

2011

Pay for Regulator Performance

M. Todd Henderson

Frederick Tung

Follow this and additional works at: https://chicagounbound.uchicago.edu/law_and_economics



Part of the [Law Commons](#)

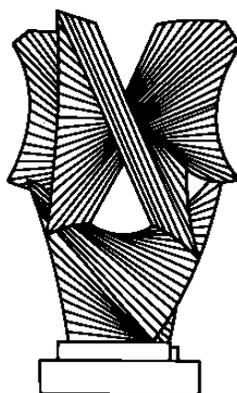
Recommended Citation

M. Todd Henderson & Frederick Tung, "Pay for Regulator Performance" (John M. Olin Program in Law and Economics Working Paper No. 574, 2011).

This Working Paper is brought to you for free and open access by the Coase-Sandor Institute for Law and Economics at Chicago Unbound. It has been accepted for inclusion in Coase-Sandor Working Paper Series in Law and Economics by an authorized administrator of Chicago Unbound. For more information, please contact unbound@law.uchicago.edu.

CHICAGO

JOHN M. OLIN LAW & ECONOMICS WORKING PAPER NO. 574
(2D SERIES)



Pay for Regulator Performance

M. Todd Henderson and Frederick Tung

THE LAW SCHOOL
THE UNIVERSITY OF CHICAGO

September 2011

This paper can be downloaded without charge at:
The Chicago Working Paper Series Index: <http://www.law.uchicago.edu/Lawecon/index.html>
and at the Social Science Research Network Electronic Paper Collection.

PAY FOR REGULATOR PERFORMANCE

M. Todd Henderson and Frederick Tung*

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 equity and debt, as well as a separate bonus linked to the timing of the decision to shut down a bank. Our pay-for-performance approach for regulators would help reduce the incidence of future regulatory failures.

* Professor of Law, University of Chicago School of Law (toddh@uchicago.edu); and Howard Zhang Faculty Research Scholar and Professor of Law, Boston University School of Law (fredtung@bu.edu), respectively. For helpful comments, we are grateful to Robert Bench, Chris Brummer, Abe Cable, John Crawford, Saul Levmore, Susan Morse, Amanda Rose, Larry Ribstein, David Walker, and Charles Whitehead, as well as workshop participants at the 2011 Roger Traynor Summer Professorship Program at Hastings College of the Law. Osama Hamdy, University of Chicago School of Law '12, provided excellent research assistance.

DRAFT AUGUST 24, 2011

TABLE OF CONTENTS

I.	Introduction	1
II.	Regulators' Pay and Its Discontents	8
	A. A Short History of Performance Pay for Regulators.....	9
	B. Toward Regulator Pay for Performance.....	10
III.	Regulators' Pay and the Great Financial Crisis	13
	A. What Bank Regulators Do.....	14
	1. The Bank Examination Process	14
	2. Regulators' Power over Banks	18
	B. Regulatory Failure in the Financial Crisis.....	20
	1. Anatomy of a Regulatory Failure	20
	2. Silver State Bank	22
	3. Washington Mutual.....	24
	C. A Public Choice Account.....	26
	1. Pay for Bureaucratic Performance	27
	2. Bureaucratic Incentives.....	28
	3. Summary	30
IV.	Incentivizing Regulators	32
	A. A Theory of Incentive Pay for Bank Regulators.....	33
	B. Mapping Incentive Pay for Regulators.....	35
	1. Performance Pay for Bankers	35
	2. Performance Pay for Regulators	38
	C. How Much Incentive?	40
	1. Regulator Risk Aversion.....	41
	2. Regulator Self-Selection	42
	D. Potential Ancillary Benefits	42
V.	The Structure of Performance Pay for Regulators	45
	A. The Debt-Equity Portfolio.....	46
	B. Structuring the Debt-Equity Portfolio	48
	1. Bank Debt Incentives.....	49
	2. Subordinated Debt versus CDS	53
	3. BHC Equity.....	54
	4. The Appropriate Mix of Debt and Equity.....	55
	C. The Shutdown Decision	56
	1. Why a Special Shutdown Bonus?	57
	2. Calculating the Bonus.....	58
	3. Additional Considerations	60
VI.	Qualifications and Objections.....	62
	A. Strategic and Perverse Incentives.....	62
	1. Crowding Out the Public Interest	62
	2. Insider Trading.....	63

DRAFT AUGUST 24, 2011

B. Noisy Proxies 64
C. Why Not Just Improve Bank CEO Incentives? 65
D. Why Not Just Improve Examiners’ Incentives within the Agency? 66
E. Increased Compensation Costs 67
F. Incentivizing the Right People 68
VII. Conclusion 70

DRAFT AUGUST 24, 2011

Why did the [regulatory] system fool itself?[†]

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.¹ 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. 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.² We assert that bank regulators' pay is not high-powered *enough* and therefore, ironically, 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 in-

[†] Ellen Seidman, former head of the Office of Thrift Supervision.

¹ See Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 1011(a), 124 Stat. 1376, 1964 (2010). See also Sanjai Bhagat & Roberta Romano, *Reforming Executive Compensation: Focusing and Committing to the Long-Term*, 26 YALE J. ON REG. 359 (2009); Lucian A. Bebchuk & Holger Spamann, *Regulating Bankers' Pay*, 98 GEO. L. J. 247 (2010); Patrick Bolton, et al., *Executive Compensation and Risk Taking*, FRB of New York Staff Report No. 456 (June 2010); Rudiger Fahlenbrach & Rene M. Stulz, *Bank CEO Incentives and the Credit Crisis*, 1 J. FIN. ECON. __ (2010); Frederick Tung, *Pay for Banker Performance: Structuring Executive Compensation for Risk Regulation*, 105 NW. U. L. REV. _ (forthcoming 2011); Frederick Tung and Xue Wang, *Bank CEOs, Inside Debt Compensation, and the Global Financial Crisis*, Working Paper (2011).

² Taxpayers bear the ultimate responsibility for failed banks, either from explicit insurance 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.2

crease social welfare.³

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 the debt and equity securities of the banks they regulate,⁴ as well as a bonus related to the timing of the decision to shut down a bank. 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.

While the idea of incentive pay could be generalized to higher-level bank regulators (and incentive pay may be needed there as well),⁵ for logistical reasons,⁶ our specific proposal centers on bank examiners. 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. This permanent examiner and the large bank she supervises are our focus.⁷ Examiner incentive pay should

³ See Part ____, *infra*.

⁴ As described below, *see infra* note ____, 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.

⁵ See *infra* Part VI.F (discussing the possible application of our proposal to higher-level regulators).

⁶ 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 the regulator. For example, she may be tempted to favor the most promising bank over others, instead of minding the safety and soundness of each bank. *See id.*

⁷ 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 con-

(continued next page)

be calibrated based on the performance of the regulated bank's debt and equity securities,⁸ as well as the shutdown bonus mentioned earlier.

There may be ways to extend the approach to higher-level regulators. Given the novelty of our proposal, however, 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.¹⁰

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

text 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 III.A.

⁸ More precisely, 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.3.

¹⁰ 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.

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.

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.¹¹ 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.¹² 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.¹³ Defending regulators' existing incentive structure seems quite problematic after the Crisis.

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 bal-

¹¹ See *infra* Part VI.A.1.

¹² 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 75 and accompanying text.

¹³ See *infra* note 47 and accompanying text.

ance 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 holding phantom bank stock) 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.¹⁴ Examiners holding (phantom) 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 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 will be key to achieving the appropriate types and levels of examiner activity.

In any event, the role of the regulator would subtly change from being antagonistic to being cooperative, since the examiner shares in the bank's gains and losses. Just this change in orientation could have profound effects on the nature of bank regulation. An added benefit is that our approach incentivizes examiners to marshal the private information they learn on the job to not only improve their own compensation but to reveal it to the market, albeit indirectly, by taking action when necessary to curb excessive risk taking at the bank. The market will be fooled less often because of examiners' incentive to act promptly when signs of trouble arise.

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).¹⁵ The Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank) adopted several reform proposals targeting banker pay. For exam-

¹⁴ The debt component of this incentive pay helps to ensure that risk taking internalizes the expected social costs of insurance.

¹⁵ Aaron Lucchetti, David Enrich & Joann S. Lublin, *Fed Hits Banks with Sweeping Pay Limits*, WALL ST. J. A1 (Oct. 23, 2009).

ple, “say on pay” provisions require banks (along with other public companies) to conduct regular advisory shareholder votes on executive pay.¹⁶

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.¹⁷ One of us has argued elsewhere that a better approach would be to pay bankers with subordinated debt of their banks.¹⁸ 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 greater focus on avoiding losses under our approach than CEOs would have under these 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.

Though the reform of regulator pay and bank CEO pay are not mutually exclusive, our proposed regulator pay reform offers three potentially significant advantages over proposed banker pay reforms. First, it is easier for government to change its own behavior and policies than to try to alter the pay practices of private en-

¹⁶ See Dodd-Frank, *supra* note 1, Pub. L. No. 111-203, § 1011(a), 124 Stat. 1376, 1964 (2010). In addition, banks must disclose incentive-based compensation tied to financial outcomes 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.* at __. The policy must require return of incentive payments that would not have been awarded under the restated financial statements. The penalty for noncompliance is delisting. 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.

¹⁷ See Bebchuk & Spamann, *supra* note 1 at 1.

¹⁸ See Tung, *supra* note 1.

terprises.¹⁹ 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 will face. Although some regulators might not be happy with our approach, we know of no reason why the president or agency heads could not implement it without much trouble. With external regulation, as opposed to internal governance incentives for bank CEOs, regulators would still have to cajole or coerce banks in order to effect regulatory policy. We view this as the more promising strategy, however, given the demonstrated political resistance to government tinkering with executive pay.

Second, bank CEOs might be able to end run around any requirement to hold debt by simply contracting with third parties to unwind their debt incentives.²⁰ As long as the monitoring and enforcement of bank CEOs' portfolio requirements are imperfect, the optimal compensation contract will not be achieved.²¹ 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.

Third, the potential error costs from miscalibrating pay requirements will be lower with regulator pay reforms. Agency heads presumably have better information about their own employees and agency than they have about banks. They can therefore be expected to make fewer mistakes when setting compensation policies for their own employees than for bank CEOs. Course corrections will also be easier to implement as needed.

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. Conceptually, the claim is deceptively modest: pay should be linked with performance, in government as it is in the private sector. The key is finding metrics for measuring "good" and "bad" performance in government, and de-

¹⁹ *See id.* at __ (discussing implementation hurdles for banker pay reforms).

²⁰ 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.

²¹ End runs by regulators are likely to be more difficult, since regulators are already subject to conflict-of-interest rules, which could be adapted to prohibit hedging strategies that neutralize their incentive arrangements.

ploying 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 the inevitable problem arises 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.

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 discussion 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 in law enforcement.²² Others extended the argument, developing various economic models demonstrating the potential efficiency gains from introducing market-based incentives in the compensation of government officials.²³ Susan Rose-Ackerman authored an important contribution in support of this idea, noting that regulators need to be both competent and motivated. She pointed out how economic incentives could do important work in providing motivation. Importantly, she explored the delicate trade-offs implicated by the deployment of market-based incentives in bureaucratic environments.²⁴

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.²⁵ Summarizing pay practices of publicly traded companies at the time, they concluded that "corporate America pays its most important leaders like bureaucrats,"

²² Gary Becker & George Stigler, *Law Enforcement, Malfeasance and Compensation of Enforcers*, 3 J. LEG. STUD. 1 (1974).

²³ 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 (1978). 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*, Working Paper.

²⁴ See Susan Rose-Ackerman, *Reforming Public Bureaucracy through Economic Incentives?*, 2 J. L. ECON. & ORG. 131 (1986).

²⁵ See Michael C. Jensen and Kevin J. Murphy, *CEO Incentives—It's Not How Much You Pay, But How*, HARV. BUS. REV. (May/June 1990).

instead of owners. They advocated for a dramatic increase in the use of stock option compensation.²⁶ 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,²⁷ 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 the regulator 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. In fact, the banker pay reforms discussed above have traction because they propose a social welfare component for banker pay. These lessons can be applied to regulator pay as well.

B. Toward Regulator Pay for Performance

Our regulatory incentive compensation proposal borrows not only from the neglected economics literature of the past. It 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 DOT employee earned a salary exceeding \$170,000 at the start of the recession. Eighteen months later, that number had ballooned to 1,690 employees. The number of civilian employees in the Defense Department earning \$150,000 or

²⁶ *Id.*

²⁷ 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).

more jumped from 1,868 in December 2007 to 10,100 in the succeeding eighteen months.²⁸

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.²⁹ While such pay increases may be important in attracting talented people, paying more does not by itself generate optimal incentives. If it did, the problem of CEO pay identified by Jensen and Murphy would not have existed. 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.³⁰ In 2006 alone, the FDIC gave bonuses to 2000 bank examiners.³¹

There are, however, several shortcomings to this very modest move toward pay for regulator performance. 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.³² Second, the use of ex post bonuses, even if

²⁸ See http://www.usatoday.com/news/washington/2009-12-10-federal-pay-salaries_N.htm.

²⁹ Top ministers paid \$1.3 million in 2007. Paid 2/3 of median of top 8 professionals in several top fields. See <http://www.nytimes.com/2007/04/09/world/asia/09iht-sing.3.5200498.html>.

³⁰ See Matt Apuzzo, “Government Bank Regulators Got Big Bonuses,” *AS-SOC. PRESS*, available at http://www.huffingtonpost.com/2010/03/18/government-bank-regulator-bonus_n_503712.html.

³¹ *Id.*

³² 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.*

tightly linked with performance, 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. 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, and so on. The linkage between bonuses and conduct that maximizes social welfare may therefore be tenuous.³³ 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, 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.³⁴

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.

³³ A recent audit of the SEC by the OIG shows the general nature of the problem. See “Audit of SEC’s Employee Recognition Program and Recruitment, Relocation, and Retention Incentives,” Office of Inspector General, Office of Audits, Aug. 2, 2001, available at <http://www.sec-oig.gov/Reports/AuditsInspections/2011/492.pdf>. The report details numerous flaws in the agency’s current compensation practices. For instance, the SEC paid a bonus to an employee who “who played a key role in the investigation that failed to uncover Bernard Madoff’s massive long-running Ponzi scheme.” See BNA, “OIG Audit Spurs Changes to Plan For Employee Recognition, Recruitment,” [cite needed].

³⁴ Claw-back rules for regulators similar to the Dodd-Frank provision would be one way of reducing this bias.

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 general 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 the identified problems.³⁵ 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 their mission is to avoid losses to the federal deposit insurance fund, 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

³⁵ See, e.g., Report of the Office of Inspector General, Federal Deposit Insurance Corporation, March 2009, "Material Loss Review of Silver State Bank, Henderson, Nevada," ("Silver State Report") ("[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 FDIC Report, "An Examination of the Banking Crises of the 1980s and Early 1990s," ("FDIC Report") available at www.fdic.gov/bank/historical/history/421_476.pdf at 24 ("[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.").

hassle, less political pushback, and less risk, all for the same wage and career results.

To see how this problem manifest 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 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 Office of the Comptroller of the Currency (OCC) supervises national banks; the Federal Reserve (Fed) supervises state member banks and bank holding companies, and the Federal Deposit Insurance Company (FDIC) supervises state non-member banks and FDIC-insured savings banks.³⁶ 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. 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.³⁷ Importantly, the senior

³⁶ See FDIC Report, *supra* note 35 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. *Id.*

³⁷ The resources can be quite extensive. For example, the equivalent of 20 full-time employees were involved in the supervision of WaMu. See also FDIC Report, *supra* note 35 at 464.

bank examiner leading the team is delegated tremendous authority over the examination and the regulated bank.³⁸

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 (DLCBS). A DLCBS “[e]valuates and approves the EIC’s recommendations, including regulatory ratings and risk assessments” and “[a]pproves the supervisory strategy for each bank.”³⁹

The examination typically occurs once per year.⁴⁰ The process lasts from weeks to months, depending on the size and complexity of the bank, its assets, and operations. The supervision of Washington Mutual (WaMu), one of the larger supervised banks under the Office of Thrift Supervision (OTS), included annual examinations from 2003 to 2008 averaging about 200 days. Reported hourly work data show that the equivalent of 20 full-time examin-

³⁸ Bank examiners responsible: “This examiner has full responsibility for supervision of the entire examination process.” *Id.* at 463.

³⁹ *Id.* at 10-11. DLCBSs 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.” See Comptroller of the Currency, “Bank Supervision Process: Comptroller’s Handbook,” (Sept. 2007) at 9-10. 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.

⁴⁰ 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. This policy stood until 1974, when the OCC moved toward off-site examinations using statistical methods, and the average examination schedule was more like 18 months. With the passage of the FDICIA, on-site examinations were required by law. By the late 1980s, resident examiners were placed in the largest multinational banks, and by the 1990s, larger regional banks also got resident examiners. See FDIC report. 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. 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.” FDIC Report at ___.

ers or assistants of various kinds was devoted to supervising this one bank.⁴¹

The 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.⁴² Throughout this multistage process,⁴³ 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.

The power of bank examiners is seen in the details of the examination process. Examiners make local judgments about the credit quality of each asset. These assets are then discussed with loan officers and bank managers. Examiners then make final determinations (effectively unreviewable) about how to classify particular loans for input into a final supervisory rating.⁴⁴ 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. In addition, examiners assess the adequacy of capital and reserves, sensitivities to liquidity and interest rate shocks, the activities of insiders, the behavior and impact of subsidiaries and affiliates, risks from litigation, and the costs and benefits of off-balance-sheet activities.

All of these fact-based judgments go into determining the bank's CAMELS rating, which is the single metric used by regulators to capture safety and soundness. 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

⁴¹ See Dept. of Treasury, Offices of Inspector General, "Evaluation of Federal Regulatory Oversight of Washington Mutual Bank," Report No. EVAL-10-002, Apr. 2010 ("WaMu Report").

⁴² FDIC Report, *supra* note 35 at 464.

⁴³ 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. FDIC Report, *supra* note 35 at 463.

⁴⁴ 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. See *id.*

market risk – and then assign a composite score.⁴⁵ 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.⁴⁶

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. 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. To the extent problems have been identified, examiners are usually looking for commitments from individuals or the entire board to strengthen the bank’s condition by taking corrective actions.

Importantly, it is only when the bank has deteriorated significantly, say to CAMELS rating 4 or 5, that regulatory higher-ups would be involved in the meetings with the board of directors. To get a sense of how rare this might be, WaMu kept its overall CAMELS rating of 2 until September 19, 2008; it failed six days later.⁴⁷

The overall goal of on-site review is to “identify the risk of failure in troubled institutions in sufficient time for supervisors to take corrective action.”⁴⁸ Recent bank failures discussed below illustrate that examinations may fail woefully in this pursuit. The other tool available to examiners is a follow-up enforcement action, which is designed to “control the risk-taking behavior of problem banks after they have been identified.”⁴⁹ This action 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 other high-risk

⁴⁵ All scores are reported, so a typical rating would look like this: 22122/2. *See id.*

⁴⁶ *See* OTS Examination Handbook, Section 070, pages 070A.3 & .4.

⁴⁷ *See* WaMu Report, *supra* note 43 at 18; Robin Sidel, et al., “WaMu is Seized, Sold Off to J.P. Morgan, In Largest Failure in U.S. Banking History,” *WALL ST. J.*, Sept. 26, 2008, available at <http://online.wsj.com/article/SB122238415586576687.html>.

⁴⁸ FDIC Report, *supra* note 35 at 439.

⁴⁹ WaMu Report, *supra* note 43 at ___.

strategies, which reward shareholders if successful, but place losses primarily with creditors or the government if unsuccessful.⁵⁰ Follow-up enforcement therefore offers a sensible regulatory tool. Unfortunately, regulators failed here as well.⁵¹

2. *Regulators' Power over Banks*

Regulators have tremendous power to influence bank decision making. Much of the actual power resides with bank examiners. For example, 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 a written commitment to take corrective action.⁵²

When things deteriorate to a CAMELS rating of 4 or 5, as earlier noted, higher-level regulators typically become involved, taking formal legal actions that are enforceable in the courts.⁵³ Although ultimate authority to enforce legal sanctions and modifications to bank activity resides at administrative levels above the

⁵⁰ FDIC Report, *supra* note 35 at 439. This of course is the classic asset substitution problem for creditors.

⁵¹ *See infra* Part III.C.2.

⁵² This written commitment commonly comes in the form of a board resolution creating a Memorandum of Understanding between the bank and the regulator. *See* FDIC Report, *supra* note 35 at ____.

⁵³ *See id.* at 441. These include mandatory asset sales, sales of new equity or debt, cease-and-desist orders, suspension or removal of officers and directors, and civil penalties. *Id.* at 441-42. 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)) 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. Historically, many formal actions were taken pursuant to section 8 and other laws, such as the Prompt Corrective Action rules. *See id.* at ___, Table 12.6. From 1980 to 1995, nearly 2400 formal actions were taken. Most were cease-and-desist orders under section 8(b) (1485 of these), termination of insurance under section 8(a) (394 of these), and removal of officers or directors under section 8(e) (369 of these). *See id.*

bank examiner, even in that situation, examiners wield enormous influence because they control the inputs into this decision making 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.

Given examiners' crucial gatekeeper role, as a practical matter, they enjoy effective power to improve capital, levy fines, remove management, restrict dividends and other inappropriate funds transfers, and restrict riskier lending and excess asset growth.

Not only do bank examiners and regulators have tremendous authority over a range of bank decisions, but they control the scope and intensity of the regulatory process as well. Regulators enjoy enormous discretion over critical decisions in the supervisory process.⁵⁴ They have wide latitude to decide, among other things, the amount of resources to devote to a particular examination,⁵⁵ 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 risk assets within a given bank; how to weight particular geographic concentrations of banks or assets;⁵⁶ how to

⁵⁴ Consider the decision whether to shut down a failing bank, for example. Statutes generally limit shutdown to "insolvent" banks. But the definition of insolvency is left to the discretion of the regulator. A report on bank failures noted that the OCC "had wide latitude to define insolvency and could have adopted a more flexible standard than it did" FDIC Report, *supra* note __ at 457.

⁵⁵ "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. FDIC Report, *supra* note 35 at 17.

⁵⁶ 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. See FDIC Report at 456. For a more complete discussion of the issue of examination frequency in Texas and the Southwest during the 1980s, see O Keefe, THE TEXAS BANKING CRISIS, 14. During the recent Financial Crisis, loan losses in California, Florida,

(continued next page)

extrapolate from past 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.⁵⁷ 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 post-mortem 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, the reports do not conclude this shock was sufficient to explain bank failures. One report explains: "Although the deterioration in the bank's financial condition was severe in 2008, the underlying risks were evident in the preceding years."⁵⁸ 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

Nevada, and several other states account for the bulk of the original losses that led to downgrades of mortgage-backed securities. *See* [cite needed].

⁵⁷ Bank chartering authorities also have the power to appoint a conservator or receiver, and the FDIC has the power to terminate or suspend deposit insurance.

⁵⁸ Silver State Bank Report, *supra* note 35 at 31.

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.”⁵⁹

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 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 inspector general of the Treasury Department concluded: “examiners did not identify or sufficiently address the core weaknesses that ultimately caused the thrift to fail until it was too late.”⁶⁰ 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. The post-mortem on the \$2.5 billion collapse of NetBank is typical of this type of regulatory failure. According to the Treasury Department inspector general, the Office of Thrift Supervision “did not react in a timely and forceful manner to certain repeated indications of problems.”⁶¹ A similar lapse preceded the \$2 billion failure of ANB Financial. The regulator – the Office of the Comptroller of Currency – “did not issue a formal enforcement action in a timely

⁵⁹ FDIC Report, *supra* note 35 at ____.

⁶⁰ See Office of Inspector General, Department of the Treasury, Audit Report, Safety and Soundness: Material Loss Review of IndyMac Bank, Feb. 26, 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.” 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.

⁶¹ See Apuzzo, “Government Bank Regulators Got Big Bonuses,” *supra* note 30 .

manner” after the bank began to suffer losses and experience distress.⁶²

The general sense one gets from reading the failure reports is that the regulators engaged in more box-checking and paper work than aggressive oversight. For instance, WaMu’s regulator did not “formally track the status of examiner recommendations and [required] corrective actions.”⁶³ 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.⁶⁴ A typical report concluded:

We found that *bank management did not effectively implement key examiner recommendations over several examination cycles* regarding such 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.⁶⁵ (emphasis added).

A more in-depth examination of two failures offers context for our incentive pay proposal.

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, as well as obliterating over \$20 million in uninsured deposits.⁶⁶

⁶² Id.

⁶³ WaMu Report, *supra* note 43.

⁶⁴ Silver State Bank Report, *supra* note 35 at ___.

⁶⁵ Id at 30.

⁶⁶ See Jake Bernstein and A.C. Thompson, “The Small Bank Bust,” PRO-PUBLICA, Jan. 26, 2009, available at <http://www.propublica.org/article/the->

(continued next page)

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. 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."⁶⁷

The supervisory problem was not a lack of understanding but of action: "[W]hen needed, a more progressively stringent supervisory tone was not presented in the [reports of examinations], and actions were not taken."⁶⁸ 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."⁶⁹

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 analysis,⁷⁰ the inspector general concluded that the bank collapsed not because examiners did not know about the problems,⁷¹ but be-

[small-bank-bust-090126](#).

⁶⁷ Silver State Bank Report, *supra* note 35 at ___.

⁶⁸ "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 ___.

⁶⁹ *Id* at ___.

⁷⁰ *See id* at ___ (noting that examiners failed "to recognize and/or analyze risk, set a proper tone in the [examination reports]; appropriately consider risk in CAMELS ratings; ensure that proper controls and risk limitation and/or mitigation strategies were established and appropriately implemented; identify in a timely manner [the bank's] increasing risk profile, including concentrations in targeted market areas, as a potential concern; and deal assertively with bank management on examination findings and recommendations.").

⁷¹ The examiner's reports recommended numerous improvements and corrective actions: It "recommended that bank management improve its measuring,

(continued next page)

cause 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.⁷²

3. *Washington Mutual*

The failure of WaMu tells a similar story. WaMu was the largest financial institution supervised by the Office of Thrift Supervision.⁷³ 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. 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.⁷⁴ 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, examiners spent over 100,000 hours over 400 days

monitoring, and reporting of concentrations; internal routines and controls; loan underwriting and administration; . . . compliance with the FDIC's Rules and Regulations . . . improve the monitoring and reporting of its economic environment and the policies and procedures covering interest reserve loans." *See id* at

—⁷² Although some doctors, like the fictional Dr. House on the eponymous Fox television program, undoubtedly diagnosis 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.

⁷³ 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. WaMu Report, *supra* note 43 at 16-17.

⁷⁴ *Id* at 8.

pouring over WaMu's assets and operations.⁷⁵ As early as 2003, bank examiners had reported significant deficiencies in WaMu's underwriting process for residential loans, its core loan activity.⁷⁶ 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. Over the next several years, examiners repeatedly criticized WaMu for its underwriting practices and overly risky incentive structures.⁷⁷ Examiners made nearly 1000 formal criticisms and recommendations during this period. 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.⁷⁸ 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."⁷⁹

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]."⁸⁰

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."⁸¹

⁷⁵ See id at __, Table 5.

⁷⁶ See id at ____.

⁷⁷ See id at ____.

⁷⁸ See id at 19-20, Table 7.

⁷⁹ Id at 21-22.

⁸⁰ Id at ____.

⁸¹ Id at ____.

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 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."⁸² 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.⁸³

The WaMu examination process was emblematic of the regulatory failures of the Financial Crisis. As with the failure 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.⁸⁷

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 noninterven-

⁸² Id at __.

⁸³ Given this specific guidance, the significance of single family residential lending to WaMu's business, and the OTS's repeated warnings on asset quality that WaMu management seemingly ignored, it is difficult to understand how examiners could allow WaMu a satisfactory asset quality 2-rating for so long. Assigning a satisfactory rating to unsatisfactory conditions 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.

⁸⁷ See *id.* at __ ("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.").

tion, in the face of specific policy guidance to the contrary? The answer is incentives.⁸⁴

1. *Pay for Bureaucratic Performance*

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. 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.⁸⁵

⁸⁴ 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 WaMu Report, *supra* note 43, at 17, Table 5. Examinations averaged about 150 days in length and were conducted by the equivalent of 20 full-time employees. See *id.* at ___ (based on the data in Table 6).

⁸⁵ Cite Keating Five.

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

2. *Bureaucratic Incentives*

In a simple model, examiners will act when the expected personal benefits of their actions exceed the expected costs. With a fixed salary independent of performance and a remote chance of termination, it is not surprising that examiners are not aggressive and that they focus more on observable process than outcomes. Performing the examination and filling out examination reports is entirely within the examiners’ control. This output is subject to objective performance metrics (e.g., is the report 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.

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. 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 chose not to do the extra work could free ride 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.

More generally, 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.⁸⁶ 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.⁸⁷

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 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. Alexi Giannoulis was a former senior loan officer of the bank, which his family controlled. The bank failed and entered

⁸⁶ See Bernstein & Thompson, "The Small Bank Bust," *supra* note 69 at ___.

⁸⁷ *Id.*

government receivership. At the time, Giannoulas 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 Giannoulas and his family, until after the election.⁸⁸

There is also the revolving door problem. Some regulators are bound to get some of their expected compensation from future employment with regulated banks. Insofar as the value of future employment (that is, being hired plus the amount of compensation) depends on acting in the public interest as regulators, then this form of deferred compensation might be a positive incentive for regulators. In other words, 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 act in ways that banks but not the public would desire. 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.

3. *Summary*

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. For instance, regulators might be envious

⁸⁸ Ray Gibson, “Federal Report on Giannoulas Bank Will Come After Election,” CHIC. TRIB. (Oct. 22, 2010), available at http://newsblogs.chicagotribune.com/clout_st/2010/10/federal-report-on-giannoulas-bank-will-come-after-election.html

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.

Importantly, regulators would personally gain nearly nothing from pushing for additional oversight. The personal benefits to the examiner of reducing bank failure are therefore smaller than they would be if examiner compensation were linked with bank performance. The clear incentive in the existing environment is simply to perform the concrete tasks – like filing 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 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."⁸⁹ 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 recognized some need to improve individual incentives. Certain agencies adopted bonus structures in the period before the Financial Crisis, but these

⁸⁹ See Apuzzo, "Government Bank Regulators Got Big Bonuses," *supra* note 30.

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.”⁹⁰ 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.

Perhaps regulators thought they were doing well because they were maximizing to the best of their ability within their given incentive structure. We turn now to our proposal to reform regulators’ incentives.

IV. INCENTIVIZING REGULATORS

Bank examiners were too slow in pursuing corrective action to address recognized problematic risk taking at their regulated banks. We propose to rely on market-based incentives to avoid this regulatory regress.

Though our proposal may seem radical at first, we are not the first to propose regulator bonuses or even to recognize that pay increases may improve regulators’ performance. As earlier noted, the Obama administration has aggressively increased regulators’ pay in selected areas, presumably to attract and retain excellent employees. Bank examiners specifically have also received performance bonuses in the recent past.⁹¹ 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 pay for regulators, together with bank CEOs’ pay incentives, which illustrates that regulators’ pub-

⁹⁰ Ellen Seidman, a research fellow at the New America Foundation think tank and the former head of OTS from 1997 to 2001.

⁹¹ Even bank regulators think this is a good idea. *See* Apuzzo, “Government Bank Regulators Got Big Bonuses,” *supra* note 30 (quoting thrift office spokesman William Ruberry, “These [bonuses] are meant to motivate employees, have them work hard.”); (“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.”).

lic-regarding incentives should be calibrated to respond to the structure of bank CEOs' private performance incentives. High-powered CEO performance 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*

The socially optimal course for banks is to track a course that is profitable but does not create excessive default risk. Bankers' equity-fueled incentives and the moral hazard created by government guarantees, however, may cause bankers to err on the side of excessive risk taking.⁹² The regulator's job is to curb this tendency.

Regulators act as agents of taxpayers in doing this work. As described above, at-the-bank examiners have enormous discretion in determining the outcome of bank supervision, and can therefore be considered a locus of primary regulatory action, where incentives for optimal action are the most crucial.⁹³ These incentives could be achieved through a variety of means, including monitoring by more senior regulators and the use of various carrots and sticks, including promotions, titles, office space, number of employees supervised, money, and so on.

If superiors could design an effective approach at acceptable cost, including careful monitoring of examiners and productive deployment of non-monetary carrots and sticks, there would be little or no need for monetary incentives tied to objective metrics.⁹⁴ But designing and implementing such an approach at acceptable cost is often tricky, whether for reasons of institutional inertia, workplace politics, or otherwise. Where monitoring has

⁹² See, e.g., Tung, "Pay for Banker Performance," *supra* note 19 at ___.

⁹³ 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.

⁹⁴ 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.

failed to produce good outcomes, it makes sense to rethink the fundamental design of the carrots and sticks.⁹⁵ 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. As earlier discussed, CEOs act as agents for shareholders, and before the 1990s, shareholders (acting through boards of directors) tried a largely non-monetary carrot-and-stick-plus-monitoring approach to reducing managerial agency costs. This approach was only modestly successful, and it generated perverse incentives for CEOs to game the metrics by, for example, 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 CEOs do. 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 specific external metrics, like sales volume or even stock price, and oftentimes these sales staff are the only ones in the firm hierarchy to receive this kind of compensation. That is, sales managers may be paid with lower-powered incentives than sales staff. This is because salespeople occupy the place in the distribution chain with the greatest independence and discretion and where the design and monitoring

⁹⁵ The abject regulatory failures described above make plain that this condition has been met with respect to banking regulation. *See supra* ___.

of behavior is likely to be the most difficult. Examiners occupy an analogous place in the bank supervision hierarchy. As earlier described, examiners are at the sharp end of the regulatory stick. They enjoy wide discretion in evaluating banks' assets and operations, and 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 with reference to the recent reform proposals for bank CEO pay. Figure 1 presents a conceptual framework for thinking about the compensation problem for bank CEOs and bank regulators. 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 rules that enable corporate agents to pursue goals other than shareholder wealth maximization, there may be deviation toward public purposes as well.

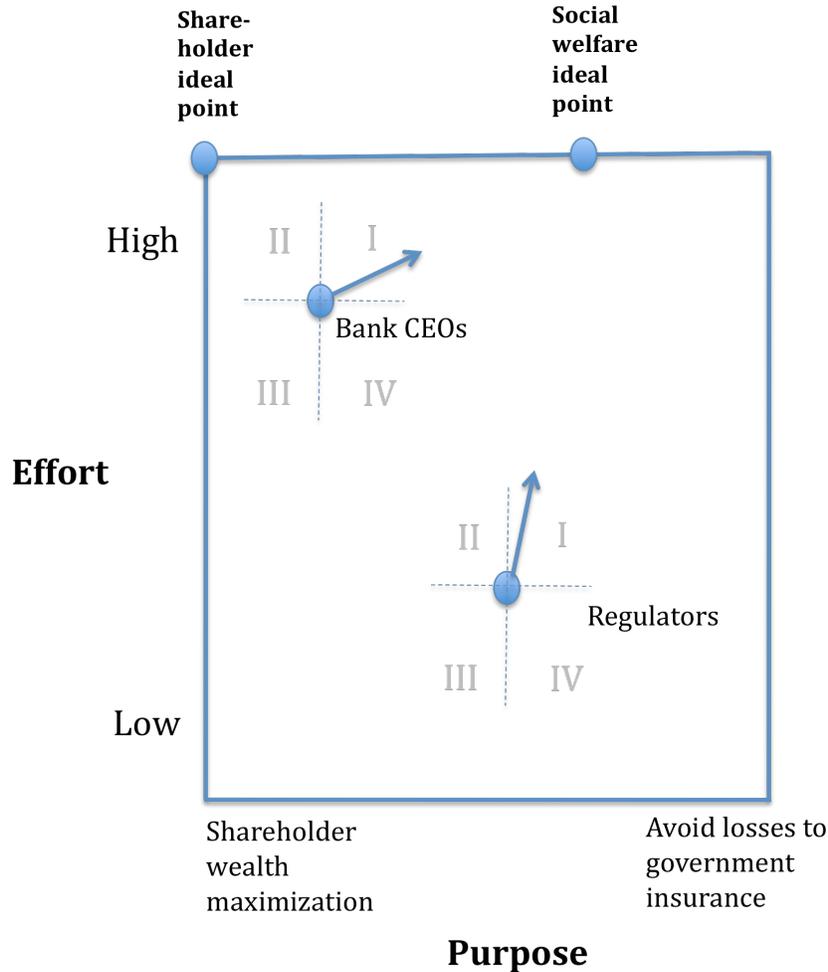


FIGURE 1

Prior to the Financial Crisis, bank CEOs were roughly in the same part of the Figure 1 compensation space as CEOs of non-financial firms, since the CEOs of large multi-national 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, provides 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.⁹⁶ 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 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, as shown on Figure 1.⁹⁷ Any move in quadrant I increases the public purpose of effort and would therefore be a valuable change according to these reforms.⁹⁸ 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 effort on the part of CEOs. 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

⁹⁶ 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.

⁹⁷ 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, shareholders generally prefer their CEOs to focus.

⁹⁸ 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.

purely in the public interest for familiar reasons of capture, be it from familiarity, the revolving door enticement, or other reasons. 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.⁹⁹ Similarly, for our 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 are bank CEOs' private incentives to maximize shareholder wealth, the more high powered must regulators' incentives 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. (We can imagine other proposals that might make regulators more public regarding without necessarily increasing their effort.) 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

⁹⁹ See Anthony J. Crawford et al., *Bank CEO Pay-Performance Relations and the Effects of Deregulation*, 68 J. BUS. 231 (1995) (finding that bank CEO pay became more high powered with the banking deregulation of the 1980s); Vicente Cuñat & Maria Guadalupe, *Executive Compensation and Competition in the Banking and Financial Sectors*, 33 J. BANKING & FIN. 495 (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 (1995) (finding a positive association between bank CEO pay and firm performance in the 1980s and a stronger association in deregulated markets).

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.¹⁰⁰

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.

C. *How Much Incentive?*

Despite the seemingly patent need for better regulator incentives, we are mindful of the novelty of our idea. 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. For several important reasons, the incentive component should not be so large as to swamp the regulator's salary in importance. 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 finan-

¹⁰⁰ 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 deposit insurance fund 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 XX.

cial incentives and other factors may have good reasons for greater or lower percentages, especially after some trial and error.

We simply point out the important tradeoffs inherent in this decision. Too small an incentive component risks irrelevance, of course. The incentive component should be large enough to offer real incentive to the regulator. On the other hand, too large an incentive component runs important risks, of which we discuss two.

1. Regulator Risk Aversion

Too large an incentive component may stoke regulatory risk aversion. Incentive pay is by definition variable, and the larger is the portion of the regulator's pay that is incentive pay, the greater is the range of total pay that the regulator can expect to receive. If the incentive component is so large that the regulator cannot afford to suffer a loss, she might simply take the conservative course, adopting a maximin strategy.¹⁰¹ She would be willing to forego 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 \$50,000, minus \$50,000, and zero. If she regulates aggressively, she stands a 50-50 chance of gaining or losing \$50,000; 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% chance of winding up with only \$50,000 in total pay. That possibility is sufficiently unattractive that even the chance to make \$150,000 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

¹⁰¹ In game theory, this is a strategy designed to maximize one's minimum payoff. See, e.g., DOUGLAS G. BAIRD ET AL., *GAME THEORY AND THE LAW* (1998).

regulator pay. The proportion of total pay that is incentive pay will matter as well.

2. *Regulator Self-Selection*

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. Some might fear that too aggressive an incentive pay structure might affect the public service culture of the regulatory agency. For example, if half of a regulator's total annual expected pay were in the form of variable incentive compensation, that might change the nature of the regulatory enterprise from one of supervision to "profit"-sharing. The type of person that chooses to be a bank examiner could change, for example. 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.¹⁰²

Given the incremental approach to incentive pay that we propose, 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. As discussed earlier,¹⁰³ examiners screened by their commitment to the public interest were in fact insufficiently attentive to that interest. Accordingly, attracting individuals interested in a variable pay-for-social-performance compensation structure may be a beneficial change.

D. *Potential Ancillary Benefits*

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 have other salutary effects as well.

¹⁰² Below we address the more general objection that *any* incentive pay may have this corrosive effect. See *infra* Part VI.A.1.

¹⁰³ See *supra* Part III.C.

Besides faithfully executing the existing oversight scheme, examiners may have incentive to innovate in ways that improve the value of their regulated banks. 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, an examiner may come up with ways to examine more efficiently—say, by streamlining the examination process at her specific bank or working with higher level regulators to initiate broad-based changes. Improvements in the oversight process might move toward more stringent supervision as well. An examiner might more aggressively seek out information from the bank in order to enhance the precision of her 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.¹⁰⁴ The individual examiner may not be able to capture the entire value of her innovation, but having some economic stake in the process at least moves her in the right direction.

One might be skeptical that there is much that examiners could do to increase firm value by making regulation more efficient. But there is some evidence to the contrary. 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. The premise of this competition 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 that regulatory choices undoubtedly

¹⁰⁴ See Robert P. Bartlett III, *Making Banks Transparent*, ___ VAND. L. REV. ___ (2011).

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.

Linking examiner pay to bank performance may also effect a fundamental change in the relationship between the regulator and the regulated. Far from being the enemy, under our proposal the examiner is now on the same side with the bank, insofar as she has some economic interests aligned with the bank’s. The bank knows that the more money it makes, the more money the examiner makes. Though their time horizons may be decidedly different, this is a much softer point of conflict than the typically oppositional alignment of regulator and regulated. This cooperative alignment may result in greater information sharing, more honest brokering, and greater efficiencies of the regulatory process.

The power of a simple rhetorical or positional change can be seen in the implementation of the prompt corrective action rules in the wake of the S&L Crisis. The problem of excessive forbearance under political pressure was “solved” by a simple statutory change that *required* regulators to act under certain conditions, instead of leaving it optional. Importantly, the mandatory obligation contained in the statute was not readily enforceable, so the question is why it mattered at all. The simple answer is that it gave well-meaning regulators a plausible excuse to resist political pressure – “I’d love to help you, Senator, but the law requires me to act.” This changes the dynamic between regulators and their congressional masters in ways that are viewed as highly effective. Similarly, changes in the compensation of regulators may enable them to offer bank managers the credible claim that they are on the same team.

* * *

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

In most areas outside of banking, tying bureaucrats' pay more explicitly to social welfare outcomes might be difficult given problems of incommensurability, data availability, and the lack of agreed-upon metrics. It might be impossible to craft a sensible pay package for EPA officials regulating air pollution, for example, since the balance between economic output and pollution may be difficult to measure. Fortunately, however, performance metrics exist for bank regulators, as well as financial instruments that can measure both upside and downside impacts from regulatory choices.

For logistical reasons, our target regulator is the bank-level examiner whose regulatory responsibility is confined to one bank.¹⁰⁵ As we discuss below, it is possible that incentive compensation could be sensibly applied up and down the regulatory hierarchy, as well as to other agencies, but the case of the bank examiner is the most straightforward one of which we are aware. We leave it to future work to extend our analysis to these other cases, which present more logistical hurdles than theoretical objections.

As noted above,¹⁰⁶ 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.¹⁰⁷ 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.

¹⁰⁵ This focus reduces the possibilities for strategic behavior that might occur if a regulator were to have oversight roles with respect to multiple banks and also hold stakes in those banks. It would be undesirable if such a regulator were to take a portfolio approach to maximizing the value of her bank holdings. She might be willing, for example, to sacrifice the value of one bank for a larger increase in the value of another bank in her portfolio.

¹⁰⁶ See *supra* Part III.B.

¹⁰⁷ See *supra* ___ and accompanying text.

This component would matter primarily during good times, while the bank is operating in the ordinary course. The primary purpose of this component 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 shut down a failing bank. Regulators have a number of reasons to wait too long before shutting down a failing bank, as our earlier discussion described.¹⁰⁸ The shutdown 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 propose to incentivize bank regulators toward efficient regulation by linking some portion of their pay to the market value of the publicly traded debt and equity securities of the banks they regulate. The idea of linking the pay of agents with the economic outcomes enjoyed by the principals they represent is not new. 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 the value of the firm, as well as the social value of the enterprise. Although imperfect, managers paid with firm shares have greater incentives to increase the value of the firm than managers paid fixed salaries. Similarly, regulators paid in bank shares would have greater incentives to design and implement regulations to increase the value of bank shares.

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 non-financial

¹⁰⁸ See *supra* Part III.B.

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 metric that can serve as a useful proxy for the potential for bank losses falling on taxpayers. A publicly traded debt instrument is sensitive to the downside risk of its issuer, and therefore provides the downside equivalent of what share price signals about upside potential. But 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 of 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.¹⁰⁹

¹⁰⁹ 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 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' pay should focus mostly on debt.

B. Structuring the Debt-Equity Portfolio

For both debt and equity components, awarding the actual securities is not necessary.¹¹⁰ 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 should 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 by that might arise when regulators sold securities to monetize gains.

To encourage a medium- to long-term regulatory perspective, each year’s allocation should have a “holding” period. Only after some prescribed period, say three to five years after the initial award, would a given year’s allocation be cashed out by paying the regulator the then market value of the allocation. With annual allocations with multi-year holding periods, the regulator would hold multiple tranches of phantom securities with staggered maturities,¹¹¹ giving the regulator 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 are not confident in our abilities to divine the optimal length of such holding periods, which we imagine would vary by agency, bank, time period, examiner, and other factors. We anticipate that the optimal holding period will develop over time based on experience.

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

¹¹⁰ 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 be forbidden. *See infra* Part ____.

¹¹¹ 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.

1. Bank Debt Incentives

There are (at least) two potential benchmarks on which the debt feature of this package could be based: (i) a subordinated debt security issued by the bank or (ii) a credit default swap contract (CDS) referencing a junior debt obligation of the bank holding company parent of the regulated bank.¹¹² 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 is junior to depositor liabilities, and of course is uninsured. When a bank fails, subordinated debt holders rarely recover anything.¹¹³ 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. 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.¹¹⁴ 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,¹¹⁵ and banks engaging in excessively risky

¹¹² 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* ____.

¹¹³ *See* Richard M. Hynes & Steven D. Walt, *Why Banks are Not Allowed in Bankruptcy*, _____.

¹¹⁴ They may even trade above face value if market interest rates have dropped since the debt securities were issued.

¹¹⁵ *See infra* note XX and accompanying text; Laurence H. Meyer, *Supervising Large Complex Banking Organizations: Adapting to Change*, in PRUDENTIAL SUPERVISION, *supra* note XX, at 97, 103.

strategies will see their sub-debt trading prices drop.¹¹⁶ If the bank is at risk of default, its debt 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.¹¹⁷ 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. If an examiner held 100 units of phantom debt of a bank, for example, the units would be worth about 100 if the bank were doing well. But if the bank were at risk of default, the units might be worth, say, 50, reflecting the default risk. If calibrated correctly, these phantom securities would give regulators incentives to decrease the risk of default.

¹¹⁶ Douglas D. Evanoff & Larry D. Wall, *Sub-debt Yield Spreads as Bank Risk Measures*, 20 J. FIN. SERVICES RES. 121, 133–35 (2001) (showing that sub-debt yield spreads perform slightly better than capital measures as predictors of banks' financial condition); 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 Hancock & Myron L. Kwast, *Using Subordinated Debt to Monitor Bank Holding Companies: Is it Feasible?*, 20 J. FIN. SERVICES RES. 147, 147 (2001) (finding that bonds of highest liquidity offer the most consistent pricing information for purposes of reflecting bank default risk).

¹¹⁷ Mark J. Flannery, Joel F. Houston & Frank Partnoy, *Credit Default Swap Spreads as Viable Substitutes for Credit Ratings*, 158 U. PENN. L. REV. 2085 (2010). 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* (Sept. 2009).

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; 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 help make it more difficult for regulators to remain passive in the face of mounting evidence of trouble at a given bank. Not only might this information be valuable generally, for example, as a warning signal for an examiner to devote more or less resources to an examination. But 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 too might public debt instruments help regulators decide how to allocate their 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,¹¹⁸ 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. 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.¹¹⁹

¹¹⁸ See, e.g., Tung & Wang, Bank CEOs, Inside Debt Compensation, and the Global Financial Crisis, *supra* note __ at __ (arguing . . .); Patrick Bolton et al., "Executive Compensation and Risk Taking," Working Paper, May 2010 (finding this for financial firms); Chenyang Wei & David Yermack, "Stockholder and Bondholder Reactions to Revelations of Large CEO Inside Debt Holdings: An Empirical Analysis," Working Paper, 2010 (finding this for nonfinancial firms).

¹¹⁹ "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." John & Qian, *supra* note XX, at 110. 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

(continued next page)

There is a theoretical explanation for this effect.¹²⁰ While equity compensation incentivizes managers to exert more effort—thereby addressing the agency costs of equity—inside debt counters the risk-shifting incentives that accompany equity compensation, thereby reducing the agency costs of debt.¹²¹ 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.¹²² Managers holding inside debt may therefore be less inclined to make risky bets when the firm gets into trouble.¹²³

We have good reason to believe that bank debt incentives will influence bank regulators in the same way, especially given what we know about regulators and their mission. We should be able to incentivize bank examiners by paying them based on changes in the value of their bank’s subordinated debt securities or changes in the price of CDS contracts written against the debt of the bank’s parent holding company.¹²⁴ Though each has its pluses

us much pause, however. Bank governance has traditionally been recognized as presenting special concerns that deserve special governance tools. *See supra* notes, XX and accompanying text.

¹²⁰ Edmans & Liu, *supra* note XX, at 78.

¹²¹ While Jensen and Meckling consider the agency costs of equity and debt separately, see Jensen & Meckling, *supra* note 25, at 312, Edmans and Liu consider them simultaneously, thereby enabling analysis of the tradeoffs between incentivizing managerial effort and influencing investment choice. *See* Edmans & Liu, *supra* note XX, at 79 & n.5.

¹²² 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 XX, 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.*

¹²³ The appropriate amount of debt depends on the relative magnitudes of the two different types of agency problems—shirking versus risk shifting. *Id.*

¹²⁴ One of us has argued in other work that a particular form of inside debt—bank subordinated debt—could be especially useful as a form of bank

(continued next page)

and minuses, discussed below, both may be extremely useful because their public trading prices 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.¹²⁵ 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 BHC level, CDS contracts are typically written with reference to BHC debt obligations and not those of the banking subsidiary.¹²⁶ Therefore, CDS prices will more accurately reflect the default risk of the BHC than the bank. Major banks are almost uniformly held as wholly owned subsidiaries of BHCs, 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 BHCs. The larger is the percentage of the BHC's cash flow and assets that derive from the given bank, the better will CDS pricing (that references BHC debt) reflect risk 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% of

CEO compensation that would help curb excessive risk taking. Tung, *supra* note 1.

¹²⁵ Blanco, Brennan, & Marsh, *An Empirical Analysis of the Dynamic Relation between Investment-Grade Bonds and Credit-Default Swaps*, 60 J. FIN. 2255 (2005).

¹²⁶ We found one exception for which public price information was available. Bloomberg quotes CDS pricing for Capital One Bank, a banking subsidiary of financial holding company Capital One Financial Corporation.

BHC assets and contributes only about 70% of BHC net income. 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.¹²⁸ 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.¹²⁹ Ideally, one would use equity of the bank itself as the benchmark, since the market value of the bank's equity would offer the cleanest market assessment of the bank's upside prospects, and therefore a proxy for the 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.¹³⁰

Rather than rewarding (or punishing) the regulator simply based on BHC equity price movements, we propose two adjust-

¹²⁸ A Bloomberg search showed only nine BHCs with regular CDS pricing information.

¹²⁹ 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.

¹³⁰ Among the ten largest banks, the average bank accounts for 61% of its BHC's assets and 131% of its earnings. See Appendix I for details [to come].

ments 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-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, that works an improvement to our scheme.

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. Regulator compensation differs from executive compensation insofar as experimentation with executive pay occurs among the thousands of private firms that exist. Even if a mistake in incentive pay design were so drastic as to cause the failure of a firm, this would be unlikely to have widespread impact. By contrast, there are only a few bank regulatory agencies, and a significant mistake in incentive compensation design 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 Shutdown 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 shut down a failing bank. Especially for larger banks, examiners will not enjoy unilateral authority to shut down the bank. 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 shutdown. Even absent formal authority to decide on shutdown by themselves, examiners will enjoy enormous influence over the decision. Incentives toward optimal shutdown 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 shutdown timing.

1. Why a Special Shutdown Bonus?

The shut down decision requires special treatment for two main reasons. First, it is a tough call for the regulator to make. In fact, it is the most drastic decision the regulator must make in her supervision of the bank. As our earlier discussion suggests,¹³¹ the regulator has a number of reasons for being reluctant to pull the plug on a failing bank. Regulatory capture and the Stockholm effect may dissuade the regulator from putting the bank out of business. 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.

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 attempt to shut the bank down 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.¹³²

Another reason for a special shutdown bonus is that market signals are also likely to be noisy. Market discipline may not be useful in prodding a regulator to shut down a bank because of information asymmetry. The optimal timing of the shutdown decision will depend to a great extent on fine-grained private information which (a) is available only to the regulator, and (b) is constantly being updated in real time once shutdown becomes a real

¹³¹ See *supra* Part III.C.

¹³² 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 vesting or holding periods should help reduce this problem.

possibility. As such, a one-time bonus distinct from any market assessment of the decision is advisable.

2. *Calculating the Bonus*

Bank regulators are by statute tasked with the specific goal of minimizing losses to the Deposit Insurance Fund (DIF).¹³³ The shutdown bonus could therefore be tied specifically to the ultimate losses sustained by the DIF at the resolution of the FDIC's receivership proceeding. A shutdown bonus would offer a direct incentive to make the right timing decision at a critical juncture. The lessons from the Financial Crisis, like all others before it, show that regulators will tend to err on the side of pulling the plug too late rather than too early. This delay in the Crisis exacerbated banks' losses and the ultimate costs to the DIF. Our approach is to award high bonuses for low losses and vice-versa. As to scale, the bonus should be potentially large enough to induce the regulator to forego her hopes of recovering significant value in her debt-equity portfolio from a miracle turnaround by the bank. Absolute values will depend on a comparison of the examiner's expected payouts under particular incentive contracts. If the examiner expects to reap an expected value of \$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 the shutdown decision.¹³⁴ Information about these various parameters may become more accurate as the bank approaches failure, and this may counsel for a shutdown bonus algorithm that adjusts and can be manually updated over time. With learning and experience,

¹³³ See 12 U.S.C. § 1823(c)(4)(a).

¹³⁴ 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%, then the shutdown bonus need be no greater than \$10.

it may be possible to design a fully automated, less discretionary system in which market and other data are incorporated into the bonus algorithm.¹³⁵

In theory, for example, if an examiner forces a bank to enter government receivership at time T_1 , and as a result FDIC losses are 100, the examiner would get a larger bonus than if the decision to shut down the bank is made at T_2 when the FDIC losses would be 200. If we could know the counterfactual values (that is, the losses that would have occurred at T_2), then the calculation would be simple. There is no T_2 in reality, however, so we cannot know what the counterfactual losses would have been.

There are ways of addressing this practical concern. Agencies can develop a mechanism for estimating what losses would have been had the examiner not acted when she did. For example, post-mortem 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 shut down 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 shut down 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 shutdown 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

¹³⁵ 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 her 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.

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 shutdown to minimize losses—since this is what they will expect the ex post estimator to be doing.¹³⁶ Some randomization among outside experts doing the ex-post analysis may help ensure the optimal ex ante incentives.¹³⁷

Alternatively, bonus payouts could be based on the percentage of recoveries the DIF is able to achieve. An algorithm could be designed that would set bonuses at the best available level given a particular bank's characteristics and the losses suffered by the DIF. Obviously, the larger the losses, the lower the payout. For instance, if a particular bank is shutdown and the DIF eventually suffers losses of \$100, this amount could be compared with losses suffered at other similarly situated banks. If another bank of similar size and objective economic characteristics had previously been shutdown and resulted in losses of \$200, this would be evidence that the examiner in the first case had made a valuable shutdown decision. The FDIC could collect data about failures and losses in order to establish benchmarks for expected losses. This would give examiners information about expected bonus payments for variously timed shutdown decisions.

3. *Additional Considerations*

As the preceding discussion suggests, structuring shutdown incentives will be tricky. It may be that they even overshoot: Examiners may be too aggressive in shutting down banks that have a positive private and social value. One solution to this problem might involve a non-trivial penalty if the DIF ultimately suffers no losses after a bank is shut down. If the reason is that the examiner pulled the plug too soon, there should be a financial cost to this socially inefficient decision. Although this strikes us as a relatively unlikely scenario, it is a factor that incentive contract designers should consider depending on the nature of the entire compensation bargain.

¹³⁶ See, e.g., Michael Abramowicz and M. Todd Henderson, *Prediction Markets for Corporate Governance*, 82 NOTRE DAME L. REV. 1343 (2007).

¹³⁷ See *id.*

Another issue is timing. DIF losses—and the related regulatory bonus—will likely not be finally determined until some years after the bank is seized. The process of disposing of a failed bank's assets may take several years. Also the FDIC may enter into loss sharing arrangements with asset acquirers in order to increase the sale price of assets. So a "final" resolution will be hard to predict at the time of shutdown. Moreover, the regulator making the shutdown decision may not be intimately involved in the asset sale process.¹³⁸ Of course, too long a gap between the shutdown decision and the realization of the bonus, and the intercession of other actors in the asset disposition process, may vitiate the incentive effect of any bonus. Nevertheless, the shutdown 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 shutdown 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.

¹³⁸ 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 OCC has resolution authority under 12 U.S.C. § 1818(b) (to make orders and formal written agreements); 12 U.S.C. § 3907 (to issue capital directives); 12 U.S.C. § 1831o (to take Prompt Corrective Action (PCA)); and 12 U.S.C. § 1831p-1 (to issue safety and soundness orders). *See* OCC Policies & Procedures Manual, PPM 5310-3 (REV), July 30, 2001, available at www.occ.gov/static/publications/ppm-5310-3.pdf. For a discussion of new resolution authority rules for large banks and non-bank financial companies, *see* Brady Dennis, "FDIC's new tools to close troubled banks offer opportunity, challenge," WASH. POST, Jan. 17, 2011, available at <http://www.washingtonpost.com/wp-dyn/content/article/2011/01/17/AR2011011704164.html>.

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

One 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 forego the potential financial rewards for diligence. Once diligence has been priced, perhaps some regulators will slack.¹³⁹

We do not discount this concern. Social scientists have documented this crowding-out effect in experimental settings. We

¹³⁹ See 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); Ernst Fehr & Armin Falk, *Psychological Foundations of Incentives*, 46 EUR. ECON. REV. 687 (2002) (discussing interaction of economic incentives with intrinsic and social incentives).

do not believe, however, the effect is necessarily universal or sufficiently well understood that experimentation with incentive compensation for regulators should be precluded.¹⁴⁰ 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 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. In addition, by committing in advance to a bonus or incentive scheme linked to bank performance, agencies can subtly but importantly change the nature of the relation between regulator and regulated. The possibility that a bonus might be paid if an agency head determines that the examiner did a “good” job is fundamentally weaker in this pursuit than a contract that aligns the interests of the examiner and the bank managers.

2. *Insider Trading*

As with any incentive scheme involving publicly traded securities, there is the possibility that security holders with access to non-public 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 goes a long way toward reducing this problem. In effect, examiners can “sell” their securities only to the agency, and therefore there can be no victim, since there will not be any third parties involved. Vesting or holding periods will also help reduce this problem.

¹⁴⁰ 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* (finding that nominal economic rewards and penalties led to worse performance).

Given that examiner bonuses depend on positive market price movements, examiners may also be tempted simply to leak non-public information about the banks they oversee. While this is not an implausible scenario given our proposed incentive structure, it is not a strong objection. Examiners and other regulators already have incentive to misuse non-public 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, and our proposal does not make it more or less likely. Whatever risk remains from regulators using their privileged position to earn profits that violate existing insider-trading laws, they are no greater than exist under current compensation practices. Examiners could tip information about bank prospects in return for cash payments, but they can do this today. And, in any event, such practices are illegal. That said, agency heads should be mindful of potential abuses or changes in behavior that are not desired or expected, and adjust pay practices or bring legal actions accordingly.

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,¹⁴¹ 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.

Private sector behavior should offer some guidance here. Private firms in a number of industries typically use option compensation to incentivize not only executives but the rank and file as well. This despite the fact that any given employee's influence on overall firm performance is likely to be small. Even though any given employee may not clearly see any effect of her actions on the

¹⁴¹ See *supra* Parts V.B.1, V.B.3.

value of her option compensation, holding a stake in the firm must still incentivize her to some extent. Otherwise, firms would not bother with option compensation outside of the executive suites.

Though a given employee's actions may not generally affect the value of the firm or the value of her options, she may still work harder at the margin because of her stake in the firm. There may also be specific situations where her input is crucial, though it may be difficult to predict *ex ante* which specific contributions by which employees will later be important.

Similarly, with regulators, it may be that for most banks, especially during good times, regulatory action has no effect on bank 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?

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 more blunt 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 the regulator).

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. 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 before less drastic measures had 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.¹⁴² We are therefore skeptical that rearranging internal per-

¹⁴² We are not aware of any examiner or high-level regulator losing her job as a result of poor performance in the Crisis. OTS, which had regulatory responsibility over WaMu and AIG before the Crisis, has been merged with the OCC. 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

(continued next page)

formance metrics could offer a complete solution to the incentive problems we have identified.

Moreover, market-based metrics are likely to impound the effects of regulatory action exactly when that action matters 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 compensation 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 on the ground that this would require the government to take ownership stakes in banks, but this objection is not as significant as it may seem. For one, the government could take non-voting stakes or enter into an arrangement with a third party where it is merely the beneficial owner of the shares but without control over them.

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. Moreover, the legislation merging OTS into the OCC goes to great lengths to assure that no OTS employees will actually lose their jobs or suffer a pay cut! Robert Schmidt & Phil Mattingly, *A Thrift Regulator Fades (Sort of) into the Sunset*, BUSINESS WEEK, Oct. 14, 2010, available at: http://www.businessweek.com/print/magazine/content/10_43/b4200038824455.htm.

Moreover, given the relatively small amounts of compensation involved, the stakes the government would have to hold would be relatively tiny. If there is a single examiner working with a particular bank, and the examiner has a compensation upside of a few tens of thousands of dollars, the government's stake in the bank would be utterly miniscule and pale in comparison with the other avenues by which the government 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.¹⁴³ Importantly, options do not confer control rights or other complications of government involvement with private firms.¹⁴⁴

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 decision makers 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 into large and complex examinations, while

¹⁴³ 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.

¹⁴⁴ The government could also purchase swap contracts to mimic the requisite cash flows from phantom stock and debt appreciation.

higher-ups—an Assistant Deputy Comptroller or Deputy Comptroller for Large Bank Supervision, for example¹⁴⁵—may have ultimate decision making authority on how to implement examiners' conclusions. 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 find ways to promote the fortunes of one bank over another if she believed that the favored bank's securities would appreciate more than the disfavored bank's securities would devalue.

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 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 decision making 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.

¹⁴⁵ See *supra* note 39 and accompanying text.

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 non-existent. 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” performance 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.

Readers with comments should address them to:

Professor M. Todd Henderson
University of Chicago Law School
1111 East 60th Street
Chicago, IL 60637
toddh@uchicago.edu

Chicago Working Papers in Law and Economics
(Second Series)

For a listing of papers 1–550 please go to Working Papers at <http://www.law.uchicago.edu/Lawecon/index.html>

- 551. Douglas G. Baird, Car Trouble, May 2011
- 552. Omri Ben-Shahar, Fixing Unfair Contracts, May 2011
- 553. Saul Levmore and Ariel Porat, Bargaining with Double Jeopardy, May 2011
- 554. Adam B. Cox and Richard T. Holden, Reconsidering Racial and Partisan Gerrymandering, May 2011
- 555. David S. Evans, The Antitrust Economics of Free, May 2011
- 556. Lee Anne Fennell, Property and Precaution, June 2011
- 557. Omri Ben-Shahar and Anu Bradford, Reversible Rewards, June 2011
- 558. Alon Harel and Ariel Porat, Commensurability and Agency: Two Yet-to-Be-Met Challenges for Law and Economics, June 2011
- 559. Randal C. Picker, After Google Book Search: Rebooting the Digital Library, June 2011
- 560. Julie A. Roin, Privatization and the Sale of Tax Revenues, July 2011
- 561. Joseph Issenbergh, Last Chance, America, July 2011
- 562. Richard H. McAdams, Present Bias and Criminal Law, July 2011
- 563. David Weisbach, Is Knowledge of the Tax Law Socially Desirable?, July 2011
- 564. Louis Kaplow and David Weisbach, Discount Rates, Judgments, Individuals' Risk Preferences, and Uncertainty, July 2011
- 565. Louis Kaplow, Elisabeth Moyer and David A. Weisbach, The Social Evaluation of Intergenerational Policies and Its Application to Integrated Assessment Models of Climate Change, July 2011
- 566. David A. Weisbach, Carbon Taxation in Europe: Expanding the EU Carbon Price, July 2011
- 567. Nuno Garoupa and Tom Ginsburg, Hybrid Judicial Career Structures: Reputation v. Legal Tradition, August 2011
- 568. Richard A. Epstein, F. Scott Kieff, and Daniel F. Spulber, The FTC's Proposal for Regulation IP through SSOs Would Replace Private Coordination with Government Holdups, August 2011
- 569. Dhammika Dharmapala, Nuno Garoupa, and Richard McAdams, Do Exclusionary Rules Convict the Innocent? August, 2011
- 570. Andres Sawicki, Better Mistakes in Patent Law, August 2011
- 571. Jonathan S. Masur and Eric A. Posner, Regulation, Unemployment, and Cost-Benefit Analysis, August 2011
- 572. Adam B. Cox and Eric A. Posner, Delegation in Immigration Law, September 2011
- 573. Joseph Bankman and David Weisbach, A Critical Look at a Critical Look—Reply to Sanchirico, September 2011
- 574. M. Todd Henderson and Frederick Tung, Pay for Regulator Performance, September 2011