that any moves into quadrants II or III would not be improvements.

2. Performance Pay for Regulators

We now turn to regulator pay. As shown on Figure 1, the moves are analytically similar to the goal of improving bank CEO pay. Because of their low-powered incentives and job security, regulators are thought to exert less effort than the regulated. At the same time, regulators act more in the public interest than in the private interest of the banks they regulate. Regulators do not act purely in the public interest for familiar reasons of capture, be it from familiarity, the revolving door enticement, or some other cause. The public, who are the principals in this compensation bargain, would prefer that regulators expend more effort toward the public interest. The location of the social welfare ideal point on Figure 1 captures this idea. Our proposal hopes to nudge regulators in that direction. And as shown by the relative slopes of the two reform vectors, our proposal is more focused on improving effort than improving purpose, while the banker compensation reform literature has the opposite emphasis.

The structure of regulator incentives and bank CEO incentives are related. For example, from bank shareholders' perspective, the optimal private incentives for bank CEOs may depend on what risks and growth opportunities the regulatory environment will permit.¹³⁴ Similarly, for our

132. Ironically, Dodd-Frank's say-on-pay provision, requiring a shareholder vote to approve executives' pay, may actually move bank CEO compensation contracts away from the social welfare ideal point and into quadrant II, where shareholders generally prefer their CEOs to focus.

133. A move along the vertical axis, that is, additional effort without any additional public purpose, would obviously not satisfy these goals, while a move along the horizontal axis in quadrant I would.

134. See Anthony J. Crawford, John R. Ezzel & James A. Miles, *Bank CEO Pay-Performance*

purposes, the appropriate direction and magnitude of regulators' incentives will depend to a great extent on the structure of bank CEOs' incentives. The more high powered bank CEOs' private incentives are to maximize shareholder wealth, the more high powered regulators' incentives must be in the direction of the public interest. That is, regulators' public-regarding incentives should be strong enough to counter the private risk-taking incentives that banks create for their CEOs to the extent such risk taking may be socially suboptimal.

As with bank CEOs, it may be that regulators' moves in quadrant IV (less effort, more public regarding) would be socially efficient, but these are not likely to arise from our approach to increasing the incentives for effort.¹³⁵ More difficult to judge in the abstract are moves into quadrant II. Although not the main focus of our proposal, it is possible that incentives to work hard may move regulators into this quadrant (more effort, more private regarding). In this case, the gains from additional effort in helping banks to be more efficient and reducing regulatory burdens might be social welfare improving. That is, the gains may exceed the costs of expected social losses from bank failures. The recent Financial Crisis cautions against putting too much faith in this expectation, so our proposal makes every effort to encourage additional effort for regulators directed into quadrant I (and toward the social welfare ideal point), instead of quadrant II.¹³⁶

No incentives are perfect, however, so we do not expect bank regulators ever to reach the social welfare ideal point. But with better regulatory efforts in that direction, regulatory influence may drive banks' vector of activity more closely toward the public interest.

Relations and the Effects of Deregulation, 68 J. BUS. 231, 252–53 (1995) (finding that bank CEO pay became more high powered with the banking deregulation of the 1980s); Vicente Cuñat & María Guadalupe, *Executive Compensation and Competition in the Banking and Financial Sectors*, 33 J. BANKING & FIN. 495, 496 (2009) (same for 1990s banking deregulation); R. Glenn Hubbard & Darius Palia, *Executive Pay and Performance: Evidence from the U.S. Banking Industry*, 39 J. FIN. ECON. 105, 125 (1995) (finding a positive association between bank CEO pay and firm performance in the 1980s and a stronger association in deregulated markets).

135. We can imagine other proposals that might make regulators more public regarding without necessarily increasing their effort.

136. It is also possible that regulators might start to the right of the social welfare point. They may harbor too strong a sense of purpose to protect the DIF or taxpayers. Therefore, their socially optimal moves would be in quadrant II. Although this does not seem to be the case for many regulators during the Crisis, when combined with the possibility of low effort, the case is stronger that some of this may have been going on. Very low effort combined with even extremely strong motives to reduce taxpayer losses could still explain the Financial Crisis. In such cases, a more shareholder-regarding motivation could incentivize examiners toward the social welfare optimum. The use of bank equity in examiner compensation is designed to achieve this goal, as we describe below. *See infra* Part V.A.

C. HOW MUCH INCENTIVE?

An important preliminary question is the appropriate magnitude of the incentive component of regulatory pay. We anticipate that a fixed salary will continue to constitute the lion's share of regulator pay. At the same time, the incentive component should be large enough to offer real incentive to the regulator without swamping the regulator's salary in importance. Too small an incentive component risks irrelevance, of course, but too large an incentive component may stoke regulatory risk aversion.

Incentive pay is by definition variable, and a larger percentage of incentive pay broadens the range of total pay that the regulator can expect to receive—that is, it puts more risk on the regulator. If the incentive component is so large that regulators cannot afford to suffer a loss, they might simply take the conservative course, adopting a maximin strategy.¹³⁷ They would be willing to forgo any potential gains from being aggressive or innovative in order to avoid any losses.

Consider an examiner with a base salary of \$100,000 and a variable pay component with three possible outcomes: plus \$40,000, minus \$40,000, and zero. If she regulates aggressively, she stands a fifty-fifty chance of gaining or losing \$40,000; if she regulates conservatively, her variable pay will be zero for sure. If she is risk neutral and has low fixed costs, then she should be financially indifferent between aggressive and conservative regulation, since the total expected value in both cases is \$100,000. But a risk-averse examiner with larger fixed costs might strongly prefer the conservative approach, since she will net \$100,000 for sure. Aggressive regulation is too risky, since the examiner runs a 50 percent chance of winding up with a \$40,000 loss, netting only \$60,000 in total pay. That possibility is sufficiently unattractive that even the chance to make \$140,000 would not induce her to regulate aggressively.

The design of the incentive securities will of course be important in managing the variance in the incentive component of regulator pay. We tentatively suggest that incentive pay should constitute up to 25 percent of the regulator's total pay at the start of the relevant incentive period, but this is just an informed guess. Agency heads who give thought to our general idea and better understand the tradeoffs between financial incentives and other factors may have good reasons for greater or lower percentages,

137. In game theory, this is a strategy designed to maximize one's minimum payoff. *See, e.g.,* DOUGLAS G. BAIRD, ROBERT H. GERTNER & RANDAL C. PICKER, *GAME THEORY AND THE LAW* (1998).

especially after some trial and error.

D. INCENTIVES TO INNOVATE

Our performance pay scheme would not only help ameliorate the sorts of “false negative” failures that facilitated the Crisis, but by giving bank examiners economic stakes in regulated banks, our approach might also spur regulatory innovation.

Under the current fixed salary approach, examiners have no strong incentive to change the regulatory system in ways that improve or protect bank values or taxpayer interests. Instead, as with the inertia they demonstrated in the face of bad news at their regulated banks preceding the Crisis, examiners may prefer just to do what they are told and work to the letter of the examinations manual.

With a stake in the bank’s value, examiners may come up with ways to examine more efficiently—say, by streamlining the examination process at a specific bank or working with higher-level regulators to initiate broad-based changes. More stringent supervision might evolve as well. Examiners might more aggressively seek out information from the bank in order to enhance the precision of their assessment of the bank’s situation. This might also lead to broader-based change across banks as individual examiners begin to experiment. For example, the level of banks’ public disclosures may be suboptimal because of market failures that regulators can solve. Individual examiners may not be able to capture the entire value of their innovation, but having some economic stake in the process at least moves them in the right direction.

One might be skeptical that there is much that examiners could do to increase firm value through regulatory innovation. But there is evidence that regulatory choices matter. In the period before the Financial Crisis, banks had a choice of regulator, and regulatory agencies competed to offer the most attractive set of regulations and regulatory policies.¹³⁸ The premise must have been a belief by banks that they could increase their share price by choosing the “best” regulator. No doubt this scenario, like our proposal, creates the potential for a race to the bottom. For our part, we hope to solve this problem by not only awarding regulators the gains from making regulations more efficient, but also penalizing them when their regulatory choices result in bank losses or failures. But the point remains

138. Alex Blumberg, Chana Joffe-Walt & Dave Kestenbaum, *The Watchmen*, CHI. PUB. MEDIA (June 5, 2009), http://www.thisamericanlife.org/sites/default/files/382_transcript.pdf.

that regulatory choices undoubtedly can increase bank value. Cabined by the downside constraint on “deregulation,” we nevertheless believe that some of this value remains, or should at least be something regulators pursue.

Although the theoretical case for linking bank regulators’ pay to bank performance seems relatively straightforward, the details of the incentive structure are crucial. In the next part, we take a first pass at structuring a regulatory pay-for-performance contract, recognizing that efficient contracts will only be developed over time through trial and error.

V. THE STRUCTURE OF PERFORMANCE PAY FOR REGULATORS

The regulatory laxity in the run-up to the Financial Crisis involved two distinct types of regulatory failure: the failure to apply preventive medicine when times were good and the failure to act aggressively when a bank showed signs of distress.¹³⁹ Regulators’ incentive pay should have two distinct components to address these separate problems. The first is a variable compensation component based on the market value of a mix of the regulated bank’s debt- and equity-based securities. This debt-equity portfolio would offer real time market feedback to the regulator regarding the bank’s risk taking and its potential rewards. This component would matter primarily during good times, while the bank is operating in the ordinary course. Its purpose is to incentivize preventive and remedial measures well before a bank approaches distress. The second component becomes important as a bank approaches distress. It consists of a bonus for which the regulator would be eligible based on the timing of her decision to take over a failing bank. Regulators have a number of reasons to wait too long before putting a failing bank into resolution.¹⁴⁰ The takeover bonus would ameliorate this problem.

We elaborate on these various features of our regulatory pay-for-performance scheme below.

A. THE DEBT-EQUITY PORTFOLIO

We take lessons from the executive compensation literature to structure our debt-equity portfolio for regulators. For the typical firm manager, pay is linked to stock price, which is the best available metric for

139. *See supra* Part III.B.1.

140. *See supra* Part III.C.

the value of the firm, as well as the social value of the enterprise.¹⁴¹ Although imperfect, managers paid with firm shares have greater incentives to increase the value of the firm than managers paid fixed salaries.

If there were no externalities from individual bank activity or risk levels, we could stop there. But of course externalities exist. Risk taking at one bank can affect the financial stability of other banks and the banking system as a whole, as the Great Financial Crisis has amply illustrated. Together with the bank runs from the numerous panics of the 19th Century, the Great Depression, and the S&L Crisis, these episodes confirm that individual banks' activities have stronger social welfare implications than nonfinancial firms. Hence the need for bank managers to be compensated in a way that accounts for the potential social losses from their decisions, as recent reform proposals argue. Our claim is that this is also true for regulators.

As is true for bank managers, there is a ready proxy for the potential bank losses that may fall on taxpayers. A publicly traded debt instrument is sensitive to the downside risk of its issuer; it therefore provides the downside analog of what share price signals about upside potential. While it may make sense for bank managers to focus mostly on increasing bank value subject to some downside risk, the opposite is likely true for regulators. If we could design an optimal contract for CEOs, regulators might be unnecessary, but absent such a perfect contract, a division of labor in which managers focus mostly on gains while regulators worry most about losses might be the most efficient. Accordingly, we believe the lion's share of regulator's debt-equity portfolio should consist of the debt-based instrument. This would give the regulator a personal financial stake in curbing excessive risk taking at the bank. Holding only debt incentives, however, might cause the regulator to be too risk averse, which would unnecessarily limit credit availability and the bank's profitability. We therefore also include equity-based pay in the regulator's pay package.¹⁴²

141. *The Wall Street Journal/Hay Group Survey of CEO Compensation*, WALL ST. J. (May 8, 2011), <http://graphicsweb.wsj.com/php/CEOPAY11.html>; Michael C. Jensen & Kevin J. Murphy, *Remuneration: Where We've Been, How We Got to Here, What Are the Problems, and How to Fix Them* (Harvard NOM, Working Paper No. 04-28, European Corporate Governance Inst., Finance Working Paper No. 44/2004, 2004), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=561305.

142. The pay of bank managers and regulators might be related. Though they play separate and somewhat opposing roles, their respective pay structures could be substitutes for each other. The more bank managers are paid in bank stock, the more regulators would need to be paid in bank debt in order to police the extra risk taking that bank managers would be incentivized to pursue. Shareholders of a

B. STRUCTURING THE DEBT-EQUITY PORTFOLIO

For both debt and equity components, awarding the actual securities is not necessary.¹⁴³ Instead, the underlying securities would be used as benchmarks, with incentive pay based on the market price of the underlying securities after a given reference date. For example, if performance and incentive pay were awarded each calendar year, the examiner would receive a “phantom” allocation of the bank’s debt- and equity-based instruments at the beginning of each year. This avoids the conventional objections to government ownership of stakes in private businesses and the potential for insider trading that might arise when regulators sell securities to monetize gains.

To encourage a medium- to long-term regulatory perspective, each year’s allocation would have a specified maturity. At maturity, say three to five years after the initial award, the allocation would be cashed out at the then-market values of its underlying debt and equity components. With regular periodic allocations with multi-year maturities, the regulator would hold multiple tranches of phantom securities with staggered payouts,¹⁴⁴ giving her incentive to consider the long-term as well as short-term consequences of her regulatory decisions, and making short-term manipulations of securities prices an unattractive strategy. We do not attempt to divine the optimal maturity of each debt-equity allocation, which we imagine would vary by agency, bank, time period, examiner, and other factors. We anticipate that the optimal maturity will develop over time based on experience.

Below, we describe a range of possible approaches for implementing the examiner’s debt-equity portfolio.

1. Bank Debt Incentives

We consider two potential benchmarks on which the debt feature of this package could be based: (1) a subordinated debt security issued by the

bank might alter the pay of bank managers in light of regulator pay structures, and vice versa. We leave it to another paper and a formal model in development to explore these issues more fully. For now we simply claim that given the heavy equity weighting of bank CEO pay, regulators’ incentive pay should focus mostly on debt.

143. The examiner should not be allowed to trade in any of the bank’s securities or instruments in any event, so holding the underlying securities would not only be unnecessary, it would also be forbidden. *See infra* Part VI.A.2.

144. For example, with a three-year holding period, after three years, the regulator would always hold three tranches of phantom securities, which would mature in succession at the next three calendar years’ end.

bank or (2) a credit default swap contract (“CDS”) referencing a junior debt obligation of the bank holding company that is the parent of the regulated bank.¹⁴⁵ The prices of publicly traded subordinated debt securities and CDS contracts reflect the market’s best estimate of the risk of default of the bank underlying the security or contract. We would adjust debt prices for compensation purposes in order to filter out the effects of industry-wide or market-wide debt price movements. To the extent possible, the regulator’s incentive pay should reflect bank-specific developments and not changes in debt markets generally.

Subordinated debt (“sub-debt”) is junior to depositor liabilities, and of course is uninsured. When a bank fails, subordinated debt holders rarely recover anything.¹⁴⁶ Similarly, when a banking institution defaults on a debt obligation referenced in a CDS, this triggers the obligation of the CDS seller to pay the CDS purchaser for losses sustained on the insured amount of the banking entity’s defaulted debt.¹⁴⁷ Sub-debt holders and CDS sellers therefore have important incentives to monitor bank risk taking. If a bank is healthy, its debt securities will trade near face value.¹⁴⁸ Similarly, the price of its CDS contracts will be low.

When bank risk taking is excessive, however, sub-debt holders will sell their debt. The market for subordinated bank debt is well established,¹⁴⁹ and banks engaging in excessively risky strategies will see their sub-debt trading prices drop.¹⁵⁰ If the bank is at risk of default, its debt

145. A CDS acts like a debt instrument insofar as its trading price will reflect the default risk of the reference entity. The CDS spread—the price one would have to pay to insure against the reference entity’s default—rises and falls with the probability of default. As discussed below, with respect to CDS contracts referencing banking institutions, the reference obligation is almost always a BHC debt obligation, and not an obligation of the bank itself. *See infra* Part V.B.2.

146. *See* Richard M. Hynes & Steven D. Walt, *Why Banks Are Not Allowed in Bankruptcy* 45 (Univ. of Va. Sch. of Law & Econ., Research Paper No. 2010-03, 2009), available at <http://ssrn.com/abstract=1522205> (noting that senior claimants are almost always paid in full, but junior claimants such as subordinated debt and equity holders almost always receive nothing).

147. *See, e.g.,* M. Todd Henderson, *Credit Derivatives Are Not “Insurance”* (U. Chi. Law & Econ., Olin Working Paper No. 476, 2009), available at <http://ssrn.com/abstract=1440945>.

148. They may even trade above face value if market interest rates have dropped since the debt securities were issued.

149. *See* Laurence H. Meyer, *Supervising Large Complex Banking Organizations: Adapting to Change*, in *PRUDENTIAL SUPERVISION: WHAT WORKS AND WHAT DOESN’T* 97, 103 (Frederic S. Mishkin ed., 2001) (describing the market for subordinated debt as “well established,” as well as “well defined and homogenous”); *infra* Part V.B.2 (discussing subordinated debt versus CDS).

150. Douglas D. Evanoff & Larry D. Wall, *Sub-Debt Yield Spreads as Bank Risk Measures*, 20 J. FIN. SERVS. RES. 121, 133–35 (2001) (showing that sub-debt yield spreads perform slightly better than capital measures as predictors of banks’ financial conditions); Mark J. Flannery & Sorin M. Sorescu, *Evidence of Bank Market Discipline in Subordinated Debenture Yields: 1983–1991*, 51 J. FIN. 1347, 1373–74 (1996) (demonstrating that bond yields reflect investors’ pricing of bank risk taking); Diana

securities will trade at a discount reflecting the probability of default and the estimated payout in such event. Similarly, the price of a CDS contract reflects the expected losses from loans, bonds, or other reference obligations issued by the underlying bank. CDS spreads for contracts written on large publicly traded financial institutions react very quickly to new information.¹⁵¹ Therefore, as bank risk taking increases, CDS dealers will raise the price at which they are willing to sell CDS protection for the banking institution's debt.

Market pricing serves as a transparent and continuing signal of the riskiness of the bank's activities. Risk-related price fluctuations will directly affect bank examiners' wealth when the debt component is included in their personal portfolios. In this way, the fine reflection of bank risk taking generates both important incentive and information effects. The debt feature of an incentive contract would give the examiner incentive to be vigilant in policing excessive risk taking at the bank.

Using CDS or sub-debt as a benchmark for examiner pay also serves an important related function. Market pricing acts gradually to signal changes in the issuing bank's risk profile, in contrast to the sudden meltdowns that occurred at WaMu and other banks that failed in the Crisis when regulators were too timid. Incorporating market-priced debt instruments as part of regulator pay not only creates incentives for careful risk analysis, but it also makes price changes more salient to examiners and their supervisors as an indicator of the capital market sentiment concerning risk taking at the given bank. This greater prominence for crowd wisdom may make it more difficult for regulators to ignore mounting evidence of trouble at a given bank. This information could be valuable as a warning signal for an examiner to devote more resources to an examination or a follow-up enforcement action. It might also be sufficiently finely tuned to give direct feedback on micro-level regulatory changes. Just as a stock price offers immediate signals to managers with imperfect information, so

Hancock & Myron L. Kwast, *Using Subordinated Debt to Monitor Bank Holding Companies: Is It Feasible?*, 20 J. FIN. SERVS. RES. 147, 180 (2001) (finding that bonds of highest liquidity offer the most consistent pricing information for purposes of reflecting bank default risk).

151. Mark J. Flannery, Joel F. Houston & Frank Partnoy, *Credit Default Swap Spreads as Viable Substitutes for Credit Ratings*, 158 U. PA. L. REV. 2085, 2088 (2010) (arguing that CDSs "responded to new information more promptly and responsively than institutions (credit rating agencies) did"). Hart and Zingales also propose to incorporate CDS pricing into the regulatory apparatus, noting its ability to reflect excessive risk at the reference entity. They would use CDS, however, as merely a trigger for regulatory action; they do not propose incentive pay for regulators or the use of CDS in that endeavor. Oliver Hart & Luigi Zingales, *A New Capital Regulation for Large Financial Institutions*, 13 AM. L. & ECON. REV. 453, 456 (2011).

too might public debt instruments help regulators adjust their allocations of time and effort.

Empirical evidence supports the idea that regulators would respond to debt incentives. Studies have shown, for nonfinancial as well as financial firms, that firm risk taking declines as the proportion of a CEO's wealth held in the form of her firm's debt—"inside" debt—increases relative to the value of her equity holdings.¹⁵² The presence of this inside debt shifts CEOs' personal interests away from risk-preferring equity, aligning their interests more closely with relatively risk-averse debt holders.¹⁵³

There is a theoretical explanation for this effect.¹⁵⁴ Inside debt counters the risk-shifting incentives that accompany CEOs' equity compensation.¹⁵⁵ Giving managers a stake in the value of the firm's debt makes them less willing to sacrifice its value to benefit shareholders, which is especially important when the firm is in distress. Debt compensation can improve managerial effort and firm value in distress situations because, unlike equity, debt is sensitive to the firm's liquidation value. That is, debt holders may still recover value when the firm is in distress.¹⁵⁶ Managers

152. See, e.g., BOLTON, MEHRAN & SHAPIRO, *supra* note 2 (finding the same for financial firms); Tung & Wang, *supra* note 2, at 27 ("CEOs' inside debt holdings preceding the Crisis are significantly positively associated with bank performance and significantly negatively associated with bank risk taking during the Crisis."); Chenyang Wei & David Yermack, *Stockholder and Bondholder Reactions to Revelations of Large CEO Inside Debt Holdings: An Empirical Analysis* 17–18 (Cornell Univ. ILR Sch., Comp. Research Initiative CRI 2009-005, 2009) (finding the same for nonfinancial firms).

153. See Kose John & Yiming Qian, *Incentive Features in CEO Compensation in the Banking Industry*, FED. RES. BANK OF N.Y. ECON. POL'Y REV., Apr. 2003, at 109, 110 ("Top management should . . . be given incentives to act on behalf of debtholders to an adequate degree. . . . [P]roviding managers with compensation structures that have low pay-performance sensitivity may be optimal."). Such compensation would admittedly dissuade bank executives from the traditional pursuit of value for shareholders, which is sometimes viewed as corporate managers' exclusive goal. This should not give us much pause, however. Bank governance has traditionally been recognized as presenting special concerns that deserve special governance tools. See *supra* Part III.

154. See Alex Edmans & Qi Liu, *Inside Debt*, 15 REV. FIN. 75, 78 (2011) (explaining a "theoretical framework underpinning recent normative proposals to reform executive pay by compensating the manager with debt as well as equity").

155. Jensen and Meckling consider the agency costs of equity and debt separately. See Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305, 312 (1976). Edmans and Liu, on the other hand, consider them simultaneously, thereby enabling analysis of the tradeoffs between incentivizing managerial effort and influencing investment choice. Edmans & Liu, *supra* note 154, at 79 n.5.

156. Equity holders are indifferent to the firm's liquidation value because that value goes to pay creditors. So while equity-based compensation gives managers an incentive to avoid insolvency, it may also induce them to "inefficiently sacrifice liquidation value to gamble for solvency" when a firm is in distress. Edmans & Liu, *supra* note 154, at 77. Debt holders will be less sanguine about squandering value on desperate investment strategies because their returns are fixed; they will not share in any (low probability but) stupendous returns beyond the fixed amount of their claims. *Id.*

holding inside debt may therefore be less inclined to make risky bets when the firm gets into trouble.¹⁵⁷

Similarly, regulators with a stake in the value of a bank's debt instruments will be less inclined to turn a blind eye to bankers' excessively risky bets. Public trading prices of bank debt will operate as a continuing public referendum on risk taking at the bank.

2. Subordinated Debt Versus CDS

While both bank subordinated debt and CDS could offer important incentives and market information for regulators, there are important differences between the two, such that their best uses may be different. As between subordinated bank debt and CDS, evidence exists that CDS prices react more quickly to information than subordinated debt prices do.¹⁵⁸ This sensitive bellwether would therefore offer more immediate feedback to regulators than subordinated debt, so that prompt action could be taken.

Subordinated debt, however, may offer a few advantages over CDS. Unlike sub-debt, which is issued at the bank level as well as the bank holding company ("BHC") level, CDS contracts are typically written with reference to BHC debt obligations and not those of the banking subsidiary.¹⁵⁹ Therefore, CDS prices will more accurately reflect the default risk of the BHC than the bank itself. Major banks are almost uniformly held as wholly owned subsidiaries of BHCs,¹⁶⁰ and every BHC owns other financial institutions besides the bank at issue, although for the very largest banks, each bank constitutes the dominant subsidiary within its BHC. The larger the percentage of the BHC's cash flow and assets that derive from the given bank, the better CDS pricing (that references BHC debt) will reflect risks at the bank. But as the proportions of BHC assets and earnings contributed by the bank decrease, so will the clarity of CDS spreads decrease as a signal of the bank's health. Bank of America, N.A., for example, is the dominant entity within its BHC, Bank of America Corporation. Yet the bank represents only about 65 percent of BHC assets

157. The appropriate amount of debt depends on the relative magnitudes of the two different types of agency problems—shirking versus risk shifting. *Id.* at 77–78.

158. Robert Blanco, Simon Brennan & Ian W. Marsh, *An Empirical Analysis of the Dynamic Relation Between Investment-Grade Bonds and Credit-Default Swaps*, 60 J. FIN. 2255, 2279 (2005).

159. We found one exception for which public pricing information was available. Bloomberg quotes CDS pricing for Capital One Bank, a banking subsidiary of financial holding company Capital One Financial Corporation. *Pricing Information for 5 Year CDS Protection*, BLOOMBERG (on file with author) (last visited May 30, 2012).

160. Tung, *supra* note 2, at 1208.

and contributes only about 70 percent of BHC net income.¹⁶¹ Performance of the other entities within the BHC will likely have a nontrivial effect on overall BHC performance, so that CDS spreads on Bank of America Corporation may only offer a noisy proxy for risk taking at the bank, Bank of America, N.A.

A second limitation with CDS is coverage. Most large banks issue subordinated debt that is publicly traded. By contrast, regular CDS pricing data is available for only a handful of the very largest BHCs.¹⁶² The very largest banks and BHCs are of course the most important in terms of asset values and systemic risk, so CDS still might be best for those institutions. Where both bank sub-debt and BHC CDS pricing are available, it might be useful to incorporate both into the debt component of regulators' incentive pay.

3. BHC Equity

The debt component of regulator incentive pay should be balanced with equity incentives in order to guard against the possibility of excessive risk aversion.¹⁶³ Ideally, one would use bank equity as the benchmark, since its trading price would offer the cleanest market assessment of the bank's upside prospects, and therefore the best proxy for value added by regulators. Again, however, because major banks are almost uniformly held as wholly owned subsidiaries of BHCs, no major bank has publicly traded equity. BHC equity is the next best option, though it may offer a somewhat noisy proxy for performance at the banking subsidiary.¹⁶⁴

Rather than rewarding (or punishing) the regulator simply based on BHC equity price movements, we propose two adjustments to hone the regulator's incentives. First, as with our debt component, we suggest a relative performance approach, pursuant to which the effect of industry-

161. See Bank of Am. Corp., Consolidated Statements for Bank Holding Companies (Form FR Y-9C), at 11 (Sept. 30, 2009) (showing total BHC assets of \$2.25 trillion); Bank of America, N.A., Consolidated Reports of Condition and Income for a Bank with Domestic and Foreign Offices (Form FFIEC031), at 10–11 (Sept. 30, 2009).

162. A Bloomberg search showed only nine BHCs with regular CDS pricing information. *Pricing Information for 5 Year CDS Protection*, *supra* note 159.

163. Too much debt in managers' compensation packages may make them suboptimally risk averse, reducing long term value. Rangarajan K. Sundaram & David L. Yermack, *Pay Me Later: Inside Debt and Its Role in Managerial Compensation*, 62 J. FIN. 1551, 1553 (2007); David I. Walker, *The Challenge of Improving the Long-Term Focus of Executive Pay*, 51 B.C. L. REV. 435, 446–47 (2010). We can anticipate a similar effect if regulators' portfolios are excessively overweighted with debt.

164. Among the ten largest banks, the average bank accounts for 61 percent of its BHC's assets and 131 percent of its earnings. See *infra* app.1.

wide or market-wide equity price movements would be filtered out of the regulator's performance pay. Ideally, an incentive-compensation scheme would reward an agent for only those effects within her control. But because no public securities exist to measure regulatory inputs alone, we must settle for second best. To the extent we are able to excise market and industry effects from the regulator's incentive pay, our scheme is improved.

In addition to the relative performance adjustment, we suggest that the regulator should be exposed only to the upside of the equity, and not the downside. In other words, the regulator can only win with the equity-based component. The reason for this is that exposure to downside equity volatility might make the regulator too timid. With equity value to lose, the regulator may be reluctant, for example, to expose poor management or risky practices at the bank. The holding period for debt-equity allocations addresses that problem to some extent. Given the inertia exhibited by regulators in the run-up to the Financial Crisis, however, we should be careful not to inadvertently incentivize inaction. This does not mean that the regulator has nothing to lose, of course. The debt component of her incentive pay includes downside potential but likely with less volatility than equity.

4. The Appropriate Mix of Debt and Equity

As earlier noted, we believe the lion's share of this ordinary course "preventive medicine" component of incentive pay should be debt based. Beyond that, the appropriate debt-equity mix in the regulator's portfolio will depend on a number of factors, some of which will be specific to the regulated bank, to the regulating agency, to the particular times, and perhaps even to the individual examiner. We therefore make no attempt to offer firm prescriptions for the right ratio. Instead, we discuss important considerations that regulatory agencies should consider when structuring each regulator's portfolio.

The right mix can induce regulators to care about bank profits but not at the expense of risk shifting to creditors. Excessive bank risk would diminish net incentive pay, provided that the negative reaction from debt markets reduced the value of the debt component of the regulator's incentive portfolio by more than any positive reaction from equity markets augmented the value of the equity component of the regulator's portfolio.

We are confident that the optimal mix can best be determined through trial and error. Potential error costs, however, counsel for a gradual

implementation of our proposal. Unlike executive compensation, where experimentation can and does occur among thousands of private firms, and a given firm's poor pay design would be unlikely to have widespread impact, error costs may be high with regulator incentive-compensation design. There are only a few bank regulatory agencies, and a significant design mistake could affect the entire banking sector, and perhaps beyond. Agency heads should therefore proceed slowly and incrementally. The appropriate debt-equity mix is an area for which more study and a conservative approach are likely warranted.

C. THE TAKEOVER DECISION

In addition to the market-based ordinary course component of incentive pay, we advocate an additional feature to address the bank in distress. Specifically, we propose a bonus tied to the timing of the decision to take over a failing bank. Especially for larger banks, examiners will not enjoy unilateral authority to put the bank into resolution. Instead, the decision will involve higher-level supervisors as well as examiners. Incentive pay for examiners still makes sense in this context. Examiners will have the best information about their banks' condition and prospects, and their experience with their banks will be critical in determining the optimal timing of resolution. Even absent formal authority to decide on resolution by themselves, examiners will enjoy enormous influence over the decision. Incentives toward optimal resolution timing would encourage examiners to be forthcoming with information important for the decision and to make unbiased recommendations to higher-level regulators. These inputs are crucial for improving resolution timing.

1. Why a Special Takeover Bonus?

The takeover decision requires special treatment for a number of reasons. First, it is the most difficult and drastic decision the regulator must make in her supervision of the bank. The regulator has a number of reasons for being reluctant to pull the plug on a failing bank.¹⁶⁵ Regulatory capture and the Stockholm effect may dissuade the regulator from taking over the bank. Pulling the plug might also highlight the regulator's past mistakes in not intervening more forcefully. At any given point, the regulator might prefer to wait and see, hoping the bank will turn itself around. As the Financial Crisis illustrates—like all others before it—regulators tend to err on the side of taking over too late rather than too early. During the Crisis,

165. See *supra* Part III.C (discussing incentives for examiner nonintervention).

this delay exacerbated banks' losses and the ultimate costs to the DIF. A resolution bonus would offer a direct incentive to make the right timing decision at a critical juncture.

Moreover, although the FDIC is charged by statute with the specific goal of minimizing DIF losses in its dealings with troubled banks,¹⁶⁶ the FDIC is typically not involved in the takeover decision, which rests with each bank's chartering agency or primary federal regulator.¹⁶⁷ The FDIC takes over only after a bank has been declared insolvent and put into resolution. Because these other agencies do not have their own money at stake in the timing of the takeover, the incentives to wait and see may be overwhelming.

The bank debt-equity portfolio that we propose as part of the regulator's compensation package may ameliorate this regulatory reluctance to some extent. The debt piece of the portfolio could induce the regulator to put the bank into resolution before it became massively insolvent, since continuing losses at the bank would eat into the value of the bank's debt and the debt portion of the regulator's incentive portfolio. On the other hand, it might be difficult for the regulator to assess the bank's solvency in real time, since this involves an assessment of the bank's asset values. With uncertainty, a wait-and-see approach might seem attractive to the regulator.¹⁶⁸ The resolution bonus acts as a sort of consolation prize to the regulator, who might otherwise be tempted to let the bank try to work its way out of trouble to enable the regulator to recoup the losses suffered in her bank debt-equity portfolio from the bank's demise.

Another reason for a special resolution bonus is that market signals are likely to be noisy. Market discipline may not be useful in prodding a regulator to declare a bank insolvent because of information asymmetry. The optimal timing of the takeover decision will depend to a great extent on fine-grained private information which (1) is available only to the regulator, and (2) is constantly being updated in real time once takeover becomes a real possibility. A one-time bonus distinct from any market

166. See 12 U.S.C. § 1823(c)(4)(A)(ii) (2006) (requiring the FDIC to choose a method that is "the least costly to the [DIF] of all possible methods for meeting the [FDIC's] obligation").

167. George G. Kaufman, *FDIC Losses in Bank Failures: Has FDICIA Made a Difference?*, ECON. PERSP., Fall 2004, at 13, available at http://chicagofed.org/digital_assets/publications/economic_perspectives/2004/ep_3qtr2004_p2_Kaufman.pdf.

168. Of course, if the debt-equity ratio is miscalibrated so as to be too equity rich, this will exacerbate this wait-and-see problem. If the potential gains to equity, which prefers additional risk during bad times, are greater than the potential debt losses, then this could induce the exact wrong behavior in regulators. Weighting the incentive mix heavily with debt and having long holding periods should help reduce this problem.

assessment of the decision is therefore advisable.

2. Calculating the Bonus

Because of the importance of minimizing DIF losses, the resolution bonus should be tied to the ultimate losses sustained by the DIF at the resolution of the FDIC's receivership proceeding. Low losses should trigger high bonuses and vice versa. In theory then, if an examiner were to put a bank into resolution at time T_1 , and as a result FDIC losses were 100, the examiner would get a larger bonus than if the decision were made at T_2 when the FDIC losses would be 200. Implementing this simple idea may not be straightforward, however.

First, if we could discern the counterfactual losses that would have occurred at T_2 , then the calculation would be simple. But of course, a takeover at T_1 makes it impossible to know the counterfactual T_2 outcome. Second, it is entirely possible that a conscientious examiner might decide, given the information available to her at T_1 , to wait until T_2 for more information. Important developments concerning the bank's prospects—the direction of certain asset or lending markets, for example—might be worth waiting for. Perhaps paradoxically, the more uncertain are the bank's prospects, the more value there is in waiting.¹⁶⁹ Third, even if a regulator made an (ex ante) optimally timed decision to resolve a failed bank, disposing of the bank's assets may take several years. That process will affect the ultimate DIF loss figures and will not be under the examiner's control.¹⁷⁰ So a "final" resolution will be hard to predict at the time of

169. The takeover decision involves a set of real options concerning the disposition of the distressed bank's assets, including an option to forbear and see if the bank can work its way out of trouble. The value of the wait-and-see option at T_1 increases with the variance of the bank's future earnings, as well as its predicted growth. Douglas G. Baird & Edward R. Morrison, *Bankruptcy Decision Making*, 17 J.L. ECON. & ORG. 356, 361 (2001). As compared with firms in unregulated industries, however, the wait-and-see option for a failing bank may be less valuable because banking regulators do not suffer the same information asymmetry as bankruptcy judges or other outside decisionmakers. With a wealth of private information about the quality of the bank's assets and management, banking regulators do not face the same degree of uncertainty about the bank's future prospects as do actors tasked with deciding whether to pull the plug in other contexts.

170. For example, the OCC makes shutdown decisions for the national banks it supervises, but the FDIC is required to be appointed as the receiver for every insured national bank. The FDIC sets the structure of auctions for bank assets, as well as deciding on the timing of sales. It may also enter into profit- or loss-sharing arrangements with asset acquirers in order to improve the terms of the sale. Marissa Fajt, *FDIC Finds Fresh Ways to Minimize DIF's Losses*, AM. BANKER, Dec. 24, 2009, available at <http://americanbanker.com/news/fdic-1005554-1.html?zkPrintable=true>. The OCC has enforcement authority under 12 U.S.C. § 1818(b) (2006) (to make orders and formal written agreements); *id.* § 3907 (to issue capital directives); *id.* § 1831o (to take Prompt Corrective Action ("PCA")); and *id.* § 1831p-1 (to issue safety and soundness orders). See OFFICE OF THE COMPTROLLER

takeover.

Despite these seeming hurdles, a resolution bonus may still offer important motivation for a regulator to act promptly in putting a bank into resolution, as compared to the current compensation system. The timing of takeover will no doubt have an important effect on the severity of DIF losses, and warning signs in terms of bank characteristics and practices that lead to large resolution losses are not so mysterious. Researchers have identified factors that correlate with increased losses, as well as estimating the economic magnitudes of the effects. The findings generally comport with common intuition. Bank asset composition and quality affect ultimate losses,¹⁷¹ as does liability structure.¹⁷² For example, brokered deposits are positively associated with high-cost bank failures and shorter time to failure.¹⁷³ The same is true for real estate owned and loans past due.¹⁷⁴ Uncollected income correlates with high-cost failures.¹⁷⁵

Local economic conditions also matter. State personal income growth and the health of the local banking industry are negatively correlated with

OF THE CURRENCY, OCC POLICIES & PROCEDURES MANUAL, NO. 5310-3 (rev. ed. 2011), available at www.occ.gov/static/publications/ppm-5310-3.pdf (providing overview of OCC's internal guidance policies for enforcing laws, rules, and final agency orders). For a discussion of new resolution authority rules for large banks and nonbank financial companies, see Brady Dennis, *FDIC's New Tools to Close Troubled Banks Offer Opportunity, Challenge*, WASH. POST (Jan. 17, 2011, 8:43 PM), <http://www.washingtonpost.com/wp-dyn/content/article/2011/01/17/AR2011011704164.html>.

171. James R. Barth, Philip F. Bartholomew & Michael G. Bradley, *Determinants of Thrift Institution Resolution Costs*, 45 J. FIN. 731, 739–43 (1990); John F. Bovenzi & Arthur J. Murton, *Resolution Costs of Bank Failures*, 1 FDIC BANK. REV. 1, 6–7 (1988); Christopher James, *The Losses Realized in Bank Failures*, 46 J. FIN. 1223, 1229 (1991).

172. George G. Pennacchi, *Risk-Based Capital Standards, Deposit Insurance, and Procyclicality*, 14 J. FIN. INTERMEDIATION 432, 442–43 (2005); Klaus Schaeck, *Bank Liability Structure, FDIC Loss, and Time to Failure: A Quantile Regression Approach*, 33 J. FIN. SERVS. RES. 163, 164 (2008).

173. See Schaeck, *supra* note 172, at 173 (measuring the ratio of brokered deposits to total assets). Brokered deposits are large sums aggregated by brokers on behalf of investors looking to earn higher-than-average returns on their FDIC-insured deposits. Banks seeking to lure these large deposits must offer unusually high interest rates. The banks willing to chase these large deposits are often those in financial trouble, seeking to increase their deposits in a hurry in order to grow their way out of trouble. *Id.* at 177. But of course, in order to profit from these more expensive deposits, the bank must make riskier bets with them. See Eric Lipton & Andrew Martin, *For Banks, Wads of Cash and Loads of Trouble*, N.Y. TIMES, Jul. 4, 2009, at A1 (describing bank's use of "hot money"—brokered deposits—to fuel risky growth).

174. Schaeck, *supra* note 172, at 172, 177. Real estate owned typically increases with loan defaults, as banks foreclose on real property collateral. Similarly, loans past due of course increase with borrower defaults.

175. James, *supra* note 171, at 1231; Schaeck, *supra* note 172, at 172, 177; Kathleen McDill, *Resolution Costs and the Business Cycle* 18 (FDIC, Working Paper No. 2004-01, 2004), available at http://www.fdic.gov/bank/analytical/working/wp2004_01/wp2004_01.pdf. Uncollected income is a measure of "nonperforming" loans—loans for which the borrower is behind in its payments. James, *supra* note 171, at 1229.

FDIC losses,¹⁷⁶ while in-state bankruptcy growth and the unemployment rate are positively correlated with FDIC losses.¹⁷⁷

The depth of existing research strongly suggests that a resolution bonus algorithm could be constructed to both guide and cabin regulators' discretion as to the timing of a bank takeover. Some trial and error would be involved in optimizing the bonus structure in pursuit of minimizing DIF losses, but with learning and experience, it might be possible to design a fully automated system in which market and other data are incorporated into the bonus algorithm.¹⁷⁸

Short of that, agencies can develop a mechanism for estimating what losses would have been had examiners not acted when they did. For example, postmortem reports, like those described above, could be helpful. The inspector general of the FDIC could estimate losses at hypothetical future intervals had the examiner not taken over the bank when she did. These reports could deploy a mix of economic models, learning from past failures, and expert opinions from inside and outside the regulatory agency.

This approach is not perfect, of course; it suffers from potential biases and manipulation. Most obviously, since the report is written only after the decision has been made to take over the bank, ex post biases may result in loss estimates that differ significantly from what ex ante estimates would have shown. This could lead to distorted incentives for examiners making takeover decisions.

This problem is not fatal, however, so long as the potential biases are not predictable ex ante—that is, estimates are not systematically too high or too low. The use of external expert opinions to produce the loss schedules described above could reduce any bias. So long as the estimate is not expected to be biased one way or the other, examiners should be incentivized simply to do their best—to time a takeover to minimize losses—since this is what they will expect the ex post estimator to be

176. McDill, *supra* note 175, at 19. Since healthy banks in the vicinity of a failed bank are the likeliest purchasers of the failed bank's assets, a weak banking industry translates into fewer and lower bids for those assets. *Id.*; Schaeck, *supra* note 172, at 174.

177. McDill, *supra* note 175, at 14; Schaeck, *supra* note 172, at 174.

178. Moreover, to ameliorate these conflicting incentives, and consistent with the end-game nature of the shutdown decision, at some point in the bank's downward spiral, the value of the examiner's debt-equity portfolio should be frozen for compensation purposes so that the examiner's only operating incentive is the shutdown bonus. With no additional portfolio upside to gain from a long-shot recovery by the bank, the examiner's only focus will be on minimizing DIF losses from the bank's failure. Of course, if the bank recovers and shutdown is avoided, the examiner's portfolio should be unfrozen on the bank's way up.

doing.¹⁷⁹ Some randomization among outside experts doing the ex post analysis may help ensure the optimal ex ante incentives.¹⁸⁰

Even if predicting ultimate FDIC losses is not an exact science for the regulator making the takeover decision, neither is the loss assessment inscrutable. A lack of research or analysis is unlikely to be the reason why regulators have been too slow to pull the plug on failed banks. Empirical studies—many done by the FDIC—and post-mortem reports, like those described earlier, offer regulators a wealth of research to support the goal of minimizing DIF losses. Instead, regulators may simply need better incentives to get it right.

3. Additional Considerations

As to scale, the bonus should be potentially large enough to induce regulators to forgo their hopes of recovering significant value in their debt-equity portfolio from a miracle turnaround by the bank. Absolute values would depend on a comparison of an examiner's expected payouts under particular incentive contracts. If the examiner expects to receive \$10 if the bank survives and becomes profitable, but the potential downside to the DIF has a positive expected value, then the examiner should be compensated more than \$10 for a good takeover decision.¹⁸¹

As the preceding discussion suggests, structuring takeover incentives will be tricky. It may be that they even overshoot: examiners may be too aggressive in taking over banks that have a positive private and social value. One solution to this problem might involve a nontrivial penalty if the DIF ultimately suffers no losses after a bank is resolved because the examiner pulled the plug too soon. There should be a financial cost to this socially inefficient decision.

Of course, too long a gap between the takeover decision and the

179. See, e.g., Michael Abramowicz & M. Todd Henderson, *Prediction Markets for Corporate Governance*, 82 NOTRE DAME L. REV. 1343, 1382–83 (2007) (explaining that ex post judicial review of business decisions is deferential).

180. See *id.* at 1398 (suggesting court-appointed experts as a way to “encourage parties to submit nonextreme valuations”).

181. Although the shutdown bonus should offset the potential gains from a decision to forbear in favor of a possible turnaround, this does not necessarily mean that the bonus must be very large. When a bank is clearly distressed, the probability of turnaround will likely be very small. So even if potential gains to the examiner from a long-shot recovery would be large, the expected value of forbearance would still typically be small given the low probability of success. Multiplying the value from a successful turnaround by the probability of that turnaround will reduce the value of that strategy for the examiner. For example, if the examiner expects to earn \$100 in the event that the bank recovers, but the probability of this is just 10 percent, then the shutdown bonus need be no greater than \$10.

realization of the bonus, and the intercession of other actors in the asset disposition process, may vitiate the incentive effect of any bonus. Ultimate DIF losses and the related regulatory bonus will likely not be finally determined until some months or years after the bank is seized, and asset disposition decisions will be out of the examiner's hands. Nevertheless, the takeover bonus may still offer important motivation for the regulator to act promptly in closing down a bank, as compared to the current system of compensation. Though the timing of takeover will have an important effect on the final resolution and the amount of DIF losses, the regulator currently has every incentive to wait to see, as was amply demonstrated during the Financial Crisis. A well-structured bonus may help ameliorate this problem.

VI. QUALIFICATIONS AND OBJECTIONS

In this part, we raise and respond to some potential objections to our proposal.

A. STRATEGIC AND PERVERSE INCENTIVES

Incentive structures may sometimes generate not only the desired outcomes but also some that are unintended and undesired. Our regulator incentive pay proposal is no exception. Time and experience will enable agency heads to identify and address any bad incentives that may arise from our proposal. In this section, we discuss a few of the possibilities for bad incentives that we can anticipate.

1. Crowding Out the Public Interest

Some might object that incentive pay is fundamentally inconsistent with public service. Financial rewards for "success" might change the public-regarding culture within regulatory agencies; financial incentives may crowd out the public spiritedness that would otherwise motivate employees. The possibility of financial rewards tied to market metrics might change regulators' perception of their charge. Instead of diligent altruistic service to the public, regulators and other agency employees might begin to view their roles in terms of market exchange. Regulators' desiring higher compensation would pursue the proffered financial rewards, while those who value leisure might feel free to work less and forgo the potential financial rewards for diligence. Once diligence has been priced,

perhaps some regulators will slack.¹⁸²

In addition, the type of person that chooses to be a bank examiner could change. Regulators have employment choices, and we believe that regulators' choice to be regulators derives at least in part from their interest in public service. This public spirit is an important regulatory asset and should be husbanded. Public service motives might be displaced by financial motivations among new hires after implementation of an incentive-compensation scheme. Eventually, the composition of the regulatory agency could change for the worse.

We do not discount these concerns. Social scientists have documented the crowding-out effect in experimental settings. We do not believe, however, the effect is necessarily universal or sufficiently well understood that experimentation with incentive compensation for regulators should be precluded.¹⁸³ Moreover, as described above, the federal government has already begun experimenting with financial incentives for regulators. Enormous pay raises have been implemented at several executive agencies. Bank regulators have received bonuses for good performance during the Financial Crisis. These examples suggest that public spiritedness and financial reward are not mutually exclusive, at least up to a point. Our innovation is to rely on market pricing and specific observable outcomes to set bonus pay, instead of relying on fiat. Ours is an incremental step designed to link such bonus programs more explicitly to proxies for the social welfare function of regulators, to make incentive pay more transparent and less subject to political, class, racial, or other biases, and to increase the sensitivity of such programs to performance.

Given our incremental approach, any selection effects from variability of pay are likely to be minor, at least in the early stages. More generally, the possibility that increased pay variability might change the mix of individuals opting to serve as examiners could be a good thing. Examiners screened by their commitment to the public interest were in fact insufficiently attentive to that interest during the Financial Crisis.¹⁸⁴ Accordingly, attracting individuals interested in a variable pay-for-social-

182. See Ernst Fehr & Armin Falk, *Psychological Foundations of Incentives*, 46 EUR. ECON. REV. 687, 688 (2002) (discussing interaction of economic incentives with intrinsic and social incentives); Uri Gneezy & Aldo Rustichini, *A Fine Is a Price*, 29 J. LEGAL STUD. 1, 14 (2000) (describing an experiment where the use of financial incentives led to worse performance by experimental subjects).

183. It may be, for example, that economic incentives may substitute for social incentives, but that nominal economic incentives may be too weak. Cf. Gneezy & Rustichini, *supra* note 182, at 14–15 (finding that nominal economic rewards and penalties led to worse performance).

184. See *supra* Part III.C.

performance compensation structure may be a beneficial change.

2. Insider Trading

As with any incentive scheme involving publicly traded securities, there is the possibility that security holders with access to nonpublic information will use that information to earn profits at the expense of those with access only to publicly available information. Our proposal to use phantom securities with fixed redemption dates reduces this problem to a great extent, since examiners enjoy no discretion as to the grant or sale of their incentive securities.

Given that examiner bonuses depend on positive market price movements, examiners may also be tempted at opportune moments simply to leak nonpublic information about the banks they oversee. While this is not an implausible scenario, examiners and other regulators already have incentive to misuse nonpublic information they obtain in the course of their work. For example, they may sell the information to traders. Or they may use accomplices to trade based on their private information. Work rules already restrict this misuse of information.

On the other hand, our proposal does increase the likelihood of misuse insofar as it confers upon regulators an economic interest in the market movements of certain bank securities that regulators might not have absent our proposal. To the extent our proposal increases the risk of insider trading or manipulation, agency heads may wish to augment prophylactic measures to detect and deter these forms of misbehavior. To be sure, this is not a new problem for financial regulatory agencies. We are confident that appropriate measures exist to address this concern.

B. NOISY PROXIES

A basic objection to our approach is that it simply won't work. Our market-based incentives may be too blunt to be effective. Even after adjustments for relative performance,¹⁸⁵ many important influences besides the regulator's input will affect the market pricing of the bank's debt and equity securities. Decisions by the CEO and senior officers, for example, will generally dwarf the regulator's influence over the bank's performance and the market price of its securities. If the regulator's decisions have little impact on the bank or the price of its securities, the argument goes, then our scheme will have weak if any incentive effects on regulators.

185. See *supra* Parts V.B.1 & V.B.3.

Moreover, though private firms often extend option compensation to rank-and-file employees, and not just executives, there is some debate as to whether broad-based option plans create effective performance incentives.¹⁸⁶ No matter how much harder they work, individual employees are not likely to be able to exert much influence on firm value. Given their individual small shares in their firms, they might rather freeride than increase their effort.¹⁸⁷

These potential obstacles to performance pay schemes in private firms should not detain us, however. Our situation is different. Regulators are not tasked with the general goal of increasing banks' value. Their charge is far more specific, and their incentive structure is more targeted. Regulators' charge is to guard against excessive bank risk taking, and our debt-heavy portfolio of phantom bank securities focuses regulators on that task. In a well-run bank that does not incur excessive risk, it may be true—as with rank-and-file employees in private firms—that examiners' ability to affect the value of the bank's securities and their own debt-heavy portfolios is weak or nonexistent. But that is as it should be. The regulator will not object that a bank is not pushing the risk envelope. Moreover, in that situation, the costs to the government of performance incentives are low, since the market value of the bank's debt will probably not move much. The bank's debt will enjoy a consistently low risk premium.

However, in the opposite scenario, when a bank pushes the risk envelope and the market value of its debt declines, examiners have personal financial incentives to respond.¹⁸⁸ This is the situation in which performance incentives cause the regulator's self-interest to correspond with social welfare interests: regulatory intervention matters for social welfare and performance incentives matter for the regulator. So unlike the

186. Compare John E. Core & Wayne R. Guay, *Stock Option Plans for Non-Executive Employees*, 61 J. FIN. ECON. 253, 260, 274 (2001) (finding results consistent with the use of options to offer performance incentives, as well as to attract and retain certain types of employees), and Semi Kedia & Abon Mozumdar, *Performance Impact of Employee Stock Options* 31 (Working Paper, 2002), available at <http://www.nvc.vt.edu/abon/eopt2.pdf> (same), with Paul Oyer & Scott Schaefer, *Why Do Some Firms Give Stock Options to All Employees?: An Empirical Examination of Alternative Theories*, 76 J. FIN. ECON. 99, 101, 118 (2005) (explaining broad-based option plans as mechanisms to sort employees and improve retention, but rejecting a performance-based incentives explanation).

187. Paul Oyer, *Why Do Firms Use Incentives that Have No Incentive Effects?*, 59 J. FIN. 1619, 1621 (2004) (noting the freerider problem among rank-and-file employees). See generally Armen Alchian & Harold Demsetz, *Production, Information Costs, and Economic Organization*, 62 AM. ECON. REV. 777, 786 (1972) (discussing free riding in the face of profit sharing when the production team is large). Firms may instead use broad-based option schemes to improve retention and employee sorting. See Oyer & Schaefer, *supra* note 186.

188. The equity piece of the regulator's portfolio guards against excessive risk aversion. See *supra* Part V.B.3.

scenario of broad-based performance incentives in private firms, regulators can anticipate the situation in which their intervention will matter a great deal. If that situation never comes to pass, all the better.

Even in a private firm, though a given rank-and-file employee's actions may not generally affect the value of the firm or the value of the employee's options, there may be specific situations in which the employee's input is crucial, though it may be difficult to predict *ex ante* which specific contributions by which employees will later be important.¹⁸⁹ Similarly, with banks and regulators, it may be that, especially during good times, regulatory action has little effect on most banks' value or the value of most banks' securities. However, when a bank strays, prompt and effective regulatory action may be critical to avoiding large losses in the future. For this bank and this regulator, the incentives may matter.

C. WHY NOT JUST IMPROVE BANK CEO INCENTIVES?

Given the existing learning on performance pay for executives, as well as post-Crisis proposals to modify bank CEO incentive pay to address excessive risk taking, one might fairly wonder why incentive compensation should extend to regulators. Why not just tinker with bank CEO compensation structure, as one of us has suggested?¹⁹⁰

By itself, adjustment of CEO incentive structures is unlikely to offer a complete solution to excessive bank risk taking. There are good reasons to doubt that a CEO could be ideally incentivized in such a way that regulatory effort would be unnecessary. Bank CEOs and regulators each have specialized functions. They play different roles, with different constituencies and different information sets. We could incentivize CEOs to act like regulators, but then there would be far less play for conventional corporate governance mechanisms to operate. The benefits of specialization would be lost.

CEOs and regulators both suffer from bounded rationality as well. So the conceptually optimal set of CEO incentives might either be too difficult to comprehend, or if simplified, might be blunter than could be achieved with the specialist regulator involved in affecting the CEO's behavior and the bank's behavior. Similarly, attempting to craft optimal CEO incentives in order to obviate the need for the regulator would require Herculean expertise on the part of the crafter of the incentive structure (presumably

189. Oyer & Schaefer, *supra* note 186, at 101 (noting that broad-based incentive compensation might make sense where employees' actions can have very large value implications for the firm).

190. See *supra* note 20 and accompanying text.

the regulator). By placing the risk brake firmly in the regulator's hands (instead of or in addition to the CEO's), this enables adjustments to bank risk policy no matter how the CEO's incentives are structured.

Moreover, regulator pay reform may offer more promise than banker pay reform. First, it is easier for government to change its own behavior and policies than to try to alter the pay practices of private enterprises.¹⁹¹ Resistance to the pay reforms proposed by the pay czar for a very limited number of TARP companies exemplifies the difficulties that banker pay reform proposals face.¹⁹² By contrast, we see no reason why the President or agency heads could not implement our proposal without much trouble. Of course, regulators would still have to cajole or coerce banks in order to affect regulatory policy, as compared to internal governance incentives for bank CEOs. We view this as the more promising strategy, however, given the demonstrated political resistance to government tinkering with executive pay.

Second, as compared to regulators, bank CEOs might more easily be able to nullify their debt incentives by simply passing their debt risk to third parties.¹⁹³ Monitoring and enforcement of bank CEOs' portfolio requirements are likely to be weaker than similar constraints on regulators, who are already subject to conflict-of-interest rules,¹⁹⁴ which could be adapted to prohibit hedging strategies that neutralize their incentive arrangements.

D. WHY NOT JUST IMPROVE EXAMINERS' INCENTIVES WITHIN THE AGENCY?

A natural reaction to our market-based approach might be to try less drastic, more incremental reforms first. The most obvious incremental reform would be to simply improve examiners' internal incentive structures within their agencies. Or perhaps agencies could improve their organizational cultures to overcome the regulatory inertia we observed during the Crisis. We have readily acknowledged the various moving parts to our market-based approach that would have to be ironed out over time with experience. Why undertake this wholesale change in examiner pay

191. See Tung, *supra* note 2, at 1247–51 (discussing implementation hurdles for banker pay reforms).

192. See *supra* note 17 and accompanying text.

193. For example, a put option on the CEO's debt holdings would effectively enable the CEO to transfer the debt risk to the option writer.

194. *E.g.*, 18 U.S.C. § 208 (2006) (prohibiting Executive Branch officers and employees, including the Federal Reserve, from decisionmaking affecting personal financial interests).

before less drastic measures have been tried?

Private firms, of course, use internal benchmarks to evaluate and reward employee performance, as well as market-based instruments like stock options. Internal benchmarking makes sense for private firms: certain necessary “support” functions within private firms—strategic planning or human resources or public relations, for example—do not contribute directly to the bottom line. External market-based measures may therefore offer poor indicators for employees’ performance in these areas.

Despite this insulation from market indicators, however, we harbor some faith that private firms can construct suitable internal evaluation criteria for their employees. Poor internal benchmarks would hurt firms’ overall performance and profits, perhaps even leading to their demise.

With government agencies, of course, no similar market pressure exists to correct poor internal benchmarking. Though the Crisis focused more intense congressional and public attention on bank regulatory agencies’ performance, the agencies continue to exist in the wake of the Crisis and examiners continue in their positions. We are not aware of any examiner or high-level regulator losing her job as a result of poor performance in the Crisis. The OTS was nominally eliminated under Dodd-Frank: it was forced to merge into the OCC after having presided over the massive failures of IndyMac Bank, AIG, and Washington Mutual.¹⁹⁵ Even there, the legislation goes to great lengths to assure that no OTS employees will actually lose their jobs or suffer a pay cut!¹⁹⁶ Each former OTS employee must enjoy the “same status and tenure” in her new job as the old.¹⁹⁷ We are therefore skeptical that rearranging internal performance metrics could offer a complete solution to the incentive problems we have identified.

Moreover, our market-based approach can offer real-time incentives to regulators that internal benchmarks cannot. Market metrics are likely to impound the effects of regulatory action exactly when that action matters

195. Cheyenne Hopkins, *OTS-OCC Merger Off to Ugly Start*, AM. BANKER, Oct. 12, 2010.

196. Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 322(e), 124 Stat. 1376, 1529–1535 (2010) (mandating that each transferred OTS employee shall be placed in a position at OCC “with the same status and tenure,” and each employee’s pay will be protected for thirty months following the transfer); Robert Schmidt & Phil Mattingly, *A Thrift Regulator Fades (Sort of) into the Sunset*, BUS. WK., Oct. 14, 2010, available at http://www.businessweek.com/print/magazine/content/10_43/b4200038824455.htm. This elimination of an agency is, of course, quite rare. The demise of OTS was not solely a result of its failings in the Financial Crisis. From its inception in 1989, many questioned the advisability of a separate regulator for thrifts, and calls for its merger into the OCC or FDIC have been around as long as the agency itself.

197. Dodd-Frank § 322(e); Hopkins, *supra* note 195.

most. For ordinary banking operations in normal times, a bank examination is unlikely to disturb the bank's existing business model or affect the market pricing of its public securities very much. However, with a troubled bank, investors will keep a close watch over the regulatory actions to which the bank is subjected, and the nature and effect of these actions will be reflected in the bank's securities prices.

E. INCREASED COMPENSATION COSTS

Some might worry that market-based pay will potentially increase the costs of compensating regulators. In boom years, for example, the value of some examiners' phantom bank debt and equity portfolios might balloon in value, independent of examiner performance. While this is certainly a possibility, the government can easily hedge against this risk. Most obviously, the government could hold debt and equity positions in banks that exactly match the phantom securities held by examiners, dollar for dollar. In this way, if the examiner's pay were to rise by \$100 as a result of an increase in a bank's value, the government's position would also rise by \$100, resulting in no effective increase in compensation costs.

One may object to the government taking ownership stakes in banks, but this objection is not difficult to overcome. For one, the government could take nonvoting stakes or contract away its voting interest in any shares. Moreover, given the relatively small amounts of compensation involved, the government stakes would be miniscule. Any ownership influence the government might have would pale in comparison with the other avenues by which it influences banks.

Derivatives and other synthetic instruments could address this problem as well by simply replicating expected payouts under our compensation scheme. Such instruments would not be difficult to create and would avoid any government ownership stake in any bank. For instance, the government could buy call options on bank stocks and debt securities. Because such a call option locks in the price at which the government may purchase a bank's stock or debt in the future, this approach completely hedges the government's exposure to future appreciation in the bank's securities.¹⁹⁸ Importantly, options do not confer control rights or other complications of government involvement with

198. A call option entitles the holder to buy a specified security at a predetermined price—the "strike price"—for a specified period. Assuming the government purchases at-the-money call options with the same duration as the phantom securities used for examiner compensation, the government's hedging expense would be limited to the initial cost of the options.

private firms.¹⁹⁹

F. INCENTIVIZING THE RIGHT PEOPLE

A final potential objection is that our focus on bank examiners may be incomplete because examiners constitute only one link in the supervisory chain of command. There may be something to this objection. After all, private firms deploy incentive compensation not just for the CEO, but for decisionmakers at many levels in the hierarchy.

In the context of bank regulation, our proposal focuses on examiners, but individuals both higher and lower in the hierarchy may also play important roles in bank supervision. Their performance might also improve with incentive pay. Line examiners provide crucial inputs to large and complex examinations, while higher-ups—an Assistant Deputy Comptroller or Deputy Comptroller for Large Bank Supervision, for example²⁰⁰—may have ultimate decisionmaking authority on how to implement examiners' conclusions.²⁰¹ The incentive mechanisms we describe could be used for all of these individuals, though additional considerations must be addressed before deploying these mechanisms for higher-ups.

Higher-level bank regulators typically have oversight responsibilities for multiple banks. While incentivizing these regulators with public debt and equity securities of the multiple banks they regulate might create useful incentives, possibilities for strategic behavior abound. A regulator holding a portfolio of banks' securities may be incentivized to maximize the overall value of her portfolio, instead of improving the value of each bank. She might decide, for example, to focus all her attention on the bank in her portfolio that she believes holds the highest potential for appreciation. Or more perversely, she might even sacrifice the value of one bank for a larger increase in the value of another bank in her portfolio.

Incentive pay could be structured to discourage this kind of opportunism. For instance, a higher-level regulator's portfolio of phantom securities of multiple banks might be more debt-heavy than the portfolio of an examiner responsible for only one bank. This debt emphasis would

199. The government could also purchase swap contracts to mimic the requisite cash flows from phantom stock and debt appreciation.

200. See *supra* note 50 and accompanying text.

201. Incentives might also be appropriate for FDIC officials responsible for resolving failed institutions, since their actions also have important consequences for the severity of government losses from bank failures. See *supra* Part V.C.1.

magnify the effect of losses on the regulator's incentive pay, which would encourage her diligent monitoring of all the banks under her supervision and discourage her from attempting to pick favorites from among the banks. More sophisticated indexing approaches could also be devised.

Agency heads are likely best positioned to identify the employees for whom incentive compensation holds the most promise. In general, the potential benefits of performance pay would seem greatest for individuals with wide discretion and important decisionmaking authority in the supervision process. Our review of bank failure reports and banking supervision handbooks leads us to identify examiners as promising candidates. We leave it to agency heads to work out over time whether our pay-for-performance approach should be expanded up and down the hierarchy.

Differential eligibility for incentive pay within an organizational hierarchy may create unintended side effects in terms of promotion and career progression. For example, examiners who receive bonuses might not be interested in promotion to higher-level jobs where incentive compensation is lower or nonexistent. While this is an issue to manage, it is not uncommon. As noted above, firms often pay sales people with high-powered incentive compensation that creates similar problems. Similarly, securities and commodities traders typically enjoy high-powered incentive pay that their supervisors do not. Even hourly workers may hesitate to accept promotion to salaried supervisory positions, since accepting the salaried job often forsakes overtime pay. Among regulators, one would expect some efficient sorting, with regulators with different skills sorting into positions based on their preferences and comparative advantages.

VII. CONCLUSION

There is no reason we can think of why regulators are not paid for performance. The crucial issues are whether one can identify what "good" and "bad" performances are, whether contracts can be written *ex ante* that operationalize these metrics, and whether the potential negative effects from introducing a pay-for-performance culture for regulators outweigh the potential efficiency gains. We have argued that bank regulation is an area where there are readily available metrics, where plausible contracts or payment schedules could be devised, and where the potential for crowd out or other downsides from incentive pay are limited.

Accordingly, we propose that bank examiners be paid in part with a mix of debt-heavy incentives linked to bank equity and debt values. This

pay should represent a substantial but not dominant part of examiner pay, should be paid out over a number of years, and should adjust in order to maintain incentives aligned with the regulatory mission of ensuring that bank risk taking is aligned with the social welfare.

Although seemingly radical, our proposal is consistent with recent moves by regulators to pay bonuses for good work and to generally increase the quality and efficiency of regulation. It is also consistent with laws and academic proposals to alter bank CEO pay to take greater account of the social component of bank losses. Our contribution is to merely point out that regulator incentives are an overlooked but crucial factor affecting bank risk taking, and that improving the social performance of banks and the banking system requires a consideration of the incentives not only of bank CEOs but also of bank regulators. Insofar as we can improve the efficiency of government regulators, we need to worry less about the structure of private incentives, which are further from the control of government.

APPENDIX

TABLE 1.

<i>Bank</i>	<i>Assets</i>	<i>Net Income</i>
	<i>(USD, in thousands)</i>	
JPMORGAN CHASE BANK, NATIONAL ASSOCIATION	1,791,060,000	5,584,000
BANK OF AMERICA, N.A.	1,454,050,584	3,992,093
CITIBANK, N.A.	1,216,291,000	1,863,000
WELLS FARGO BANK, NATIONAL ASSOCIATION	1,104,833,000	6,011,000
U.S. BANK NATIONAL ASSOCIATION	310,099,589	2,163,131
PNC BANK, NATIONAL ASSOCIATION	254,825,730	1,418,646
THE BANK OF NEW YORK MELLON	236,330,000	712,000
HSBC BANK USA, NATIONAL ASSOCIATION	195,101,367	617,668
FIA CARD SERVICES, NATIONAL ASSOCIATION	187,296,365	3,485,229
STATE STREET BANK AND TRUST COMPANY	185,499,369	912,779
TOTALS	6,935,387,004	26,759,546
as % of BHC	0.612624313	1.307336535

Note: All bank data is available at the FFIEC Search Page, <https://cdr.ffiec.gov/public/> (last visited Mar. 31, 2011).

TABLE 2.

<i>BHC</i>	<i>Assets</i>	<i>Net Income</i>
	<i>(USD, in thousands)</i>	
JPMORGAN CHASE & CO.	2,198,161,000	5,555,000
BANK OF AMERICA CORPORATION	2,276,418,250	2,049,141
CITIGROUP INC.	1,947,815,000	2,999,000
WELLS FARGO & COMPANY	1,244,666,000	3,759,000
U.S. BANCORP	311,462,000	1,046,000
PNC FINANCIAL SERVICES GROUP, INC.	259,500,612	837,547
BANK OF NEW YORK MELLON CORPORATION,	266,571,000	625,000
HSBC NORTH AMERICA HOLDINGS INC.	369,534,704	1,078,313
BANK OF AMERICA CORPORATION	2,276,418,250	2,049,141
STATE STREET CORPORATION	170,236,334	470,609
TOTALS	11,320,783,150	20,468,751

Note: All BHC Data is available at National Information Center Top 50 BHC Page, www.ffiec.gov/nicpubweb/nicweb/Top50Form.aspx (last visited Mar. 31, 2011).