

Confident Uncertainty, Excessive Compensation & the Obama Plan[†]

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Public outrage at the enormous bonuses TARP recipients paid to senior executives recently prompted the Obama administration to impose sweeping new curbs on executive compensation. Shortly thereafter, Senator Dodd added restrictions on executive bonuses to the stimulus bill President Obama subsequently signed. These are understandable political reactions, but will they achieve the twin goals of reducing executive compensation in recipients of federal assistance while spurring better corporate performance? To examine this question, I analyze excessive compensation as the product of “confident uncertainty,” the tendency of even the most sophisticated actors to place unwarranted confidence in their ability to predict the future. In particular, research from psychology and behavioral law and economics argues that employers demonstrate misplaced faith in their ability to distinguish among closely comparable candidates and therefore vastly overpay for talent which is not predictably superior. I apply confident uncertainty to explain why corporations may

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pay their senior executives too much. These insights on the root causes of excessive compensation grant valuable insight into the likely impact of both the Obama Plan and the Dodd provisions. I argue the Obama Plan's cap on pay is likely to prove effective in countering cognitive uncertainty, but it should be tailored to a corporation's particular circumstance and apply to performance pay as well. I also contend the nonbinding "say on pay" provisions in both the Obama Plan and Dodd provisions are unlikely to curb excessive pay. Finally, I conclude that the Dodd provisions' cap on performance pay are a step in the right direction, but contain loopholes likely to seriously dilute any predicted benefit.

INTRODUCTION

Troubled financial companies paid their senior executives billions of dollars in bonuses this past year.¹ When news of these bonuses broke, the resulting public outrage prompted the Obama administration to proclaim sweeping new restrictions on executive pay in early February.² Less than two weeks later, Senator Dodd added provisions to the conference version of the stimulus bill—since signed by President Obama—with additional compensation curbs.³ Both sets of limits included revolutionary new provisions, including a fixed cap on senior-executive pay of \$500,000 in the Obama Plan, a ceiling on bonuses of one-third of total compensation in the Dodd provisions, and a mandatory (though nonbinding) “say on pay” for shareholders in both sets.⁴

These restrictions represent an understandable political reaction. The specter of blue chip financial companies requesting billions of dollars of public assistance while simultaneously richly rewarding their senior executives seems almost calculated to provoke the public's ire.⁵ Critics, however, have argued that Wall Street's system of

1. See Thomas Frank, *The Tilting Yard: Wall Street Bonuses Are an Outrage*, WALL ST. J., Feb. 4, 2009, at A11 (illustrating that Wall Street paid \$18.4 billion in bonuses in 2008, causing a public outcry); Aaron Lucchetti & Matthew Karnitschnig, *On Street, New Reality on Pay Sets In*, WALL ST. J., Jan. 31, 2009, at B1 (noting that the five biggest Wall Street firms lost a combined \$25.3 billion in 2008, yet paid out some \$26 billion in bonuses); Aaron Lucchetti, Deborah Solomon & Laura Meckler, *Strict Executive-Pay Caps Planned*, WALL ST. J., Feb. 4, 2009, at A3 (“Last week, Mr. Obama called it ‘shameful’ that Wall Street firms awarded \$20 billion worth of bonuses as taxpayers were bailing them out . . .”).

2. See Press Release, U.S. Dep’t of the Treasury, Treasury Announces New Restrictions on Executive Compensation (Feb. 4, 2009), <http://www.ustreas.gov/press/releases/tg15.htm>.

3. See American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (2009).

4. See *id.*; Press Release, U.S. Dep’t of the Treasury, *supra* note 2.

5. See Randall Smith, Aaron Lucchetti & Susanne Craig, *Securities Firms Tackle Pay Issue: Limits on Compensation Are Considered to Head Off a Public Outcry*, WALL ST. J., Oct. 31, 2008, at C1 (citing “an emerging consensus among some of the securities industry’s most powerful executives that the escalating pay controversy is creating yet another public-relations mess for Wall Street”); Cari Tuna, *Shareholders to Focus on Executive Compensation: Some Investors, Frustrated with Big Payouts amid Financial Crisis, Plan to Propose Limits at Annual Meetings*, WALL ST. J., Jan. 12, 2009, at B4 (noting that many shareholders pushing to limit executive compensation in frustration at executives who were richly rewarded despite large losses).

performance bonuses are an efficient method of inspiring success, and eliminating them could have the perverse effect of lengthening the recession.⁶

This argument represents the latest and most intense bout in a long-standing debate on whether corporate executives are paid efficiently.⁷ Many scholars have pointed to

6. See Roy C. Smith, *Greed is Good*, WALL ST. J., February 7, 2009, at W1 (“The capital-markets industry operates in a very sophisticated and competitive environment, one that responds best to strong performance incentives.”); Carly Fiorina, *Commentary: Government Shouldn’t Decide Executive Pay*, CNN.COM, Feb. 5, 2009, <http://www.cnn.com/2009/POLITICS/02/05/fiorina.pay/index.html> (“[I]t doesn’t strengthen our economy when government decides how much each job is worth. In America we leave that job to markets.”).

7. For critics of the current system, see LUCIAN BEBCHUK & JESSE FRIED, *PAY WITHOUT PERFORMANCE: THE UNFULFILLED PROMISE OF EXECUTIVE COMPENSATION* 27–31, 61–86 (2004) (arguing that public company boards are dominated by CEOs and therefore pay their CEOs excessive and poorly structured compensation); DEREK BOK, *THE COST OF TALENT: HOW EXECUTIVES AND PROFESSIONALS ARE PAID AND HOW IT AFFECTS AMERICA* 95–114 (1993) (arguing that chief executives are overpaid); George P. Baker, Michael C. Jensen & Kevin J. Murphy, *Compensation and Incentives: Practice vs. Theory*, 43 J. FIN. 593, 614 (1988) (arguing that directors fail to create proper executive pay arrangements); Linda J. Barris, *The Overcompensation Problem: A Collective Approach to Controlling Executive Pay*, 68 IND. L.J. 59, 61 (1992) (arguing that executive compensation is excessive); Carl T. Bogus, *Excessive Executive Compensation and the Failure of Corporate Democracy*, 41 BUFF. L. REV. 1, 39 (1993) (applying the law of small group dynamics to the relationship between the board of directors and the chief executive officer); Michael B. Dorff, *Softening Pharaoh’s Heart: Harnessing Altruistic Theory and Behavioral Law and Economics to Rein in Executive Salaries*, 51 BUFF. L. REV. 811, 825–26 (2003) (noting that the evidence does not support a link between executive ability and compensation); Melvin Aron Eisenberg, *The Structure of Corporation Law*, 89 COLUM. L. REV. 1461, 1489–93 (1989) (explaining that CEO compensation practices do not align the interests of managers and shareholders); Tod Perry & Marc Zenner, *CEO Compensation in the 1990s: Shareholder Alignment or Shareholder Expropriation?*, 35 WAKE FOREST L. REV. 123, 145 (2000); Joel Seligman, *A Sheep in Wolf’s Clothing: The American Law Institute Principles of Corporate Governance Project*, 55 GEO. WASH. L. REV. 325, 331 (1987) (arguing that board nominations by anyone other than management is “virtually impossible”); Kevin J. Murphy, *Executive Compensation* (Apr. 1998), <http://ssrn.com/abstract=163914> (reviewing the research on executive compensation); Robert Thomas, *Is Corporate Executive Compensation Excessive?*, in *THE ATTACK ON CORPORATE AMERICA* 276 (M. Bruce Johnson ed., 1978). For defenders of the market’s fundamental efficiency, see Steven M. Bainbridge, *Executive Compensation: Who Decides?*, 83 Tex. L. Rev. 1615, 1628–29 (2005) (reviewing LUCIAN BEBCHUCK & JESSE FRIED, *PAY WITHOUT PERFORMANCE: THE UNFULFILLED PROMISE OF EXECUTIVE COMPENSATION* (2004)); Frank H. Easterbrook, *Managers’ Discretion and Investors’ Welfare: Theories and Evidence*, 9 DEL. J. CORP. L. 540 (1984); Daniel R. Fischel, *The Corporate Governance Movement*, 35 VAND. L. REV. 1259 (1982); Mark J. Loewenstein, *The Conundrum of Executive Compensation*, 35 WAKE FOREST L. REV. 1, 4 (2000) (arguing that CEOs are not overpaid); James A. Mirrlees, *The Optimal Structure of Incentives and Authority Within an Organization*, 7 BELL J. ECON. 105 (1976); Kevin J. Murphy, *Top Executives Are Worth Every Nickel They Get*, HARV. BUS. REV., Mar.–Apr. 1986, at 125 [hereinafter Murphy, *Top Executives*] (arguing that executive compensation is not excessive); Stephen A. Ross, *The Economic Theory of Agency: The Principal’s Problem*, 63 AM. ECON. REV. 134 (1973); Steven Shavell, *Risk Sharing and Incentives in the Principal and Agent Relationship*, 10 BELL J. ECON. 55 (1979); Nicholas Wolfson, *A Critique of Corporate Law*, 34 U. MIAMI L. REV. 959 (1980) (arguing that market

indicia such as the rapid rise in executive pay, the ballooning multiples by which executive compensation exceeds average worker compensation, and the disparity between chief executive officer (CEO) pay in the United States and other developed nations to argue that public company executives are paid too much.⁸ Others have focused instead on the executive-pay structure, arguing that the appearance of performance-sensitive pay is really an illusion masking economic rents.⁹ Still other scholars have defended the status quo as the product of an efficient labor market.¹⁰

It is not my purpose to engage this debate here or even to attempt to define what constitutes “excessive” compensation. Instead, I begin with the assumption Congress and the administration seem to have accepted: that executive pay is inefficient in

forces control executive compensation).

8. See, e.g., Barris, *supra* note 7, at 60–61 (noting that during the 1980s CEO compensation increased by 212% while earnings on the S&P 500 Index grew by only 78% and factory workers received only 53% raises); Bogus, *supra* note 7, at 10 (noting that during the 1980s, CEO compensation grew 212%); Michael B. Dorff, *The Group Dynamics Theory of Executive Compensation*, 28 CARDOZO L. REV. 2025, 2027 (2007) (noting the multiples by which CEO pay exceeds average workers has leaped from forty-two in the early 1980s to over 400 currently); Melvin A. Eisenberg, *The Compensation of the Chief Executive Officer and Directors of Publicly Held Corporations*, SE39 A.L.I.-A.B.A. 103, 106–08 (1999) [hereinafter Eisenberg, *Compensation*] (noting that while U.S. CEOs earn 200 times what factory workers earn, Japanese CEOs earn only about twenty to thirty times factory workers’ salaries); Melvin A. Eisenberg, *A Brief Overview of the Problems Raised by Executive and Director Compensation*, SC53 A.L.I.-A.B.A. 299, 301–02 (1997) [hereinafter Eisenberg, *Overview*] (“[T]he evidence suggests that the total compensation of American CEOs, including base salary, bonus, long-term compensation, and benefits and perquisites, is approximately twice as high as that of CEOs of comparable corporations in Japan, Germany, eight other west European countries, and Canada.”); Loewenstein, *supra* note 7, at 6 (noting that from 1980–1995, average CEO pay increased 380% while average worker salaries rose only 60%); Mark J. Loewenstein, *Reflections on Executive Compensation and a Modest Proposal for (Further) Reform*, 50 SMUL REV. 201, 202–04 (1996) (highlighting a 1996 study showing that U.S. CEOs earned an average of \$1,085,000 while average CEOs in Great Britain earned \$551,600, in Germany \$537,000, in France \$485,004, and in Italy \$318,000 and, U.S. CEO compensation rose 20.6% in 1993, 12.8% in 1994, and 10.4% in 1995); Perry & Zenner, *supra* note 7, at 123–24 (noting that the total CEO compensation for all 1900 firms listed in the ExecuComp database more than doubled from 1992 to 1998, and CEOs from S&P 500 firms’ compensation rose more than 250%); Charles M. Yablon, *Overcompensating: The Corporate Lawyer and Executive Pay*, 92 Colum. L. Rev. 1867, 1871 (1992) (book review) (noting that the in 1990, average U.S. CEOs earned \$2.8 million per year (120 times manufacturing worker’s salary) while their counterparts in Germany earned \$735,000 annually (twenty-one times factory worker’s compensation) and CEOs in Japan earned only \$310,000 (sixteen times factory worker’s salary)).

9. By far the most prominent work in this area is BEBCHUK & FRIED, *supra* note 7 (discussing the term “Managerial Power” and gathering voluminous evidence of a disconnect between pay and performance in executive compensation).

10. See Stephen M. Bainbridge, *Why a Board? Group Decisionmaking in Corporate Governance*, 55 VAND. L. REV. 1 (2002); Easterbrook, *supra* note 7; Fischel, *supra* note 7; Loewenstein, *supra* note 7, at 4 (arguing that CEOs are not overpaid); Mirrlees, *supra* note 7; Murphy, *Top Executives*, *supra* note 7 (noting that executive compensation is not excessive); Ross, *supra* note 7; Shavell, *supra* note 7; Thomas, *supra* note 7; Wolfson, *supra* note 7 (noting that market forces control executive compensation).

structure and excessive in amount.¹¹ Given that assumption, how effective are the Obama Plan and the Dodd provisions likely to prove in curbing excessive compensation and improving executives' incentives to run their institutions efficiently?

Accurately predicting the likely impact of the new rules requires an understanding of the root causes of excessive executive compensation. Previous attempts to explain flaws in the executive-labor market have largely laid the blame at the door of managers' ability to co-opt self-interested board members (the "managerial power" theory).¹² Such explanations stumble on two points. First, a large percentage of public-company directors are current or former CEOs of other public companies, and therefore have wealth and earning power that easily dwarfs the pay they receive for their work as a director.¹³ It is therefore difficult to understand why they would sacrifice their integrity for what is to them a relatively paltry sum. Second, even if the incentives were significant, the managerial power theory assumes that most directors in the United States have effectively accepted bribes to buy their complicity in a scheme to enrich managers.¹⁴ The scale of this alleged conspiracy defies belief and does not comport with our general assumptions of the board's good faith.¹⁵ For the managerial-

11. The Department of Treasury's press release provides, "[T]he compensation committees of all companies receiving government assistance must provide an explanation of how their senior-executive compensation arrangements do not encourage excessive and unnecessary risk-taking." Press Release, U.S. Dep't of the Treasury, *supra* note 2. The Obama Plan also states, "[o]ver the last decade there has been an emerging consensus that top executives should receive compensation that encourages more of a long-term perspective on creating economic value for their shareholders and the economy at large." *Id.* Moreover, the Obama Plan calls for a conference on executive pay reform at financial institutions. *Id.* Similarly, the Dodd provisions require TARP recipients to exclude "incentives for senior executive officers . . . to take unnecessary and excessive risks that threaten the value of such recipient." American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 111(b)(3)(A), 123 Stat. 115, 517 (2009). Both plans provide for strict new limits on compensation, the Obama Plan on salaries and the Dodd provisions on bonuses, reflecting a belief that market restraints are inadequate. *See id.*; Press Release, U.S. Dep't of the Treasury, *supra* note 2.

12. *See* BEBCHUK & FRIED, *supra* note 7 (using the term "managerial power" and gathering voluminous evidence of a disconnect between pay and performance in executive compensation). Even some corporate law casebooks have adopted this position. *See* MELVIN ARON EISENBERG, CORPORATIONS AND OTHER BUSINESS ORGANIZATIONS 156-57 (18th ed. 2000) (arguing that because of constraints of time, information, and composition, boards largely defer to management's decisions).

13. *See* BEBCHUK & FRIED, *supra* note 7, at 33 (noting that forty-one percent of directors on compensation committees were executives in 2002, with an additional twenty-six percent retired former executives); Dorff, *supra* note 8, at 2071 ("[M]ost board members are richly-paid executives of other companies."); Ronald J. Gilson & Reinier Kraakman, *Reinventing the Outside Director: An Agenda for Institutional Investors*, 43 STAN. L. REV. 863, 875 (1991) (noting that approximately 63% of public companies' outside directors are CEOs of other public companies). The median pay for directors of the top two hundred corporations in the United States was \$190,000 in 2007. *See* PEARL MEYER & PARTNERS, 2007 DIRECTOR COMPENSATION REPORT 4 (2007), <http://www.pearlmeyer.com/knowledgecenter/research/director/2007director.pdf>.

14. *See* BEBCHUK & FRIED, *supra* note 7, at 30 ("Directors have a natural interest in their own compensation, which CEOs may be able to influence.").

15. This presumption has been embodied in corporate law in the form of the highly

power theory to accurately describe corporate life requires most directors to have sold their integrity for a song. While this is not impossible, Occam's razor suggests simpler explanations are more likely to prove correct. Rather than assuming that most directors are faithless rational calculating machines, the theory I advance in this Article takes the more parsimonious view that they are merely human, with human judgment flaws.

Any such explanation must first confront a core belief in American law: that sophisticated players make calculated, optimal decisions when faced with high-stakes decisions.¹⁶ Human beings as a whole may often behave irrationally, but when the consequences are great and there is a substantial incentive to make the correct decision, highly educated and well-advised principals will behave efficiently.¹⁷ This belief often forms the basis of arguments favoring free, deregulated markets under the rationale that sophisticated players can defend their own interests without law's supporting crutch.¹⁸

Although widely accepted, this belief has not been adequately tested empirically. In fact, the few empirical studies that have been conducted indicate that sophisticated players may prove equally susceptible to the foibles of human decision making.¹⁹ And certainly this past year's disastrous collapses in multiple markets—such as housing,

deferential business-judgment rule. *See* *Aronson v. Lewis*, 473 A.2d 805, 812 (Del. 1984), *overruled by* *Brehm v. Eisner*, 746 A.2d 244 (Del. 2000) (“It is a presumption that in making a business decision the directors of a corporation acted on an informed basis, in good faith and in the honest belief that the action taken was in the best interests of the company.”); *see also* *Benihana of Tokyo, Inc. v. Benihana, Inc.*, 906 A.2d 114 (Del. 2006).

16. *See, e.g.*, *Beethoven.com L.L.C v. Librarian of Congress*, 394 F.3d 939, 947 (D.C. Cir. 2005) (holding that the contract was particularly reliable because it involved sophisticated market participants with substantial resources); *In re Cendant Corp. Sec. Litig.*, 404 F.3d 173, 191 (3d Cir. 2005) (holding that institutional investors should be the lead plaintiff in securities class actions because they have a large financial stake in the transaction and have the incentive and the sophistication to monitor the litigation); *In re Tutu Water Wells CERCLA Litig.*, 326 F.3d 201, 208–09 (3d Cir. 2003) (noting the fact that a settlement reached by sophisticated parties with conflicting interests argues in favor of its fairness).

17. The Behavioral Law and Economics literature has provided numerous examples of irrational human behavior. For the best overviews of this literature's insights see Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CAL. L. REV. 1051 (2000) and Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471 (1998).

18. *See, e.g.*, ROBERTA ROMANO, THE ADVANTAGE OF COMPETITIVE FEDERALISM FOR SECURITIES REGULATION 12 (2002) (noting that the federal securities laws are less meaningful with the rise of sophisticated investors and available investor information on the Internet); Stephen Choi, *Regulating Investors Not Issuers: A Market-Based Proposal*, 88 CAL. L. REV. 279, 282–83 (2000) (arguing that sophisticated investors do not need regulation because they can bargain for their own protections); David Dana & Susan P. Koniak, *Bargaining in the Shadow of Democracy*, 148 U. PA. L. REV. 473, 544–45 (1999) (noting that there is no need to change the “rely-at-your-own-risk” rule because those who rely are generally sophisticated players).

19. *See, e.g.*, Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES 3, 16–17 (Daniel Kahneman, Paul Slovic & Amos Tversky eds., 1982) (noting that there is an optimism bias in estimating knowledge certainty common to both sophisticated and naïve subjects); Amos Tversky, *Assessing Uncertainty*, 36 J. ROYAL STAT. SOC'Y 148, 151–52 (noting that even experienced research psychologists demonstrated erroneous belief in the law of small numbers).

credit, equities, and oil—should at least inspire some questioning of our implicit faith in sophisticated market participants.²⁰

In this Article, I advance a behavioral-economics theory for why the most intelligent, well-educated, wealthy business people are sometimes colossally wrong. I argue that the interaction of several well-documented heuristics and biases causes even the most sophisticated actors to place unwarranted confidence in their ability to predict the future, a phenomenon I term “confident uncertainty.” When we make predictions about the future, we employ a number of heuristics that, while often useful, distort our analysis of the gathered data.²¹ We wrongly assume that the sample we have is representative of the real world, even when we have good reason to know that our sample is flawed.²² We rely heavily on types of information that are poor predictors, such as job interviews.²³ We place too much faith in our ability to control random

20. See *GMAC Posts a Profit for Fourth Quarter*, N.Y. TIMES, Feb. 4, 2009, at B3 (describing the effects of the collapse of the credit industry on GMAC); Walter Hamilton, *Dow Hits a 6-Year Low*, L.A. TIMES, Feb. 20, 2009, at C1 (noting that the Dow is down 47% from its record high); Jack Healy, *October Report Shows Home Prices Down 18% from Last Year*, N.Y. TIMES, Dec. 31, 2008, at B3 (noting that the housing market was down 18%); Jack Healy, *Wholesale Costs Rise As Oil Prices Seem to Bottom Out*, N.Y. TIMES, Feb. 20, 2009, at B3 (“Crude oil has fallen from its peaks of about \$145 a barrel in July as a global economic downturn gained force, but prices have settled around \$35 to \$40 a barrel since mid-December.”).

21. See Lee Ross & Craig A. Anderson, *Shortcomings in the Attribution Process: On the Origins and Maintenance of Erroneous Social Assessments*, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES, *supra* note 19, at 129, 135 (noting that a fundamental attribution error results from processes that function well in many contexts).

22. See Caryl Cox & John Mouw, *Disruption of the Representativeness Heuristic: Can We Be Perturbed into Using Probabilistic Reasoning?*, 23 EDUC. STUD. MATHEMATICS 163 (1992); David M. Grether, *Bayes Rule as a Descriptive Model: The Representativeness Heuristic*, 95 Q.J. ECON. 537 (1980); Daniel Kahneman & Amos Tversky, *Subjective Probability: A Judgment of Representativeness*, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES, *supra* note 19, at 32, 33.

23. See, e.g., EDWARD C. WEBSTER, *THE EMPLOYMENT INTERVIEW: A SOCIAL JUDGMENT PROCESS* (1982); Richard D. Arvey & James E. Campion, *The Employment Interview: A Summary and Review of Recent Research*, 35 PERSONNEL PSYCHOL. 281 (1982); Michael M. Harris, *Reconsidering the Employment Interview: A Review of Recent Literature and Suggestions for Future Research*, 42 PERSONNEL PSYCHOL. 491 (1989) (indicating that the interview has moderate validity); John E. Hunter & Ronda F. Hunter, *Validity and Utility of Alternative Predictors of Job Performance*, 96 PSYCHOL. BULL. 72 (1984); Eugene C. Mayfield, *The Selection Interview—A Re-evaluation of Published Research* 1 PERSONNEL PSYCHOL. 239 (1964); G.G. Milne, *The Interview: Let Us Have Perspective*, 2 AUSTRALIAN PSYCHOLOGIST 77 (1967); Richard R. Reilly & Georgia T. Chao, *Validity and Fairness of Some Alternative Employee Selection Procedures*, 35 PERSONNEL PSYCHOL. 1 (1982); Alec Rodger, *The Worthwhileness of the Interview*, 26 OCCUPATIONAL PSYCHOL. 101 (1952); Patricia M. Rowe, *The Employment Interview: A Valid Selection Procedure*, 28 CANADIAN PERSONNEL & INDUS. REL. J. 37 (1981); Neal Schmitt, *Social and Situational Determinants of Interview Decisions: Implications for the Employment Interview*, 29 PERSONNEL PSYCHOL. 79 (1976); Lynn Ulrich & Don Trumbo, *The Selection Interview Since 1949*, 63 PSYCHOL. BULL. 100 (1965); Ralph Wagner, *The Employment Interview: A Critical Summary*, 2 PERSONNEL PSYCHOL. 17 (1949); Orman R. Wright, *Summary of Research on the Selection Interview Since 1964*, 22 PERSONNEL

events.²⁴ When we make decisions in groups, we are likely to defer to the will of the majority or the group's leader and avoid raising issues that may generate conflict, such as alternative proposals.²⁵

Heuristics and biases like these interact to produce flawed choices. Then, once we have made and invested in such a decision, cognitive dissonance encourages us to interpret new data in a way that reinforces the accuracy of our original choice and urges us to defend the original outcome rather than correct our prior errors.²⁶ The anxiety associated with stressful and uncertain choices demands amelioration. Denying that the choice was difficult can ease the mental pressure caused by uncertainty.²⁷

This strategy's corollary, however, is excessive confidence in the judgment's accuracy. High confidence in turn can induce decision makers to defend the outcome too vigorously, by overpaying for the anointed candidate or by punishing those who threaten the legitimacy of the decision-making process.²⁸ We persuade ourselves the decision was easy because one candidate or process was clearly superior to the competition. An outstanding candidate is worth pursuing at even a premium price, and a worthwhile process is worth defending vigorously from detractors.

In sum, I argue confident uncertainty causes those responsible for choosing key employees to use methods in which they place undeserving confidence, leading to distortions in employment markets and undue resistance to reform. To support my claim, I first introduce the heuristics and biases that make up confident uncertainty (Part I). In Part II, I proceed to apply confident-uncertainty analysis to corporate senior executives. Again beginning with the (contested) assumption that senior executives are paid too much, I explain why corporate boards may systematically err in making compensation decisions. Finally, Part III evaluates the Obama administration's current proposal to regulate executive compensation in light of confident uncertainty's insights, as well as the executive-compensation provisions Senator Dodd subsequently inserted in the stimulus package and the Treasury regulations authorized by those

PSYCHOL. 391 (1969). *But see* Michael A. McDaniel, Deborah L. Whetzel, Frank L. Schmidt & Steven D. Maurer, *The Validity of Employment Interviews: A Comprehensive Review and Meta-Analysis*, 79 J. APPLIED PSYCHOL. 599, 610 (1994) (noting that even an unstructured interview has a "respectable" level of validity); Willi H. Wiesner & Steven F. Cronshaw, *A Meta-Analytic Investigation of the Impact of Interview Format and Degree of Structure on the Validity of the Employment Interview*, 61 J. OCCUPATIONAL PSYCHOL. 275, 286, 289 (1988) (noting that interviews have satisfactory to modest validity, depending on the type of interview, and produce better results than random selection).

24. *See* Ellen J. Langer, *The Illusion of Control*, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES, *supra* note 19, at 231, 237–38.

25. *See* IRVING L. JANIS, *GROUPTHINK: PSYCHOLOGICAL STUDIES OF POLICY DECISIONS AND FIASCOES* (2d ed., 1982); Daniel P. Forbes & Frances J. Milliken, *Cognition and Corporate Governance: Understanding Boards of Directors as Strategic Decision-Making Groups*, 24 ACAD. MGMT. REV. 489, 496–97 (1999).

26. *See* LEON FESTINGER, *A THEORY OF COGNITIVE DISSONANCE* (1957); *see also* C. Daniel Batson, *Rational Processing or Rationalization?: The Effect of Disconfirming Information on a Stated Religious Belief*, 32 J. PERSONALITY & SOC. PSYCHOL. 176 (1975) [hereinafter Batson, *Rational Processing*]; C. Daniel Batson, *Experimentation in Psychology of Religion: An Impossible Dream*, 16 J. SCI. STUDY RELIGION 413, 416 (1977) [hereinafter Batson, *Psychology of Religion*].

27. *See* FESTINGER, *supra* note 26, at 34, 42–46.

28. *See infra* Part II.B.

provisions.²⁹ I conclude that caps on compensation are advisable so long as they are tailored caps—not uniform caps as the Obama plan currently provides.³⁰ The unlimited performance pay in the Obama plan, however, is likely to unwind the cap’s benefits, and the nonbinding “say on pay” will do little to curb excessive compensation.³¹ The Dodd provisions’ bonus restrictions could be a useful step, but they fail to provide meaningful limits on total pay and contain a troubling loophole for preexisting contracts.³² As a result, they are unlikely to moderate excessive compensation caused by confident uncertainty.³³

I. CONFIDENT UNCERTAINTY

Most of us would have little trouble admitting we cannot predict the future. Foretelling events is generally relegated to the realm of fantasy or science fiction. Although there are thousands of mediums and spiritualists that claim prophetic powers,³⁴ and even respected public figures are sometimes rumored to consult psychics,³⁵ few people will publicly admit to taking precognitive abilities seriously. Yet we have implicit faith that sophisticated business people can and will make efficient economic decisions. These choices necessarily rely on forecasts, whether about demand for a new product, fashion trends, development of new technologies, or general economic conditions. As such, these decisions should be made cautiously, remaining sensitive to their contingent nature and attempting to provide for unforeseen occurrences. All too often, though, sophisticated market participants forget or suppress the uncertainty that accompanies planning, sometimes with ruinous results.

Why? Decision makers with the resources to acquire the best advice and the most advanced statistical expertise, should not overestimate the extent of their knowledge. Nevertheless, as I shall explore below, time and again they do.³⁶ I argue that this

29. See Deborah Solomon & Mark Maremont, *Bankers Face Strict New Pay Cap: Stimulus Bill Puts Retroactive Curb on Bailout Recipients*; *Wall Street Fumes*, WALL ST. J., Feb. 14, 2009, at A1 (noting that the stimulus package passed by Congress includes new executive-compensation restrictions inserted by Senator Dodd).

30. See *infra* Part III.B.

31. See *infra* Parts III.C–D.

32. See American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 111(b)(3)(D)(iii), 123 Stat. 115, 518 (2009) (“The prohibition [on bonuses] shall not be construed to prohibit any bonus payment required to be paid pursuant to a written employment contract executed on or before February 11, 2009 . . .”).

33. See *infra* Part III.E.

34. Yellow.com lists over six thousand businesses under the category “psychics and mediums.” See Yellow Pages, <http://yellowpages.superpages.com/listings.jsp?SRC=comwp&CS=L&MCBP=true&C=psychic&STYPE=S&L=&search.x=69&search.y=8&search=Find+It&search=Find+It>.

35. Hillary Clinton and Nancy Reagan, for example, both are rumored to have consulted with psychics. See Greg Barrett, *Can the Living Talk to the Dead?*, USA TODAY, July 20, 2001, at D1; John Podhoretz, *Clinton Fatigue for Dems; It’s Why Hillary Can’t Get a Real Cheer Even from Her Own Party*, N.Y. POST, Feb. 8, 2000, at 43; Nancy Benac, *Watergate: How a “Third-Rate Burglary” Changed American History*, L.A. TIMES, June 8, 1997, at 31.

36. See *infra* Parts I–II.

surprising result stems from a confluence of well-documented heuristics and biases that interact to produce excessive confidence about forecasts.

Our problems fall broadly into three categories: perception, analysis, and group decision making. In gathering data, we tend to seek reassurance in consistency and assume the relevance of data that is not very probative.³⁷ That is, we suffer from an illusion that comforting data is also valid, even when it is not. We also often incorrectly assume that the sample we have (or can easily recall) is representative of the entire population and tend to believe success is entirely the result of skill—employing a representativeness heuristic.³⁸

When we analyze the data, we act as though we believe we can influence future events, underestimating the role of chance.³⁹ Also, we interpret new data to confirm our preexisting theories, even when the new data tends to undermine our presuppositions.⁴⁰ Confronting the new data's impact threatens us with unpleasant cognitive dissonance, which we avoid by interpreting the new data as consistent with our theories or discounting the new information altogether.⁴¹ To make matters worse, we are generally far too optimistic about our conclusions' validity and our own skills generally.⁴²

Finally, when we gather together to make decisions, we have a tendency to self-censor dissenting views and to defer to the group's leader or to the majority, resulting in groupthink.⁴³ We are also susceptible to social cascades, in which we mimic the majority's strategy, ignoring our private information.⁴⁴

All of these problems combine to inspire excessive confidence in our ability to predict the future. In this section, I shall describe the various heuristics and biases that together create confident uncertainty.

37. See Daniel Kahneman & Amos Tversky, *On the Psychology of Prediction*, 80 PSYCHOL. REV. 237 (1973) [hereinafter Kahneman & Tversky, *Psychology of Prediction*]; Tversky & Kahneman, *supra* note 19, at 9 (describing the illusion of validity).

38. See Tversky & Kahneman, *supra* note 19, at 33; Amos Tversky & Daniel Kahneman, *Judgments of and by Representativeness*, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES, *supra* note 19, at 84, 84–85 [hereinafter Tversky & Kahneman, *Representativeness*].

39. See Langer, *supra* note 24, at 231.

40. See FESTINGER, *supra* note 26, at 44–46; Ross & Anderson, *supra* note 21, at 144.

41. See Ross & Anderson, *supra* note 21, at 151.

42. See Baruch Fischhoff, *Debiasing*, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES, *supra* note 19, at 422, 432.

43. See generally JANIS, *supra* note 25; Forbes & Milliken, *supra* note 25.

44. Lisa R. Anderson & Charles A. Holt, *Classroom Games: Information Cascades*, 10 J. ECON. PERSP. 187 (1996) [hereinafter Anderson & Holt, *Classroom Games*]; see also Lisa R. Anderson & Charles A. Holt, *Information Cascades in the Laboratory*, 87 AM. ECON. REV. 847 (1997) [hereinafter Anderson & Holt, *Information Cascades*]; Abhijit V. Banerjee, *A Simple Model of Herd Behavior*, 108 Q.J. ECON. 797, 798 (1992); Sushil Bikhchandani, David Hirshleifer & Ivo Welch, *Learning from the Behavior of Others: Conformity, Fads, and Informational Cascades*, 12 J. ECON. PERSP. 151, 154 (1998); Cass R. Sunstein, *Deliberative Trouble? Why Groups Go to Extremes*, 110 YALE L.J. 71, 82 (2000).

A. Perception Issues

The first set of heuristics affects our decisions by biasing the information we receive and process. Two dynamics are important here: the illusion of validity and the representativeness heuristic.

1. The Illusion of Validity

Not all information is equally informative. Some types of data are clearly irrelevant, but other irrelevant data may be more seductive. A good fit between the predicted outcome and the gathered data can produce too much confidence that the prediction will come true.⁴⁵ Confidence is in part a function of the data's internal consistency, but consistency does not actually enhance a prediction's validity.⁴⁶ In fact, the opposite is often the case. Given a set number of variables, it is preferable to have variables that are independent of one another.⁴⁷ Variables dependent on the same factors produce less information—and less predictive power—than do independent variables.⁴⁸ But independent variables more often produce inconsistent information, reducing confidence. Variables that contain overlapping information boost confidence without enhancing real predictive power.⁴⁹

For example, in hiring an associate, a law firm may take comfort in observing that the candidate had an impressive law school record and clerked for a prestigious judge. These two variables reinforce one another, building the perception that the candidate's accomplishments merit the position. The two variables, however, are interdependent. The reason the candidate was able to clerk for a prestigious judge was that he or she

45. See Hillel J. Einhorn & Robin M. Hogarth, *Confidence in Judgment: The Persistence of the Illusion of Validity*, 85 PSYCHOL. REV. 395, 396 (1978) (noting that experience can enhance the illusion of validity through confirmatory bias); A.V. Muthukrishnan, *Decision Ambiguity and Incumbent Brand Advantage*, 22 J. CONSUMER RES. 98, 99–100 (1995); Robert Prentice, *Whither Securities Regulation? Some Behavioral Observations Regarding Proposals for Its Future*, 51 DUKE L.J. 1397, 1463 n.307 (2002) (“[P]eople will be confident in the prediction that a person is a librarian when a description of that person matches a stereotype of a librarian, even if the information contained in the description is scanty, unreliable, or outdated.”); Susanna Kim Ripken, *Predictions, Projections, and Precautions: Conveying Cautionary Warnings in Corporate Forward-Looking Statements*, 2005 U. ILL. L. REV. 929, 960 (2005) (noting that the illusion of validity causes people making judgments under uncertainty to experience excessive confidence in fallible choices); Tversky & Kahneman, *Heuristics and Biases*, *supra* note 19, at 9 (describing the illusion of validity).

46. Tversky & Kahneman, *supra* note 19, at 9 (“The unwarranted confidence which is produced by a good fit between the predicted outcome and the input information may be called the illusion of validity.”).

47. See *id.* (“[A]n elementary result in the statistics of correlation asserts that, given input variables of stated validity, a prediction based on several such inputs can achieve higher accuracy when they are independent of each other than when they are redundant or correlated.”).

48. See *id.* (“[R]edundancy among inputs decreases accuracy even as it increases confidence, and people are often confident in predictions that are quite likely to be off the mark.”).

49. See *id.* (“The internal consistency of a pattern of inputs is a major determinant of one's confidence in predictions based on these inputs.”).

performed well as a law student. Strong school work resulted in obtaining a fine clerkship. The second variable—the clerkship post—therefore adds little information but nevertheless may disproportionately boost confidence.⁵⁰ As pioneering behavioral economists Kahneman and Tversky have written, “[R]edundancy among inputs decreases accuracy even as it increases confidence, and people are often confident in predictions that are quite likely to be off the mark.”⁵¹

One interesting effect of the illusion of validity is its tendency to enforce folk wisdom and stereotypes. So, for example, in studies in which subjects are given a description of a person that matches a librarian’s stereotype—that is, quiet, bookish, wears glasses—the subjects express confidence that the person described is a librarian.⁵² Their confidence remains unabated even when the description is very limited or when the description was written many years before (and might therefore no longer reflect the person’s character).⁵³ Their emotional state reflects the illusion that the little information they have received validly predicts the person’s profession.

The illusion of validity induces overconfidence in the face of uncertainty by cloaking irrelevant (or at least not very relevant) data in the guise of predictive information. Decision makers then inappropriately treat the immaterial information as though it forecasts accurately, producing confident but erroneous visions of the future that inspire suboptimal decisions.

2. The Representativeness Heuristic

Suppose we have two events, A and B, and we wish to explore how the two are related. That process could be quite difficult and involved, perhaps requiring a detailed analysis of the root causes of A and B, their relative frequencies, and any possible environmental influences on both or either. The representativeness heuristic provides a shortcut to resolve this problem. When we use the representativeness heuristic, we judge the probability that A caused B by evaluating the similarities between A and B. If the two events seem alike, we judge the probability that one caused the other as relatively high. If they seem dissimilar, we judge the causation probability less likely.

Although this heuristic may be useful, it also leads to three important structural errors. First, representativeness may persuade us to believe falsely in the law of small numbers.⁵⁴ Second, judging events by their resemblance to one another may cause us to believe in a relationship because the story seems plausible, when the level of detail that makes a story believable actually makes it *less* probable.⁵⁵ Finally, judging whether one

50. Some might argue that the clerkship provides some training that could be relevant to the applicant’s future career. Clerking likely does help prepare future litigators, but it seems unlikely that clerks receive much training in scholarship or teaching.

51. Tversky & Kahneman, *supra* note 19, at 9.

52. *Id.*; Prentice, *supra* note 45, at 1463 n.307 (“[P]eople will be confident in the prediction that a person is a librarian when a description of that person matches a stereotype of a librarian, even if the information contained in the description is scanty, unreliable, or outdated.”).

53. Tversky & Kahneman, *supra* note 19, at 9.

54. See Tversky & Kahneman, *Representativeness*, *supra* note 38, at 83–84.

55. *Id.* at 98.

event is likely to cause another by the events' similarity may cause us to overlook the more probative basal-probability rates.⁵⁶

Very large random samples are generally quite representative of their base populations.⁵⁷ The same cannot be said, however, for small samples.⁵⁸ Small samples permit enormous variance, so that the sample may not provide much information about the population as a whole.⁵⁹ The representativeness heuristic ignores this statistical principle and treats small samples as though they were representative of the whole.⁶⁰

For example, in one study subjects were asked to estimate the distributions in the heights of men selected randomly where the average height was 170 cm.⁶¹ Their estimates remained constant as the number of men in the group changed from 10 to 100 to 1000.⁶² The subjects were entirely insensitive to sample size. Statistics teaches us that in fact the odds of obtaining an unusually large average height decline as the sample size increases.⁶³ When the sample size is small, there is a greater chance of obtaining a result significantly different from the broader population than when the sample size is large.⁶⁴ The subjects ignored this rule and instead applied the representativeness heuristic.⁶⁵

Another type of problem caused by the representativeness heuristic comes from our focus on coherence.⁶⁶ Data that fits a consistent account is more salient than information that is harder to explain.⁶⁷ We therefore have trouble taking in data that makes the account less plausible.⁶⁸ Adding details to an account—which makes the account statistically less likely, since more is being predicted—tends to *increase*

56. Tversky & Kahneman, *supra* note 19, at 4–5.

57. Kahneman & Tversky, *supra* note 22, at 35, 37–38. *See generally* Ward Edwards & Detlof von Winterfeldt, *On Cognitive Illusions and Their Implications*, in *JUDGMENT AND DECISION MAKING* 592, 600–01 (Terry Connolly, Hal R. Arkes & Kenneth R. Hammond eds., 2d ed. 2000).

58. *See* Edwards & von Winterfeldt, *supra* note 57, at 600–01; Kahneman & Tversky, *supra* note 22, at 35, 37–38.

59. *See* Kahneman & Tversky, *supra* note 22, at 35, 37–38.

60. *See id.* at 38.

61. *See id.* at 40–42; Edwards & von Winterfeldt, *supra* note 57, at 600.

62. *See* Edwards & von Winterfeldt, *supra* note 57, at 600.

63. *Id.*

64. *Id.*

65. *See* Kahneman & Tversky, *supra* note 22, at 40. Another interesting study in this area asked subjects which of two hospitals recorded more days on which more than sixty percent of babies born that day were boys. The two hospitals were different sizes, with the larger hospital averaging forty-five babies born per day and the smaller averaging only fifteen. Subjects overwhelmingly said that the hospitals would record about the same number of days with an unusual percentage of boys born, even though the odds are much higher that the smaller hospital would have more such days than the larger. *Id.* at 44–46.

66. *See* Tversky & Kahneman, *Representativeness*, *supra* note 38, at 97–98.

67. *See* Shelley E. Taylor, *The Availability Bias in Social Perception and Interaction*, in *JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES*, *supra* note 19, at 190, 197–98.

68. *Id.* at 200.

confidence in the account's validity, the opposite of the correct reaction.⁶⁹ A good story is generally more believable than a poor story, but less likely.⁷⁰

Studies have verified this effect by examining subjects' judgments of the relative probability of simple and compound statements.⁷¹ For example, in one study, subjects were given a short personality sketch and then asked to rank the likelihood of a series of statements about the person described.⁷² Most of these statements were simple, declarative sentences such as, "Linda is a bank teller" or, "Linda is active in the feminist movement."⁷³ A few of the sentences were compound statements crafted by combining two of the simple declarations such as, "Linda is a bank teller and is active in the feminist movement."⁷⁴

The probability that a compound statement will be true is always lower than the probability that either of its components will be true.⁷⁵ Linda is more likely to be a bank teller than she is to be a bank teller who is active in the feminist movement. Nevertheless, subjects consistently ranked the compound statement as more likely than at least one of its component parts.⁷⁶ The compound statement created a more complete and consistent image that subjects found more probable than the relatively truncated descriptions in the simple statements.⁷⁷ Subjects were drawn to the good stories.⁷⁸

69. See Tversky & Kahneman, *Representativeness*, *supra* note 38, at 90–98.

70. See *id.* at 98. As Tversky & Kahneman wrote:

As they stare into the crystal ball, politicians, futurologists, and laypersons alike seek an image of the future that best represents their model of the dynamics of the present. This search leads to the construction of detailed scenarios, which are internally coherent and highly representative of our model of the world. Such scenarios often appear more likely than less detailed forecasts, which are in fact more probable. As the amount of detail in a scenario increases, its probability can only decrease steadily, but its representativeness and hence its apparent likelihood may increase.

Id. at 97–98.

71. *Id.* at 90–97; see also Robert A. Prentice, *Chicago Man, K-T Man, and the Future of Behavioral Law and Economics*, 56 VAND. L. REV. 1663, 1684 (2003) ("In one set of studies, ninety-one percent of subjects, including those with substantive expertise, were induced by the representativeness heuristic to commit the conjunction fallacy.")

72. See Tversky & Kahneman, *Representativeness*, *supra* note 38, at 90–97.

73. *Id.* at 92.

74. *Id.*; see also Robert A. Prentice, *The Case of the Irrational Auditor: A Behavioral Insight into Securities Fraud Litigation*, 95 NW. U. L. REV. 133, 158 (2000) (describing the study).

75. See Paul Chevigny, *Pornography and Cognition: A Reply to Cass Sunstein*, 1989 DUKE L.J. 420, 424 (1989) (describing the "basic probability" that a single characteristic is more likely than a conjunctive characteristic); Tversky & Kahneman, *Representativeness*, *supra* note 38, at 90.

76. See Tversky & Kahneman, *Representativeness*, *supra* note 38, at 90–97; see also David M. Frederick & Robert Libby, *Expertise and Auditors' Judgments of Conjunctive Events*, 24 J. ACCT. RES. 270, 281–88 (1986) (reporting studies demonstrating that even auditors employ the representativeness heuristic).

77. See Prentice, *supra* note 74, at 158 ("The similarity of the description to the stereotype of a feminist overwhelms the (seemingly) obvious point that it must be more likely that Linda is only 'a' than that she is 'a' and 'b.'" (emphasis in original)); Tversky & Kahneman, *Representativeness*, *supra* note 38, at 90–98.

This effect is so powerful that it can cause us to ignore information that does not fit within our conceptual map.⁷⁹ For example, one study presented psychology graduate students with a paragraph supposedly written by a clinical psychologist about Tom, now a graduate student.⁸⁰ The psychologist had based the evaluation on projective tests conducted while Tom was in high school.⁸¹ The paragraph described Tom as intelligent but uncreative and hungry for order.⁸² It also stated that Tom had little feeling or sympathy for other people but did have a deep moral sense.⁸³

The graduate students ranked the probability that Tom had entered into nine possible fields of graduate education. They strongly agreed that Tom's most likely areas were computer science or engineering, and that he was least likely to have entered social sciences, social work, the humanities, or education. They also agreed that the kind of projective tests relied on by the psychologist in formulating the descriptive paragraph did not provide a valid basis for predicting future career choices. Afterwards, the subjects were told that Tom in fact was an education graduate student specializing in the education of children with special needs. The students were then asked to explain the relation between Tom's personality and career choice.⁸⁴

The graduate students believed that the psychologist's evaluation was based on invalid testing.⁸⁵ Faced with an invalid test result from Tom's high school years and a contrasting current career choice, the most sensible response would be to discount the psychologist's evaluation and reevaluate Tom's personality in light of his actual career as kinder and more caring than the psychologist believed.⁸⁶ Instead, the students explained Tom's career choice in terms of the psychologist's evaluation, arguing that it stemmed either from his deep moral sense or a need for dominance.⁸⁷ Only a small minority (twenty-one percent) questioned the validity of the study, and even most of these explained Tom's profession as a function of the psychologist's view of Tom's personality.⁸⁸ These responses illustrate both our reluctance to revise an explanatory

78. See Tversky & Kahneman, *Representativeness*, *supra* note 38, at 90–98.

79. See Amos Tversky & Daniel Kahneman, *Causal Schemas in Judgments Under Uncertainty*, in *JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES*, *supra* note 19, at 117, 126–28.

80. *Id.*; see also Charles L. Barzun, *Rules of Weight*, 83 *NOTRE DAME L. REV.* 1957, 1990 (2008).

81. Tversky & Kahneman, *supra* note 79, at 127; see also Barzun, *supra* note 80, at 1990.

82. Tversky & Kahneman, *supra* note 79, at 127.

83. *Id.*

84. See *id.* (describing experiment).

85. *Id.* at 127 (“Response to an additional question also exhibited general agreement that projective tests do not provide a valid source of information for the prediction of professional choice.”).

86. As Tversky & Kahneman argued: “The high confidence with which people predict professional choice from personality descriptions implies a belief in a high correlation between personality and vocational choice. This belief, in turn, entails that professional choice is highly diagnostic with respect to personality.” *Id.*

87. *Id.*; see also Barzun, *supra* note 80, at 1990.

88. Tversky & Kahneman, *supra* note 79, at 127–28; see also Barzun, *supra* note 80, at 1990–91 (noting that few subjects considered the validity of the psychology test as an explanation).

model once adopted and our ability to use an existing model to account for new nonconforming data.⁸⁹

Coherence encourages us to look for stories and to cling to them once we have found them. We may have an explanation or theory in mind even before we begin to examine the data. If the early data seems to confirm this theory, we are likely to insist that later data that does not fit the theory is inaccurate or aberrational. Instead of fitting the theory to the data, we are likely to try to conform the data to the theory with which we started. This tendency also can make us overly optimistic about our projections. If we have a good story about what has happened in the past and why, we may assume that the story will continue to hold true in the future. Our affection for coherence may disguise the data's true variability. As a result, we may overlook warning signs that the future may be quite different from the past.

Finally, the representativeness heuristic may cause us to pay too little attention to base-rate probabilities as we focus on the similarity between cause and potential effects.⁹⁰ Representativeness information is easily available and may often prove useful. Two variables that rise and fall together often are related in some way, either with one causing the other or both the result of some third factor. But the heuristic fails to take account of base-rate probabilities—the likelihood that an event A will occur regardless of the presence of event B.⁹¹ In addition to encouraging belief in the law of small numbers and prioritizing coherence, the representativeness heuristic induces us to ignore the base-rate information we have about the population as a whole, such as the overall frequency of event B.⁹²

89. For other prominent studies that have reached similar conclusions see ROBERT JERVIS, *PERCEPTION AND MISPERCEPTION IN INTERNATIONAL POLITICS* (1976); THOMAS S. KUHN, *THE STRUCTURE OF SCIENTIFIC REVOLUTIONS* (1962); Robert P. Abelson, *Modes of Resolution of Belief Dilemmas*, 3 J. CONFLICT RESOL. 343 (1959); Carl I. Hovland, *Reconciling Conflicting Results Derived from Experimental and Survey Studies of Attitude Change*, 14 AM. PSYCHOLOGIST 8 (1959).

90. See Kahneman & Tversky, *Psychology of Prediction*, *supra* note 37, at 237–38; Richard E. Nisbett, Eugene Borgida, Rick Crandall & Harvey Reed, *Popular Induction: Information Is Not Necessarily Informative*, in *JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES*, *supra* note 19, at 101, 107–08; Daniel Shaviro, *Statistical-Probability Evidence and the Appearance of Justice*, 103 HARV. L. REV. 530, 545 (1989) (“People, as an empirical matter, tend to underestimate the probative value of base-rate evidence in comparison to other evidence.”).

91. See Chris Guthrie, Jeffrey J. Rachlinski & Andrew J. Wistrich, *Blinking on the Bench: How Judges Decide Cases*, 93 CORNELL L. REV. 1, 22 (2007) (“When people rely on the representativeness heuristic . . . [They] tend to discount information about the frequency with which the underlying category occurs, a phenomenon known as ‘base rate’ neglect.”); Jonathan J. Koehler & Daniel N. Shaviro, *Veridical Verdicts: Increasing Verdict Accuracy Through the Use of Overtly Probabilistic Evidence and Methods*, 75 CORNELL L. REV. 247, 256 (1990) (giving an example of how people tend to underweigh base rate information).

92. See Korobkin & Ulen, *supra* note 17, at 1086 (“The ‘representativeness heuristic’ refers to the tendency of actors to ignore base rates and overestimate the correlation between what something appears to be and what something actually is.”); Amos Tversky & Daniel Kahneman, *Evidential Impact of Base Rates*, in *JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES*, *supra* note 19, at 153, 153–54.

One landmark study that illustrated this aspect of the representativeness heuristic asked subjects to guess, based on a description, whether someone was a lawyer or an engineer.⁹³ The subjects were told that the person described came from a group of one hundred engineers and lawyers that were interviewed by a panel of psychologists.⁹⁴ The psychologists wrote thumbnail descriptions of each member of the group, based on the interviews and some personality tests.⁹⁵ Some subjects were told the group consisted of thirty engineers and seventy lawyers (the “low-engineer” group), while others were told the group consisted of seventy engineers and thirty lawyers (the “high-engineer” group).⁹⁶ When given no description at all, the subjects generally assessed the probability that someone was an engineer at thirty percent in the low-engineer group and seventy percent in the high-engineer group.⁹⁷ But when the subjects were given an uninformative description (thirty, married, motivated, able, and well liked), they estimated the odds the described person was an engineer at around fifty percent. That is, even useless information was sufficient to cause people to ignore the basal probabilities and instead ground their estimate solely on their sense of the similarity between the description and the two professions.⁹⁸

Base-rate probabilities are often an important predictor. Our experience of outdoor weddings may exclusively consist of fair-weather events, such that we strongly associate outdoor weddings with sunny days. Nevertheless, if it typically rains on half of the days in May, we probably should not plan an outdoor May wedding. Ignoring valid base-rate data in favor of invalid information about the similarity of potential causes and effects (weddings are sunny) may cause us to become overly optimistic about our forecasts.

Correlation does not necessarily prove causation.⁹⁹ When two events seem related—when one seems representative of the other—our ability to separate correlation from causation diminishes sharply. The more one event represents another, the greater our

93. See Kahneman & Tversky, *Psychology of Prediction*, *supra* note 37, at 241.

94. *Id.*; see also Barbara D. Underwood, *Law and the Crystal Ball: Predicting Behavior with Statistical Inference and Individualized Judgment*, 88 YALE L.J. 1408, 1428 n.54 (1979) (describing study).

95. Kahneman & Tversky, *Psychology of Prediction*, *supra* note 37, at 241; see also Jeffrey O’Connell & Joseph R. Baldwin, *(In)juries, (In)justice, and (Il)legal Blame: Tort Law as Melodrama—or Is It Farce?*, 50 UCLA L. REV. 425, 435–36 (2002).

96. Kahneman & Tversky, *Psychology of Prediction*, *supra* note 37, at 241; see also Jeff Govern, *Toward a Theory of Warranties in Sales of New Homes: Housing the Implied Warranty Advocates, Law and Economics Mavens, and Consumer Psychologists Under One Roof*, 1993 WIS. L. REV. 13, 34.

97. Kahneman & Tversky, *Psychology of Prediction*, *supra* note 37, at 242; see also Jon D. Hanson & Douglas A. Kysar, *Taking Behavioralism Seriously: The Problem of Market Manipulation*, 74 N.Y.U. L. REV. 630, 665 (1999).

98. Kahneman & Tversky, *Psychology of Prediction*, *supra* note 37, at 242–43; see also Jonathan J. Koehler, *When Do Courts Think Base Rate Statistics Are Relevant?*, 42 JURIMETRICS J. 373, 396 (2002) (“It seems that individuating information reduces the perceived relevance of base rates, whereas the *absence* of individuating information focuses attention on available base rates.” (emphasis in original)).

99. See O. Carter Snead, *Neuroimaging and the Complexity of Capital Punishment*, 82 N.Y.U. L. REV. 1265, 1287 (2007).

tendency to assume a causal link between the two.¹⁰⁰ The representativeness heuristic thus tends to produce overly optimistic forecasts that similar events will follow one another.

B. Analysis Issues

The second set of heuristics influences the way we analyze the data we have gathered. Two evaluative phenomena act to render us unduly optimistic about our ability to plan for and influence future events. First, we place undue confidence in our ability to determine outcomes, understating chance's role.¹⁰¹ Second, we tend to interpret data in order to support our own preconceptions, and may even ignore information that contradicts a favored theory.¹⁰² These phenomena combine to inappropriately enhance our confidence in our capacity to manage uncertainty.

1. The Illusion of Control

A gambler steps up to the craps table. She needs a high number to win. How hard should she throw the dice? This question may seem like a non sequitur. The fall of the dice is random, and the number that comes up is not affected by the force with which the dice are released. Despite this fact of physics, people throw the dice hard when they want a high number and drop them softly when they want a low number.¹⁰³

Ellen Langer has demonstrated that this perplexing behavior is the result of what she terms the "illusion of control."¹⁰⁴ Most tasks involve a mix of chance and skill.¹⁰⁵ It is therefore often difficult to distinguish the relative roles of luck and talent.¹⁰⁶ As a result, people behave as though they can control outcomes, even when those outcomes are entirely random.¹⁰⁷

One particularly telling study involved lottery tickets.¹⁰⁸ Langer divided subjects into two groups. One group was given lottery tickets ("assigned group"); the other group was permitted to choose their own lottery tickets ("choice group").¹⁰⁹ Then both

100. See Loren J. Chapman & Jean Chapman, *Test Results Are What You Think They Are, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES*, *supra* note 19, at 239, 241.

101. See Ehud Guttel & Alon Harel, *Uncertainty Revisited: Legal Prediction and Legal Postdiction*, 107 MICH. L. REV. 467, 475 (2008) ("Behavioral studies show that individuals often believe that they can influence the likelihood of stochastic outcomes."); Langer, *supra* note 24, at 231; Paul K. Presson & Victor A. Benassi, *Illusion of Control: A Meta-Analytic Review*, 11 J. SOC. BEHAV. & PERSONALITY 493 (1996) (reviewing the literature).

102. See FESTINGER, *supra* note 26; see also Batson, *Rational Processing*, *supra* note 26, at 176; Antony Page, *Unconscious Bias and the Limits of Director Independence*, 2009 U. ILL. L. REV. 237, 270 (describing a study showing cognitive dissonance can be used to cause people to believe lies they told).

103. See James M. Henslin, *Craps and Magic*, 73 AM. J. SOC. 316, 319 (1967).

104. Langer, *supra* note 24, at 231.

105. See *id.* at 238.

106. See *id.*

107. *Id.* at 231; see also ERVING GOFFMAN, *INTERACTION RITUAL* 193 (1967) (listing a streak of "ill luck" as a common reason for dismissal of experienced casino dealers).

108. See Langer, *supra* note 24, at 236–37.

109. See *id.*; see also Jon Hanson & David Yosifon, *The Situational Character: A Critical*

groups were offered money for their tickets. Since the tickets each represented the same random chance at winning a prize, one would expect the two groups to sell their tickets for more or less the same price. Instead, the choice group demanded four times as much money for their tickets as did the assigned group.¹¹⁰ There was no ambiguity about the nature of the game; this was a random lottery. Nevertheless, the mere fact of selection influenced the choice group to believe that they could affect their chance of winning and that their tickets were therefore worth more.¹¹¹

Our tendency to believe we can impact even purely random events can make us overly optimistic about our ability to plan for the future. We are likely to believe our choices affect the future far more than they actually do, lending us a false sense of assurance that our desired outcome will in fact occur.

2. Cognitive Dissonance

We have an unfortunate tendency to cling to ideas, especially once we have invested in them or acted on them.¹¹² When we encounter a cognition that conflicts with an idea or emotion we already hold, we experience dissonance, or psychological discomfort.¹¹³ We can alleviate this discomfort by rejecting the new stimulus, discarding our previously held conflicting cognition, or resolving the two so that they no longer contradict one another.¹¹⁴

Cognitive dissonance can cause us to discount new information that conflicts with our preexisting conceptual map. Rather than endure psychological discomfort, we may choose to disbelieve information that conflicts with cherished beliefs. Alternatively, even if we believe the new information, we may go to great lengths to avoid the implication that our preexisting conceptions have been demonstrated to be false.

One study that demonstrated this aspect of cognitive dissonance began with a group of teenagers attending a church retreat.¹¹⁵ The teenagers were divided into two groups based on whether they believed that Jesus was the son of God. Both groups were administered a questionnaire to measure the intensity of their religious belief. The subjects all then read a fictitious newspaper article purporting to reveal that Christianity was a hoax. While most of the teenagers disbelieved the article, about one-third thought it was true. The subjects then filled out a second questionnaire to again measure the intensity of their religious belief.¹¹⁶

Realist Perspective on the Human Animal, 93 GEO. L.J. 1, 97 (2004).

110. See Langer, *supra* note 24, at 237.

111. See *id.* at 237–38; see also Hanson & Yosifon, *supra* note 109, at 97 (“[S]ubjects were apparently under the illusion that by choosing their tickets they had increased their chances of winning the first lottery.”).

112. See Alafair S. Burke, *Improving Prosecutorial Decision Making: Some Lessons of Cognitive Science*, 47 WM. & MARY L. REV. 1587, 1593–1602 (2006).

113. See *id.* at 1601; Matthew D. Lieberman, Kevin N. Ochsner, Daniel T. Gilbert & Daniel L. Schacter, *Do Amnesiacs Exhibit Cognitive Dissonance Reduction? The Role of Explicit Memory and Attention in Attitude Change*, 12 PSYCHOL. SCI. 135, 135 (2001).

114. See Burke, *supra* note 112, at 1594–98 (discussing confirmation bias and selective information processing).

115. See Batson, *Psychology of Religion*, *supra* note 26, at 416; Batson, *Rational Processing*, *supra* note 26, at 179.

116. See Batson, *Psychology of Religion*, *supra* note 26, at 416.

Among those teenagers who believed Jesus was the son of God and who also believed the article told the truth, the intensity of religious belief actually increased. No other subgroup demonstrated an increase in religious fervor after reading the fake newspaper article.¹¹⁷

Logic would seem to dictate that if the newspaper article were true, as this subgroup believed, that religious fervor would *decrease*. Who, after all, would cling to a belief credibly revealed to be a hoax? Yet the true believers had precisely the opposite reaction. Their faith was strengthened, not weakened, by the fake article's revelations. This reaction seems irrational, but becomes explicable through the dynamic of cognitive dissonance. The information in the article questioned a core belief, creating substantial emotional unease.¹¹⁸

One strategy to cope with this discomfort would have been to attack the validity of the source, disbelieving the article. Two-thirds of the teenagers who believed Jesus was the son of God appear to have adopted this tactic.¹¹⁹ An alternative approach is to rationalize around the new information to find an explanation that reconciles the new information with preexisting beliefs, or at a minimum allows the two to coexist. For example, these subjects might have thought to themselves that even if Christianity began as a hoax, it had evolved over the centuries to discover universal and divine truths that superseded any questionable origins. This sort of rationalization would permit the teenagers to maintain their original beliefs in the face of what they believed to be strong conflicting evidence.¹²⁰

Cognitive dissonance may prevent decision makers from absorbing and granting appropriate weight to evidence that contradicts favored beliefs and opinions. Contrary evidence provides a necessary check against excessive enthusiasm for a view, helping to remind actors that their initial opinion may well be mistaken. By obscuring conflicting evidence and permitting evaluators to focus only on evidence that confirms their predilections, cognitive dissonance may excessively enhance optimism in the face of uncertainty.

C. Group Decision Issues

Groups are often credited with improving the quality of decisions.¹²¹ More participants bring a wider range of perspectives and a richer diversity of ideas, as well

117. *See id.*

118. *See id.* (“Consistent with Festinger’s (1957) theory of cognitive dissonance (but not with logic), those believers who indicated they accepted the article as true actually expressed more intense religious belief on a subsequent questionnaire.”).

119. *See* Batson, *Rational Processing*, *supra* note 26, at 182.

120. *Id.* at 182–83. Again, the point here is not that such reasoning is rational, only that cognitive dissonance may contrive to render it persuasive.

121. *See* Bainbridge, *supra* note 10, at 12 (“[N]umerous studies have found that group decisions are not only superior to those of the average member, but also to those made by the very best individual decisionmakers within the group.”); Sunstein, *supra* note 44, at 73 (“[M]any recent observers have embraced the traditional American aspiration to ‘deliberative democracy,’ an ideal that is designed to combine popular responsiveness with a high degree of reflection and exchange among people with competing views.”).

as a broader knowledge base.¹²² Groups seem particularly sagacious when organized into markets.¹²³ Markets have been established or proposed to predict things as varied as the Academy Awards, presidential elections, and terrorist attacks.¹²⁴ Nevertheless, groups are also prone to certain systematic weaknesses. Two of these weaknesses are relevant to confident uncertainty: groupthink and social cascades. In essence, groupthink is the tendency of certain groups to succumb to excessive consensus.¹²⁵ Social cascades present the illusion of efficient market decisions under conditions that represent very little actual data.¹²⁶

1. Groupthink

Decision-making bodies generally require a certain degree of group cohesion to function properly. Without some cohesion, some loyalty to one another or to a purpose larger than individual self-interest, groups' efforts may dissolve in fractious infighting. Too much cohesion, however, can be as problematic as having too little, because excessive cohesion can produce groupthink.

Groupthink consists of at least seven group characteristics that together can cause serious group decision-making flaws.¹²⁷ Cohesive groups generally consider only a limited range of options, seldom consider the goals to be met by the decision, and rarely delve beyond the obvious disadvantages of the choice initially favored by the majority of the group. They tend to avoid seriously considering options initially opposed by the majority. Cohesive groups often forgo the opportunity to consult with experts from outside the group who might provide data or opinions that undermine the favored option. Even when confronted with contrary data, cohesive groups tend to ignore information that argues against the favored policy, and to highlight information

122. See Bainbridge, *supra* note 10, at 19 (“Multiple sources of information may make it less costly to gather information . . .”).

123. See JOYCE BERG, ROBERT FORSYTHE, FORREST NELSON & THOMAS REITZ, RESULTS FROM A DOZEN YEARS OF ELECTION FUTURES MARKET RESEARCH 4–5 (2000), http://www.biz.uiowa.edu/iem/archive/BFNR_2000.pdf (reporting that the Iowa decision market outperformed political polls in predicting results nine times out of fifteen).

124. See Daniel Goldin, *And the 3-to-1 Winner Is . . .*, L.A. TIMES, Mar. 3, 2006, at E10 (noting that the prediction market Hollywood Stock Exchange correctly forecast Academy Award winners in 2005); Guy Gugliotta, *In California Race, an Online Invitation to Profit*, WASH. POST, Sept. 7, 2003, at A06 (describing an abandoned Defense Department proposal to set up a decision market to predict terrorist attacks, modeled on the Iowa Electronic Markets that predict political election results); Steve Lohr, *Betting to Improve the Odds*, N.Y. TIMES, Apr. 9, 2008, at H1 (describing prediction markets used to estimate demand for products and movie box office returns).

125. See Gia B. Lee, *The President's Secrets*, 76 GEO. WASH. L. REV. 197, 235 (2008) (“Groupthink delineates a set of conditions and processes that leads groups toward an ‘extreme consensus-seeking’ tendency and thereby interferes with critical thinking.”); Marlene E. Turner & Anthony R. Pratkanis, *Twenty-Five Years of Groupthink Theory and Research: Lessons from the Evaluation of a Theory*, 73 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 105, 106 (1998).

126. See Marleen A. O'Connor, *The Enron Board: The Perils of Groupthink*, 71 U. CIN. L. REV. 1233, 1240 (2003); Sunstein, *supra* note 44, at 84 (describing social cascades).

127. JANIS, *supra* note 25, at 9–10.

that supports that policy. Finally, cohesive groups neglect to form contingency plans to deal with foreseeable obstacles to success.¹²⁸

Cohesion is often considered a desirable group characteristic.¹²⁹ Groups that lack cohesion may expend too much energy mediating conflicts to achieve their goals. They may enjoy little trust, experience difficulties communicating, and suffer through unproductive debates.¹³⁰ Cohesiveness can lead to the development of positive social norms that enhance a group's ability to function efficiently.¹³¹

While some cohesion is useful, excessive cohesion, combined with a lack of cognitive conflict, can produce poor decision making.¹³² Groups need intellectual diversity to function best. They require contrasting ideas to spark a debate that leaves them open to possibilities other than the one first considered or advanced by their leader. Without some conflict, groups risk becoming self-reinforcing—with members reassuring the others that their ideas are absolutely correct. Once this dynamic manifests, groups experience difficulty absorbing new evidence that conflicts with their existing powerful consensus. They have trouble conceiving that anyone would feel differently or that the group's fundamental assumptions could be misguided.

The most famous experiment demonstrating the power of social conformity was conducted by Solomon Asch.¹³³ Asch presented subjects with three lines and asked them which best matched a line on a white card.¹³⁴ The task was not difficult; ninety-nine percent of the subjects answered the question correctly in the absence of experimental manipulations.¹³⁵ Asch also asked the same question of solitary subjects in a group of experimental confederates.¹³⁶ Asch's grouped subjects were asked the question first, and each chose the same, incorrect, answer.¹³⁷ Faced with a strong social consensus that contradicted their private opinions, over seventy percent of the subjects went along with the group at least once.¹³⁸

128. *Id.* at 10.

129. See Bainbridge, *supra* note 10, at 32; Donald C. Langevoort, *The Human Nature of Corporate Boards: Law, Norms, and the Unintended Consequences of Independence and Accountability*, 89 GEO. L.J. 797, 799 (2001).

130. See Langevoort, *supra* note 129, at 800.

131. *Cf. id.*

132. See Forbes & Milliken, *supra* note 25, at 496–97.

133. SOLOMON E. ASCH, *SOCIAL PSYCHOLOGY* 450–59 (1952) [hereinafter ASCH, *Social Psychology*]; see also Solomon E. Asch, *Opinions and Social Pressure*, in READINGS ABOUT THE SOCIAL ANIMAL 13 (Elliot Aronson ed., 1995); Solomon E. Asch, *Studies of Independence and Conformity*, 70 PSYCH. MONOGRAPHS: GEN. & APPLIED 1 (1956).

134. ASCH, *Social Psychology*, *supra* note 133, at 450–59; Sung Hui Kim, *The Banality of Fraud: Re-Situating the Inside Counsel as Gatekeeper*, 74 FORDHAM L. REV. 983, 1019–21 (2005); Sunstein, *supra* note 44, at 79.

135. See ASCH, *Social Psychology*, *supra* note 133, at 450–59; see also Kim, *supra* note 134, at 1019–21; Sunstein, *supra* note 44, at 79.

136. See David Hess, *A Business Ethics Perspective on Sarbanes-Oxley and the Organizational Sentencing Guidelines*, 105 MICH. L. REV. 1781, 1797 (2007) (describing Asch's experiments).

137. See ASCH, *Social Psychology*, *supra* note 133, at 452–54; Edward L. Glaeser, *Paternalism and Psychology*, 73 U. CHI. L. REV. 133, 137 (2006) (describing Asch's experiments).

138. ASCH, *Social Psychology*, *supra* note 133, at 457; see also Kim, *supra* note 134, at

Groupthink, in some ways, is the social analogue of cognitive dissonance. Overly cohesive groups demonstrate some of the same behaviors produced by cognitive dissonance, such as giving short shrift to alternative options, overlooking contrary information, and highlighting information that supports the initial theory.¹³⁹ As cognitive dissonance does for individuals, groupthink may lead groups to become overly optimistic about their ability to manage uncertainty.¹⁴⁰ Groups that fail to pay sufficient attention to conflicting evidence due to groupthink may come to believe too strongly in their initial projections, producing excessive confidence.

2. Social Cascades

Social cascades can arise when individuals or groups make a decision sequentially, knowing about the decisions that others have made before them. At some point in the chain, decision makers may begin to ignore their private information in favor of the crowd's views.¹⁴¹ This response may be a rational calculation that the crowd has more information than any single individual,¹⁴² alternatively, it may represent an attempt to preserve reputation, at the expense of making an incorrect decision.¹⁴³

The behavior of individuals involved in social cascades may be rational. Particularly when the actor has little other information—following the lead of the crowd, even a crowd of strangers, may represent the best strategy. If each person in the group makes an independent decision, based on his or her own information ignoring those who preceded him or her, then the crowd's decision should contain a great deal of information—the aggregation of each individual's private knowledge. Social cascades occur, however, when most people adopt the “follow-the-crowd” strategy rather than making an independent decision.¹⁴⁴ When most individuals ignore their own information in favor of following the majority, the group's decision contains only the information of the first few decision makers. If these pioneers happen all to make the same, wrong selection, the bulk of the group may fall in line even if the decision contradicts their own private information.¹⁴⁵

A famous classroom experiment designed by economists Lisa Anderson and Charles Holt should serve to illustrate the principle.¹⁴⁶ Anderson and Holt placed three balls in each of two urns, A and B. In urn A, they placed two light balls and one dark ball; in urn B they placed two dark balls and one light ball.¹⁴⁷ They then flipped a coin to determine which urn would be chosen, and then poured the balls of the chosen urn into a third urn or cup.¹⁴⁸ Students were then invited up in random order to draw a ball from

1019–21; Sunstein, *supra* note 44, at 79.

139. *See supra* Part II.B.5.

140. *See id.*

141. *See supra* note 44.

142. *See* Banerjee, *supra* note 44, at 798; Bikhchandani, *supra* note 44, at 154.

143. *See* Sunstein, *supra* note 44, at 78.

144. *See* Bikhchandani, *supra* note 44, at 154.

145. *See id.* at 154–55.

146. Anderson & Holt, *Classroom Games*, *supra* note 44, at 189 (describing game); Anderson & Holt, *Information Cascades*, *supra* note 44, at 847 (describing experimental results).

147. Anderson & Holt, *Information Cascades*, *supra* note 44, at 849.

148. Anderson & Holt, *Classroom Games*, *supra* note 44, at 189.

the cup, replace it, and then guess which urn had been chosen.¹⁴⁹ The student's decision was publicized to the rest of the class, but the signal (the color of the ball drawn) remained private.¹⁵⁰

A student who draws a light ball from the cup should guess urn A, since the probability is two to one that urn A was chosen.¹⁵¹ Conversely, a student who draws a dark ball from the cup should guess urn B since the same odds favor that urn B was chosen. In both cases, the student should be correct two-thirds of the time.¹⁵² So far, the game appears quite straightforward.

The game becomes more interesting, however, once more students begin to play. Suppose that urn A is selected in the coin toss. If the first student draws a light ball and guesses urn A, and the second student also draws a light ball, the second student should also guess urn A since the publicly available information (that the previous student had drawn a light ball) matches the student's private information (that this student also drew a light ball). But what if both the first and second students draw dark balls? Both should select urn B: the first student because a dark ball has a two-to-one chance of coming from urn B, and the second student both for that reason and because the first student's choice of urn B indicates that he also drew a dark ball. Even if the third student then draws a light ball, she should choose urn B. Although her private information (the light ball) indicates that urn A was more likely the winner of the coin toss, the two previous students' selections suggest that they both drew dark balls. Since dark balls were drawn twice, and a light ball only once, the third student should guess urn B.¹⁵³

This is how cascades begin. From this point on, no matter what color ball each student draws, he or she should guess urn B. The publicly available information (that every student before has chosen urn B and therefore presumably drawn a dark ball) overwhelms the privately available information (that this particular student may have drawn a light ball). Anderson and Holt observed in their experiment that cascades began in seventy-five percent of the games in which they were possible, that is, when the first two students both drew the same color balls.¹⁵⁴

Results produced by a social cascade often acquire the credibility of the market. In a cascade, multiple, apparently independent, and often sophisticated players reach the same conclusion. When the decision makers have strong economic motivations to reach the correct result, observers may describe the outcome as the market's verdict, as though the result were in fact the product of multiple independent decisions made on the basis of separate information. At this point, anyone wanting to dispute the result's wisdom must overcome the powerful argument that the market has determined the efficient outcome.¹⁵⁵

149. Anderson & Holt, *Information Cascades*, *supra* note 44, at 849.

150. *Id.*

151. Since urn A has two light balls and urn B only one, the odds are two to one that any light ball chosen came from urn A.

152. Anderson & Holt, *Information Cascades*, *supra* note 44, at 849.

153. *See id.* at 849–50.

154. *See id.* at 851–52.

155. *See* Dorff, *supra* note 8, at 2051 (“Once a cascade of either type has taken hold, the resulting decision takes on the legitimacy of the market.”).

Cascades can interfere greatly with our efforts to reach valid inductive conclusions. They create an appearance of data where none exists—generating an illusion that many people have independently reached the same conclusion based on private information when in reality most have just mimicked those who decided before them. In addition, reputation-based cascades interfere with our analysis of whatever information we do have, skewing us toward decisions for reasons other than inductive logic. Cascades can, therefore, inspire undue confidence in decision makers. Cascades can cause participants to believe they are following the decision of a well-informed and carefully calibrated marketplace when the outcome is actually based on very little data.¹⁵⁶

D. Conclusion

Although wealthy, sophisticated market participants are generally considered highly rational,¹⁵⁷ a number of well-documented psychological phenomena combine to induce undue optimism even in these elite actors. The illusion of validity disguises largely irrelevant data as highly probative data.¹⁵⁸ The representativeness heuristic confuses events' similarity with causality.¹⁵⁹ The illusion of control hints that random events are subject to conscious manipulation.¹⁶⁰ Cognitive dissonance overlooks information that contradicts preexisting beliefs.¹⁶¹ Groupthink fulfills a similar function for decisions made jointly.¹⁶² Finally, social cascades mask reliance on prior public decisions as a well-functioning market.¹⁶³ Together, these heuristics and biases encourage excessive optimism even in those we most expect to resemble the rational calculating machines envisioned by economics.

156. *Id.*

157. *See, e.g.,* *Beethoven.com L.L.C. v. Librarian of Cong.*, 394 F.3d 939, 947 (D.C. Cir. 2005) (arguing that the contract was particularly reliable because it involved sophisticated market participants with substantial resources); *In re Cendant Corp. Sec. Litig.*, 404 F.3d 173, 191 (3d Cir. 2005) (discussing how institutional investors should be the lead plaintiff in securities class actions because they have a large financial stake in the transaction and have the incentive and the sophistication to monitor the litigation); *In re Tutu Water Wells CERCLA Litig.*, 326 F.3d 201, 208–09 (3d Cir. 2003) (observing the fact that settlement reached by sophisticated parties with conflicting interests argues in favor of its fairness).

158. *See* Prentice, *supra* note 45, at 1462 n.307 (“[P]eople will be confident in the prediction that a person is a librarian when a description of that person matches a stereotype of a librarian, even if the information contained in the description is scanty, unreliable, or outdated.”); Ripken, *supra* note 45, at 960 (illusion of validity causes people making judgments under uncertainty to experience excessive confidence in fallible choices); Tversky & Kahneman, *supra* note 19, at 9 (describing the illusion of validity); Kahneman & Tversky, *Psychology of Prediction*, *supra* note 37, at 249 (describing the illusion of validity).

159. *See* Kahneman & Tversky, *Subjective Probability*, *supra* note 22, at 33; Tversky & Kahneman, *Representativeness*, *supra* note 38, at 84–85.

160. Henslin, *supra* note 103, at 316; Langer, *supra* note 24, at 231.

161. *See* Batson, *Psychology of Religion*, *supra* note 26, at 416; Burke, *supra* note 112, at 1593–1602; Lieberman, *supra* note 113, at 135.

162. *See* JANIS, *supra* note 25, at 9–10; Forbes & Milliken, *supra* note 25, at 496–97; Lee, *supra* note 125, at 235; Turner & Pratkanis, *supra* note 125, at 106.

163. *See* O'Connor, *supra* note 126, at 1240; Sunstein, *supra* note 44, at 84.

In the next section, I will apply the explanatory power of confident uncertainty to the hiring of corporate CEOs. I will argue that confident uncertainty provides a powerfully descriptive account of excessive compensation in the corporate executive labor market.

II. PUBLIC COMPANY CEOs

A. Background

CEOs of publicly held corporations exercise substantial authority over enormous wealth.¹⁶⁴ The CEOs of the Fortune 500 companies alone presided over \$9.1 trillion in revenues and \$610 billion in profits in 2005.¹⁶⁵ Although the corporation's broad strategy decisions must be approved by the board of directors, they are generally initiated by the CEO. For day-to-day operations, the CEO has essentially unchecked authority. As a result, although the CEO rarely owns a meaningful percentage of the company's equity, the chief executive does exercise appreciable control.

A public corporation's board of directors hires the company's CEO. The largest group represented on the boards of large, public corporations is current or former CEOs of other large, public corporations.¹⁶⁶ Boards overwhelmingly consist of white, middle-aged men from privileged backgrounds.¹⁶⁷ Other groups commonly represented on boards include "inside directors," such as officers of the corporation,¹⁶⁸ friends of the CEO,¹⁶⁹ and "celebrity" directors—prominent academics and retired politicians.¹⁷⁰ Public institutional shareholders are rarely represented despite often owning a considerable stake in the corporation.¹⁷¹ Directors are formally elected by the

164. In references to the CEO in this article, I intend to include the chair of the board of directors when, as is increasingly the case, those two positions are held by different individuals.

165. See Ellen McGirt, *The Fortune 500: A Banner Year*, CNNMONEY.COM, Apr. 4, 2006, http://money.cnn.com/2006/03/31/news/companies/intro_f500_fortune/index.htm.

166. CEOs of other companies constitute some sixty-three percent of outside directors. Gilson & Kraakman, *supra* note 13, at 875; see also ROBERT A. G. MONKS, *CORPORATE GOVERNANCE* 187 (2d ed. 2001) (finding that eighty-six percent of billion-dollar company boards include at least one CEO or chief operating officer of another company); Bogus, *supra* note 7, at 36 (noting cases of CEOs sitting on each other's compensation committees); Dorff, *supra* note 7, at 845 ("Because CEOs want their own companies' boards to remain passive, they have little incentive to oppose management's desires when they sit on boards of other corporations.").

167. See KORN/FERRY INT'L, *30TH ANNUAL BOARD OF DIRECTORS STUDY 10* (2003) (finding that, in 2002, eighty-three percent of boards included a CEO or chief operating officer of another company, while only forty-four percent included even one African-American board member and only seventeen percent included at least one Latino board member).

168. Dorff, *supra* note 7, at 845.

169. *Id.*, at 846; Mark J. Roe, *The Modern Corporation and Private Pensions*, 41 *UCLA L. REV.* 75, 109 (1993); Yablon, *supra* note 8, at 1881.

170. Dorff, *supra* note 7, at 847.

171. *Id.* at 946–47; see also Bernard S. Black, *Agents Watching Agents: The Promise of Institutional Investor Voice*, 39 *UCLA L. REV.* 811, 823–24 (1992) (noting that institutional shareholders face many obstacles to nominating their own directors, including a risk of liability for insider trading or short-swing profits).

corporation's shareholders, but the shareholders have little real say over the board's composition. Outside of the hostile-takeover context, directors generally run unopposed, making the board an effectively self-perpetuating body.

The largest companies reward their stewards with considerable compensation. Total pay for Fortune 500 corporations' CEOs typically reaches seven figures, and some CEOs have easily breached the eight figure mark.¹⁷² For many corporations, the amount paid to the CEO now accounts for a noticeable percentage of the company's profits.¹⁷³

CEO pay has certainly attracted its critics, who largely argue that CEOs' enormous pay packages are the result of agency costs stemming from the separation of ownership and control.¹⁷⁴ That is, shareholders own the corporation's equity, but the real power lies in the hands of the board and the CEO.¹⁷⁵ As a result, managers may exercise considerable power over the board of directors and may use this power to extract excessive compensation.¹⁷⁶

Defenders counter that the talent required to run a major corporation is expensive because it is both scarce and valuable. For example, one recent study calculated that the difference in talent between the number one CEO and the 250th CEO translates to a market cap differential of only .016%.¹⁷⁷ Nevertheless, the authors argued, because market capitalizations of Fortune 500 corporations are so large, even such incredibly small talent distinctions are worth paying enormous sums to obtain.¹⁷⁸

Still, these efficiency-rooted stories have difficulty explaining the rapid changes in both absolute and relative CEO compensation or many of the more troubling structural aspects of the typical CEO pay package and their disconnect from the CEO's individual attainments.¹⁷⁹ I cannot hope to do justice to the efficiency debate in this short space, nor do I believe that the debate has reached (or will reach) a conclusive

172. See Joann S. Lublin, *Persistent Pay Gains: A Survey Overview*, WALL ST. J., Apr. 14, 2008, at R1 (explaining that the median direct compensation for CEOs of top 200 U.S. corporations was \$8.85 million in 2007, but Merrill Lynch's John Thain (\$78.5 million), Goldman Sachs' Lloyd Blankfein (\$68.5 million), Occidental Petroleum's Ray Irani (\$61 million), American Express's Kenneth Chenault (\$46.2 million), and Lehman Brothers' Richard Fuld Jr. (\$40 million) are among those CEOs earning much more).

173. See Lucian Bebchuk & Yaniv Grinstein, *The Growth of Executive Pay*, 21 OXFORD REV. ECON. POL'Y 283, 284 (2005) ("The aggregate compensation paid by public firms to their top-five executives was 9.8 per cent of the aggregate earnings of these firms during 2001-3, up from 5 per cent during 1993-5."); Kathy M. Kristof, *California Executive Pay Report: Out of Balance?*, L.A. TIMES, June 10, 2007, at C1 (reporting that CEO pay accounted for an average of two percent of profits for top 100 California corporations).

174. See, e.g., BEBCHUK & FRIED, *supra* note 7.

175. The classic text first making this argument was, of course, ADOLPH A. BERLE & GARDINER C. MEANS, *THE MODERN CORPORATION & PRIVATE PROPERTY* (Bearle & Means ed., Transaction Publishers 1991) (1932).

176. See BEBCHUK & FRIED, *supra* note 7, at 61-79.

177. See Xavier Gabaix & Augustin Landier, *Why Has CEO Pay Increased So Much?* Q. J. ECON., Feb. 2008, at 49, 50.

178. *Id.*

179. See Bebchuk & Grinstein, *supra* note 173, at 284 (documenting growth in executive pay and arguing that it cannot be explained by changes in firm size, performance, or industry mix).

judgment. Fundamentally, the CEO functions as the leader of a vast team, and the CEO's success or failure rests to a great degree on the achievements of everyone else in the company. The company's success also depends on circumstances beyond any individual's control, such as general economic conditions, the development of new technologies, the market prices of commodities, interest rates, and a host of other factors too numerous to list.¹⁸⁰ The CEO's part in determining a company's fate is, therefore, necessarily amorphous. Without a clear demarcation of a CEO's individual contribution, we cannot discover with any certainty whether compensation is overblown.

Congress and the Obama administration, however, have clearly aligned themselves with the view that executive compensation is excessive and poorly structured.¹⁸¹ To evaluate their solutions, I will assume throughout the Article that their position is correct (as I in fact believe it to be). Readers who do not share this belief may argue that what follows is irrelevant—an explanation of a nonexistent problem. Still, to the extent their views of executive compensation are rooted in an implicit faith in employment markets, they will, I hope, find that faith severely challenged by the next section.

180. Bebchuk and Fried argue:

Without significant adjustments, however, changes in share price are not a good indicator of a manager's own performance. A company's stock price can increase for reasons that have nothing to do with its managers' own efforts and decision making. Falling interest rates, for example, can cause stock prices to increase considerably without managers lifting a finger. Indeed, one study of U.S. stock prices over a recent ten-year period reported that only 30 percent of share price movement reflects corporate performance; the remaining 70 percent is driven by general market conditions. If performance is measured by changes in share price, managers who perform poorly relative to their peers might still be rewarded when the market or sector rises as a whole.

BEBCHUK & FRIED, *supra* note 7, at 139.

181. A Department of Treasury press release states: “[T]he compensation committees of all companies receiving government assistance must provide an explanation of how their senior executive compensation arrangements do not encourage excessive and unnecessary risk-taking.” Press Release, U.S. Dep’t of the Treasury, *supra* note 2. The Obama Plan also states: “Over the last decade there has been an emerging consensus that top executives should receive compensation that encourages more of a long-term perspective on creating economic value for their shareholders and the economy at large.” *Id.* Moreover, the Obama Plan calls for a conference on executive pay reform at financial institutions. *Id.* Similarly, the Dodd provisions require Troubled Asset Relief Program recipients to exclude “incentives for senior executive officers . . . to take unnecessary and excessive risks that threaten the value of such recipient” American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 111(b)(3)(A), 123 Stat. 115, 517 (2009). Both plans provide for strict new limits on compensation, the Obama Plan on salaries and the Dodd provisions on bonuses, reflecting a belief that market restraints are inadequate. *See id.*; Press Release, U.S. Dep’t of the Treasury, *supra* note 2.

B. Behavioral Economic Analysis

1. The Uncertainty of Future Performance

Economists Gabaix and Landier have argued that public company CEOs are very similar in ability, with the difference between the best and the 250th accounting for only a .016% difference in their corporations' market capitalizations.¹⁸² Presumably, the top candidates for any particular CEO position are even closer in ability. There is reason to doubt that boards are capable of accurately assessing such tiny talent gradations. Moreover, with closely comparable talents, luck may play a larger role than any small difference in ability to determine a candidate's future success.

We should also be concerned that boards may be vastly overpaying for the talent they secure. CEO compensation has increased exponentially over the past several decades, far outpacing inflation or the increases in the salaries paid to lower level workers. In the early 1980s, public company CEOs earned an average of forty-two times what factory workers earned, now they earn some four hundred times as much as factory workers do.¹⁸³ Perhaps even more troublingly, public companies increasingly pay their CEOs in ways that reward them regardless of the CEOs' performance.¹⁸⁴ Traditional stock options, for example, often become more valuable for reasons completely apart from the company's performance. In 2005, when oil prices climbed dramatically, oil company stock prices rose commensurately. As a result, Ray Irani, the chief executive of Occidental Petroleum, received nearly sixty-three million dollars in compensation that year, the vast majority of which came from stock options.¹⁸⁵ John Drosdick, Sunoco's chief executive, received almost twenty-three million dollars, again mostly in options.¹⁸⁶ Yet, neither company's chief executive caused the spike in oil prices that created their new wealth. Their stories are far from unique.¹⁸⁷ Option holders often greatly benefit from general increases in the stock market due to an expanding economy or lower interest rates, which are factors having nothing to do with individual performance.¹⁸⁸

Uncertainty suffuses the hiring and compensation processes, and there seems little cause to suppose that directors are immune from the heuristics and biases that handicap

182. See Gabaix & Landier, *supra* note 177, at 50.

183. Dorff, *supra* note 7, at 823.

184. See BEBCHUK & FRIED, *supra* note 7, at 87–185.

185. See J. Alex Tarquinio, *Pay for Oil Chiefs Spiked Like Prices*, N.Y. TIMES, Apr. 9, 2006, at B10.

186. *Id.*; *BW Executive Compensation*, BUSINESSWEEK.COM, Apr. 4, 2005, http://www.businessweek.com/magazine/content/05_14/b3927433_mz080.htm.

187. Warren Buffet famously complained about the divergence between individual performance and the rewards granted by options given to lower-level managers in his 1985 Letter to Shareholders. Letter from Warren E. Buffet, Chairman of the Board, Berkshire Hathaway, Inc., to the Shareholders of Berkshire Hathaway, Inc., (Mar. 4 1986), <http://www.berkshirehathaway.com/letters/1985.html>.

188. See BEBCHUK & FRIED, *supra* note 7, at 139 (citing one study showing that seventy percent of stock performance is due to general market conditions, not individual corporate performance).

the rest of us when coping with the unknown.¹⁸⁹ In choosing a new CEO, the board is likely to rely on invalid data, mistake similarity for probability, and take erroneous credit for causing random events.¹⁹⁰ Cognitive dissonance and groupthink may magnify all these effects by protecting poor conclusions from having to confront contrary data.¹⁹¹

2. The Illusion of Validity

The information available to a board when hiring a CEO includes an applicant's educational background, career path, track record, and the intangible sense of the person that comes from an interview. This data is undoubtedly useful in separating out reasonable office seekers from those whose ambitions are unrealistic. An aspirant with only three years of business experience is unlikely to serve ably as the chief executive of a multibillion dollar company. But when the board is choosing among the final contenders, all of whom have broadly similar backgrounds,¹⁹² the directors are likely to greatly overestimate the degree to which this information is capable of predicting future success.¹⁹³ The facts they have available contain much more noise than they will typically realize.¹⁹⁴

Neither the candidates' résumés nor their interviews possess the predictive power that most people would credit to them.¹⁹⁵ The information in a résumé—particularly in the résumé of someone sufficiently accomplished to be seriously considered as the CEO of a major company—will be broadly consistent, portraying impressive position after impressive position and success after success. This data is considerably dependent but, due to the illusion of validity, will be perceived as though each accomplishment represents separate proof of the applicant's abilities.¹⁹⁶

Attending a prestigious undergraduate institution facilitates securing a notable job upon graduation. That job, in turn, together with the undergraduate experience, helps one with gaining admission to a prestigious business school. The business school degree gains one entry to another plum position, which leads to a series of others. Although each job does provide independent information—the candidate performed sufficiently well to continue advancing—much of the intelligence is highly dependent. Early successes generate a virtuous circle that creates continuing opportunities. A person's experience is likely to be perceived as though he or she had jumped from

189. See, e.g., CASS R. SUNSTEIN, *BEHAVIORAL LAW & ECONOMICS* (2000) (documenting and describing many such heuristics and biases).

190. See *supra* Part II.B.1–5 (describing the impact of uncertainty heuristics and biases on the CEO selection and compensation process).

191. See *supra* Part II.B.6–7 (describing the impact of group decision-making phenomena on the CEO selection and compensation process).

192. See KORN/FERRY INT'L, *supra* note 167, at 10 (reporting survey of directors that found eighty-three percent of boards included a senior officer of another corporation and that only forty-four percent included even one African-American board member and only seventeen percent included at least one Latino board member).

193. See *supra* note 45.

194. *Id.* (describing the illusion of validity).

195. See *supra* note 23.

196. See *supra* note 45.

ground level to grasp each honor; but, in reality, a career path is more like climbing a staircase; one can reach great heights by virtue of having already climbed some distance before. The illusion of validity disguises stair climbers as high jumpers.

Job interviews similarly convey a mistaken impression of validity.¹⁹⁷ We tend to store great trust in interviews because we feel we can get a highly accurate sense of a person through a short period of face-to-face conversation. One survey of 852 organizations found that ninety-nine percent of them relied on interviews as part of the hiring process.¹⁹⁸ Even a short conversation, on the order of twenty to thirty minutes, can imbue sufficient confidence to make a decision about a position that may be held for decades. Candidates with highly impressive paper credentials may nevertheless fail to secure a position because of how they fare during the screening interview.¹⁹⁹

Nisbett, Borgida, Crandall, and Reed conducted a study that dramatized the impact of personal interviews.²⁰⁰ Subjects were asked to choose courses for their undergraduate major in psychology. The subjects were divided into two groups. The members of the first group each interviewed an older student and asked which courses that student had preferred and why. The members of the second group received data reflecting the mean course evaluation of many students (ranging from twenty-six to 142) on a five-point scale. The interview impacted subjects' choices much more powerfully than the course evaluations even though the evaluations reflected the input of many more students.²⁰¹

But, our reliance on interviews appears misguided, a result of the illusion of validity.²⁰² Candidates impress in interviews because they project the image of the good employee—persuading the interviewer that their traits match those of the theorized ideal candidate. When we pause to analyze the interview as a data-collection method aimed at producing an inductive judgment, however, we quickly realize its many flaws. The interview consists of a short conversation in which the candidate responds to questions designed to ferret out his or her chances of establishing a successful career. The questions may focus on personal background, interest in the position, hypothetical problems that might arise in the job, or tests of relevant substantive knowledge. Indirectly, the interviewer may learn about the subject's personality, sense of humor, and ability to engage in light conversation.

Compare this short performance with the record demonstrated by the candidate's résumé or by the candidate's letters of recommendation from former positions. These sources represent information collected over a substantial period of time, often by numerous different evaluators, in a variety of situations—many of which are likely comparable to those the candidate is likely to face in the actual job. Which test is likely to be a better predictor of the candidate's ability to perform tasks over time? The candidate's skill as demonstrated over twenty minutes to a single questioner (or even a small group), or the candidate's ability to impress numerous supervisors across a diverse range of related tasks? Not surprisingly, according to most studies the

197. *See supra* note 23.

198. Ulrich & Trumbo, *supra* note 23, at 100–16.

199. *Id.* (describing results of survey).

200. *See* Nisbett et al., *supra* note 90, at 113–15.

201. *Id.*

202. *See supra* note 23.

interview turns out to be an indifferent predictor of future performance despite its near-universal use.²⁰³

Board members have little choice but to rely on candidates' past experiences and interpersonal skills in estimating their future success. But they should use these tools advisedly, with a strong sense of their limits. They should—but I suspect do not—always bear in mind that the evaluative methods at their disposal are crude predictors and are incapable of accurately making fine distinctions. Placing too much faith in past successes and flawed tools such as personal interviews may create unwarranted confidence in the ultimate selection.

3. The Representativeness Heuristic

What is the probability that two events are causally linked? How do we know whether to attribute a positive outcome to a particular actor? Suppose Dilma Garcia served as CEO of Public Company, Inc. for a three-year period during which the company saw unprecedented profit growth. Should Public Company's success be attributed to its leader, Garcia?

To understand whether Garcia should be credited with Public Company's success, it would help to know the likelihood that the company would have grown dramatically even without Garcia's involvement. That is, what was the growth rate of companies similar to Garcia's during Garcia's tenure at the company? If Public Company is an oil producer and Garcia took office in 2005, we might be a bit skeptical about the link between Garcia's talents and the company's rise. During 2007, oil prices nearly doubled, creating enormous profits for all major oil producing corporations.²⁰⁴ Public Company might have profited just as richly under any competent executive's leadership during such prosperous times, so the company's success by itself tells us less about Garcia's skills than we might think.

Studies demonstrate, however, that we tend to attribute causation based more on what our preconceptions lead us to believe we will observe than on the actual data.²⁰⁵ We jump to the conclusion that the actor, not the situation, is responsible.²⁰⁶ We tend to cling to whatever specific information we have, even if it is not very probative, at the expense of less salient base-rate information.²⁰⁷ We make worse decisions when we have worthless case-based evidence than when we have no case-based evidence.²⁰⁸

The upper echelons of the corporate world are remarkably homogeneous. Board members and senior executives in Fortune 500 companies are overwhelmingly white and male.²⁰⁹ Since the board members almost by definition have attained remarkable

203. There have been a number of major review studies that have reached this conclusion. *See supra* note 23.

204. *See* Jad Mouawad, *Exxon Profit Hits Record on Surge in Oil*, INT'L HERALD TRIB., Feb. 2, 2008 at 11.

205. *See* Dennis L. Jennings, Teresa M. Amabile & Lee Ross, *Informal Covariation Assessment: Data-Based Versus Theory-Based Judgments*, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES, *supra* note 19, at 211, 215–16.

206. Ross & Anderson, *supra* note 21, at 135 (describing the fundamental attribution error).

207. *See* Tversky & Kahneman, *supra* note 19, at 4–5.

208. *Id.* at 5.

209. *See* KORN/FERRY INT'L, *supra* note 167, at 10 (finding that in 2002, only forty-four

levels of success, it is natural—and an application of the representativeness heuristic—for them to seek out candidates who are similar to themselves. This tendency may help explain the stubborn persistence of the “glass ceiling,” with troublingly few minorities or women among the ranks of Fortune 500 CEOs.²¹⁰

Irrelevant information may actually prove quite damaging. As with the study asking subjects to estimate the probability that a personality profile was of an engineer or a lawyer, knowing a little bit of useless information about someone can cause boards to ignore more telling—but less salient—basal data.²¹¹ The syllogism—I succeeded, so people like me are more likely to achieve—is highly seductive, though false, and likely to excessively inflate confidence in hiring decisions.

4. Illusion of Control

A corporation’s success depends on a raft of factors such as corporate strategy, input markets, product markets, customer demand, interest rates, employee talent and loyalty, and general economic conditions. Some of these factors are predominantly the product of talent; others are largely the product of luck. For example, the CEO’s ability to inspire loyalty and hard work among the employees can mostly be attributed to the CEO’s innate skill with people. But the broad economic conditions the company faces are almost entirely outside the company’s control.

In judging the CEO’s performance, the board of directors may succumb to the illusion of control.²¹² That is, the directors may consider the company’s results as due primarily to the CEO’s actions. They are correspondingly likely to discount the role of chance in producing outcomes.²¹³ The illusion of control may, therefore, induce the board to evaluate CEO candidates by crediting the candidates entirely for their employer’s past successes (and faulting them for their employer’s failures). Consequently, the board is likely to experience excessive optimism about their candidates’ talents and about the ability of any CEO to control the corporation’s fate. The illusion of control thus contributes to boards’ disproportionate optimism about their ability to choose the best CEO and their corresponding tendency to pay exorbitant sums for their first choice CEO candidate.²¹⁴

percent of public company boards included even one African American board member and only seventeen percent included at least one Latino board member); Anya Sostek, *Despite Advances, the Number of Women on Corporate Boards Has Remained Relatively Stagnant*, PITTSBURGH POST-GAZETTE, Aug. 25, 2006, at E1 (finding that women made up 14.7% of Fortune 500 company directors).

210. See generally Sostek, *supra* note 209.

211. See Tversky & Kahneman, *supra* note 19, at 4–5.

212. See GOFFMAN, *supra* note 107, at 193 (noting that dealers in Vegas who suffered bad-luck streaks were often terminated for that reason); Henslin, *supra* note 103, at 319 (discussing a study that shows that people throw fair dice harder when they want to roll a high number and softer when they want a low number); Langer, *supra* note 24, at 231 (arguing people act as though they can control random events when those events involve even a modicum of choice).

213. See *supra* note 101 (documenting the illusion of control).

214. See Barris, *supra* note 7, 60–61 (citing John A. Byrne, *The Flap over Executive Pay*, BUS. WK., May 6, 1991, at 90, 90) (“During the frenzied 1980s, CEO compensation jumped by 212% while earnings per share on the Standard and Poor’s 500 Index grew by only 78%. In contrast, factory workers’ wages rose only 53%.”); Bogus, *supra* note 7, at 10 (citing Byrne’s study); Dorff, *supra* note 8, at 2027 (observing that multiples by which CEO pay exceeds

5. Cognitive Dissonance

Cognitive dissonance makes the consideration of chance's role in executives' achievements particularly unlikely. The board members are highly successful, respected businesspeople.²¹⁵ Considering the role chance played in the candidate's successes would require them to face the similar contribution luck made to their own triumphs. Those directors who did raise this issue would risk facing censure from their peers. If the cultural norm is to take credit for one's own successes, it will likely prove difficult for any individual director to question the link between success and merit.²¹⁶ As a result, directors will prove overly optimistic about their CEO's native skill.

Cognitive dissonance may also help explain why public company boards approve such lucrative compensation packages for their CEOs.²¹⁷ The most prevalent full-time occupation for public company directors is a high-level executive (generally CEO or Chair of the Board) of another publicly traded company.²¹⁸ CEOs no doubt believe that they are worth their own high pay. Cognitive dissonance would then make it difficult for them to consider the possibility that some other CEO is not. While they might feel comfortable investigating whether some particular chief executive is worthy of the post, the magnitude of compensation commanded by the position—that is, by a competent CEO—may be more difficult to probe. Any serious questioning of the notion that CEOs as a class deserve pay in the seven-figure range could call into

average workers has leaped from forty-two in the early 1980s to over 400 currently); Eisenberg, *Compensation*, *supra* note 8, at 106–08 (finding that while U.S. CEOs earn 200 times what factory workers earn, Japanese CEOs earn only about twenty to thirty times factory workers' salaries); Eisenberg, *Overview*, *supra* note 8, at 301–02 (“[T]he evidence suggests that the total compensation of American CEOs, including base salary, bonus, long-term compensation, and benefits and perquisites, is approximately twice as high as that of CEOs of comparable corporations in Japan, Germany, eight other west European countries, and Canada.”); Loewenstein, *supra* note 7, at 6 (noting that from 1980–1995, average CEO pay increased 380% while average worker salaries rose only 60% and determining that U.S. CEOs appear to be paid more than foreign CEOs, but executive pay is difficult to measure outside the U.S.); Loewenstein, *supra* note 8, at 202–03 (citing Tara Parker-Pope, *So Far Away*, WALL ST. J., Apr. 11, 1996, at R12) (noting that a 1996 study showed that U.S. CEOs earned an average of \$1,085,000 while average CEOs in Great Britain earned \$551,600, in Germany \$537,000, in France \$485,004, and in Italy \$318,000 and CEO compensation rose 20.6% in 1993, 12.8% in 1994, and 10.4% in 1995); Perry & Zenner, *supra*, note 7, at 123–24 (finding that total CEO compensation for all 1900 firms listed in the ExecuComp database more than doubled from 1992 to 1998, and CEOs from S&P 500 firms' compensation rose more than 250%); Yablon, *supra* note 8, at 1871 (observing that in 1990, average U.S. CEOs earned \$2.8 million per year (120 times a manufacturing worker's salary) while their counterparts in Germany earned \$735,000 annually (twenty-one times a factory worker's compensation) and CEOs in Japan earned only \$310,000 (sixteen times a factory worker's salary)).

215. See KORN/FERRY INT'L, *supra* note 167, at 10 (finding that in 2002, eighty-three percent of boards included a CEO or chief operating officer of another company, while only forty-four percent included even one African American board member and only seventeen percent included at least one Latino board member).

216. Boards subject to groupthink will find opposing this cultural norm particularly difficult. See *infra* Part II.B.6.

217. See *supra* note 214.

218. See KORN/FERRY INT'L, *supra* note 167, at 10 (finding that in 2002, 83% of boards included a CEO or COO of another company).

question their own entitlement to such sums, producing cognitive dissonance.²¹⁹ One way to avoid this dissonance is to dismiss any such information or argument.

6. Groupthink

Groupthink seems likely to develop on many public company boards.²²⁰ Both friendship and prestige tend to promote group cohesiveness.²²¹ As Irving Janis, groupthink's pioneer, wrote:

Concurrence-seeking tendencies probably are stronger when high cohesiveness is based primarily on the rewards of being in a pleasant "clubby" atmosphere or of gaining prestige from being a member of an elite group than when it is based primarily on the opportunity to function competently on work tasks with effective co-workers.²²²

Directors are often selected on the basis of personal friendships and networking.²²³ Also, directorships of public corporations are highly prestigious, and that prestige contributes to a sense of group competence that may inhibit directors' willingness to consult outside opinions.²²⁴

Janis also contended that a group's lack of diversity in training and background contributes to groupthink.²²⁵ Public company boards overwhelmingly consist of white, middle-aged men from privileged backgrounds who have spent their careers working for large corporations.²²⁶ Although the board's homogeneity contributes to the board's effectiveness by facilitating communication, lack of diversity also reduces dissent,

219. See generally FESTINGER, *supra* note 26 (describing cognitive dissonance); Batson, *Rational Processing*, *supra* note 26, at 176.

220. See Bainbridge, *supra* note 10, at 32; Langevoort, *supra* note 129, at 810 (concluding that boards naturally trend towards collegiality and hence groupthink); see also O'Connor, *supra* note 126, at 1261–69 (arguing the Enron board suffered from groupthink).

221. JANIS, *supra* note 25, at 247.

222. *Id.*

223. See BEBCHUK & FRIED, *supra* note 7, at 31; see also Barry Baysinger & Robert E. Hoskisson, *The Composition of Boards of Directors and Strategic Control: Effects on Corporate Strategy*, 15 ACAD. MGMT. REV. 72, 72–73 (1990); Charles M. Elson, *Executive Compensation—A Board-Based Solution*, 34 B.C. L. REV. 937, 975–76 (1993); O'Connor, *supra* note 126, at 1249; cf. Bainbridge, *supra* note 10, at 37–38 (endorsing boards generally but with the caveat that a CEO's personal ties with board members may lead to an exploitative relationship).

224. See JANIS, *supra* note 25, at 247; see also JAY W. LORSCH & ELIZABETH M. MACIVER, *PAWNS OR POTENTATES?: THE REALITY OF AMERICA'S CORPORATE BOARDS* 64 (1989) (noting that many directors feel their most critical role involves "the care and feeding of the chief executive officer").

225. See JANIS, *supra* note 25, at 250.

226. See KORN/FERRY INT'L, *supra* note 167, at 10 (finding that in 2002, eighty-three percent of boards included a CEO or chief operations officer of another company, while only forty-four percent included even one African-American board member and only seventeen percent included at least one Latino board member).

contributing to groupthink.²²⁷ Not surprisingly, then, many scholars have argued that corporate boards may be particularly susceptible to groupthink.²²⁸

Groupthink may account for boards' undue confidence in their ability to select the best applicant for the CEO position. Organizations suffering from groupthink rarely consider more than a few options when faced with a decision, generally fail to examine the goals they seek to meet with the decision, and seldom consider disadvantages beyond the obvious of the plan initially favored by the group.²²⁹ Corporate boards' failure to recognize their own limitations may, therefore, result from a paucity of considered options and a failure to examine possibilities closely and in relation to the boards' goals. Even directors with ample experience may not pause to question selection mechanisms they are accustomed to using.

Groupthink may also explain why CEOs are paid such exorbitant sums. Hard questions about the proposed compensation package risk being perceived as criticisms of the CEO. Groups subject to groupthink are unusually likely to follow their leader because they perceive the leader as best embodying the group's values.²³⁰ Also, group members tend to vote with their leader's views in order to reduce the stress generated by some external threat or internal dilemma.²³¹ Stress temporarily lowers self-esteem, but joining the consensus created by a respected leader can reduce this stress and restore self-confidence.²³² Boards suffering from groupthink are far more likely to vote with their leader, the CEO, and to perceive the CEO's views to be those of the board's majority.²³³ They are correspondingly unlikely to voice complaints or critiques of the commonly used mechanisms.

This reluctance is especially likely since those critiques typically take the form of concerns about potential CEO abuses, such as using the derivatives market to undo the incentives created by options.²³⁴ Raising such concerns implies that this particular CEO may act improperly, a view that will almost certainly prove unpopular and may subject the speaker to sharp censure from his or her peers. Perhaps even worse, to the extent enormous CEO pay has become commonplace and thereby taken on the credibility of the market, critics of the status quo may risk being perceived as amateurish or naïve. In sum, groupthink may cause boards to experience undue optimism about the skills and value of their CEO.

227. See JANIS, *supra* note 25, at 250; see also Bainbridge, *supra* note 10, at 32.

228. See Bainbridge, *supra* note 10, at 32; James Fanto, *Whistleblowing and the Public Director: Countering Corporate Inner Circles*, 83 OR. L. REV. 435, 462–66 (2004); Forbes & Millken, *supra* note 25, at 496; O'Connor, *supra* note 126, at 1239.

229. JANIS, *supra* note 25, at 9–10.

230. See Fanto, *supra* note 228 at 463–64; see also John M. Levine, Lauren B. Resnick & E. Tory Higgins, *Social Foundations of Cognition*, 44 ANN. REV. PSYCHOL. 585, 601 (1993) (noting that groupthink is particularly present in cohesive groups with strong, directing leaders).

231. JANIS, *supra* note 25, at 255–56.

232. *Id.*

233. See *id.*; Fanto, *supra* note 228 at 463–64; Levine, et al., *supra* note 230, at 601.

234. See BEBCHUK & FRIED, *supra* note 7, at 174–185 (arguing that firms have generally taken few steps to prevent executives from trading in derivatives to unwind equity incentives); Jesse Fried, *Reducing the Profitability of Corporate Insider Trading Through Pretrading Disclosure*, 71 S. CAL. L. REV. 303, 317–20 (1998) (citing studies that corporate insiders buy company stock before releasing positive information and sell before disclosing negative information).

7. Social Cascades

For a social cascade to begin, the decision makers must not possess much private information about the issue in question.²³⁵ Board members fulfill this criterion when faced with hiring the CEO. Although boards possess a great deal of information about CEO candidates' backgrounds and characters, this information is at best only modestly predictive of the candidates' future performance.²³⁶ Too many uncontrollable environmental factors affect corporate outcomes for the CEO's success to be predictable on the basis of personal characteristics alone.²³⁷ This fact is likely to be underappreciated or perhaps even disputed by boards for a variety of reasons, including the illusion of control.²³⁸ As a result, when other corporations hire their CEOs without discounting sufficiently for environmental factors, a board may do likewise, ignoring any private information it has about the imperfect correlation between the CEO's skills and corporate outcomes.²³⁹

This dynamic manifests most clearly in the resulting compensation package. Recognition of the imperfect correlation between past and future performance may not significantly alter CEO selection methods, but it should alter compensation, both in structure and amount. The final candidates are likely to be very close in ability based on discernible characteristics and experience.²⁴⁰ Nevertheless, boards may feel that the best candidate is worth hiring even at the cost of very large premiums because tiny differences in ability, when leveraged over an enormous corporation, may produce a sizable improvement in performance.²⁴¹ This rationale is substantially undercut, however, by two factors. First, there are serious questions concerning boards' abilities to distinguish the best of such closely comparable candidates. Second, uncontrollable environmental factors play a critical role in determining corporate outcomes and therefore dilute the CEO's impact.²⁴² As a result of these two factors, boards should be reluctant to pay high premiums for small differences in talent. Yet, in part because of the social cascade in executive compensation, boards have consistently done so.²⁴³

235. See Sunstein, *supra* note 44, at 76.

236. See *supra* Part II (arguing that CEOs' past performance is insufficient to distinguish closely comparable candidates' potential for future success).

237. See BEBCHUK & FRIED, *supra* note 7, at 139 (citing study showing that seventy percent of stock performance is due to general market conditions, not individual corporate performance).

238. See *supra* note 212.

239. See Anderson & Holt, *Classroom Games*, *supra* note 44, at 187 (describing social cascade experiments); see also Anderson & Holt, *Information Cascades*, *supra* note 44, at 847; Banerjee, *supra* note 44, at 798; Bikhchandani et al., *supra* note 44, at 154; Sunstein, *supra* note 44, at 82 (describing social cascades).

240. See Gabaix & Landier, *supra* note 177, at 50 (arguing public-company CEOs are very similar in ability, with the difference between the best and the 250th accounting for only a .016% difference in their corporations' market capitalizations).

241. See *id.* (contending that even small differences in CEO candidates' abilities justify large pay discrepancies because the CEOs' talents are leveraged across enormous corporations).

242. See BEBCHUK & FRIED, *supra* note 7, at 139 (citing a study showing that seventy percent of stock performance is due to general market conditions, not individual corporate performance).

243. See *supra* note 173.

A key factor in the understanding of executive compensation as the result of a social cascade is the role of the executive compensation consultant. Most large public corporations engage a compensation specialist as a consultant when formulating their officers' pay packages.²⁴⁴ These consultants provide a comparison study, indicating the amount and form of compensation similar corporations pay their own CEOs.²⁴⁵ Such comparison studies effectively provide a report on what other similarly situated boards of directors have done when faced with parallel compensation questions. The fact that so many boards have made comparable decisions—to pay a large premium for the candidate they consider most qualified—is likely to induce a board to follow the crowd rather than investigate more deeply on its own.

“Once a cascade . . . has taken hold, the resulting decision takes on the legitimacy of the market.”²⁴⁶ Directors, executives, and compensation consultants who wish to argue for alternative compensation structures would need to overcome the powerful argument that the market has determined the traditional compensation forms are efficient. Moreover, to compete for talented executives, corporations may have to offer the same excessive packages offered by their peer companies.

Recent events provided a dramatic illustration of this phenomenon. When the bankruptcy court judge presiding over United Airlines's Chapter 11 filing approved the executives' new, very lucrative pay packages, the court responded to objections that the executives' pay was excessive by stating: “It may be we have a culture in this country that overcompensates management But United is just one enterprise that operates in that general environment The marketplace indicates this is a reasonable plan.”²⁴⁷

Whatever we may believe about CEOs' influence over boards through groupthink (or even through managerial power),²⁴⁸ that power is not very likely to extend to a federal bankruptcy judge. Yet the presumably impartial and independent judge felt he had to bow to the market, even though he seemed to believe that the market was overcompensating executives. The rhetorical legitimacy of the market can be incredibly difficult to overcome and may produce unusually stable social cascades.

C. Conclusion

Experts vigorously debate the efficiency of CEO pay packages, with some criticizing compensation as excessive and others lauding its efficiency.²⁴⁹ Scholars who defend the status quo generally base their argument on faith in an efficient labor

244. BEBCHUK & FRIED, *supra* note 7, at 37, 70; Michael B. Dorff, *Does One Hand Wash the Other? Testing the Managerial Power and Optimal Contracting Theories of Executive Compensation*, 30 J. CORP. L. 255, 267 (2005); Charles M. Yablon, *Bonus Question—Executive Compensation in the Era of Pay for Performance*, 75 NOTRE DAME L. REV. 271, 276 n.5 (1999).

245. See Dorff, *supra* note 244, at 267; Yablon, *supra* note 244, at 276 n.5.

246. Dorff, *supra* note 8, at 2051.

247. Susan Carey, *Judge Approves UAL's Managers Incentive Plan*, WALL ST. J., Jan. 19, 2006, at A2.

248. Cf. BEBCHUK & FRIED, *supra* note 7, at 61–79 (arguing that managerial power accounts for poorly structured executive compensation).

249. See *supra* note 7.

market.²⁵⁰ Confident uncertainty should give these researchers some pause and cause them to reflect more deeply on whether that faith is misplaced. For experts who already believe the CEO labor market is bloated, confident uncertainty provides a powerful explanation of the observed data.

Confident uncertainty explains excessive CEO compensation as a byproduct of boards' undue confidence in their ability to forecast a CEO's future performance.²⁵¹ Directors experience excessive optimism about their first-choice candidate, leading them to believe that the favored applicant merits a large premium. Their optimism stems from a variety of sources. The illusion of validity lends unwarranted credence to résumés and interviews that are only moderately predictive of future success.²⁵² The representativeness heuristic emphasizes coherence over validity and causes directors to see candidates similar to themselves as having an outsized chance of superior performance.²⁵³ The illusion of control obscures the role of chance in determining outcomes and lures directors into an exaggerated confidence in the CEO's abilities.²⁵⁴ Cognitive dissonance and groupthink enhance this effect.²⁵⁵ Finally, social cascades may boost confidence in existing evaluative methodologies beyond their actual utility.²⁵⁶ The combination of all these factors yields excessive confidence in the board's ability to select the best CEO and in that favored candidate's superiority to the rest of the field, producing excessive compensation. In the next section, I will apply these insights to evaluate the recent federal efforts to combat excessive compensation.

III. REGULATING EXECUTIVE COMPENSATION: THE OBAMA PLAN

A. Background

This past February, the Obama administration proposed revolutionary curbs on executive compensation for those financial companies receiving government assistance in response to the financial crisis.²⁵⁷ The administration was quickly followed by Senator Dodd, who inserted additional executive pay limits into the stimulus package

250. See Bainbridge, *supra* note 10, at 3; Easterbrook, *supra* note 7, at 540; Fischel, *supra* note 7, at 1259; Sanford J. Grossman & Oliver D. Hart, *An Analysis of the Principal-Agent Problem* 51 *ECONOMETRICA* 7, 7 (1983); Bengt Holmström, *Moral Hazard and Observability*, 10 *BELL. J. ECON.* 74, 74 (1979); Loewenstein, *supra* note 7, at 4 (arguing that CEOs are not overpaid); Mirrlees, *supra* note 7, at 105; Murphy, *Top Executives*, *supra* note 7, at 125 (suggesting that executive compensation is not excessive); Ross, *supra* note 7, at 134; Shavell, *supra* note 7, at 55; Thomas, *supra* note 7, at 276; Wolfson, *supra* note 7, at 959 (determining that market forces control executive compensation).

251. See *supra* Part II.B (applying confident uncertainty to explain the observed data).

252. See *supra* Part II.B.2 (explaining the illusion of validity's impact on CEO compensation and selection).

253. See *supra* Part II.B.3 (describing errors boards may make in compensating CEOs due to the representativeness heuristic).

254. See *supra* Part II.B.4 (arguing that the illusion of control may result in the overcompensation of CEOs).

255. See *supra* Part II.B.5–6 (contending that cognitive dissonance and groupthink may inflate CEO pay).

256. See *supra* Part II.B.7 (describing the impact of social cascades on CEO compensation).

257. See U.S. Dep't of the Treasury, *supra* note 2.

which I will discuss in Part III.E, below.²⁵⁸ More changes were made as the proposals were translated into final regulations by the Treasury Department, which I will discuss in Part III.F, below.²⁵⁹ Each of these sets of restrictions far exceeded anything previously attempted by the federal government in this area.²⁶⁰ In light of confident uncertainty's explanation of the root causes of excessive compensation, some of these changes and proposals are essentially sound but require modification or expansion, while others seem altogether ill-advised.

The Obama Plan's limits were divided into two categories. The strictest requirements were reserved for those entities who would in the future receive "exceptional financial recovery assistance."²⁶¹ Firms that took advantage only of the generally available capital access program would be subject to looser restrictions.²⁶²

The Plan's stricter rules for those receiving exceptional assistance consisted of three major components: (1) a cap on compensation of \$500,000; (2) an exception for restricted stock or similar incentive programs; and (3) a requirement for a "say on pay" by shareholders.²⁶³ The more permissive limits for companies participating in widely available relief programs were similar, but provided an additional exception to the compensation cap. Companies that wished to pay their senior executives more than \$500,000 per year (excluding restricted stock) could do so if they fully disclosed the compensation to shareholders and, "if requested" (presumably by the Treasury Department), provided an opportunity for a nonbinding "say on pay" shareholder resolution.²⁶⁴

Both sets of rules in the Obama Plan would apply only to companies who received assistance after the new rules were announced; companies the government shored up prior to the announcement—such as Bank of America and AIG—would not have been

258. See Solomon & Maremont, *supra* note 29; see generally H.R. REP. NO. 111-16 (2009) (Conf. Rep.).

259. See generally 31 C.F.R. § 30 (2009).

260. The most recent such efforts before the current crisis were undertaken by the Clinton administration and are embodied in § 162(m) of the Internal Revenue Code. See I.R.C. § 162(m) (2006). That provision eliminated the tax deduction for executive compensation in excess of one million dollars unless the excess compensation was performance related, for example, bonuses or stock options. *Id.*

261. 31 C.F.R. § 30.1; see also Jonathan Weisman & Joann S. Lublin, *Obama Lays Out Limits on Executive Pay*, WALL ST. J., Feb. 5, 2009, at A1.

262. See Press Release, U.S. Dep't of the Treasury, *supra* note 2.

263. *Id.* In addition, the Obama Plan provides for "clawback" provisions for bonuses given to top executives who engage in deceptive practices, a ban on "golden parachutes" for the top ten senior executives (and lesser limits for other executives), and a mandate that boards of directors adopt written policies on luxury spending and post these policies on the company web site. *Id.* The clawback provisions and ban on golden parachutes are unlikely to arouse much controversy. Even corporate leaders have praised some such provisions. See Fiorina, *supra* note 6. The requirement for written policies on luxury spending seems unlikely to have much impact—companies receiving TARP money are already likely to be more sensitive to such expenditures after the recent press coverage—but are also likely harmless. I focus here on the provisions that are likely to prove most controversial and/or impactful.

264. See U.S. Dep't of Treasury *supra* note 2; Stephen Labaton & Vikas Bajaj, *Executive Pay Limits Seek to Alter Corporate Culture*, N.Y. TIMES, Feb. 5, 2009, at A1.

required to comply unless they subsequently received additional assistance.²⁶⁵ The rules in the Obama Plan also did not apply to companies who did not receive financial assistance.²⁶⁶

Although limited in scope, the new rules were potentially revolutionary in effect. As a result, they incited a predictable flurry of controversy.²⁶⁷ Critics of the plan, however, generally assumed that executive compensation was set appropriately by a fair and impartial market.²⁶⁸ None of the critics recognized the role of confident uncertainty in creating systemic market failures that needed to be corrected. This lack of understanding at a minimum undermines critics' argument that the labor market for executive talent is efficient and should be left to determine pay on its own. But it also has much to say about the means of addressing the problem.

B. Salary Cap

The heart of the Obama Plan was the salary cap.²⁶⁹ A salary cap seems conceptually very promising as a method to combat the overbidding on CEO candidates caused by confident uncertainty. Boards are likely to amplify the disparity in expected future performance between their first-choice CEO candidate and the other finalists.²⁷⁰ As a result, they may bid too high to obtain their favored manager, reasoning that the skills gap fully justifies the higher price.²⁷¹ As more and more companies pay extraordinary sums for what they perceive to be the best talent, other companies may fall victim to a social cascade that seems to justify the new compensation level.²⁷²

265. See U.S. Dep't of the Treasury, *supra* note 2; Labaton & Bajaj, *supra* note 264 (stating that new rules do not apply to the more than 350 institutions that have already received bailout funds).

266. See U.S. Dep't of the Treasury, *supra* note 2; Labaton & Bajaj, *supra* note 264 (“[T]he toughest new rules apply only to large companies seeking government assistance to survive.”).

267. See, e.g., Lucian Bebchuk, *Pay Cap Debate: They Don't Go Far Enough* . . . , WALL ST. J., Feb. 6, 2009, at A11 (“[T]he guidelines are too modest and should be tightened.”); Smith, *supra* note 6 (“Public anger is hard to deny, but we shouldn't let it weaken an important industry. Sensible restraints and market forces will cause the industry to reinvent itself.”); Labaton & Bajaj, *supra* note 264 (arguing that the new rules may discourage companies from seeking federal assistance and may make it more difficult to recruit and retain talented executives); Fiorina, *supra* note 6 (“[I]t doesn't strengthen our economy when government decides how much each job is worth. In America we leave that job to markets.”).

268. See Smith, *supra* note 6 (stating most Wall Street bonuses paid in 2008 were efficient and went to those who helped make things better or were otherwise valuable to retain); Fiorina, *supra* note 6 (“[I]t doesn't strengthen our economy when government decides how much each job is worth. In America we leave that job to markets.”).

269. As discussed below, the cap was nevertheless largely dropped from the final regulations. See *infra* Part III.F.

270. See *supra* Part II.C (applying confident uncertainty to analyze CEO compensation).

271. See Gabaix & Landier, *supra* note 177, at 84 (“Substantial firm size leads to the economics of superstars, translating small differences in ability into very large differences in pay.”).

272. See generally O'Connor, *supra* note 126, at 1240; Sunstein, *supra* note 44, at 84 (discussing the basic theory of the cascade phenomenon).

A strict salary cap should short-circuit the resulting upward pay spiral. No matter how talented the candidate, regardless of how much value the board believes she or he might add to the company's bottom line, the directors may only spend the amount of the cap. They will likely still perceive one candidate as reliably superior to the others, but a cap would restrain directors from acting on their exaggerated perceptions.²⁷³ A cap would also break the social cascade.²⁷⁴ A statutory maximum would prevent companies from signaling that some higher threshold is appropriate. Without some signal that can be read and interpreted by other players as indicating the possession of private information, social cascades can neither form nor survive.²⁷⁵ To the extent excessive pay is the result of confident uncertainty, a strict salary cap should prove an effective tonic.

As critics have pointed out, however, strict caps produce many problems of their own.²⁷⁶ First, any fixed cap is necessarily arbitrary.²⁷⁷ Why should pay be capped at \$500,000? Why not \$550,000 or \$1 million or \$10 million? Half a million is a nice, round number and certainly sounds like an enviable salary to most Americans,²⁷⁸ but there is no theoretical justification for choosing that particular figure. Consequently, policy makers will have trouble defending any particular line drawn.

Second, the Obama cap applies to all senior executives at companies that have taken government funding, regardless of the companies' size or the executives' performance.²⁷⁹ An across-the-board cap is hard to defend on either fairness or economic grounds. Larger companies are likely to be more complex and require

273. See *supra* Part II.B (explaining excessive executive compensation as a consequence of boards' excessive optimism).

274. See *supra* Part II.B.7 (describing the role of social cascades in producing excessive executive compensation).

275. See Anderson & Holt, *Information Cascades*, *supra* note 44, at 847. See generally Anderson & Holt, *Classroom Games*, *supra* note 44, at 187–92 (describing social cascade experiments); Banerjee, *supra* note 44, at 798; Bikhchandani et al., *supra* note 44, at 151–55; Sunstein, *supra* note 44, at 82–83 (describing social cascades).

276. See Valerie Bauerlein & Paulo Prada, *Curbs on Executive Pay: Among Bankers, Howls—and Cheers*, WALL ST. J., Feb. 5, 2009, at A10 (quoting a bank executive as complaining caps set an “arbitrary standard without consideration for individual decisions” (internal quotation marks omitted)); Alex Roth & Corey Dade, *Curbs on Executive Pay: Mixed Reactions from Republicans Demonstrate the Dilemma Faced by the Party*, WALL ST. J., Feb. 5, 2009, at A10 (quoting conservative commentator Sean Hannity as describing the caps as “a dramatic move away from capitalism and toward socialism” (internal quotation marks omitted)); Weisman & Lublin, *supra* note 261 (quoting a banking executive as critiquing the pay cap because “if executives are making money for shareholders, ‘they should be rewarded for it’”); Fiorina, *supra* note 6 (describing caps as arbitrary).

277. See Bauerlein & Prada, *supra* note 276 (quoting a bank executive as complaining caps set an “arbitrary standard without consideration for individual decisions” (internal quotation marks omitted)); Fiorina, *supra* note 6 (describing caps as arbitrary).

278. The average income for a middle-income American family in 2006 was \$45,000. Neil Irwin & Alejandro Lazo, *Inflation Hits the Poor Hardest; No Income Group Is Untouched, but Staples Are Rising Fastest*, WASH. POST, Mar. 21, 2008, at A01.

279. See Press Release, U.S. Dep't of the Treasury, *supra* note 2 (explaining how guidelines distinguish between companies based on the amount of assistance they receive, not based on their size or success).

greater expertise to run.²⁸⁰ The pool of executives with the necessary skill and experience to govern larger businesses is therefore likely to be relatively small. Those individuals who do possess the requisite skill set may justifiably expect to command greater compensation than those who do not. An executive with the rarified ability to run a multinational, diversified conglomerate worth hundreds of billions of dollars simply deserves higher pay than someone whose abilities are strained by running a much simpler, smaller company. Similarly, a CEO who guides a company to triumph deserves to be rewarded more than a less-successful rival. Economically, wealthier businesses should be able to translate that advantage into more talented leadership, whether measured in sophistication or expected success.²⁸¹ The Obama cap would bar companies from leveraging their wealth to purchase the best executives.²⁸² Without a price mechanism that can respond to quality, talent will not be put to its most efficient use. Executives who could run large, complex entities may instead end up running simpler businesses because the reward for the two tasks is identical.

Third, strict compensation caps (although not the cap in the Obama Plan) fail to align executives' incentives with shareholders' interests.²⁸³ Proponents of performance pay—such as bonuses, stock options, and restricted stock—argue that it provides executives with appropriate incentives to maximize shareholder value.²⁸⁴ Assuming that investors are diversified, executives should pursue shareholders' interests by investing in projects with the greatest expected returns.²⁸⁵ Even if the associated risk of

280. This is the heart of Gabaix and Landier's argument that the rise of CEO compensation is justified. Companies increased greatly in size and complexity at the same time that CEO pay was increasing, and larger companies require greater executive expertise—hence a more rarified talent pool. See Gabaix & Landier, *supra* note 177, at 49–50 (“[T]he model proposes that the recent rise in CEO compensation is an efficient equilibrium response to the increase in the market value of firms, rather than resulting from agency issues.”).

281. See *id.* at 49 (describing model showing that best CEOs will be hired by the largest firms, since these firms can best leverage the CEOs' impact).

282. I argue above that boards exaggerate their own ability to distinguish the best candidate from closely comparable finalists. See *supra* Part II. Nevertheless, a fixed cap such as that in the Obama Plan will not permit even large and easily discernible talent gaps to be rewarded, and therefore will impede distribution of talent to the highest valuing use.

283. The Obama Plan provides for the possibility of restricted stock awards, which may be intended to compensate for this deficit of absolute caps. See Press Release, U.S. Dep't of the Treasury, *supra* note 2 (“Any pay to a senior executive of a company receiving exceptional assistance beyond \$500,000 *must be made in restricted stock* or other similar long-term incentive arrangements.” (emphasis in original)). I will discuss the restricted-stock component in the next section. See *infra* Part III.C.

284. See Solomon & Maremont, *supra* note 29 (explaining how corporate-governance experts advocate compensation packages that contain larger proportions of incentive pay, rather than salaries).

285. See Henry T.C. Hu, *Risk, Time, and Fiduciary Principles in Corporate Investment*, 38 UCLA L. REV. 277, 292–93 (1990). As Henry Hu has argued:

If shareholders are diversified and the risk associated with a project can be diversified away, managers can concentrate on expected returns and pay relatively little attention to such “diversifiable,” “unique,” or “unsystematic” risk. Stated more generally, if shareholders hold diversified portfolios (as is usually presumed for publicly held corporations), corporate managers dedicated to acting

these investments is high, diversified shareholders will benefit on average if companies act as risk-neutral, rational agents.²⁸⁶ Guaranteed fixed compensation, in contrast, may induce executives to work toward their employer's long-term stability so that they can preserve their positions.²⁸⁷ As a result, investors may suffer subpar returns from overly safe investments.²⁸⁸ As applied to troubled companies receiving a large government bailout, this aspect of fixed compensation may seem a virtue rather than a vice. Particularly for the largest companies whose failure poses risks to the entire financial system, the government—in contrast to shareholders—may well prefer investment in safer enterprises despite their lower expected returns.²⁸⁹ But fixed compensation may also fail to incentivize hard work the way performance-linked compensation should.²⁹⁰ The Obama Plan did not suffer from this particular defect since it contained an exception for performance pay. As I argue below, however, the usual methods of aligning pay with performance are themselves troubling.²⁹¹

One last problem with the Obama cap stemmed from its limited scope. The cap applied only to financial companies who received government assistance after the restrictions were announced.²⁹² Financial companies who received aid before the new rules were exempt unless they received further assistance.²⁹³ These excepted entities could offer whatever they liked to potential executives, and so would have a significant advantage in competing with restricted companies for managerial talent.²⁹⁴ Affected

consistently with shareholder optimality should pay relatively little attention to unsystematic risk in judging among investment alternatives.

Id. (footnotes omitted). The financial crisis demonstrated that systemic (nondiversifiable) risk may be more common than previously appeared.

286. *See id.* at 299 (“[A] diversified shareholder would *not* want the managers of a publicly held corporation to act in a way intended to ensure the well-being of the corporation. If managers were to focus on the total risk of an investment project instead of the nondiversifiable risk, for instance, they might enhance the health of the firm, but they would probably not maximize the share price.” (emphasis in original)).

287. *See* Hu, *supra* note 285, at 299.

288. *See id.* (“If managers were to focus on the total risk of an investment project instead of the nondiversifiable risk . . . they might enhance the health of the firm, but they would probably not maximize the share price.”).

289. *See* Press Release, U.S. Dep’t of the Treasury, *supra* note 2 (“[T]he compensation committees of all companies receiving government assistance must provide an explanation of how their senior executive compensation arrangements do not encourage excessive and unnecessary risk-taking.”).

290. *See* BEBCHUK & FRIED, *supra* note 7, at 121–24.

291. *See infra* Part III.C.

292. *See* Weisman & Lublin, *supra* note 261 (“The rules do not apply retroactively, not even to those firms that have already been bailed out.”).

293. *See* Press Release, U.S. Dep’t of the Treasury, *supra* note 2 (“The measures announced today are designed to ensure that the compensation of top executives *in the financial community* is closely aligned not only with the interests of shareholders and financial institutions, but with the taxpayers providing assistance to those companies.” (emphasis added)). *But see* Weisman & Lublin, *supra* note 261 (“But [the rules] will be imposed on all companies—in the financial, auto or other sectors—receiving any future help.”).

294. *See* Craig Karmin, *Shareholders Renew Push to Regulate Executive Pay*, WALL ST. J., Feb. 13, 2009, at C1 (“Companies contend that current pay structures are necessary to attract and retain talent, despite job losses on Wall Street.”); Lucchetti & Karnitschnig, *supra* note 1 (“If the government imposes caps or other limits on compensation, some bankers worry that the

companies would have been particularly vulnerable. The market is likely to interpret government assistance as a sign of weakness.²⁹⁵ Executives may be correspondingly reluctant to trade positions with more stable companies for slots with at-risk businesses. Restricting these companies' ability to overcome this deficit with a compensation-risk premium for executives may deprive weakened companies of badly needed leadership.²⁹⁶

The Obama Plan's limited scope seemed purely a product of politics. The motivation for the cap seemed to be to mollify the public's outrage that taxpayer funds were used to pay large bonuses to executives whose companies were failing.²⁹⁷ But these companies' problems say nothing about the market for senior executives. If seven-figure compensation packages are necessary to attract the needed talent, then the fact that the companies used taxpayer money to fund these expenses seems irrelevant. Taxpayers would be unlikely to complain about funds used to build a new factory or purchase new inventory; why should using bailout funds to purchase skilled managers be any different? These restrictions make sense only under the assumption that the executive labor market is not efficient and is producing excessive compensation. But that justification is surely not limited to companies receiving Troubled Asset Relief Program (TARP) money or other federal assistance. If the executive labor market is producing excessive compensation, the market failure as a whole should be addressed, not just some subset of the financial sector.²⁹⁸

The salary cap as envisioned by the Obama Plan was deeply flawed. While there is obvious political appeal to imposing compensation limits on executives who led their companies and the country into an economic quagmire, imposing an arbitrary, across-the-board cap on selected businesses is likely only to undermine efforts to rescue ailing companies.²⁹⁹ A properly designed salary cap, however, could help overcome confident uncertainty while still avoiding many of the current plan's pitfalls. Two important changes would greatly improve any future cap.

most talented people will flee to firms that are less regulated.”).

295. This is especially true of banks' use of the Federal Reserve's discount window. See Neil Irwin, *Fed's Role in Crisis Is Giant, if Opaque*, WASH. POST, Nov. 24, 2008, at A1.

296. The availability of restricted stock and similar incentive pay as a compensation tool may ameliorate this effect somewhat. See Press Release, U.S. Dep't of the Treasury, *supra* note 2 (“Any pay to a senior executive of a company receiving exceptional assistance beyond \$500,000 must be made in restricted stock or other similar long-term incentive arrangements.” (emphasis in original)).

297. See Weisman & Lublin, *supra* note 261; see also Smith, *supra* note 6 (discussing the “public outcry” at news that the securities industry paid bonuses of eighteen billion dollars in 2008). President Obama stated, in announcing the new restrictions: “This is America . . . We don't disparage wealth. We don't begrudge anybody for achieving success. And we believe success should be rewarded. But what gets people upset—and rightfully so—are executives being rewarded for failure, especially when those rewards are subsidized by U.S. taxpayers.” Weisman & Lublin, *supra* note 261.

298. The Obama Plan applies only to financial companies that receive federal assistance after the Plan's inception. See Press Release, U.S. Dep't of the Treasury, *supra* note 2. But see Weisman & Lublin, *supra* note 261 (“But [the rules] will be imposed on all companies—in the financial, auto or other sectors—receiving any future help.”).

299. See *supra* notes 276–96 and accompanying text (discussing the problems with the current version of the salary cap).

First, for the reasons discussed above, the cap should not be fixed across the board.³⁰⁰ Instead, the maximum compensation should be tied to the company's complexity and success—what I term a “tailored cap.” The level of compensation will inevitably still be arbitrary, but companies that are relatively complex and/or are thriving should have the ability to pay their executives more than those that are simpler or that experience less success.³⁰¹ The compensation level is more a question of feasible politics than wise policy, but the compensation formula should permit for fairly wide variance among companies on the order of four to one (such as a salary range of \$250,000 to \$1 million). The range should be sufficient to permit a functioning distributional market so that those identified (even if without perfect accuracy) as the best executives land in the companies best able to leverage their talents.³⁰² The formula for the tailored cap could take many factors into account, but keeping it simple is probably preferable; a complex formula is likely to be more easily susceptible to manipulation.³⁰³

One possibility would be to calculate compensation as a function of the company's average market capitalization over a period of five years as compared to the average market capitalization for all public companies in the industry.³⁰⁴ Market capitalization is a crude measure of a company's complexity and success, but may suffice for our purposes. For example, the formula could be:

$$C + K \sum_{y=-2}^2 \frac{MCC_y}{MCI_y}$$

“C” and “K” in this formula are constants chosen to set the compensation at the politically desired level and could be adjusted annually for inflation. “C” represents some minimum compensation that heads of even the smallest company could collect. “K” is a multiplier that will determine the impact of company size. “Y” measures the

300. See *supra* notes 280–86 and accompanying text (arguing the fixed cap is hard to defend on either efficiency or fairness grounds).

301. For an explanation of why this should be the case see *supra* notes 283–86 and accompanying text.

302. As explained previously, companies are likely to place too much faith in their ability to predict accurately which executives will prove most successful. See *supra* Part II.B. Nevertheless, I do not see an alternative to a market mechanism for making labor distribution decisions. As is generally true with market failures, law should intervene to curb market excesses while still harnessing markets' power. Here I advocate—in contrast to the Obama Plan—permitting significant spreads in compensation to allow for a market while still limiting the upper range of pay packages to avoid the worst effects of confident uncertainty.

303. See *infra* notes 340–46 and accompanying text (discussing manipulation of performance pay mechanisms).

304. To avoid manipulation of the benchmark, some government entity such as the Securities and Exchange Commission or the Federal Reserve should classify all public companies for this purpose. Clearly, some unfairness would result as, for example, small, rapidly growing companies would be included in an index that also measured the success of larger, slower-growth entities. Similarly, conglomerates that included many different industries might be difficult to classify. But the risks of manipulation inherent in an effort to find the most accurate comparative benchmark clearly outweigh any benefits of greater fine-tuning.

year, from two years previous to two years subsequent to the current year, with year zero as the current year.³⁰⁵ “MCC_y” represents the market capitalization of the company in year “Y.” “MCI_y” represents the average market capitalization for companies in the same industry in year “Y.”

A five-year average like this should be much more difficult for executives to manipulate than a single quarter’s financial results, so this proposal should not suffer from the same defects as conventional stock options.³⁰⁶ In order to better align executives’ incentives with shareholders’ interests, the five-year period could include future years as well, with some portion of compensation withheld until those years’ results are known. Basing compensation on a moving average of executive compensation would reward, with raises, executives who succeeded in growing the company and enriching shareholders, achieving some alignment of executives’ and shareholders’ interests. Adjusting the compensation relative to the industry’s performance as a whole prevents managers from receiving rewards (or salary cuts) just because the industry as a whole is experiencing a favorable economic climate (such as high oil prices).³⁰⁷ Executives should be barred from unwinding these incentive effects through derivatives trading.³⁰⁸

Other corporate characteristics could certainly be used in addition to or instead of market capitalization, but to avoid the impact of confident uncertainty, the formula should be restricted to objectively measurable criteria.³⁰⁹ Permitting boards to reward abstract skills such as leadership would reopen the door to excessive compensation.

The second modification that should be made is to apply the compensation limits as broadly as legally permissible under the Commerce Clause,³¹⁰ if possible, to all companies, whether public or private, that do business in the United States or are listed on a United States stock exchange.³¹¹ The United States should also endeavor to

305. Although this formula looks at a five-year period to determine compensation, the choice of the relevant period is of course somewhat arbitrary. The period should be long enough to avoid strictly short-term thinking (and the accompanying incentives to manipulate financial results to improve this year’s compensation), but still short enough so that success has a significant impact on total pay.

306. Bebchuk and Fried have criticized conventional options in part for their susceptibility to manipulation. *See* BEBCHUK & FRIED, *supra* note 7, at 184 (“Executives who are free to unload shares or options may have incentives to jack up short-term stock prices by running the firm in a way that improves short-term results at the expense of long-term value.”).

307. *See id.* at 141–42. Bebchuk and Fried have pointed out that conventional stock options suffer from this flaw. *See id.* (explaining how indexed options can help avoid the windfall problem associated with conventional options).

308. *See id.* at 174–85 (explaining that conventional options generally do not prohibit recipients from unwinding the resulting exceptions through derivatives trading).

309. If private companies are also governed by the plan, as I argue below they should be, some other measure of total company value would have to be used, such as discounted cash flow or earnings capitalization.

310. U.S. CONST. art. I § 8, cl. 3.

311. The United States Constitution grants power to Congress to “regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes” *Id.* The Commerce Clause has been applied broadly to permit federal regulation of corporate governance. *See, e.g.,* Edgar v. MITE Corp., 457 U.S. 624, 630–46 (1981) (striking down a state antitakeover statute, in part, because it conflicted with the federal Williams Act governing

persuade other countries to impose similar caps. Most other heavily industrialized nations indicated their willingness to adopt such a cap, at least for financial companies, at the G-20 meeting in September 2009.³¹² The G-20, which represents eighty percent of the world's economy, was blocked by the United States and Britain from imposing a compensation cap for bankers.³¹³

Universal application will be politically contentious. Politicians willing to impose compensation limits on companies receiving substantial government assistance may balk at applying those limits across the board. For example, Senator Richard Shelby, the senior Republican on the Senate Banking Committee, stated: "In ordinary situations where the taxpayers' money is not involved, we shouldn't set executive pay But where you've got federal money involved, taxpayers' money involved, TARP money involved, and the way they have spent it, with no accountability, is getting close to being criminal."³¹⁴

Despite the controversy universality is likely to generate, broad application of the cap is critical to its success. If important categories of companies are excluded, talented executives may migrate to those entities able to offer them the highest compensation.³¹⁵ For some period at least, the CEOs of affected entities may feel their reputations and future marketability—as well as some sense of responsibility for their company's dilemma—require that they remain at the helm, even at substantially reduced pay. A number of CEOs in similar situations have agreed to work for one dollar per year, at least for a time, though they have often demanded equity grants as well.³¹⁶ But those senior executives below the top spot who are less visible to public pressure may feel no such compunction. Troubled companies are poorly positioned to weather the loss of their most seasoned executives.

These two modifications—adjusting pay for company complexity (as crudely measured by market value) and applying the restrictions as broadly as possible—should ameliorate most of the flaws in the Obama Plan's cap.³¹⁷ The level of pay will remain arbitrary, but will be adjusted for the company's complexity and success, permitting a market in senior managers.³¹⁸ By changing over time in reaction to a company's growth, the modified cap also preserves some performance incentives for

tender offers).

312. See *G-20 Addresses Bankers' Bonuses*, L.A. TIMES, Sept. 6, 2009, at A11.

313. *Id.*

314. *Obama Imposes Limits on Executive Pay*, MSNBC.COM, Feb. 4, 2009, <http://www.msnbc.msn.com/id/29003620/>.

315. Similarly, if the cap applies only domestically, the most sought-after executives may move to international companies free of the compensation restriction.

316. See Andrew Countryman, *Reformers Chip Away at Great Wall of Pay*, CHI. TRIB., May 9, 2004, at C1 (noting that Apple CEO Steve Jobs accepted a one dollar per year salary, but also took nearly seventy-five million dollars in restricted stock); Kerry E. Grace, *Crisis on Wall Street: AIG Says CEO Pay Will Be \$1*, WALL ST. J., Nov. 26, 2008, at C2 (noting that AIG CEO Edward M. Liddy agrees to work for one dollar per year, plus equity grants); Tomoe Murakami Tse, *Congress Trumps Obama by Cuffing Bonuses for CEOs*, WASH. POST, Feb. 14, 2009, at A1 (noting that Citigroup CEO Vikram Pandit agreed to an annual salary of one dollar per year until the bank is profitable again).

317. See *supra* notes 279–99 and accompanying text (discussing flaws with the salary cap in the Obama Plan).

318. See *supra* notes 304–17 and accompanying text (proposing modifications to the Obama Plan).

executives, though admittedly these will be weaker than under the current unregulated system.³¹⁹ Finally, by applying the restrictions as broadly as possible, the modified cap should avoid subjecting affected companies to a significant talent drain.

C. Performance Pay

The Obama Plan permitted even those companies subject to the strictest limits—those receiving “exceptional assistance”—to exceed the \$500,000 cap by awarding their senior executives restricted stock or “other similar long-term incentive arrangements.”³²⁰ The Treasury Department’s Press Release did not provide examples of conforming compensation structures.³²¹ Restricted stock cannot be sold until after either: (a) the company has repaid the government in full, including contractual dividend payments; or (b) some unspecified period has elapsed that has permitted the government to determine the company is otherwise behaving itself.³²² Presumably, some analogous restriction would apply to arrangements that are “similar” to restricted stock, but the Treasury Department’s Press Release did not state as much expressly.³²³

The restricted stock exception’s vague nature makes it difficult to evaluate concretely. Nevertheless, the clear intent of the restricted stock exception was to anticipate critiques that the Obama Plan’s regulations would prevent corporations from providing executives incentives to maximize shareholder value and protect taxpayer funds.³²⁴ Performance-based pay of some sort is widely considered sound compensation practice as a method of reducing residual agency costs, especially in publicly traded corporations where ownership is divorced from control.³²⁵ Guaranteed

319. The formula’s incentives may also prove weaker than the restricted stock and performance bonuses permitted under the Obama Plan. I will have more to say about pay-based incentives in the next section. *See infra* Part III.C.

320. Press Release, U.S. Dep’t of the Treasury, *supra* note 2.

321. *See id.*

322. *See id.* (“The senior executive receiving such restricted stock will only be able to cash in either after the government has been repaid—including the contractual dividend payments that ensure taxpayers are compensated for the time value of their money—or after a specified period according to conditions that consider among other factors the degree a company has satisfied repayment obligations, protected taxpayer interests or met lending and stability standards.”).

323. *See id.*

324. *See id.* (“Such a restricted stock strategy will help assure that senior executives of companies receiving exceptional assistance have incentives aligned with both the long-term interests of shareholders as well as minimizing the costs to taxpayers.”).

325. *See* Michael C. Jensen & Kevin J. Murphy, *CEO Incentives—It’s Not How Much You Pay, but How*, HARV. BUS. REV., May–June 1990, at 138, 138–49 (arguing for greater emphasis on performance pay). *See generally* Michael C. Jensen & Kevin J. Murphy, *Performance Pay and Top-Management Incentives*, 98 J. POL. ECON. 225 (1990) (arguing for greater emphasis on performance pay). Agency costs can be broadly divided into three categories: bonding costs, monitoring costs, and residual costs. Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305, 308 (1976). Bonding costs are incurred by the agent as a method of demonstrating his or her reliability. *Id.* For example, securing a law degree from a prestigious university signals that the graduate will be a bright and well-trained lawyer. Monitoring costs are borne by the principal or

cash compensation is generally thought to provide inadequate incentives to protect shareholder interests.³²⁶

I see four problems with including long-term performance incentives as an exception to the flat cap in the Obama Plan. First and most importantly, performance incentives open the very door to excessive compensation that a flat cap (or my proposed tailored cap) closes.³²⁷ Boards suffering from confident uncertainty will overstate their favored candidate's superiority to his or her competitors. As a result, they will consent to exorbitant compensation demands they would not have to pay if they were willing to settle for their second choice. A compensation cap (whether flat or tailored) prevents boards from acting on their excessive confidence by depriving them of the power to bid beyond the cap.³²⁸ But the restricted stock exception would permit boards to overpay despite the cap on fixed compensation. The Obama Plan did not limit the amount of restricted stock or similar incentive-based compensation that companies could award.³²⁹

This loophole is particularly troubling because the form of compensation is contingent; executives will receive their reward only if the corporation repays its debt or otherwise pleases the government.³³⁰ All else being equal, executives would prefer certain compensation to compensation they may never realize.³³¹ When bargaining for compensation in an unregulated market, executives would therefore typically demand—and boards would generally grant—higher expected compensation to compensate executives for taking on risk.³³² Risky compensation such as stock options, restricted stock, and performance bonuses, therefore, often results in greater overall compensation on average than guaranteed compensation such as salaries.³³³

employer to detect defections by the agent. *See id.* Checking receipts before reimbursing business expenses is an example of a monitoring cost. Finally, residual costs constitute costs to the principal that result from an agent's actions that are not in the principal's interest. *See id.* Employees who surf the web on company time are imposing residual costs on their employers.

326. *Cf.* BEBCHUK & FRIED, *supra* note 7, at 122–23.

327. *See supra* notes 273–79 and accompanying text (arguing that a compensation cap may prove effective in combating excessive compensation caused by confident uncertainty).

328. *See supra* notes 273–79 and accompanying text.

329. *See* Press Release, U.S. Dep't of the Treasury, *supra* note 2.

330. *See id.* (“The senior executive receiving such restricted stock will only be able to cash in either after the government has been repaid—including the contractual dividend payments that ensure taxpayers are compensated for the time value of their money—or after a specified period according to conditions that consider among other factors the degree a company has satisfied repayment obligations, protected taxpayer interests or met lending and stability standards.”).

331. *See* Lucian A. Bebchuk, Jesse M. Fried & David I. Walker, *Managerial Power and Rent Extraction in the Design of Executive Compensation*, 69 U. CHI. L. REV. 751, 762–63 (2002) (“A firm that requires a risk-averse executive to accept risky elements of compensation will have to provide more total compensation on an expected value basis to offset risk-bearing costs.”).

332. *See id.*

333. *See id.* at 763 (“For example, if a CEO candidate currently works for a firm that pays her a cash salary of \$500,000, another firm wishing to hire her and pay her in part with options will have to provide her—if she is risk-averse—compensation with an expected value greater than \$500,000.”).

The last major government effort to moderate executive compensation suffered from a similar defect, with disastrous results. The Clinton administration passed an amendment to the Tax Code that forbade public corporations from deducting senior-executive compensation in excess of one million dollars unless that compensation was performance related (such as stock options or performance bonuses).³³⁴ In response, companies' use of stock options in compensation packages skyrocketed, as did total pay.³³⁵ In sum, not only would the performance-pay exception unwind the benefits of the \$500,000 cap, but it would do so in a way that is especially likely to result in excessive compensation.

The second problem with this exception is that performance-linked pay may induce executives to manipulate financial statements or manipulate the business itself to raise their compensation. By definition, performance pay rewards achievement. Any achievement, however, must have a metric. The most common form of performance pay—stock options—measures achievement with the stock price.³³⁶ The past few years have demonstrated that when executives receive a large portion of their compensation in options, they can improve their personal bottom line by timing disclosures of information to the public; delaying or hastening capital expenditures or advertising campaigns; or, in the most egregious cases, providing fraudulent numbers in their financial statements.³³⁷ But options are not the only form of performance pay vulnerable to manipulation. Restricted stock, performance bonuses, or any other compensation structure where pay is linked to some performance target may be susceptible to exploitation.³³⁸ In short, performance pay seems to provide a powerful temptation to cheat and worse, to cheat in ways that hurt the company and its shareholders.

We certainly expect most executives will play by the rules. But incentives should be designed to make it as difficult as possible to manipulate the results. Performance-related pay is very difficult to design without vulnerabilities highly motivated and intelligent executives can exploit. In addition, the underlying assumption that

334. See 26 U.S.C. § 162(m) (2006). In particular, § 162(m)(1) provides: "In the case of any publicly held corporation, no deduction shall be allowed under this chapter for applicable employee remuneration with respect to any covered employee to the extent that the amount of such remuneration for the taxable year with respect to such employee exceeds \$1,000,000." *Id.* § 162(m)(1). Section 162(m)(4)(C) contains the exception for performance pay, "The term 'applicable employee remuneration' shall not include any remuneration payable solely on account of the attainment of one or more performance goals." *Id.* § 162(m)(4)(C).

335. See Bebchuk et al., *supra* note 331, at 792 (attributing the large increase in corporations' use of stock options in executive compensation package in part to the passage of § 162(m)).

336. See Sanjai Bhagat, Brian Bolton & Roberta Romano, *The Promise and Peril of Corporate Governance Indices*, 108 COLUM. L. REV. 1803, 1812 (2008) ("Compensation in the form of stock and stock options has therefore often been emphasized as a key to improved corporate performance, and such compensation has been the most substantial component of executive pay for well over a decade.").

337. See Bebchuk et al., *supra* note 331, at 317–20 (citing studies that corporate insiders buy company stock before releasing positive information and sell before disclosing negative information).

338. See BEBCHUK & FRIED, *supra* note 7, at 170–73 (arguing that restricted stock increases windfalls to executives relative to conventional stock options).

performance pay is necessary to align shareholders' and executives' interests deserves greater examination. Most CEOs are necessarily ambitious, hardworking people who are driven to succeed.³³⁹ Rewarding that success may induce some to work harder, but the raw desire to excel may suffice as an incentive.³⁴⁰ At a minimum, the assumption that performance pay, especially at stratospheric levels, is necessary to persuade CEOs to work hard or to focus on shareholders' interests deserves more empirical—and not just theoretical—examination.³⁴¹ In the meantime, if restrictions on executive pay are to permit an incentive-based component, that component should be capped to limit the impact of confident uncertainty.³⁴²

The restricted-stock exception's third flaw is that whatever incentives are produced appear to be reversible. Scholars have previously noted that employees can, through derivatives trades, unwind the incentives created by common forms of incentive pay such as stock options and restricted stock.³⁴³ Without regulation to prevent this unwinding, restricted stock awards are unlikely to provide much protection to shareholders or taxpayers. The Treasury Department Press Release provided no hint whatsoever whether the administration intends to enact such regulation as part of its new executive compensation rules.³⁴⁴ It is critical that any plan that includes expensive rewards for performance prevents executives from executing derivatives trades that result in rewarding them regardless of their performance.³⁴⁵

339. One model of executive compensation, the "tournament model," proposes that CEO pay is purposefully set very high to enhance competition among senior officers for the top spot. See Iman Anabtawi, *Explaining Pay Without Performance: The Tournament Alternative*, 54 EMORY L.J. 1557 (2005); Lorne Carmichael, *Firm-Specific Human Capital and Promotion Ladders*, 14 BELL J. ECON. 251, 257 (1983); Ronald G. Ehrenberg & Michael L. Bognanno, *Do Tournaments Have Incentive Effects?*, 98 J. POL. ECON. 1307, 1308–10 (1990); James A. Fairburn & James M. Malcomson, *Rewarding Performance by Promotion to a Different Job*, 38 EUR. ECON. REV. 683, 684 (1994); Edward P. Lazear & Sherwin Rosen, *Rank-Order Tournaments as Optimum Labor Contracts*, 89 J. POL. ECON. 841, 847 (1981); James M. Malcomson, *Work Incentives, Hierarchy, and Internal Labor Markets*, 92 J. POL. ECON. 486, 487–89 (1984); Barry J. Nalebuff & Joseph E. Stiglitz, *Prizes and Incentives: Towards a General Theory of Compensation and Competition*, 14 BELL J. ECON. 21, 26 (1983); Mary O'Keeffe, W. Kip Viscusi & Richard J. Zeckhauser, *Economic Contests: Comparative Reward Schemes*, 2 J. LAB. ECON. 27, 34 (1984).

340. I am currently beginning an empirical project interviewing senior officers and directors on a variety of corporate governance topics, including this one.

341. The work that has been done in this area has looked primarily at whether cash compensation has increased as a result of improved performance. See BEBCHUK & FRIED, *supra* note 7, at 122–23. The correlation found has been inconsistent. See *id.* But the work I am calling for here is aimed at a different question: to what extent is performance pay necessary to induce optimal behavior? Psychological and cultural factors may well prove adequate substitutes for financial incentives. At a minimum, the question bears further investigation.

342. For example, the United Brotherhood of Carpenters this year has "submitted shareholder proposals to 21 TARP recipients" to limit bonuses to the executive's salary. See Karmin, *supra* note 294.

343. See BEBCHUK & FRIED, *supra* note 7, at 174 ("Until very recently, firms have taken surprisingly few steps to prevent or to regulate the unwinding of the incentives created by option and restricted-stock grants.").

344. See Press Release, U.S. Dep't of the Treasury, *supra* note 2.

345. See BEBCHUK & FRIED, *supra* note 7, at 174–85 (arguing such restrictions should be included in executive pay structures).

Fourth and finally, restricted stock is a problematic form of incentive compensation. As Lucian Bebchuk and Jesse Fried have cogently argued, restricted stock shares the same performance insensitivity as stock options.³⁴⁶ Like stock options, restricted stock's value often rises and falls for reasons having little to do with the company's performance: changes in overall interest rates, shifts in economic growth, increases in the money supply, variations in commodities pricing, and others. As a result, restricted stock may reward executives for events entirely beyond their control and fail to effectively align executives' interests with those of shareholders.

Overall, the restricted-stock exception is well-intentioned but ill-advised. Permitting incentive pay probably loans some comfort to those accustomed to having stock options and similar compensation structures at the center of compensation packages, and may have purchased some corresponding political support. In the end, restricted stock seems unlikely to provide benefits that outweigh the substantial costs of excessive pay and perverse incentives to manipulate the timing and content of disclosures.³⁴⁷ This exception should be capped or eliminated altogether and replaced with a tailored cap, as argued above. At a minimum, the Obama administration should restrict the affected senior executives' ability to unwind incentive arrangements through derivatives trading.

D. "Say on Pay"

The Obama Plan required those companies receiving extraordinary assistance to submit their executive compensation arrangements to the shareholders for a nonbinding "[s]ay on [p]ay."³⁴⁸ Those companies participating in the generally available capital access programs did not need to submit their executive compensation for shareholder approval unless they desired to exceed the \$500,000 cap and such a vote was "requested."³⁴⁹ The Treasury Department's Press Release did not specify who may make such a request. Presumably the Treasury Department would have had the power to do so, but shareholders' ability to demand a vote was murky at best. The Obama administration also did not state the reasons it might request such a vote.³⁵⁰

Granting shareholders a voice on officers' pay, while in keeping with some scholars' recent recommendations for greater shareholder power, would constitute a radical change in corporate law.³⁵¹ Executive compensation has traditionally been

346. See BEBCHUK & FRIED, *supra* note 7, at 170–73.

347. See *supra* notes 330–46 and accompanying text.

348. Press Release, U.S. Dep't of the Treasury, *supra* note 2 ("The senior executive compensation structure and the rationale for how compensation is tied to sound risk management must be submitted to a non-binding shareholder resolution. There are no 'Say on Pay' provisions in the existing programs.").

349. *Id.* ("Companies that participate in generally available capital access programs may waive the \$500,000 plus restricted stock rule only by disclosure of their compensation and, if requested, a non-binding 'say on pay' shareholder resolution.") Note that these entities are also permitted to provide senior executives with restricted stock or similar performance-sensitive compensation above the \$500,000 cap without a shareholder vote. *Id.*

350. See *id.*

351. See Lucian A. Bebchuk, *The Myth of the Shareholder Franchise*, 93 VA. L. REV. 675, 696–97 (2007) (arguing for greater shareholder access to the corporate ballot in board

considered a matter of ordinary company operations and therefore strictly within the board's purview.³⁵² Shareholders have long been barred from interfering with the directors' management of the ordinary operations of the business.³⁵³ The long-standing policy against shareholder interference in ordinary operations is grounded in sound policy. One of the key advantages of the corporate form is the centralization and professionalization of management.³⁵⁴ Shareholders in a publicly traded corporation seldom have access to detailed knowledge about the company's operations, nor do they often share the depth of training and experience possessed by senior executives.³⁵⁵ In the compensation context in particular, shareholders may not understand the select labor market for senior officers and may fail to realize that princely sums are currently *de rigueur*.³⁵⁶ As a result, shareholders may naively reject compensation packages necessary to secure top-flight talent, inadvertently depriving the company of skilled management expertise.

Confident uncertainty, however, indicates that a shareholder voice on compensation decisions may prove helpful. Shareholders do not participate in the vetting process for CEO candidates, and, therefore, should not succumb to excessive optimism to nearly the same degree as the board. For example, because shareholders did not themselves choose the CEO, they should not fall prey to cognitive dissonance—they have no personal decision to defend.³⁵⁷ Also, individual shareholders are less likely to be highly conscious of other companies' compensation decisions and may therefore elude the

elections). *But see* Lynn A. Stout, *The Mythical Benefits of Shareholder Control*, 93 VA. L. REV. 789, 791 (2007) (responding that strong boards prevent “intershareholder opportunism” and promote “informed decisionmaking”).

352. *See* *White v. Panic*, 783 A.2d 543, 553 n.35 (Del. 2001) (noting board has broad discretion to set executive compensation); *Brehm v. Eisner*, 746 A.2d 244, 262 n.56 (Del. 2000) (“[D]irectors have the power, authority and wide discretion to make decisions on executive compensation.”).

353. The classic case for this proposition is *Charlestown Boot & Shoe Co. v. Dunsmore*, 60 N.H. 85 (1880) (stating that shareholders may not appoint an agent to oversee the directors because by statute the business of every corporation must be managed by the directors, not the shareholders). *See also* DEL. CODE ANN. tit. 8, § 141(a) (2001) (“The business and affairs of every corporation organized under this chapter shall be managed by or under the direction of a board of directors . . .”).

354. *See* Stout, *supra* note 351, at 792 (arguing that board governance “promot[es] . . . efficient and informed decisionmaking”).

355. In fact, most shareholders are rationally apathetic. *See* Jens Dammann, *Corporate Ostracism: Freezing Out Controlling Shareholders*, 33 J. CORP. L. 681, 739 (2008) (explaining that most shareholders' limited investment “does not justify . . . becom[ing] informed about corporate matters”); Marcel Kahan & Edward Rock, *The Hanging Chads of Corporate Voting*, 96 GEO. L.J. 1227, 1231 (2008) (noting the “well-studied issues of shareholders' rational apathy”).

356. *See* Lublin, *supra* note 172 (noting that median direct compensation for CEOs of top 200 U.S. corporations was \$8.85 million in 2007, but Merrill Lynch's John Thain (\$78.5 million), Goldman Sachs' Lloyd Blankfein (\$68.5 million), Occidental Petroleum's Ray Irani (\$61 million), American Express' Kenneth Chenault (\$46.2 million), and Lehman Brothers' Richard Fuld (\$40 million) are among those CEOs earning much more).

357. *See* DEL. CODE ANN. tit. 8, § 142(b) (“Officers shall be chosen in such manner and shall hold their offices for such terms as are prescribed by the bylaws or determined by the board of directors or other governing body.”).

social cascade in executive compensation.³⁵⁸ Shareholders may therefore prove a useful bulwark against the board's tendency to exaggerate the predictability of their chosen candidate's future performance and the directors' corresponding willingness to overpay to secure that candidate's services.³⁵⁹

This positive impact of shareholder voice, however, is likely to be severely diluted by making the shareholder vote non-binding, as in the Obama Plan.³⁶⁰ Board members may rationalize any rejection by the shareholders as demonstrating poor understanding of the issues at stake. After all, the board has met the CEO candidates and understands the clear superiority of its selection over the other possibilities. The shareholders have not. The directors may reasonably feel that their fiduciary duties to the shareholders require that they overturn the negative shareholder vote.³⁶¹ In an analogous context, boards often attempt to prevent positive shareholder votes on hostile takeover offers on similar grounds. That is, the directors believe that in their hands, the company's stock will eventually rise far beyond the premium being offered by the acquirer.³⁶²

Even a binding vote, however, is unlikely to protect sufficiently against excessive pay. Shareholders do not have an opportunity to participate in the negotiations; they are simply given a chance to reject the final product. When presented with a much-lauded CEO candidate and a total compensation package endorsed by the board, shareholders seem unlikely to vote "no" in sufficient numbers to have much impact. Sophisticated institutional shareholders—who typically make up over half of all shareholders in a publicly traded company—seem particularly likely to follow the directors' recommendation.³⁶³ With their deep experience in the elite business world, it would be difficult to avoid the reasoning that even seemingly astronomical sums are

358. See *supra* Part II.B.7. Institutional investors, who have professional investment managers, are more likely to focus on issues such as executive compensation, and therefore—rather ironically—may be more susceptible to a social cascade.

359. See *supra* Part II (arguing that confident uncertainty renders directors excessively confident about their selection of the CEO and consequently results in excessive compensation).

360. See Press Release, U.S. Dep't of the Treasury, *supra* note 2 ("The senior executive compensation structure and the rationale for how compensation is tied to sound risk management must be submitted to a *non-binding* shareholder resolution." (emphasis added)). Similarly, for companies not receiving exceptional financial assistance, the Obama Plan provides, "[c]ompanies that participate in generally available capital access programs may waive the \$500,000 plus restricted stock rule only by disclosure of their compensation and, if requested, a *non-binding* 'say on pay' shareholder resolution." *Id.* (emphasis added).

361. See *Malone v. Brincat*, 722 A.2d 5, 10 (Del. 1998) ("The directors of Delaware corporations stand in a fiduciary relationship not only to the stockholders but also to the corporations upon whose boards they serve.").

362. See, e.g., *Cede & Co. v. Technicolor, Inc.*, 684 A.2d 289, 301 (Del. 1996) (agreeing with the board that the market value of shares may reflect their true value); *Paramount Commc'ns, Inc. v. Time, Inc.*, 571 A.2d 1140, 1150 n.12 (Del. 1989) ("[I]t is not a breach of faith for directors to determine that the present stock market price of shares is not representative of true value or that there may indeed be several market values for any corporation's stock.").

363. See Leo E. Strine, Jr., *Human Freedom and Two Friedmen: Musings on the Implications of Globalization for the Effective Regulation of Corporate Behaviour*, 58 U. TORONTO L.J. 241, 262 (2008) ("As the twentieth century ended, institutional investors controlled well over half of the stock in American corporations, and the percentage is continuing to rise.").

insignificant when compared to the cost of having inadequate leadership. This reasoning is persuasive because it is largely correct, but only if we assume that the directors are capable of accurately evaluating the degree to which the leading candidate is likely to outperform the other finalists. Confident uncertainty teaches us that this assumption is deeply suspect.³⁶⁴

Shareholder votes on pay, then, whether binding or not, seem unlikely to provide sufficient protection against excessive pay caused by confident uncertainty. In a plan that includes a provision for unlimited incentive pay, such as the original Obama Plan, a shareholder vote is still advisable.³⁶⁵ Despite my pessimism, shareholders may occasionally balk at some pay packages. Even though the risk of rejection is small, even a small chance of public embarrassment may persuade boards to rethink their initial optimistic tendencies. But a far superior policy would be to impose limits by law, rather than relying on shareholder action to keep boards' optimism in check.³⁶⁶

E. The Dodd Provisions

Less than two weeks after the Obama administration announced its new restrictions, Senator Christopher Dodd inserted his own executive pay provisions into the stimulus package passed by Congress.³⁶⁷ The Dodd provisions applied retroactively to *all* companies receiving TARP funds.³⁶⁸ Many of the provisions contained curbs similar to those in the Obama Plan, such as those mandating a nonbinding “[s]ay on [p]ay” by shareholders.³⁶⁹ In addition, the Dodd provisions prevented affected companies from paying certain executives bonuses or incentive pay other than in restricted stock.³⁷⁰ Even restricted stock awards could not exceed one-third of the executives' total annual compensation.³⁷¹ The number of executives covered depends on the amount of TARP money the company has received, but for companies that receive five hundred million

364. *See supra* Part II.B (arguing that boards may be less able to distinguish among closely comparable candidates than they believe).

365. *See* Press Release, U.S. Dep't of the Treasury, *supra* note 2 (“Any pay to a senior executive of a company receiving exceptional assistance beyond \$500,000 *must be made in restricted stock* or other similar long-term incentive arrangements.” (emphasis in original)).

366. *See supra* Part III.B (recommending tailored caps on compensation).

367. Solomon & Maremont, *supra* note 29.

368. *See* American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 111(a)(3), 123 Stat. 115, 516–20 (2009) (defining “TARP recipient” as an entity that has received or will receive TARP funds).

369. Both plans also contain provisions restricting golden parachutes, permitting a “claw back” for certain past compensation, and requiring boards to adopt plans on luxury spending. *See id.* § 111 123 Stat. at 516–32; *see also supra* note 263 (discussing these provisions in the Obama Plan).

370. *Id.* § 111(b)(3)(D)(i), 123 Stat. at 518 (prohibiting covered entities from “paying or accruing any bonus, retention award or incentive compensation . . . except that any prohibition developed under this paragraph shall not apply to the payment of long-term restricted stock”).

371. *Id.* § 111(b)(3)(D)(i)(I), 123 Stat. at 518 (capping restricted stock awards at “an amount that is not greater than one-third of the total amount of annual compensation of the employee receiving the stock”).

dollars or more (the most stringent category), the restrictions covered at least the twenty highest paid executives.³⁷²

At first glance, the Dodd provision's restriction on bonuses and restricted stock seemed to plug an important hole in the Obama Plan. As I argued above, the Obama Plan's authorization of unlimited restricted-stock awards greatly weakened any positive impact from the fixed cap on compensation.³⁷³ But the Dodd provisions left open an even more important loophole; they did not restrict total compensation.³⁷⁴ Since the Obama Plan's fixed cap applied only to financial companies who received assistance going forward, many companies would be covered only by the Dodd provisions.³⁷⁵ These companies would face no limits on total compensation. For them, the Dodd provisions would only restrict the proportion of fixed pay to incentive-based pay; companies could still reward their executives as richly as they desired. For companies unaffected by the Obama Plan, the Dodd provisions do little to combat confident uncertainty or the resulting excessive compensation.

Even those entities subject to both the Obama Plan and the Dodd provisions could elude meaningful compensation restrictions. The Dodd provisions contained an important exception—they did not apply to bonuses mandated by contracts entered into before February 11, 2009.³⁷⁶ Any executives who entered into contracts before February 11, 2009, are still entitled to their agreed bonuses, regardless of magnitude. Permitting many executives to circumvent the new restrictions is not only counterproductive, it is also in tension with another term of the Dodd provisions. Elsewhere, the Treasury Secretary was required to review compensation paid to senior executives in the past to determine if these payments were consistent with the new restrictions.³⁷⁷ Section 111(f)(1) provides, in relevant part:

The Secretary shall review bonuses, retention awards, and other compensation paid to the senior executive officers . . . of each entity receiving TARP assistance before the date of enactment of [the stimulus plan of 2009] to determine whether any such payments were inconsistent with the purposes of this section or the TARP or were otherwise contrary to the public interest.³⁷⁸

372. *Id.* § 111(b)(3)(D)(ii)(I), 123 Stat. at 518 (“For any financial institution that received financial assistance provided under the TARP equal to \$500,000,000 or more, the prohibition shall apply to the senior executive officers and at least the 20 most highly-compensated employees, or such higher number as the Secretary may determine is in the public interest with respect to any TARP recipient.”); *see also id.* § 111(a)(1), 123 Stat. at 517 (defining “Senior Executive Officer” as, in relevant part, “an individual who is 1 of the top 5 most highly paid executives of a public company”). The Treasury Secretary is empowered to increase this number in the public interest. *See id.* § 111(a)(1), 123 Stat. at 517–18.

373. *See supra* Part III.B.

374. *See id.* § 111, 123 Stat. at 516–20.

375. *See supra* note 265.

376. *See* § 111(b)(3)(D)(iii), 123 Stat. at 518. (“The prohibition required under clause (i) shall not be construed to prohibit any bonus payment required to be paid pursuant to a written employment contract executed on or before February 11, 2009, as such valid employment contracts are determined by the Secretary or the designee of the Secretary.”).

377. *Id.* § 111(f), 115 Stat. at 520.

378. *Id.* § 111(f)(1), 115 Stat. at 520.

Section 111(f)(2) permitted the Treasury Secretary to negotiate for reimbursement of any payments found inconsistent with the other provisions of Section 111.³⁷⁹ This provision seemed to suggest that prior *executed payments* may have been inappropriate and should be returned. If so, why privilege mere *contracts* to provide payments in the future?

The Dodd provisions will largely fail to meet their apparent goals. Because they did not restrict total compensation, they are unlikely to moderate excessive compensation.³⁸⁰ To the extent they did impose meaningful curbs, they may induce executive flight to companies not covered by these restrictions.³⁸¹ Their scope was broader than the Obama Plan, but still far from the comprehensive coverage necessary to avoid talent flows to less regulated entities or industries.³⁸² Finally, the exception for preexisting contracts is likely to exempt many executives and seems in conflict with the regulatory philosophy of other provisions.

F. Treasury Regulations

On June 15, 2009, the Treasury Department issued its final regulations implementing TARP.³⁸³ The regulations largely drop the Obama Plan's cap on total compensation. What remains of the cap is only a safe harbor for salaries of \$500,000 or less, securing automatic approval for such compensation packages.³⁸⁴ Two other changes include an exception to the Dodd amendment's bonus limitations for commissions and the appointment of a special master to oversee executive pay of TARP recipients.³⁸⁵

Dropping the cap in its current form may have been advisable. Although I have argued an efficiently structured cap could help counter the effects of confident uncertainty, the harm caused by the Obama Plan cap's poor structure—a fixed cap

379. *Id.* § 111(f)(2), 115 Stat. at 520 (“If the Secretary makes a determination described in paragraph (1), the Secretary shall seek to negotiate with the TARP recipient and the subject employee for appropriate reimbursements to the Federal Government with respect to compensation or bonuses.”).

380. *See supra* notes 367–68 and accompanying text (arguing the absence of restrictions on base compensation will permit executives to avoid much of the restriction's impact).

381. There is some evidence such flight has already begun. *See* David Gillen, *The Brain Drain Defense*, N.Y. TIMES, Feb. 22, 2009, at WK1 (discussing Wall Street headhunter who is now hearing from ten times the usual number of bankers and traders looking to switch jobs).

382. *See supra* notes 292–96 and accompanying text (expressing concern that restricting only some companies' compensation may inadvertently drain the affected businesses of experienced and talented executives).

383. *See* Interim Final Rule on TARP Standards for Compensation and Corporate Governance, 74 Fed. Reg. 28394 (interim final rules June 15, 2009) (codified at 31 C.F.R. pt. 30).

384. *See* 31 C.F.R. §§ 30.11(a), 30.16(a)(3)(ii) (2009).

385. *See id.* § 30.1. There were many other changes, but these were the most significant. For example, the regulations expanded the rule banning golden parachutes to include changes of control, mandated clawbacks for an expanded pool of executives, required board compensation committees to explain how the compensation structure discouraged inadvisable risk-taking, and prohibited tax gross-ups for certain senior executives.

unaffected by company size or growth and severely limited in scope—is likely to far outweigh any benefits.³⁸⁶

The new exception to the bonus limits for commissions is unlikely to have serious policy implications. Even without such an exception, limiting bonuses to one-third of total compensation is unlikely to prove an important restriction in the absence of a cap on total compensation. Instead, the primary impact of the bonus limits will be to mandate the form bonus payments must take—restricted stock. As I argued above, restricted stock is a flawed method of aligning shareholders' and managers' interests.³⁸⁷ Permitting an exception to this rule for commissions is therefore unlikely to matter much, because even without the exception the rule is unlikely to achieve its goals.

The most opaque change in the Treasury regulations is the appointment of a new special master (Kenneth Feinberg) to oversee executive compensation in TARP recipients.³⁸⁸ The special master is tasked with ensuring firms that have received exceptional financial assistance pay their top executives in a way that incentivizes long-term performance and protects taxpayer interests.³⁸⁹ For firms under the special master's supervision,³⁹⁰ the scope of his review is quite broad: the five most senior executives, the next twenty most highly compensated executives, and, for the structure of compensation packages, the one hundred most highly paid employees not included in either of the former two groups.³⁹¹ The special master may disapprove any compensation package he finds to be excessive, inappropriate, or designed to encourage excessive risk taking.³⁹² Taken literally, this appears to be an incredibly broad power, one which might be used to impose de facto caps on compensation that the Obama administration originally wanted but eventually retracted. To assuage any concerns that the special master might act in an arbitrary or unpredictable way, the Treasury regulations add two limits on the special master's power. The first is a safe harbor for salaries less than \$500,000, so long as any additional compensation is paid in long-term restricted stock.³⁹³ The second is a list of "principles" the special master must follow. These include: (1) avoiding compensation for short-term increases in firm value that may not last; (2) permitting firms to operate competitively in the marketplace; (3) ensuring an appropriate allocation of compensation among short-term pay, long-term pay, and provisions for retirement; (4) providing metrics for both individual and firm performance; (5) establishing pay that is similar to that at comparable firms for analogous positions; and (6) assuring that pay reflects employees' current or expected contributions to the firm.³⁹⁴

386. *See supra* Part III.B.

387. *See supra* text accompanying note 347.

388. *See* 31 C.F.R. §§ 30.11, 30.16; Justin Fox, *The Pay Crackdown*, TIME, Aug. 10, 2009 at 40.

389. *See id.* § 30.16.

390. The seven firms include the American International Group, Bank of America, Citigroup, Chrysler, General Motors, GMAC and Chrysler Financial. *See* Louise Story, *Who Gets Paid What*, N.Y. TIMES, Oct. 22, 2009, at B1.

391. 31 C.F.R. § 30.16.

392. *Id.*

393. *See id.* §§ 30.11(a), 30.16(a)(3)(ii).

394. *See id.* § 30.16(b).

The employees who most interest us will not be able to avail themselves of the safe harbor, for the simple reason that they will demand pay far in excess of the cap. At least 2500 employees of large investment banks made over \$2.5 million each in 2008.³⁹⁵ These employees can turn only to the “principles” to predict what sort of pay packages the special master will approve. But as is immediately apparent, the principles provide no meaningful guidance as to either amount or structure of compensation.

Imagine, for example, a financial services firm wishes to pay \$400,000 in salary plus a guaranteed bonus of \$1.5 million. Suppose further that this reflects the typical compensation package similar firms pay comparable employees. Even if the guaranteed bonus does not count as a “salary,” the safe harbor is clearly unavailable since the bonus will be paid in cash, not restricted stock. The employer therefore must turn to the principles to predict whether the special master will permit this employment contract.

The first principle forbids compensation that rewards employees for short-term, temporary increases in firm value and requires that payments be made “over a time horizon that [reflects] the risk horizon.”³⁹⁶ This package most likely violates the first principle, since all of the pay is due immediately upon performance. Similarly, the package likely violates the fourth principle, which requires that compensation reflect metrics for individual and firm performance. The first and fourth principles substantially overlap because the first requires payment over time that reflects risk to better measure the employee’s contribution to the firm, and the fourth also requires payments that reflect the employee’s contribution. It would seem, then, that this package would fail both the first and fourth principles.

What about the second principle? Does this package enable the firm to perform in the marketplace? If the package enables the firm to secure the employee it wants, then it does; otherwise, it does not.³⁹⁷ This second principle essentially seems to argue for permitting employees to be paid whatever firms say they must to gain their services. The fifth principle seems to articulate much the same goal—it permits firms to pay what the market demands for talent.³⁹⁸ Again, we seem to have one principle here, not two, but both seem met by this package under our assumption that the package is typical for employers such as ours.

The third principle requires an appropriate allocation between long-term and short-term pay.³⁹⁹ This principle also overlaps with the first and fourth principles, since all three seem aimed at requiring firms to structure incentives to motivate long-term performance. Our package allocates everything to short-term pay, which would seem to fail the third principle.

The sixth principle asks about the employee’s expected contribution.⁴⁰⁰ Since the firm is willing to pay the amount of the package under review, it clearly has already determined that the employee’s expected contribution is worth the cost. On what basis

395. See Justin Fox, *Pay Them Less? Hell, Yes*, TIME, Mar. 2, 2009, at 30, 30 (saying the actual figure may be much higher).

396. See 31 C.F.R. § 30.16(b)(1)(i).

397. See *id.* § 30.16(b)(ii).

398. See *id.* § 30.16(b)(v).

399. See *id.* § 30.16(b)(iii).

400. See *id.* § 30.16(b)(vi).

would the special master, whose knowledge of the firm's business is inferior to the firm's managers, argue with the firm's determination? That similar employees are paid less at comparable firms? But then we are simply repeating principles two and five (and surely one principle would be enough for this point; we do not need three principles to say the same thing).

This example should be a simple, straightforward case. Yet the results of the special master's review under these six (two?) principles is far from clear. We have a compensation package which by assumption passes the second, fifth, and sixth principles, since it is the type and amount of compensation generally paid by similar firms to comparable employees. At the same time, the package would fail those principles if modified to allocate a significant portion of the total compensation to performance pay or long-term pay. But without such modifications, the package flunks the first, third, and fourth principles. What will the special master do with this package?

Without meaningful guidance or limits restricting his behavior, the special master's impact is unpredictable. He could impose meaningful reforms, rubber-stamp the firms' existing practices, or act in a random, arbitrary manner. The only clear product of the establishment of the special master is the introduction of a great deal of uncertainty among the affected firms.

The expressed goals of executive compensation reform were to lower the amount of compensation and to restructure compensation to reduce employees' incentives to take excessive risks.⁴⁰¹ The new Treasury regulations implementing the Obama Plan and the Recovery Act (including the Dodd Amendments) seem likely to fail at both goals. Without the Obama Plan's cap, the only remaining constraint on compensation is the threat of rejection by the special master. Given the amorphous nature of the special master's guiding principles, the likely impact of this constraint is murky. The special master could establish clear rules requiring a reduction in compensation, but as of this writing has failed to do so. The most powerful changes the regulations enact in the structure of compensation are the requirements that bonuses be limited as a portion of total compensation and be paid in restricted stock. Limiting the proportion of performance pay may reduce employees' incentives to take risks, but may commensurately reduce the alignment between employees' incentives and those of the firms' owners (now primarily the U.S. taxpayers). The requirement to pay bonuses in restricted stock is similarly misguided. As explained above, restricted stock is a relatively poor incentive alignment mechanism.⁴⁰² Better methods of incentivizing employees to act in shareholders' interests exist, such as my proposed tailored cap.

401. See Press Release, U.S. Dep't of the Treasury, *supra* note 2 ("These measures are designed to ensure that public funds are directed only toward the public interest in strengthening our economy by stabilizing our financial system and not toward inappropriate private gain. The measures announced today are designed to ensure that the compensation of top executives in the financial community is closely aligned not only with the interests of shareholders and financial institutions, but with the taxpayers providing assistance to those companies.").

402. See *supra* notes 327–47 and accompanying text.

CONCLUSION

The core source of excessive compensation is directors' unwarranted confidence in their ability to forecast officers' future performance.⁴⁰³ This explanation provides useful insights in evaluating the current federal efforts to reform executive compensation. In particular, confident uncertainty teaches us that some sort of compensation cap would be wise, but it should be tailored to individual corporate circumstances.⁴⁰⁴ The cap also should be applied as broadly as possible, not limited to financial companies receiving federal assistance going forward as the Obama Plan's cap is.⁴⁰⁵ Any incentive-pay component of compensation packages should similarly be capped, but without the loopholes supplied by the Dodd provisions and Treasury regulations.⁴⁰⁶ Finally, shareholder "[s]ay on [p]ay" requirements have some potential to rein in excessive compensation. To maximize their impact, the shareholder vote should be binding on the corporation, not advisory.⁴⁰⁷

403. *See supra* Part II.

404. *See supra* Part III.B.

405. *See* Press Release, U.S. Dep't of the Treasury, *supra* note 2 (guidelines apply to "financial institutions that are receiving government assistance to address our current financial crisis").

406. *See supra* Parts III.C, III.E.

407. *See supra* Part III.D.