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Managerial Entrenchment and Shareholder Wealth Revisited: Theory and Evidence from a Recessionary Financial Market

Jay B Kesten*

ABSTRACT

Does managerial entrenchment create or destroy shareholder value? This Article presents both theory and evidence that the answer to this question is not monolithic, but rather depends on factors that vary greatly with the macroeconomic climate, such as firm profitability, takeover frequency, and valuation of takeover premiums. The mainstream view, both of academics and market participants, is that entrenchment reduces accountability to shareholders and amplifies agency costs, thus decreasing shareholder wealth. Two influential studies (Bebchuk, Cohen & Ferrell (2009) and Gompers, Ishii & Metrick (2003)) present empirical evidence consistent with this conclusion, finding statistically significant negative correlations between entrenchment and stock returns during the historic bull market of the 1990s. However, there is no a priori reason to conclude that these effects will persist. Rather, a close examination of first principles suggests that the benefits attributable to the market for corporate control are substantially minimized during recessions.

Testing this hypothesis using data from the recent economic crisis, this Article finds that the previously identified, statistically significant correlations between high entrenchment and negative stock returns disappeared entirely during the recent financial crisis, even for the most and least entrenched companies. In fact, the opposite effect was observed: firms with above-average levels of entrenchment outperformed less entrenched firms during the sample period. A portfolio buying firms with above-average entrenchment while simultaneously shorting firms with below-average entrenchment would have generated statistically

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significant annualized abnormal returns of 5.2%. Moreover, companies that entrenched themselves the most in the year prior to the current crisis outperformed companies that either reduced, maintained, or slightly increased their level of entrenchment. While correlation is not causation, these findings are consistent with the theory that there are significant costs, not just benefits, to exposing managers to an unfettered market for corporate control.

I. INTRODUCTION

2006 was a remarkable year for corporate America. Public companies reported record earnings,¹ merger and acquisition activity reached unprecedented levels,² and stock markets soared to new highs.³ Simultaneously, a chill wind swept across Wall Street as the first cracks appeared in the firmament of the economy, leading to the deepest recession and greatest economic crisis since the Great Depression.

Another phenomenon emerged as well: the managers⁴ of U.S. public companies entrenched themselves—adopting governance structures that reduced their exposure to the threat of removal via a takeover—at an astounding rate. Between 1990 and 2005, managerial entrenchment levels had remained more or less stable.⁵ In 2006, however, average entrenchment spiked nearly 50% as measured by an index of the six most impactful entrenchment devices: poison pills, staggered boards, executive golden parachutes, supermajority voting requirements for the approval of mergers, and limitations on shareholders' ability to amend corporate bylaws and charters (collectively, the Entrenchment Index or "E-Index").⁶ In

^{1.} See, e.g., historical data for the S&P 500, http://www2.standardandpoors.com.

^{2.} See, e.g., Dennis K. Berman, Year-End Review of Markets & Finance 2006—Can M&A's 'Best of Times' Get Better?—Private Equity Fuels A Frenzy of Deals, WALL ST. J., Jan. 2, 2007, at R5. Indeed, both the absolute number of deals (11,750) and aggregate deal value (\$1.484 trillion) remain the highest to date. See FactSet MergerStat, M&A Activity: U.S. and U.S. Cross-Border Transactions, http://www.factset.com/data/data/factsetmergers (subscription required) (last visited Jan. 5, 2011).

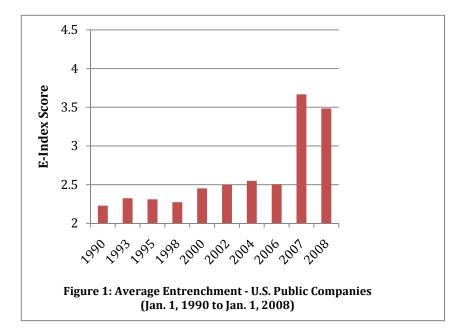
^{3.} Historical data for various indices can be found at http://finance.yahoo.com/indices.

^{4.} Unless otherwise noted, I employ "managers," "management," and related terms as shorthand for corporate fiduciaries, including directors, officers, and any other pertinent senior executives. I do not mean to suggest, however, that the roles or interests of directors on one hand, and executives on the other, are necessarily uniform or even aligned. *See* Stephen M. Bainbridge, *Director Primacy and Shareholder Disempowerment*, 119 HARV. L. REV. 1735, 1741 (2006) (arguing that the two groups should not be conflated).

^{5.} See Part IV.B.1, *infra*, for details of the entrenchment trends summarized here. Appendix B presents additional historical entrenchment data.

^{6.} See Lucian Bebchuk, Alma Cohen & Allen Ferrell, What Matters in Corporate Governance?, 22 REV. FIN. STUD. 783, 788–94, 813 (2009) [hereinafter BCF] (detailing the construction of the E-Index and finding that these six devices are highly correlated with negative stock returns during the 1990s). A working draft of this paper was circulated in 2004. See Lucian A. Bebchuk, Alma Cohen & Allen Farrell, What Matters in Corporate Governance?, (John M. Olin Center for Law, Economics, and Business, Harvard Law School, Discussion Paper No. 491, 2004), available at http://papers.ssrn.com/sol3/papers.cfm? abstract_id=593423.

all, more than three quarters of the firms sampled adopted at least one new entrenchment mechanism in the year prior to the economic crisis.⁷ Figure 1 illustrates this striking historical anomaly.



This sea-change in overall managerial entrenchment raises a question debated vigorously by academics, courts, and legislatures for more than a quarter century: does managerial entrenchment i.e., the adoption of internal corporate devices to shield management from the effects of the market for corporate control—create or destroy shareholder value?

The mainstream view, espoused by many academics and reflected in the behavior of market participants themselves, is that shareholders benefit substantially from the market for corporate control.⁸ Pursuant to the traditional law-and-economics model, any observable divergence from the optimal use of corporate resources is

^{7.} Part IV, infra, describes the sample and selection process.

^{8.} See infra Parts II.A & C. Indeed, to some extent, the very term "entrenchment," which dominates the literature, pre-supposes an answer to the underlying question. Viewed more neutrally, however, takeoever defenses do not necessarily constitute entrenchment, in the negative sense, where they are adopted with a view to maximizing shareholder value, and managers are fully cognizant of, and take seriously, their fiduciary obligations in that regard.

reflected in a public firm's share price.⁹ Market participants have strong incentives to identify such underperforming firms, acquire control, remedy the firm's managerial or operational deficiencies, and realize the resultant capital gain.¹⁰ Managers—operating in the shadow of a possible takeover—are thereby sensitized to market (i.e., shareholder) sentiment and incentivized to reduce agency costs and maximize shareholder value.¹¹ Further, in the event of an actual change of control, ineffective management is replaced and shareholders of the target company receive substantial takeover premiums when tendering their shares.¹²

Based on this theoretical framework, the market for corporate control is a powerful mechanism for holding management accountable to shareholder interests. Indeed, many legal scholars and economists argue that takeovers are the most important mechanism of corporate governance.¹³ Unsurprisingly, many commentators reason that entrenchment, by insulating managers from the disciplinary force of the market for corporate control and hindering actual changes of control in underperforming firms, reduces shareholder welfare.¹⁴

12. See infra notes 33, 35 and accompanying text.

13. See, e.g., JONATHAN R. MACEY, CORPORATE GOVERNANCE: PROMISES KEPT, PROMISES BROKEN 118 (2008) (asserting that "[t]he most important market-inspired component of the U.S. corporate governance infrastructure is the market for corporate control"); Andrei Shleifer & Robert W. Vishney, A Survey of Corporate Governance, 52 J. FIN. 737, 756 (1997) (noting that "[t]akeovers are widely interpreted as the critical corporate governance mechanism in the United States . . .").

14. See, e.g., MACEY, supra note 13, at 120 ("[T]he genius of the market for corporate control as a corporate governance device is that it improves the quality of the corporate performance at all publicly held firms whose shares are 'contestable.'"); Lucian Arye Bebchuk, Why Firms Adopt Antitakeover Arrangements, 152 U. PA. L. REV. 713, 720 (2003) (arguing that "[w]hen managers have less to fear from takeovers, they fail to reduce costs and have poorer operating performance, including lower profit margins, return on equity, and sales growth"); Frank H. Easterbrook & Daniel R. Fischel, The Proper Role of a Target's Management In Responding to a Tender Offer, 94 HARV. L. REV. 1161, 1174 (1981) [hereinafter Easterbrook & Fischel I] ("[A]ny strategy designed to prevent tender offers reduces welfare."); Frank. H. Easterbrook & Daniel R. Fischel, Auctions and Sunk Costs in Tender Offers, 35 STAN. L. REV. 1, 17 (1982) [hereinafter Easterbrook & Fischel II] ("The optimal level of regulation of tender offers ... is zero.").

^{9.} See, e.g., Henry G. Manne, Mergers and the Market for Corporate Control, 73 J. POL. ECON. 110, 112–13 (1965).

^{10.} *Id.* at 113 (asserting that the market for corporate control constituted "one of the most important 'get-rich-quick' opportunities" of the time).

^{11.} See id. at 112–13.

This conclusion is not, however, unanimous. Other commentators argue that substantial costs arise from an unfettered market for corporate control, such as short-termism and skewed risk preferences, and that these costs can be mitigated by insulating management from the threat of takeovers.¹⁵ While most modern scholarship acknowledges this possibility, proponents of the market for corporate control as an important mechanism of corporate governance nevertheless conclude that, on balance, entrenchment destroys shareholder value.¹⁶ This understanding is also reflected in the behavior of market participants, who generally react negatively to news of managerial entrenchment and positively to announcements that such devices will be dismantled.¹⁷ Indeed, corporations that adopt entrenchment mechanisms are typically labeled as having "poor" corporate governance, in contrast to firms that abstain from implementing such measures.¹⁸

Two recent, influential papers present empirical evidence consistent with this conventional model. In a seminal article, Gompers, Ishii and Metrick ("GIM") ranked nearly 1,500 U.S. public companies on an index of twenty-four governance provisions related to shareholder rights and managerial entrenchment (the

^{15.} See, e.g., Martin Lipton & Steven Rosenblum, A New System of Corporate Governance: The Quinquennial Election of Directors, 58 U. CHI. L. REV. 187, 205–14 (1991); Margaret M. Blair & Lynn A. Stout, A Team Production Theory of Corporate Law, 85 VA. L. REV. 247, 305 (1999); John C. Coffee, Jr., Regulating the Market for Corporate Control: A Critical Assessment of the Tender Offer's Role in Corporate Governance, 84 COLUM. L. REV. 1145 (1984).

^{16.} See, e.g., MACEY, supra note 13, at 118 ("Clearly political theory, not economic theory, is required to explain the regulatory burdens that impede the market for corporate control."); Bebchuk, supra note 14, at 720–21 ("Proponents of board veto have also argued that it might have beneficial effects ex ante . . . [H]owever, there is currently no empirical support for the view that these conjectured effects are sufficiently significant to outweigh the adverse ex ante effects of board veto."); Roberta Romano, A Guide to Takeovers: Theory, Evidence, and Regulation, 9 YALE J. ON REG. 119, 120–21 (1992) ("The empirical evidence is most consistent with value-maximizing, efficiency-based explanations of takeovers Yet the thrust of regulation is to thwart and burden takeovers, as if they were non-value-maximizing wealth transfers.").

^{17.} See notes 54-55, infra, and related text.

^{18.} Sanjai Bhagat, Brian Bolton & Roberta Romano, *The Promise and Peril of Corporate Governance Indices*, 108 COLUM. L. REV. 1803, 1811–12 (2008) ("Firms that adopt devices to impede control changes are . . . conventionally characterized as firms with poor corporate governance, because the managers of those firms are not subject to the disciplining force of hostile bids. Correlatively, the absence of such devices is identified as a feature of good corporate governance.").

Governance Index or "G-Index").¹⁹ Using data from 1990 to 1999, GIM found that firms with the strongest shareholders rights outperformed firms with governance arrangements most favorable to management.²⁰ Specifically, a portfolio which purchased the lowest decile (shareholder-friendly) of G-Index firms and simultaneously shorted the highest decile of G-Index firms would have generated statistically significant abnormal annualized returns of 8.5%.²¹

In a subsequent study, Bebchuk, Cohen and Ferrell ("BCF") demonstrated that six governance devices—the E-Index provisions listed above—drove the entirety of GIM's results; the other eighteen G-Index provisions had little residual explanatory power or statistical significance.²² Employing the E-Index factors alone, BCF reported a substantially more robust negative correlation between entrenchment and stock returns during the 1990s.²³ Specifically, BCF describe a monotonic relationship between entrenchment and stock returns: each increase in E-Index level would have generated progressively lower returns.²⁴

In light of these findings, the recent surge of entrenchment appears difficult to justify in terms of management's fiduciary obligations or the shareholder wealth maximization norm that animates those duties. Or, is it? To date, much of the debate concerning the market for corporate control takes for granted—sometimes explicitly, but more often as an implicit assumption—that the net shareholder wealth-effect of the market for corporate control is monolithic.²⁵ But, there is no *a priori* reason to assume that

^{19.} Paul A. Gompers, Joy L. Ishii & Andrew Metrick, Corporate Governance and Equity Prices, 118 Q. J. ECON. 107 passim (2003).

^{20.} Id. at 109.

^{21.} *Id.* at 109, 121–25. GIM did not, however, find any statistically significant returns associated with portfolios that included firms outside the top and bottom 10% on the G-Index. "Abnormal" returns, in this context, refer to the return on a given portfolio that differs from the expected return of that portfolio based on a particular asset-pricing model.

^{22.} BCF, supra note 6, at 822-23.

^{23.} *Id.* at 814–17. By reducing the noise in the G-Index, BCF reported statistically significant results even when moderately entrenched firms clustered around the middle of the distribution were included in the portfolios. *Id.*

^{24.} Id. at 813–14.

^{25.} As to those critical of entrenchment, see the articles cited at note 16, *supra*. For an opposing, but similarly monolithic view, see Martin Lipton, *Takeover Bids in the Target's Boardroom*, 35 BUS. LAW. 101, 105 (1979) ("[P]roscribing the ability of companies to defend against takeovers would adversely affect long-term planning and thereby jeopardize the economy, the policy considerations in favor of not jeopardizing the economy are so strong that not even a remote risk is acceptable."). One notable exception in the theoretical literature is

governance outcomes remain constant over time.²⁶ To the contrary, a close examination of first principles, as well as the empirical evidence to date, suggests that the net impact of managerial entrenchment depends on several exogenous factors that vary greatly with the macroeconomic climate.²⁷

In this Article, I present both theory and empirical evidence consistent with a more dynamic conception of the market for corporate control. Specifically, I argue that the benefits of the market for corporate control peak during times of strong economic growth, which are characterized, in the aggregate, by increased corporate profitability (along with associated potential for high agency cost) and markedly increased takeover frequency (along with associated takeover, as the magnitude of these variables decrease, as is typical during recessions,²⁸ so too do the benefits conferred by exposure to the market for corporate control.

A testable hypothesis emerges from this theoretical framework: the strong, negative correlation between entrenchment and stock returns observed by GIM and BCF between 1990 and 1999—a period of historic economic growth—should dissipate during stagnant or recessionary economic conditions, such as the recent economic crisis. To the extent that the balance between the costs and benefits of the market for corporate control is close, the directionality of the relationship might invert as the costs of shorttermism and skewed risk preferences overtake the benefits attributable to increased accountability. Put differently, firms with higher entrenchment might outperform firms with lesser entrenchment during recessions.

John C. Coffee, Jr., *Regulating the Market for Corporate Control: A Critical Assessment of the Tender Offer's Role in Corporate Governance*, 84 COLUM. L. REV. 1145 (1984). Professor Coffee persuasively argued that individual takeovers might be either value-increasing or value-decreasing, depending on firm-specific considerations. *Id.* at 1148–49. This Article extends that insight and presents the case that the benefits of the market for corporate control, in the aggregate, ebb and flow depending on macroeconomic factors.

^{26.} Empirical studies tend to be more cautious in this regard, often noting that there is no certainty that the reported results will persist in future periods. *See, e.g.*, BCF, *supra* note 6, at 786; Gompers et al., *supra* note 19, at 143–44.

^{27.} See discussion infra Part II.C.

^{28.} Notes 87–90, *infra*, and related text, set forth descriptive statistics from the recent economic crisis.

Extending BCF's E-Index methodology to the period from July 2007 to December 2008, I find that the results are consistent with the hypothesis set forth above. First, as predicted, the statistically significant correlation identified by GIM and BCF disappeared entirely, even for the most and least entrenched companies. Second, I find the opposite effect in more moderately entrenched companies-firms with above-average levels of entrenchment generally outperformed less entrenched firms during the sample period. For example, a portfolio buying all firms with below-average entrenchment and selling short all firms with above-average entrenchment would have generated statistically significant negative abnormal returns. The significance of this result is robust to excluding the financial companies most directly impacted by the collapse of the real estate, sub-prime mortgage, asset-backed security, and credit-default swap markets. Third, historical entrenchment does not fully explain this correlation. In fact, a portfolio of companies that entrenched themselves the most in the year prior to the sample period would have generated positive annualized abnormal returns of 2.8%. Ultimately, while correlation is not causation, these findings are consistent with a more dynamic theory of the market for corporate control.

The Article proceeds as follows. Part II briefly surveys the theoretical and empirical literature concerning the benefits and costs of the market for corporate control, and the relationship between entrenchment and stock returns. Part III develops a more dynamic theory of the market for corporate control, which takes seriously the prospect that its benefits (reduction of agency costs and generation of takeover premiums for target shareholders) are substantially minimized during economic downturns. Part IV details the empirical analysis of the correlation between entrenchment and stock returns during the recent financial crisis. Part V summarizes and discusses the main findings, focusing on plausible explanations for these results. Part VI presents some concluding remarks.

II. THE MARKET FOR CORPORATE CONTROL AND SHAREHOLDER VALUE: THEORY AND EVIDENCE TO DATE

The market for corporate control sits at the intersection of two central debates in modern corporate law: the proper allocation of authority between shareholders and managers in public companies on one hand, and the most efficient way to regulate the conduct of

corporate fiduciaries on the other.²⁹ As such, its regulation has attracted substantial academic, judicial, and legislative attention. The core question is simply stated: should shareholders have an unfettered right to receive and accept hostile tender offers, or is it desirable to insulate incumbent management (or allow them to insulate themselves) from this threat?

In considering this important policy question, scholars have proffered theoretical models illustrating both substantial benefits and potentially significant costs associated with the market for corporate control. Arising from this literature are two important empirical questions. Do the identified benefits outweigh any concomitant costs? And if so, does this result persist independently of exogenous factors such as changing macroeconomic conditions? While the former issue has been debated exhaustively, the latter concern has received no serious treatment, despite the fact that the empirical evidence to date contains hints that the net effects of the market for corporate control vary over time. This Part briefly describes the main theoretical models of the market for corporate control, and then surveys the empirical evidence bearing on the relationship between entrenchment and shareholder welfare.

A. Takeovers as Corporate Governance

Many scholars assert that a vigorous market for corporate control performs a critical role in disciplining, monitoring, and replacing underperforming management teams, which neither intra-corporate constituencies (such as shareholders and boards of directors), nor courts can replicate easily or cheaply.³⁰ Stemming from Henry

^{29.} Collectively, these two issues subsume the majority of what is regularly termed "corporate governance." *See*, *e.g.*, William W. Bratton, *Unentrapped*, 77 GEO. WASH. L. REV. 677, 680 (2009) ("Corporate law debates center on three overlapping topics: (1) the appropriate scope of regulation and the degree of reliance accorded state authority or, alternatively, private ordering, in organizing firms and solving problems; (2) the boundaries of the firm and the firm's responsibility to outsiders; and (3) the terms of the corporate agency relationship and the allocation of authority within the firm."). In making this statement, however, I offer no opinion on whether these issues should be the primary focus of modern corporate law. Similarly, for the purposes of this paper, I assume arguendo that the shareholder wealth maximization norm ought to guide corporate decision-making.

^{30.} See, e.g., MACEY, supra note 13, at 121; Easterbrook & Fischel I, supra note 14, at 1170–73; Manne, supra note 9, at 113. By way of example, many commentators argue that neither shareholders nor directors are particularly effective corporate monitors due to collective action problems on the part of the former, and incentive/capture concerns as to the latter. As to collective action problems, see, e.g., ROBERT C. CLARK, CORPORATE LAW 389–400 (1986)

Manne's seminal article, *Mergers and the Market for Corporate Control*, the standard law-and-economics model posits that control of a corporation is a valuable asset independent of either economies of scale or potential monopoly rents.³¹ Market participants thus

31. Manne, *supra* note 9, at 112; *see also* Edward B. Rock, *Saints and Sinners: How Does Delaware Corporate Law Work?* 44 UCLA L. REV. 1009, 1027 (1997) ("According to . . . the 'free market' view—tender offers were the great engine of managerial accountability and efficiency On this view, takeover entrepreneurs benefited shareholders and society as a whole by moving assets to their highest and best use, by disciplining bad managers, and paying premia to target shareholders."). As the contours and implications of this model have been treated exhaustively elsewhere, a brief summary suffices for the purposes of this Article. For a representative sample of the literature on takeovers as a key mechanism of corporate governance, see MACEY, *supra* note 13, at 118–22; Coffee, *supra* note 15, 1199–220; Lucian

⁽explaining rational apathy, collective action problems, and other related factors that drive shareholder passivity), and MACEY, supra note 13, at 131 (arguing that "[i]t would be highly irrational for individual investors to spend significant resources on corporate governance because the expected payoff any individual shareholder stands to gain from ensuring good management performance is so small in relation to the required investment"). For a discussion of board capture and other hurdles to effective corporate monitoring, see MACEY, supra note 13, at 53-68. Moreover, while legal recourse-such as the derivative suit-can be effective with respect to various forms of self-dealing, the vast majority of potential "agency cost" cases challenging strategic business decisions would be dismissed at the pleadings stage by virtue of the protections afforded by the business judgment rule. See generally Stephen M. Bainbridge, The Business Judgment Rule as Abstention Doctrine, 57 VAND. L. REV. 83 (2004); Einer R. Elhauge, Corporate Managers' Operational Discretion to Sacrifice Corporate Profits in the Public Interest, in Environmental Protection and the Social Responsibility of Firms: PERSPECTIVES FROM LAW, ECONOMICS, AND BUSINESS 29 (Bruce Hay et al. eds., 2005) (commenting that "under the business judgment rule, courts are extraordinarily willing to sustain decisions that apparently sacrifice profits, at least in the short run, on the ground that they may conceivably maximize profits, at least in the long run"). Claims for shirking and/or failure to monitor are only slightly more viable, having famously been termed by former Delaware Chancellor William Allen as "possibly the most difficult theory in corporation law upon which a plaintiff might hope to win a judgment." In re Caremark Int'l Inc. S'holder Deriv. Litig., 698 A.2d 959, 967 (Del. Ch. 1996); accord In re Citigroup Inc. Sh. Derivative Litig., 964 A.2d 106 (Del. Ch. 2009). For a detailed treatment of the development of the duty of oversight/failure to monitor claims, see Reinier Kraakman & Jay Kesten, The Story of Francis v. United Jersey Bank: When A Good Story Makes Bad Law, in CORPORATE LAW STORIES 163-93 (J. Mark Ramseyer ed., 2009). In any event, shareholder litigation is extraordinarily costly, and thus is only rarely in the best economic interests of either the shareholders in question or the corporation more generally. See, e.g., Elhauge, supra note 30, at 32-38 (arguing that shareholder litigation is a highly inefficient way of enforcing any profit maximization norm); Reinier Kraakman, Hyun Park, & Steven Shavell, When Are Shareholder Suits in Shareholder Interests?, 82 GEO. L.J. 1733, 1736 (1994) (asserting that there are only limited circumstances where derivative suits increase corporate value); MACEY, supra note 13, at 130-54 (arguing that "[i]t is highly unlikely that shareholders would voluntarily agree to opt into an expensive private litigation system such as the one that exists in the United States that allows plaintiffs' class action attorneys to extort billions of dollars from companies, and requires shareholders acquiesce in lawsuits in which massive amounts of money are transferred from one group of investors to another or, worse still, from investors to lawyers.").

possess strong incentives to monitor and identify underperforming firms (as reflected by the company's stock price), acquire control, remedy the firm's managerial or operational deficiencies, and realize the resultant capital gain.³² The greater a firm's market valuation diverges from its potential value under some other business strategy or resource allocation—especially relative to similarly situated companies in its industry or sector—the greater are the incentives for potential acquirors, thereby increasing the likelihood of a takeover.³³

Incumbent management is typically replaced in the event of a successful hostile takeover, leading to lost compensation (and other non-monetary benefits of their positions), personal disruption, and potentially reputational harm.³⁴ As such, rationally-acting managers will seek to avoid having their firms taken over, especially in circumstances that suggest they failed at their respective tasks.³⁵ Given that hostile bids are typically forthcoming only if and when a firm is underpriced by the market relative to some alternative strategy or allocation of resources, incumbent managers have strong

34. See Romano, *supra* note 16, at 122–23 (surveying evidence showing that turnover is markedly higher in firms that undergo hostile takeovers, as compared to friendly mergers and companies in which there is no change of control). Courts, too, have long recognized this circumstance as one of the classic corporate conflicts of interest. As the Delaware Supreme Court famously opined, whenever a board takes steps to thwart an unsolicited takeover bid, there is an "omnipresent spectre that a board may be acting primarily in its own interests [i.e., to preserve incumbent managements' jobs], rather than those of the corporation and its shareholders." Unocal Corp. v. Mesa Petroleum Co., 493 A.2d 946, 954 (Del. 1985); *accord* STEPHEN M. BAINBRIDGE, THE NEW CORPORATE GOVERNANCE IN THEORY AND PRACTICE 134 (2008) (remarking that unsolicited takeover bids are "[t]he paradigm[atic] conflict of interest").

35. See Michael C. Jensen & Richard S. Ruback, *The Market for Corporate Control: The Scientific Evidence*, 11 J. FIN. ECON. 5, 6–7 (1983). Jensen and Ruback theorize this point rigorously, positing an alternative, but related, description of the market for corporate control in which managers themselves compete for the right to manage corporate resources. *Id.* Judge Richard Posner simply observes that "[n]o one likes to be fired, whether he is just a director or also an officer." Dynamics Corp. of Am. v. CTS Corp., 794 F.2d 250, 256 (7th Cir. 1986), *rev'd on other grounds*, 481 U.S. 69 (1987).

Arye Bebchuk, *The Case Against Board Veto in Corporate Takeovers*, 69 U. CHI. L. REV. 973, 991–94 (2002); Easterbrook & Fischel I and II, *supra* note 14, *passim*; Romano, *supra* note 16, at 129–33.

^{32.} Manne, *supra* note 9, at 113 (asserting that the market for corporate control constituted "one of the most important 'get-rich-quick' opportunities" of the time).

^{33.} The so-called "Wall Street Rule"—which posits that dissatisfied shareholders typically sell their shares rather than expend resources to change a corporation's operations or governance—can amplify this effect. See Robert B. Thompson, Shareholders as Grown-Ups: Voting Selling, and Limits on the Board's Power to "Just Say No", 67 U. CIN. L. REV. 999, 1002 (1999) (describing the "Wall Street Rule").

incentives to operate firms to their full potential, and thereby maximize shareholder value.

Based on this theoretical framework, the market for corporate control creates shareholder value both directly and indirectly. First, in the event of an actual change of control, shareholders of target companies receive substantial acquisition premiums when tendering their shares.³⁶ Second, and perhaps more importantly for the purposes of corporate governance, the market for corporate control deters agency costs systemically, even in the absence of an actual takeover bid, by holding managers accountable to market (i.e., shareholder) sentiment.³⁷ Pursuant to this model, any regulation of the takeover market—including intra-corporate managerial entrenchment—interferes with these benefits.³⁸

37. Some commentators argue that there are additional social benefits, in that the market for corporate control identifies and removes underperforming managers. *See*, *e.g.*, *Easterbrook & Fischel I, <i>supra* note 14, at 1169 (emphasizing the monitoring function of the takeover market). There is, however, no guarantee that removing certain managers actually improves corporate performance, or that the replacements are necessarily better managers than those removed. *See* Coffee, *supra* note 15, at 1159 (arguing that "the simple view that takeovers mean that good managements replace bad oversimplifies the more complex reality that corporate cultures are not easily changed, and abrupt efforts to do so may result more in demoralization than increased efficiency").

38. See, e.g., the authorities cited supra notes 14, 16. This conclusion has even received limited endorsement by the U.S. Supreme Court. See Edgar v. MITE Corp., 457 U.S. 624, 643 (1982) ("[T]he effects of . . . block[ing] a tender offer are substantial. Shareholders are deprived of the opportunity to sell their shares at a premium. The reallocation of economic resources to their highest valued use . . . is hindered. The incentive the tender offer mechanism provides incumbent managers to perform well so that stock prices remain high is reduced."). It is also noteworthy that until recently, the conventional wisdom among both academics and market participants was that once a target was put "in play" by a hostile offer, it would generally be sold either to the initial bidder or to a white knight notwithstanding any takeover defenses in place. See Lucian Arye Bebchuk, John C. Coates IV & Guhan Subramanian, The Powerful Antitakeover Force of Staggered Boards: Theory, Evidence, and Policy, 54 STAN. L. REV. 887, 901–02 & nn.50, 54 (2002). However, Bebchuk, Coates & Subramanian demonstrate that certain takeover defenses substantially increase the chance that a target will remain independent in the face of a hostile bid. Id. at 929–31 (finding that effective staggered boards nearly double the likelihood of remaining independent in both the short-run (9 months) and

^{36.} Several meta-studies posit differing estimates for average premiums. For example, Professor Macey reports that such premiums often amount to 50% of the target firm's pre-bid share price. See MACEY, supra note 13, at 119 (citing Theodore Baums and Kenneth E. Scott, Taking Shareholder Protection Seriously? Corporate Governance in the U.S. and Germany, 17 J. APPLIED CORP. FIN. 44, 59 (2005); Gregg A. Jarrell et al., The Market for Corporate Control: The Empirical Evidence Since 1980, 2 J. ECON. PERSP. 49, 52 (1988)). In an earlier study, Jensen and Ruback suggest a more modest average premium of approximately 30%. Jensen & Ruback, supra note 35, at 4. Based on recent ThomsonOne data spanning 1990 to 2009, the average takeover premium for target companies trading on the NASDAQ and New York Stock Exchange was approximately 39%. Appendix E presents historical takeover premium data.

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B. The Dark Side of the Market for Corporate Control?

Opponents of hostile takeovers paint a starkly different picture of the market for corporate control. Gone is the benign, low cost/high efficacy monitoring and disciplining regime described above; in its place, a Schumpeterian whirlwind of creative destruction fueled by speculators, arbitrageurs and other corporate raiders.³⁹ In his now famous manifesto, *Takeover Bids in the Target's Boardroom*, Martin Lipton asserted that the stakes were no less than the very fabric of the American economy:

It would not be unfair to pose the policy issue as: Whether the longterm interests of the nation's corporate system and economy should be jeopardized in order to benefit speculators interested not in the vitality and continued existence of the business enterprise in which they have bought shares, but only in a quick profit on the sale of those shares? The overall health of the economy should not in the slightest degree be made subservient to the interests of certain shareholders in realizing a profit on a takeover.⁴⁰

Rhetoric aside, scholars have identified three main categories of plausible costs and diseconomies associated with an unfettered market for corporate control. The two most important for our purposes are behavioral. First, recalling that the market for corporate

40. Lipton, *supra* note 25, at 104. Lipton's critique also encompasses the possibility that heightened takeover activity creates substantial negative externalities beyond the interaction between shareholders and managers. Specifically, the disruption inherent in a vigorous takeover market could affect debt-holders, employees, customers, suppliers, and potentially even communities in which target firms are located. While I do not address this potential cost directly herein, it is certainly worth noting.

long-run (30 months) after an unsolicited bid). Moreover, at least as a matter of theory, the mere existence of any entrenchment mechanisms may deter some certain bids from being made at all. See Easterbrook & Fischel I, supra note 14, at 1177–80; Easterbrook & Fischel II, supra note 14, at 1177–80; Easterbrook & Fischel II, supra note 14, passim. Easterbrook & Fischel argue that the existence of takeover defenses is more likely to lead to an auction, in which subsequent players free-ride on the due diligence performed by the initial bidder. Insofar as these sunk costs (and related opportunity costs) are high, there is less incentive for outsiders to expend resources monitoring firms for underperformance in the first instance, and thus fewer initial bids will be made. Id.

^{39.} See generally Ronald J. Gilson & Reinier Kraakman, Takeovers in the Boardroom: Burke versus Schumpeter, 60 BUS. LAW. 1419 (2005); Rock, supra note 31, at 1027 ("According to one view—the 'managerialist' view—hostile tender offers were bad for companies, communities, and society as a whole. From this perspective, the 1980s were a dangerous time, with sharks circling proud and once-proud companies, looking for any sign of weakness, and then moving in for the kill. In the process, enormous debt was incurred, companies were destroyed, assets sold off, the work of generations of expansion lost, and the nation mortgaged its future.").

control monitors performance via stock price, managers who are fully exposed to the threat of takeovers may favor short-term projects or other endeavors geared primarily towards buoying the value of their firm's shares, notwithstanding any long-term detriment to their company's operations.⁴¹ While the prevalence and magnitude of "short-termism" has long been contested among academics,⁴² there is now a growing body of evidence suggesting that it is an economically meaningful trend amongst public companies. For example, in a recent study, Graham, Harvey and Rajgopal identified two ubiquitous themes among public company management: (1) managers see an express trade-off between long-term value maximizing investment decisions and the short-term need to "deliver earnings"; and (2) managers believe that the market often overreacts to earnings missed.⁴³ Based on interviews with more than 400 public company CFOs, Graham et al. report that 78% of the surveyed executives admitted to sacrificing long-term firm value in order to "smooth" earnings or hit analysts' targets for a particular quarter.⁴⁴ It is reasonable to infer that these pressures described by Graham et al. may be amplified in firms where managers are exposed to the market for corporate control.

A related concern is that, regardless of time horizon, the threat of takeovers may skew managers' risk preferences. Specifically, managers operating in the shadow of the market for corporate control may rationally prefer higher-risk ventures or business strategies.⁴⁵ This concern is particularly acute if competitors have

44. Id. at 4–5.

^{41.} See, e.g., Lipton & Rosenblum, supra note 15, at 205-14.

^{42.} Compare, e.g., Jeremy C. Stein, Takeover Threats and Managerial Myopia, 96 J. POLIT. ECON. 61 (1988) (formally modeling the potential that the threat of takeovers leads to managerial short-termism), with Lucian A. Bebchuk & Lars Stole, Do Short-Term Managerial Objectives Lead to Under- or Over-Investment in Long-Term Projects?, 48 J. FIN. 719 (1993) (arguing that the threat of unsolicited takeovers actually leads to excessive investment in long-term projects).

^{43.} John R. Graham et al., *The Economic Implications of Corporate Financial Reporting*, 40 J. ACCT. & ECON. 3, 5 (2005) (noting that "many executives feel that they are choosing the lesser evil by sacrificing long-term value to avoid short-term turmoil").

^{45.} See Coffee, supra note 15, at 1243 (arguing that "the greater danger involves a likely shift in managerial attitudes towards greater tolerance for risk"). Absent entrenchment devices, companies may also restructure their *operations* in potentially undesirably ways so as to make themselves less attractive as a takeover target. For example, managers may deplete their cash reserves, increase indebtedness, or acquire other companies for reasons wholly unrelated to long-term wealth creation. *Id.* at 1243–44.

elected to do the same because the market may punish firms that pursue conservative growth strategy if the dangers inherent in alternative high-risk strategies do not manifest themselves in the short term or are sufficiently opaque to outsiders. The empirical evidence on this point is circumstantial, but suggestive. For instance, in a multi-national study of bank performance during the economic crisis, Beltratti and Stulz found that banks with the most "proshareholder" boards performed substantially worse than those with much less shareholder-friendly governance structures (including, but not limited to, entrenchment devices).⁴⁶ They conclude that the most likely explanation is that "shareholder-friendly" banks "were pushed by their boards to maximize shareholder wealth before the crisis [and] took risks that were understood to create shareholder wealth, but were costly ex post because of the outcomes that were not expected when the risks were taken."⁴⁷

Second, if managers are perpetually subjected to the threat of losing their jobs after any dip in the firm's share price—whether warranted by a meaningful change in the company's fundamental performance or not—they may invest fewer personal resources to develop the firm-specific skills necessary to maximize operational efficiency.⁴⁸ This "demoralization cost" is not limited to executives, given the high rate of layoffs and uncertainty among lower-level

^{46.} Andrea Beltratti & René M. Stulz, Why Did Some Banks Perform Better During the Credit Crisis? A Cross-Country Study of the Impact of Governance and Regulation 3, 14–15 (European Corp. Governance Inst. Working Paper Series in Finance, Paper No. 254/2009, 2009), available at http://ssrn.com/abstract_id=1433502.

^{47.} Id. at 3. Beltratti and Stulz also acknowledge that the market can incorrectly assess risk, and may reward companies that generate high short-term gains, regardless of the potential long-term consequences associated with the strategy. Id. at 2, 21. Others have argued that incentives exist to take such risks even if potentially costly long-term outcomes were expected. See, e.g., DINO FALASCHETTI, DEMOCRATIC GOVERNANCE AND ECONOMIC PERFORMANCE: HOW ACCOUNTABILITY CAN GO TOO FAR IN POLITICS, LAW, AND BUSINESS 87 (2009) (discussing the dangers of "tail risk" strategies in which financial managers, insurance companies or other firms "expose themselves to small chances of incurring large losses" and thus "appear to outperform the market . . . [o]ver short time-horizons."); Sheila C. Bair, Statement of Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation on the Causes and Current State of the Financial Crisis before the Financial Crisis Inquiry Commission (Jan. 14. 2010), http://www.fdic.gov/news/news/speeches/chairman/spjan1410.html ("Corporate sector practices also had the effect of distorting of decision-making away from long-term profitability and stability and toward short-term gains with insufficient regard for risk.").

^{48.} See Blair & Stout, supra note 15, at 304–09; FALASCHETTI, supra note 47, at 101–13.

employees in the aftermath of a change of control.⁴⁹ In sum, the threat of takeovers may impact the labor market, potentially making it more difficult (or at least more expensive) for companies with greater takeover exposure to hire and retain high-quality management and employees.⁵⁰

The third category is primarily epistemic. Due to informational asymmetries (coupled with various collective action problems endemic to dispersed shareholdings), target shareholders will rarely, if ever, be able to assess whether a tender offer is adequately priced.⁵¹ Consequently, in the absence of a managerial stop-gap, public company shareholders can—and will—tender into undervalued bids, and thus facilitate inefficient transfers of control. Here, the benefit of entrenchment is that managers—who are not plagued by the epistemic and collective action problems faced by shareholders—can deploy (or rely on pre-existing) defensive measures in an effort to extract higher acquisition premiums through a negotiated transaction, or to block final bids deemed inadequate.⁵²

Each of these phenomena, which are by no means mutually exclusive, suggests that even if the market for corporate control confers substantial benefits on shareholders, there are attendant, non-trivial costs as well. Accordingly, the most accurate theoretical model of the market for corporate control must allow for an aggregate of both value-increasing and value-decreasing effects.⁵³

^{49.} See Coffee, *supra* note 15, at 1238–42 (summarizing the literature concerning takeovers, assimilation difficulties, and employee motivation).

^{50.} *Id.* at 1234–38 (arguing that "the cost of attaining perfect competition in the market for corporate control is substantial impairment of the efficiency of the executive labor market").

^{51.} See, e.g., Lynn A. Stout, *Takeovers in the Ivory Tower: How Academics Are Learning Martin Lipton May Be Right*, 60 BUS. LAW. 1435, 1452–53 (2005) (arguing that "director authority to fend off a hostile takeover bid can protect shareholders from their own ignorance in cases where an irrational market either undervalues the target's stock, or overvalues the bidder's"); Lipton, *supra* note 25, at 106–12.

^{52.} In a series of classic takeover cases, the Delaware Supreme Court adopted this line of reasoning to approve various defensive strategies adopted by boards of target companies. *See*, *e.g.*, Paramount Commc'ns, Inc. v. Time, Inc., 571 A.2d 1140, 1153–54 (Del. 1989) (holding that the "inadequate value" of an all cash offer for all shares is a "legally cognizable threat," to which target boards can respond by deploying defensive measures); Unitrin, Inc. v. Am. Gen. Corp., 651 A.2d 1361, 1383–85 (Del. 1995) (same, noting that shareholders might tender into an undervalued offer "in ignorance or based on a mistaken belief" concerning the value of their shares).

^{53.} This conclusion is presented more rigorously in Part III, *infra*. Perhaps implicitly recognizing this dynamic, the current state of the law is largely permissive. While there are

The question that necessarily arises is this: which side of the ledger outweighs the other? The following sub-section surveys the empirical literature addressing this issue.

C. The Empirical Evidence Thus Far

Researchers have recently employed various empirical methodologies to assess the relationship between governance arrangements—including entrenchment devices—and shareholder wealth. With few exceptions, these studies find a negative correlation between entrenchment and several measures of firm performance, including stock price. However, as illustrated below, little attention has been paid to whether these effects change in differing macroeconomic environments.

One group of studies examines the impact of specific events on stock price. Numerous researchers find that shareholders enjoy substantial, positive abnormal returns when their companies actually receive a takeover bid.⁵⁴ Other studies find a negative correlation between the adoption of various entrenchment mechanisms and firm value and/or stock returns. Faleye reports that announcing the adoption of a staggered board generates negative abnormal returns.⁵⁵ Similarly, Guo et al. find that announcing the dismantling of a staggered board generates positive abnormal returns.⁵⁶ Collectively, these studies suggest that market participants generally view entrenchment as a value-decreasing phenomenon.

certain widely-applicable regulatory constraints on the market for corporate control, courts have largely left the adoption of takeover defenses to the discretion of individual firms. For a more detailed discussion of this judicial balance, see BAINBRIDGE, *supra* note 34, at 136–40.

^{54.} MACEY, *supra* note 13, at 118 ("[S]tudies have found uniformly and unanimously that regardless of the time period or acquisitive form, there are statistically significant positive abnormal returns on the investments of shareholders in companies that receive takeover bids."); *see also* ROBERTA ROMANO, FOUNDATIONS OF CORPORATE LAW 230 (1993) (reviewing empirical studies). What is less clear is whether any particular acquisition actually creates value in the aggregate, or simply redistributes wealth amongst participants. For example, the stock prices of public acquirors tend to *decline* on average, at least in the short term. *See, e.g.*, RICHARD A. BREALEY ET AL., PRINCIPLES OF CORPORATE FINANCE, 9TH ED. 905–06 (2008); Tim Loughran & Anand M. Vijh, *Do Long-Term Shareholders Benefit from Corporate Acquisitions*, 52 J. FIN. 1765 (1997); P. Raghavendra Rau & Theo Vermaelen, *Glamour, Value and the Post-Acquisition Performance of Acquiring Firms*, 49 J. FIN. ECON. 223 (1998).

^{55.} Olubunmi Faleye, *Classified Boards, Firm Value, and Managerial Entrenchment*, 83 J. FIN. ECON. 501 (2007).

^{56.} Re-Jin Guo, Timothy A. Kruse & Tom Nohel, Undoing the Powerful Anti-Takeover Force of Staggered Boards, 14 J. CORP. FIN. 274 (2008).

Another group of studies examines the impact of certain governance arrangements on various measures of firm performance over time. Some analyze individual governance provisions,⁵⁷ while others attempt to create a more comprehensive framework via indexing several related devices. Gompers, Ishii and Metrick ("GIM") created an index of twenty-four corporate governance provisions (the "G-Index") that allocate decision-making authority between shareholders and management (including many provisions related to the firm's exposure to the market for corporate control).⁵⁸ After ranking approximately 1,500 companies on this scale and controlling for various factors, they found that firms with strong managerial protections (high G-Index scores) were less profitable and had lower sales growth than similarly situated firms with greater shareholder rights (low G-Index scores).⁵⁹ GIM also found that during the 1990s, the share price of firms in the lowest decile of the G-Index (what they termed the "democracy portfolio") outperformed firms in the highest decile of the G-Index (the "dictatorship portfolio"). In fact, an investment strategy based on buying the "democracy portfolio" while simultaneously shorting the "dictatorship portfolio" would have generated statistically significant abnormal returns of 8.5% per year during the 1990s.⁶⁰ However, for firms nearer to the median of the G-Index, they found no statistically significant abnormal returns.⁶¹

Refining GIM's methodology, Bebchuk, Cohen and Ferrell ("BCF") demonstrated that six governance provisions (the "E-Index")—each directly related to the market for corporate control—account almost entirely for GIM's findings, and that the other

^{57.} For example, both Cremers & Nair and Bebchuk & Cohen find that several governance provisions are negatively correlated with firm value (as approximated by Tobin's Q). See Lucian A. Bebchuk & Alma Cohen, *The Costs of Entrenched Boards*, 78 J. FIN. ECON. 409 (2005); K. J. Martijn Cremers & Vinay B. Nair, *Governance Mechanisms and Equity Prices*, 60 J. FIN. 2859 (2005).

^{58.} GIM identify five categories of provisions: tactics for delaying hostile bidders, director/officer protections, other takeover defenses, limits on shareholder voting rights, and state laws. *See* Gompers et al., *supra* note 19, at 110–13.

^{59.} *Id.* at 109–10, 119–29.

^{60.} *Id.* at 109, 121–25. GIM also found that high G-Index had larger capital expenditures and were significantly more likely to acquire other firms, but enjoyed lower firm value, profits, and sales growth. GIM posit that one interpretation of their results is that "high-G firms engaged in an unexpectedly large amount of inefficient investment during the 1990s." *Id.* at 137; *see also id.* at 133–137.

^{61.} Id. at 121–25.

eighteen G-Index factors were statistically insignificant.⁶² BCF's findings are particularly relevant to this Article's methodology and analysis. First, BCF found that the average monthly returns during the 1990s for portfolios of companies with the same E-Index scores dropped monotonically as entrenchment increased.⁶³ Second, employing a regression analysis, they found highly significant, positive abnormal returns for portfolios taking a long position in less entrenched firms, and simultaneously shorting more entrenched firms.⁶⁴ Unlike the GIM study, BCF found that these abnormal returns were statistically significant even when firms clustered around the middle of the distribution (i.e., firms with only moderate levels of entrenchment) were included in the portfolios.⁶⁵

Collectively, these findings are striking: variations in corporate governance structures—and managerial entrenchment in particular are highly correlated, both statistically and economically, with negative shareholder returns throughout the 1990s. There are, however, several hints in the existing literature that this correlation may not persist during periods with materially different macroeconomic conditions. GIM's findings are confined to the 1990s, a period of sustained and historic growth in the stock market. Subsequent work using a similar methodology and extending the sample size through 2001 (i.e., including the market downturn associated with the tech bubble collapse), however, found no such statistically significant correlation.⁶⁶ Additionally, Beltratti and Stulz

^{62.} BCF, *supra* note 6, at 822–23.

^{63.} Id. at 813–14.

^{64.} *Id.* at 814–17. BCF report that this correlation holds not only for the GIM sample period (1990–1999) but also the period spanning 1990–2003. *Id.* at 819–20.

^{65.} Id. at 819–20.

^{66.} See Cremers & Nair, supra note 57. There are, however, divergent opinions on how to interpret the Cremers & Nair results. Compare BCF, supra note 6, at 819 with Bhagat et al., supra note 18, at 1830–32. While BCF extended their sample to include data from 1990 to 2003, two aspects of their expanded findings are noteworthy. First, their sample includes not only the bear market of 2000–2001, but also the period of recovery immediately thereafter. Second, comparing their results for 1990–1999 with their results for 1990–2003, there is a decrease in abnormal returns for 12 of their 20 portfolios, suggesting a reduction in the abnormal returns attributable to the period from 2000-2003. See BCF, supra note 6, at 816, 820. A recent working paper by Bebchuk, Cohen and Wang lends further support to this intuition, reporting that neither the G-Index nor the E-Index is associated with abnormal returns during the period from 2000-2008, or in any four-year sub-period throughout that sample. Lucian A. Bebchuk, Alma Cohen & Charles C.Y. Wang, Learning and the Disappearing Association Between Governance and Returns (John M. Olin Center for Law,

report that banks with the most shareholder-friendly corporate governance structures fared the worst during the recent economic crisis,⁶⁷ but that the banks which performed worst during the recent recession had also generated the highest returns in the period immediately prior.⁶⁸

While these evidentiary fragments suggest that macroeconomic climate might play a meaningful role in the relationship between entrenchment and shareholder value, there has been no serious theoretical consideration of this possibility.⁶⁹ The following sections present both theory and evidence that the net effects of the market for corporate control are indeed variable, and depend on factors closely linked to prevailing economic conditions.

III. THE INHERENT VARIABILITY OF THE MARKET FOR CORPORATE CONTROL

Why might the net wealth-effect of the market for corporate control change over time? One answer lies in the operation of the market for corporate control itself, and the mechanism by which it confers benefits on shareholders. As described in Part II, *supra*, there are likely both benefits (e.g., reduced agency costs, takeover premiums, and replacement of inefficient managers) and costs (e.g., short-termism, skewed risk preferences, "demoralization costs," and the possibility of inefficient transfers of control) associated with exposure to the market for corporate control. One might approximate—albeit simplistically—the aggregate impact of the takeover market as follows:

$$NSW_{mcc} = \{P_{RAC} + P_{prem} + \ldots + N_{s-t} + N_{ineff} \ldots \}$$

Economics, and Business, Harvard Law School, Discussion Paper No. 667, 2010), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1589731.

^{67.} Beltratti & Stulz, *supra* note 46, at 3.

^{68.} Id. at 2.

^{69.} In fact, while the GIM and BCF studies have attracted substantial attention, the main thrust of most critics has been to question causality. See, e.g., John E. Core, Wayne R. Guay & Tjomme O. Rusticus, Does Weak Governance Cause Weak Stock Returns? An Examination of Firm Operating Performance and Investors' Expectations, 61 J. FIN. 655 (2006); Kenneth Lehn, Sukesh Patro, & Mengxin Zhao, Governance Indices and Valuation: Which Causes Which?, 13 J. CORP. FIN. 907 (2007). This important issue is addressed further in Part V, infra.

where the net shareholder wealth effect attributable to the market for corporate control (NSW_{mcc}) is the sum of the reduced agency costs (P_{RAC}) , takeover premiums received (P_{prem}) , etc., plus the sum of the effects of short-termism and other disruption in the boardroom (N_{r}) , losses attributable to inefficient acquisitions (N_{ineff}) , etc. In this model, P-elements create shareholder value, while N-elements generate countervailing negative effects.

However, just as there is no way to know, *a priori*, whether NSW_{mcc} is positive or negative, there is similarly no reason to believe that NSW_{mcc} remains constant. In fact, a close examination of first principles suggests that the values of several of these elements might vary substantially depending on factors, such as the firm profitability and the relative volume/valuation of takeovers, which themselves vary depending on the economic climate. This section develops a more comprehensive, dynamic theory of the market for corporate control by considering how its net effects depend on these underlying macroeconomic factors.

A. The Effects of Decreased Profitability

As illustrated in Part II, *supra*, the takeover threat creates shareholder value by deterring managerial inefficiency and reducing agency costs. In order to understand how the magnitude of valuecreation might change over time, it is necessary to clarify what exactly is being deterred. Widely-held public companies, which are characterized by the separation of ownership and control, exemplify an agency relationship.⁷⁰ Shareholders in these companies are almost uniformly passive investors who delegate authority over virtually every corporate decision to the board of directors, which in turn delegates much of the day-to-day management to the corporation's officers and other senior executives.⁷¹ Notwithstanding the myriad

^{70.} ADOLF A. BERLE, JR. & GARDINER C. MEANS, THE MODERN CORPORATION AND PRIVATE PROPERTY 66 (1932). Some commentators challenge the view that shareholders are in any meaningful way the "owners" of a corporation. *See, e.g.*, Stephen M. Bainbridge, *Director Primacy in Corporate Takeovers: Preliminary Reflections*, 55 STAN. L. REV. 791, 800 n.52 (2002) (arguing "[s]hareholders do not own the corporation" because "ownership is not a meaningful concept" in the nexus-of-contracts model of the corporation). These structural/philosophical concerns do not, however, negate the existence of agency costs or the mechanisms through which they can be minimized by the market for corporate control.

^{71.} Indeed, this corporate structure is codified by statute as the default rule. See, e.g., Del. Gen. Corp. L. § 141(a) ("The business and affairs of every corporation organized under this chapter shall be managed by or under the direction of a board of directors, except as may be

benefits associated with this structure, costs inevitably arise where decision-making authority is delegated from principals (i.e., shareholders) to agents (i.e., managers).⁷² While these "agency costs" take a variety of forms, the category with which we are principally concerned here arises where the agents' interests, and thus their use of corporate resources, diverge from those of their principals.⁷³

Shareholders' primary—if not exclusive—interest is to maximize their returns.⁷⁴ In a idealized world, managers, as fiduciaries, would never act in furtherance of their own interests to the detriment of their principals. However, in reality, managers can and do take actions which run contrary to the shareholder wealth maximization norm, from outright theft or fraud at one extreme, to shirking or inattention at the other. Between these two poles lies a vast universe of possible business decisions in which managers' preferences differ from those of shareholders.⁷⁵ Because many of the most extreme behaviors that lead to agency costs (such as theft, fraud, and selfdealing) are heavily regulated by statutory, fiduciary, and even criminal regimes, one might reasonably expect that the additional

74. This statement is admittedly an oversimplification. Even as to purely financial matters, shareholders' interests are not entirely uniform. For example, shareholders can differ greatly as to risk profile, investment horizon and/or tax circumstances. As a general matter, though, it is fair to say that virtually all investors would prefer that the value of their shares increases rather than decreases.

75. For example, managers may prefer more or less risky endeavors, differing distribution schemes (dividend vs. share buyback), capital structures (debt vs. equity), or growth strategies (organic vs. acquisition). In making any or all of these decisions, managers may be tempted to pursue a course of conduct that inures to their benefit, even if outcomes are not optimal for shareholders.

otherwise provided in this chapter or in its certificate of incorporation") (emphasis added).

^{72.} For a classic treatment of agency costs in the corporate context, see Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305 (1976).

^{73.} Jensen & Meckling term this set of costs the "residual loss." *Id.* at 308. They identify other agency costs as: (1) monitoring costs borne by the principal, and (2) bonding costs borne by the agent. *Id.* In theory, the existence of, and exposure to, a vibrant market for corporate control might also minimize these monitoring and bonding costs, e.g., insofar as the threat of takeovers reduces the need for direct shareholder oversight. In practice, however, the magnitude of this effect is rather uncertain for two reasons. First, the market for corporate control is blind to managerial conduct that does not manifest in a reduced share price, such as fraud or other acts that artificially inflate a firm's stock price. *See* MACEY, *supra* note 13, at 119. Thus, exposure to the market for corporate control does not remove entirely the need for monitoring and/or bonding. Second, given the strong theoretical basis for rational shareholder apathy, see note 29, *supra*, especially for diversified investors, it is unclear how much monitoring cost is actually borne by the average public firm shareholder.

deterrence provided by the market for corporate control with respect to these issues is marginal.⁷⁶ The takeover market is thus most effective at constraining behavior such as shirking, inattention, or inefficient allocation of resources.

The latter is of particular note because it has long been theorized that free cash flow constitutes one of the major sources of agency costs within a firm.⁷⁷ With respect to the market for corporate control as a mechanism of corporate governance, it is useful to expand this conception to include profitability more generally. As companies generate profits in excess of their need to fund current, positive net-present-value projects (or service debt, etc.), managers are faced with a decision as to how the excess cash should be deployed. On one hand, it can be used to create shareholder value in the form of dividends, share repurchases, or investments in new wealth-creating projects. On the other, it might be diverted to create private benefits for managers via increased compensation, organizational inefficiency, "pet" investments near or below the cost of capital, or various other uses that fail to maximize shareholder value. For example, if senior executives perceive that they can command higher compensation by increasing the size of the firm under management, they may employ corporate resources to pursue costly empire-building acquisition strategies that fail to generate meaningful shareholder value.⁷⁸ Viewed less cynically, agency costs

^{76.} Moreover, the traditional theory rests upon a series of assumptions that poor performance is hard to hide in reasonably efficient capital markets. As illustrated vividly by Enron and Worldcom, though, many of the more egregious forms of misconduct involve artificially *inflating* a company's value/stock price. The market for corporate control cannot detect this type of problem *ex ante*, and after the machinations are uncovered, it is often too late. *See*, *e.g.*, MACEY, *supra* note 13, at 119.

^{77.} See, e.g., Michael C. Jensen, Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers, 76 AM. ECON. REV. 323 passim (1986); Gompers et al., supra note 19, at 133.

^{78.} Some commentators argue that this very dynamic explains the wave of conglomerate mergers during the 1970s and 1980s, notwithstanding the questionable fiscal merit (and ultimate failure) of most of these diversification ventures. *See, e.g.*, Henry Hansmann & Reinier Kraakman, *The End of History for Corporate Law*, 89 GEO. L. J. 439, 444 (2001) (asserting that "[t]he collapse of the conglomerate movement in the 1970s and 1980s. . . largely destroyed the normative appeal of the managerialist model. It is now the conventional wisdom that, when managers are given great discretion over corporate investment policies, they tend to serve disproportionately their own interests, however well-intentioned [they] may be"). Given that shareholders can diversify their own holdings much more easily and cheaply than can corporations, it is unclear whether these decisions are truly intended to benefit shareholders, or whether the primary impetus for increasing revenue via diversified acquisitions is instead closely tied to executive compensation packages. *Cf.* BREALEY ET AL., *supra* note 54, at 888–89 (citing diversification as a "dubious reason[] for mergers").

may arise even where corporate strategy is shaped by non-pecuniary motives. For instance, managers' decisions may be influenced by what they *like* (such as projects involving exploration, research and development, or acquisitions) even if those investments do not optimize corporate resources.⁷⁹

Pursuant to the classic model, the takeover threat serves to minimize these agency costs by incentivizing managers to refrain from diverting corporate assets, pay closer attention to corporate affairs, and scrutinize proposed projects carefully to determine whether they maximize shareholder value.⁸⁰ By insulating managers from this disciplinary effect, entrenchment increases the likelihood that managers will misuse a firm's excess cash flow.⁸¹

As firm profitability decreases, however, managers are faced with fewer opportunities to divert value from shareholders. Moreover, as profits dwindle or the firm incurs losses, managers who would otherwise choose to co-opt private benefits during profitable periods might hesitate to do so for fear of jeopardizing the company's operational viability.⁸² Put differently, as profitability declines within a firm, there is generally less potential agency cost for the takeover market to deter. Consider two firms, A and B, both of which generate \$250 million in profits, above what is needed to fund current expenses, during year X. A and B are otherwise identical, except that A has adopted no entrenchment devices, whereas B employs several. Traditional theory holds that B's managers will divert a greater proportion of this profitability to their own private benefit. All else being equal, the variance in firm value between A

^{79.} See generally, Jensen & Ruback, supra note 35 (describing the prevalence of valuenegative projects in the oil industry in the early 1980s). Indeed, the touchstone of Delaware takeover jurisprudence— Unocal v. Mesa Petroleum— arose out of exactly this sort of strategic dispute between incumbent management and a hostile acquirer. 493 A.2d 946, passim (Del. 1985); accord Hansmann & Kraakman, supra note 78, at 444 (arguing that "[w]hile managerial firms may be in some ways more efficiently responsive to nonshareholder interests . . . the price paid in inefficiency of operations and excessive investment in low-value projects is now considered too great").

^{80.} See MACEY, supra note 13, at 118; Easterbrook & Fischel I, supra note 14, at 1168-74.

^{81.} This conclusion is bolstered by GIM's findings and their proposition that high G-Index firms "engaged in an unexpectedly large amount of inefficient investment." *See* Gompers et al., *supra* note 19, at 136.

^{82.} It is also possible that as a firm's profits decrease, so does the prevalence of shirking among its fiduciaries, who might become more attentive for fear of being fired, bankruptcy, lawsuits, or the like.

and B could be as great as the \$250 million plus the return on any portion invested in positive net present value projects. It follows, then, that if each firm generated only \$2 million in profits, the potential divergence in firm value would be greatly reduced in most circumstances. Thus, assuming reasonably efficient markets, the stock price variance between these firms should similarly be reduced. In terms relevant to the discussion of entrenchment, the aggregate value of P_{RAG} decreases as profitability decreases.

B. The Effects of Decreased M&A Volume and Valuation

The weight of empirical evidence demonstrates that shareholders of target companies reap significant—and immediate—capital gains from tendering into actual takeover bids.⁸³ It follows that when: (1) M&A activity decreases and/or (2) valuation of target companies is less ambitious (i.e., lower premiums are paid), the benefits attributable to P_{prem} also decrease.⁸⁴ Ultimately, this relationship is controlled by the relative volume of M&A activity multiplied by the average premium received by target shareholders.

It is less clear what impact, if any, decreased takeover activity has on the costs attributable to the market for corporate control. With respect to N_{ineff} , as M&A activity decreases overall, it is likely that the number of inefficient takeovers (and thus N_{ineff}) decreases as well. However, the magnitude of this effect depends on whether takeovers during downturns are more or less likely to be inefficient—from the perspective of target shareholders—than those consummated during boom periods. Furthermore, potentially offsetting this effect is the fact that high G-Index (and presumably high E-Index) firms are more likely to acquire companies.⁸⁵ If, as seems likely, these acquisitions are also more likely to be value-negative than those pursued by less entrenched firms,⁸⁶ then this inefficiency—from the

^{83.} See supra notes 36, 54 and accompanying text.

^{84.} It is also arguable—though highly speculative—that a substantial decrease in M&A volume relative to prior periods would reduce the perceived likelihood of the takeover threats, and thus reduce the effectiveness of the market for corporate control in mitigating agency costs. If so, one would expect the magnitude of deterrence to be most strongly reduced in low entrenchment companies (more highly entrenched companies already having insulated themselves to a greater or lesser extent from that threat), further minimizing the variations in stock valuation between companies of varying levels of entrenchment.

^{85.} See Gompers et al., supra note 19, at 133-37.

^{86.} See, e.g., Jensen, supra note 77, at 328 (arguing that "managers of firms with unused borrowing power and large free cash flows are more likely to undertake low-benefit or

perspective of the acquiror's shareholders—may also contribute meaningfully to the negative abnormal returns generated by entrenched companies during boom periods. The cumulative impact of these two factors (premiums to less entrenched companies and negative-value acquisitions by highly entrenched companies), is materially diminished as firm profitability decreases generally and fewer firms—including highly entrenched firms—are able to finance acquisitions.⁸⁷

Finally, the effects of decreased M&A activity on short-termism and managerial risk preferences (i.e., $N_{\rm eff}$) are similarly unclear. It is possible that a substantial decrease in takeover volume relative to prior periods would reduce the perceived likelihood of the takeover threat, and thus mitigate the pressures leading to over-investment in the short-term. This outcome seems unlikely, however, for at least three reasons. First, the *in terrorem* effect of takeovers might be so great that changes in the aggregate number of acquisitions have very little impact on managers' risk preferences and investment horizons. Indeed, even during periods of surging M&A activity, the probability of being the subject of a takeover bid for any given company is quite low. This very concern might explain the explosion in entrenchment levels experienced during 2006, as M&A activity (and especially private equity transactions) reached a frenzied peak. Second, due to the volatility of the takeover market-and the economy in general-managers may be wary of trying to "time" the M&A cycle for fear of a takeover in the event of an unexpected recovery, even if deal flow has slowed significantly during a given span. Finally, the effects of short-termism are predominantly lagged, and thus any related costs manifesting during the sample period are likely attributable to operational decisions made in prior periods.

even value-destroying mergers"); Gompers et al., *supra* note 19, at 136 (finding that high G-Index firms "engaged in an unexpectedly large amount of inefficient investment" including acquisitions).

^{87.} For example, Peter Galuszka reported that more than 1300 transactions were abandoned, primarily due to the lack of available credit, falling earnings and market volatility. Peter Galuszka, *For M&A Activity, 2008 Was a Bust Year*, BNET (Dec. 23, 2008), http://www.bnet.com/blog/ceo/for-m-a-activity-2008-was-a-bust-year/1587 (commenting that the M&A outlook for 2009 was questionable, given that "[n]ot many firms have a lot of cash").

C. Recessionary Markets: A Hypothesis

Based on the foregoing framework, the benefits of the market for corporate control, and particularly P_{RAC} and P_{prem} , are greatest when: (1) firm profitability—and thus the associated potential agency cost—is high; and (2) the aggregate returns to target shareholders attributable to changes of control {M&A volume * average premium}—and consequently the associated premiums to shareholders of low entrenchment firms and negative abnormal returns to those of more entrenched firms—are high. Conversely, as the magnitude of (1) and/or (2) decrease, as is typical in recessions, there is a concomitant reduction in the P-element values.

The recent economic crisis was characterized by substantial decreases in both of these factors. As to profitability, companies' reported earnings dropped dramatically during the recent economic crisis. Indeed, the S&P 500 reported its first ever quarter of negative earnings per share (-\$23.25) during 2008.⁸⁸

Moreover, takeover activity during 2007 and 2008 was markedly subdued as compared with the pace of M&A activity during the period examined by BCF and GIM.⁸⁹ In 2007, 496 deals were consummated involving U.S. public company targets traded on the NASDAQ and NYSE; in 2008, there were 457.90 By contrast an average of nearly 800 such deals were consummated annually 1990 1999. between and On average, premiums for NASDAQ/NYSE deals concluded during 2007 and 2008 (35.9% of share price on the day prior to announcement of the deal) were slightly lower than both the weighted mean premium observed from 1990–1999 (41.2%), and over the entire span from 1990–2009

⁵⁰⁰ 88. S&P Index Earnings Data, STANDARD & POORS. http://www.standardandpoors.com/ home/en/us (follow "S&P 500" hyperlink under "Categories" and "Featured Indices" then expand "Download Index Data" and follow "Index Earnings" hyperlink) (free subscription required) (last visited Jan. 5, 2011); see also Kate Gibson, S&P Heads to First Quarter Ever of Negative Earnings, MarketWatch (Feb. 13, 2009), http://www.marketwatch.com/story/sp-heads-first-quarterly-earnings-loss (noting six straight quarters of negative earnings growth).

^{89.} The merger and acquisition volume and valuation data described in this Part is derived from the ThomsonONE M&A Deal Analysis database and detailed in Appendix E.

^{90.} Overall public target M&A activity is comparable: 721 deals in 2007, 655 in 2008, as compared with an average of nearly 1200 annually from 1990 to 1999. *See infra* Appendix E.

(39.3%).⁹¹ Collectively, these data points suggest that the net returns to target shareholders attributable to M&A activity were, in relative terms, substantially diminished during the recent economic crisis.

Based on the foregoing, and assuming that the decrease in Pelement costs is not completely offset by a similar decrease in Nelement costs,⁹² the model set forth herein predicts that that NSW_{mee} is highest during periods of strong economic growth (such as the 1990s), but diminished during recessions. If the balance between Pand N-elements is close, one might even anticipate negative NSW_{mee} as the N-element costs overtake the P-element benefits in certain firms. This theoretical framework provides a testable hypothesis: the correlation between entrenchment and negative stock returns during the 1990s should dissipate (and might even reverse directionality) during recessionary periods. Part IV turns to empirical evidence from the recent economic crisis.

IV. ENTRENCHMENT AND STOCK RETURNS—JULY 2007 TO DECEMBER 2008: DATA, METHODOLOGY, AND RESULTS

To test the hypothesis set forth in Part III, this study adapts and extends the GIM/BCF methodology to determine the correlation between entrenchment and stock returns from July 2007 to December 2008.⁹³ First, equal-weight portfolios were created by grouping together all firms with the same E-Index score.⁹⁴ Then, three series of regressions were performed using these portfolios: (1) zero-investment portfolios were created by simultaneously shorting a high entrenchment grouping while going long on a less entrenched grouping (e.g., going long E0-1 while shorting E-6); (2) to control for certain industry-effects, the same regressions were run on industry-adjusted portfolios excluding the financial, real estate, and

^{91.} See infra Appendix E. While it is notoriously difficult to assess takeover premiums accurately (note, e.g., the anomalous average premium during 1994), the figures employed herein are in line with those reported by other commentators. See, e.g., supra note 36.

^{92.} The validity of this assumption, and in particular, the relative magnitude of each of these costs and benefits, certainly merits further research.

^{93.} This sample period tracks the time-frames used in other studies examining corporate performance during the recent economic crisis. *See, e.g.*, Beltratti & Stulz, *supra* note 46, at 6. The end of the sample period is also dictated in part by data availability.

^{94.} For the purposes of statistical analysis, E-0 and E-1 are grouped together due to the exceptionally small number of E-0 observations during the sample period (6 in 2007, 4 in 2008). BCF employed a similar grouping methodology with respect to the E-5 and E-6 firms in their study. See BCF, supra note 6, at 799.

insurance firms; and (3) regressions were run on standalone portfolios (e.g., E-4 by itself) to determine which of the E-Index cohorts account for the observed abnormal returns. Finally, given the surge in average entrenchment during the year prior to the beginning of the sample period, equal-weight portfolios were created by grouping together firms with similar changes in entrenchment during 2006 (Δ -E). Regressions were run on these portfolios to assess the correlation between stock returns and Δ -E.

A. Data Sources and the E-Index

Like BCF, this study employs a broad sample of U.S. public companies, whose corporate governance structures are detailed in the Corporate Takeover Defenses publication issued by the Investor Responsibility Research Center ("IRRC," now part of RiskMetrics, which was recently acquired by MSCI, Inc.). The coverage universe consists of the "Super S&P 1,500" (which comprises the S&P 500, the S&P MidCap 400, and the S&P SmallCap 600), as well as various other firms selected on the basis of market capitalization and high institutional ownership levels.95 While there is some variation between volumes as to companies covered, each volume provides data for between 1,400 and 2,000 firms accounting for more than 90% of the total U.S stock market capitalization.⁹⁶ Following BCF, firms with dual class share structures and real estate investment trusts (i.e., firms with SIC Code 6798) were excluded, as both of these categories of companies have unique governance structures and entrenchment mechanisms.97 The remaining sample for the test period consists of 1,368 companies.

Company financial information, including SIC codes, stock return data, and market capitalization information, was obtained from the Center for Research in Security Prices monthly data files and the Standard & Poor data collection.

^{95.} See, e.g., Investor Responsibility Research Center, Corporate Takeover Defenses xi (2006).

^{96.} See BCF, supra note 6, at 796; Bebchuk, Cohen & Wang, supra note 66, at 7. IRRC volumes were published in 1990, 1993, 1995, 1998, 2000, 2002, and 2006. More recent data is available via the Wharton Research Data Services, available at http://wrds.wharton.upenn.edu/. Each volume contains data current as of December 31 of the prior year.

^{97.} BCF, supra note 6, at 797.

To calculate abnormal returns, the three Fama-French benchmark factors (*MKTRF*, *HML*, *SMB*) were employed along with a momentum factor (*MOM*).⁹⁸ Each of these monthly datapoints was obtained from Professor French's data library.⁹⁹ Following both GIM and BCF, it was assumed that firms' governance provisions—as reported in a particular IRRC/Riskmetrics volume—remained in place throughout the period covered by that volume.¹⁰⁰ However, portfolio composition was adjusted as of January 2008 to reflect any changes in E-Index scores between the 2007 and 2008 data.

E-Index data was obtained from Professor Bebchuk's data library.¹⁰¹ Δ -E was derived by comparing E-Index data for companies covered in both the 2006 and 2007 IRRC/Riskmetrics volumes. This subset of the sample includes 1,088 companies.

The E-Index tracks the level of structural entrenchment in a given firm.¹⁰² Each company is given an ordinal score (from 0 to 6) based on the presence or absence of six corporate governance structures: (1) a staggered board; (2) limits on shareholder bylaw amendment; (3) supermajority voting requirements for merger approval; (4) supermajority voting requirements for charter amendments; (5) poison pills; and (6) golden parachutes. The first four provisions are constitutional limitations on shareholder voting power. Staggered boards divide directors into several (typically three) classes, only one of which comes up for election in any given year. Consequently, shareholders cannot oust a majority of the incumbent management in a single vote, but must conduct—and win—two

^{98.} See Eugene F. Fama & Kenneth R. French, Common Risk Factors in the Returns on Stocks and Bonds, 33 J. FIN. ECON. 3 (1993) for a description of the three Fama-French benchmarks, and Kenneth R. French, Details for Momentum Factor (Mom), DARTMOUTH.EDU, http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/Data_Library/det_mom_factor.html (last visited Jan. 5, 2011) as to the momentum factor employed herein. For additional detail on the latter, see generally Mark M. Carhart, On Persistence In Mutual Fund Performance, 52 J. FIN. 57 passim (1997) (describing momentum effects).

^{99.} Kenneth R. French, *Data Library*, DARTMOUTH.EDU, http://mba.tuck. dartmouth.edu/pages/faculty/ken.french/data_library.html (last visited Jan. 5, 2011).

^{100.} While this assumption is admittedly artificial, BCF report that using alternative "filling" methodologies do not alter their results. *See* BCF, *supra* note 6, at 796.

^{101.} The E-Index data collections employed herein were obtained from Professor Lucian Bebchuk's Data Library, in February 2009 (for 2007 vintage data) and again in January 2010 (for 2008 vintage data). Lucian Arye Bebchuck, E-Index Data Collection, HARVARD.EDU, http://www.law.harvard.edu/faculty/bebchuk/data.shtml (last visited Jan. 5, 2011).

^{102.} See BCF, supra note 6, at 784-85, 788.

elections in sequential years. The three direct limits on shareholder voting (as to bylaws, charter amendments and merger approval) each enhance a target's defenses by impeding shareholders' ability to alter a firm's existing defensive arrangements and/or approve a proposed change-of-control transaction. For example, to the extent that insiders (or shareholders friendly to management) control a meaningful, albeit not controlling, block of shares, they could potentially veto any such transaction.¹⁰³

The latter two provisions—poison pills and golden parachutes represent a target's "takeover readiness."¹⁰⁴ Poison pills preclude, in practice, the acquisition of any significant (usually 5, 10 or 15%) block of shares on the open market, and thus create an exceptionally strong deterrent to both tender offers and attempted proxy contests to obtain control.¹⁰⁵ Golden parachutes are executive compensation agreements that provide substantial pecuniary benefits in the event that executives are fired and/or demoted as a result of change-ofcontrol transactions, thus potentially marginalizing the deterrent effect of the takeover market.¹⁰⁶

Collectively, the E-Index provisions proxy for managerial exposure to the market for corporate control. Low scores represent lesser, and high scores greater, insulation from its effects. As demonstrated by BCF, these six provisions fully drive GIM's earlier findings concerning firm value and stock returns, with the remaining eighteen G-Index provisions providing little, if any, residual explanatory power.107

^{103.} For examples of this phenomenon, see Unitrin, Inc. v. Am. Gen. Corp., 651 A.2d 1361, 1380-84 (Del. 1995), and Chesapeake Corp. v. Shore 771 A.2d 293, 315-18 (Del. Ch. 2000). Early studies also demonstrate the importance of voting rights to shareholders. See, e.g., Frank H. Easterbrook & Daniel R. Fischel, Voting in Corporate Law, 26 J. L. & ECON. 395, 407 (1983) (noting that classes of stock with stronger voting rights trade at a premium of two to four percent relative to other classes); accord Blasius Indus., Inc. v. Atlas Corp., 564 A.2d 651, 659 (Del. Ch. 1988) ("The shareholder franchise is the ideological underpinning upon which the legitimacy of directorial power rests.").

^{104.} See BCF, supra note 6, at 790.

^{105.} Id. at 792.

^{106.} For an in-depth discussion of each of these provisions, see *id.* at 790–94.

^{107.} Id. at 823-24. For a detailed description of how and why these six factors were selected, see id. at 788-95.

B. The E-Index and Stock Returns: July 2007 to December 2008

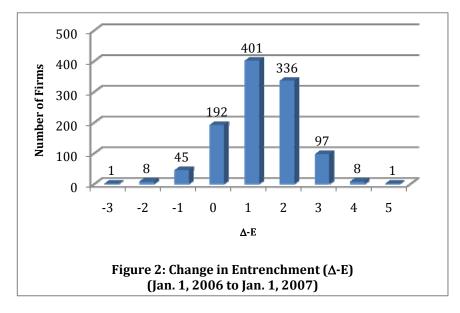
1. Summary statistics—entrenchment

Entrenchment increased at an unprecedented level throughout 2006. While there had been only a slight upward trend in entrenchment levels between 1990 and 2005, average entrenchment increased drastically—from 2.5 to 3.7—by the end of 2006, and declined only slightly (to 3.5) through 2007.¹⁰⁸

BCF reported that as of 2002, entrenchment was more or less evenly distributed between firms with an E-Index of 3 or more, and firms with an E-Index of below 3. Based on 2007 and 2008 vintage data, this distribution has changed drastically, with more than 75% of firms at an E-Index of 3 or more throughout the sample period.¹⁰⁹ Comparing 2006 and 2007 data, only 54 of 1,088 firms (less than 5%) reduced their E-Index level, 192 firms (17.6%) maintained their level of entrenchment, and 843 (77.4%) further entrenched themselves. Figure 2 illustrates the change in entrenchment (Δ -E) between 2006 and 2007.

^{108.} While anecdotal evidence suggests that at least some of this surge in entrenchment is attributable to the contemporaneous flurry of takeover activity during 2005 and 2006, a rigorous inquiry into this question is beyond the scope of this Article, and certainly warrants further investigation. It is also worth noting that RiskMetrics made several changes to its data collection methodology when it acquired IRRC in 2007, including dropping some provisions from coverage and altering the definitions of certain others. All of the E-Index provisions remain in the coverage set, though the definition of golden parachutes was changed. Appendix A compares the IRRC (1990–2006) and Riskmetrics (2007 to date) definitions for each of E-Index provisions. This change in methodology does not, however, seem to explain the steep rise in entrenchment, as the proportion of firms with golden parachutes declined between the two pertinent cohorts—nearly 78% of the 2006 coverage universe firms satisfied the golden parachute criteria as compared with only 52% in 2007.

^{109.} Historic entrenchment data, derived from the E-Index data-set, is set forth in Appendix B.



As a basic robustness check—and consistent with BCF's findings—there was no meaningful correlation between E-Index score and several potentially confounding variables, such as inclusion in the S&P 500 and market capitalization.¹¹⁰ There was a negligible correlation (Pearson's r = -0.066) between the average entrenchment of firms included in the S&P 500 at the beginning of the sample period and those that were not. Likewise, there was no noteworthy correlation (Pearson's r = -0.133) between E-Index score and firm size.¹¹¹

2. E-Index and stock returns: the baseline model

Following GIM and BCF, abnormal returns were calculated by regressing the excess returns of the long/short portfolios described above for month t (*Diff*_t) on the three Fama-French zero-investment benchmark factors, along with a momentum factor:

^{110.} Another plausible variable is incorporation in Delaware. *But see* Guhan Subramanian, *The Disappearing Delaware Effect*, 20 J. L. ECON. & ORG. 32 (2004) (finding that while firms incorporated in Delaware were worth 2–3% more than firms incorporated elsewhere between 1991–1996, that correlation has subsequently disappeared).

^{111.} Though, as BCF report, the largest firms are, on average, somewhat less entrenched than any other category. BCF, *supra* note 6, at 799. Here, average entrenchment for the 30 largest firms (market capitalization > \$75b) at the beginning of the sample period was approximately 2.7.

$Diff_t = \alpha + b_1 * MKTRF_t + b2 * HML_t + b3 * SMB_t + b4 * Mom_t + e_t$

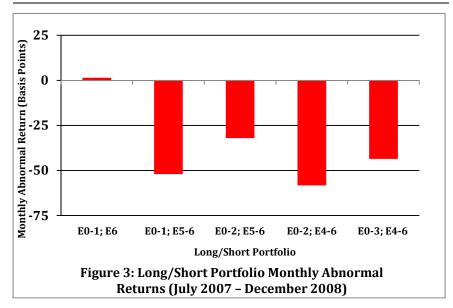
where $MKTRF_t$ is the month *t* value-weighted market return minus the risk-free rate, HML_t and SMB_t are zero-investment benchmark factors representing book-to-market (high minus low) and size (small minus big) stock return effects for month *t* respectively, and Mom_t proxies for trailing year momentum effects for time *t*. In this regression, the variable α represents the abnormal monthly return of the long-short portfolio.¹¹²

The results of these regressions starkly contrast with GIM and BCF's findings from earlier periods. First, the statistically significant, negative correlation between entrenchment and stock price disappeared entirely during the sample period. In fact, the most extreme portfolio (going long E0-1 and shorting E-6), which generated the largest abnormal returns for both GIM and BCF, generated no abnormal returns at all during the sample period (1 basis point monthly). Second, whereas BCF found that inclusion of firms towards the middle of the E-Index distribution generated monotonically declining, but positive, abnormal returns during the 1990s, I find that similarly constructed portfolios would have generated modest *negative* returns during the sample period. Two of the four portfolios (E0-2/E4-6 and E0-3/E4-6) underperformed the benchmark factors at a 5% significance level.¹¹³ Figure 3 illustrates these results.

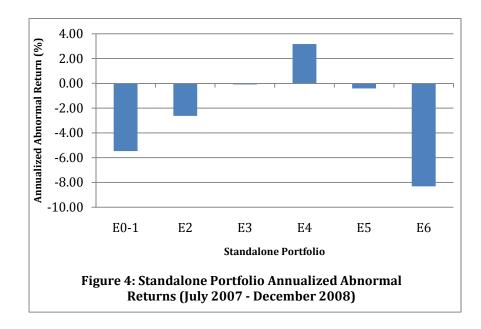
^{112.} See Fama & French, supra note 98, at 19–22; accord BCF, supra note 6, at 815.

^{113.} Appendix C displays regression results for the long-short portfolios; Appendix D displays regression results for the standalone E-Index and Δ -E portfolios discussed *infra*.





To explore this dynamic, regressions were run on each E-Index portfolio standing alone to determine which, if any, of the cohorts were driving the above returns. These results, too, diverge greatly from the monotonic relationship described by BCF. The E0-1, E2 and E6 portfolios would have returned substantial negative abnormal returns (-5.5%, -2.6%, and -8.3% annualized, respectively). The E3 and E5 portfolios both generated trivial negative abnormal returns (0.1% and 0.4% annualized, respectively). The E4 portfolio would have generated a *positive* abnormal return of more than 3.1% annualized. Figure 4 illustrates these results.



C. E-Index and Stock Returns: Ex-Financial

Given the nature of the recent crisis, it is possible that the findings described above are explained by period-specific returns attributable to the companies most directly affected by the collapse of the sub-prime mortgage market and related effects. To control for this possibility, each firm was coded according to its 4-digit SIC code into one of the 48 Fama-French industry classifications.¹¹⁴ The regressions detailed above were then re-run after excising financial companies (corresponding to the Banking, Insurance, Real Estate, and Trading industry classifications) from the portfolios as a proxy for the companies most directly affected by the unique circumstances of the financial crisis. Even excluding the returns attributable to this segment of the economy, the core findings described above, including directionality, remain unchanged, though the magnitude of abnormal returns is somewhat muted.¹¹⁵ The four moderate

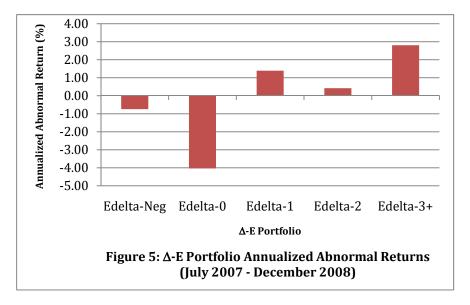
^{114.} See Eugene F. Fama & Kenneth R. French, Industry Costs of Equity, 43 J. FIN. ECON. 153, 179–81 (1997) (listing categories by SIC codes).

^{115.} Appendix C details these ex-financial results. BCF, employing a different control methodology, also report that their results are robust to industry-effects. BCF, supra note 6, at 817–18.

portfolios would still have generated negative abnormal returns, and the abnormal returns on the E0-3/E4-6 portfolio remain statistically significant, albeit at a 10% level. Ex-financials, the extreme portfolio (E0-1/E-6) would have generated positive, but not statistically significant, monthly abnormal returns of 36 basis points.

D. E-Index and Stock Returns: Δ -E

How did the massive surge in entrenchment during 2006 correlate with stock returns during the sample period? Standalone portfolios of firms that either reduced their level of entrenchment or increased it slightly would have generated trivial monthly abnormal returns (-6, 12, and 4 basis points for negative Δ -E, 1 Δ -E, and 2 Δ -E respectively). A portfolio of firms that did not alter their level of entrenchment would have generated modest, negative monthly abnormal returns (-34 basis points). Interestingly, a portfolio of the firms that entrenched themselves the most during 2006 (3 or more E-Index levels) would have generated modest positive monthly abnormal returns (23 basis points). None of these coefficients were statistically significant. Figure 5 illustrates Δ -E results on an annualized basis.



V. DISCUSSION

Three main findings emerge from this study. First, the highly significant negative correlation between entrenchment and stock returns identified by GIM and BCF disappeared entirely during the sample period. In fact, there were no statistically significant positive abnormal returns associated with any of the low-entrenchment portfolios, whether long/short or standalone.¹¹⁶ Similarly, there were no positive abnormal returns (significant or otherwise) associated with firms that decreased their level of entrenchment during the year prior to the sample period. In fact, a portfolio of negative Δ -E firms would have produced abnormal, though not statistically significant losses.

Second, contrary to the predictions of the traditional model of the market for corporate control, above-average entrenchment firms generally outperformed below-average entrenchment firms during the sample period. The extreme long/short portfolio (E0-1/E6) produced trivial abnormal returns, but all of the more moderate long/short portfolios produced economically meaningful (and in two cases statistically significant) negative abnormal returns. As demonstrated by the ex-financial regressions, these results are not explained fully by the unique circumstances of financial sector firms. While the performance of the financials impacted the magnitude of abnormal returns to some degree, the trend identified above clearly extended to the market as a whole given the persistent negative returns attributable to four of the five portfolios, and the continued statistical significance of the returns attributable to the E0-3/E4-6 portfolio.

The results from the standalone E-Index portfolio regressions further illustrate that companies with moderate, above-average entrenchment fared the best during the sample period. The strongest individual cohort was the E4 portfolio, followed by the E3 and E5 portfolios. Returns dropped off sharply for firms closer to both ends of the E-Index distribution. Particularly notable are the E0-1 and E6 portfolios, which would both have generated substantial negative annualized abnormal returns (-5.5% and -8.3% respectively).

^{116.} In this respect, my findings are consist with those of Bebchuk, Cohen & Wang, *supra* note 66, who report that the positive abnormal returns associated with the E-Index during the 1990s disappear during the period from 2000–2008.

Third, all portfolios of firms that entrenched during 2006 generated positive abnormal returns, while those that reduced entrenchment or maintained their level of entrenchment generated negative abnormal returns. In fact, a portfolio of firms that entrenched themselves the most during 2006 would have generated the largest positive abnormal returns (2.8% annualized) of any Δ -E cohort, while firms that did not alter their level of entrenchment fared the worst (-4.0% annualized abnormal returns). It is unclear how much weight should be attributed to the Δ -E findings, however, given the lack of statistical significance.

How are these results best explained? While there is no consensus about how to interpret the abnormal returns identified by GIM and BCF (and herein),¹¹⁷ there are several potential explanations. One possibility is the hypothesis and theoretical framework set forth above in Parts II and III. As predicted, the positive abnormal returns attributable to low-entrenchment firms disappeared during the sample period. Moreover, given equalweighting, as in the long/short portfolios, above-average entrenchment firms outperformed companies with below-average entrenchment. The standalone portfolios provide further evidence consistent with the theory that the N-element costs, such as shorttermism and/or skewed risk preferences, are economically meaningful, and manifest to the greatest degree in the least entrenched companies, which no longer enjoy large offsetting benefits attributable to the P-elements in the equation. Firms that were moderately shielded from the effects of the market for corporate control (i.e., the E3, E4 and E5 portfolios) outperformed those with the greatest exposure (E0-1 and E2) to that market. Tellingly, both the E0-1 and E2 portfolios would have generated economically significant negative abnormal returns.

These results are also consistent with the notion that the balance between the benefits and costs of the market for corporate control is fragile. In particular, while the most extreme long/short portfolio would have generated no abnormal returns (or small, positive returns ex-financials), once firms towards the mean of the E-Index distribution were included in the portfolios, the abnormal returns became negative and statistically significant.

^{117.} See BCF, supra note 6, at 812.

The E6 cohort might seem to diverge from the theoretical framework set forth herein, but this is not a surprising result. Firms that employ all six of the strongest entrenchment mechanisms have removed themselves almost entirely from the market for corporate control, and thus receive none of its disciplinary benefits. The theory set forth above posits that the benefits attributable to the market for corporate control are minimized during recessions, but not that they are reduced to zero. Whereas moderate levels of entrenchment may strike a balance between costs and benefits, full entrenchment-and associated agency cost-is likely to tilt that balance regardless of the prevailing economic climate, especially if the fully-entrenched condition has persisted for any length of time. This explanation is bolstered at least in part by the Δ -E regression results. More than half of the firms in the E6 cohort at the beginning of the sample period are also in the $3 + \Delta$ -E portfolio, which would have generated positive abnormal returns. Therefore, it appears that the substantial negative abnormal returns attributable to the E6 cohort are driven primarily by firms that had maintained a fully entrenched governance structure for at least several years, as opposed to firms that had entrenched themselves substantially during 2006.

There are, however, several other possible explanations that must be considered. Given the relatively narrow sample period, these results may be a statistical or economic anomaly. There might also be a correlation between the E-Index factors and a common risk factor that is, as yet, omitted from the standard asset pricing benchmarks.¹¹⁸ While there is other evidence consistent with this study's findings,¹¹⁹ one important avenue for future research is to test, more rigorously, the variable effects theory set forth herein employing a longer sample period, correlating the performance of similarly situated firms across various market conditions, and testing whether this pattern holds for

^{118.} See, e.g., BCF, supra note 6, at 812. Similarly, there could be a hidden variable that explains the abnormal returns. See Gompers et al., supra note 19, at 139–42. For example, extremely large companies tend to be, on average, much less entrenched than smaller companies. See discussion supra Part III.B.1. As BCF note, one of the reasons for this reduced level of entrenchment is that these companies are unlikely to be the subject of takeover bids purely because of their enormous market capitalization. See BCF, supra note 6, at 799–800. In accordance with the theoretical framework set out in Part III, as the imminence of the takeover threat is minimized, the salutary impact of the market for corporate control is also reduced. Thus, while the largest firms may occupy lower than average levels of the E-Index, they may not generate the expected positive abnormal returns that prior studies have attributed to low-entrenchment companies.

^{119.} See supra notes 13-14, and accompanying text.

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earlier market downturns and whether it has continued explanatory power during periods of economic stagnation.

Perhaps more importantly, correlation does not necessarily indicate causation. Indeed, the causal arrow may point in the opposite direction.¹²⁰ While this question has been debated vigorously as to the GIM and BCF findings, the causation-related critiques levied against those studies do not seem to have to the same force in the context presented herein. First, as Beltratti and Stulz argue, econometric studies are often riddled with concerns about endogeneity, but such concerns are less troubling in the instant case because it is highly unlikely that most market participants could have anticipated the depth and breadth of the economic crisis (to the extent that they anticipated a downturn at all) or its potential effects on their firms.¹²¹

Second, the reverse-causation narrative employed to challenge the GIM and BCF findings seems inapposite to the results described here. To date, the crux of the causation debate is whether high entrenchment *causes* future underperformance, or whether managers of low-value firms (or who expect poor future performance ex ante) entrench themselves prophylactically to reduce the likelihood of a takeover.¹²² This explanation makes little sense when inverted: why would managers expecting strong future performance entrench themselves or remain entrenched? Thus, while causality cannot be inferred with any certainty from these results, the traditional reversecausation hypothesis does not appear to have much explanatory power.123 Of course, this raises an important question for further

^{120.} See, e.g., Core et al., supra note 69, at 655; Lehn et al., supra note 69, at 907; BCF, supra note 6, at 823.

^{121.} See Beltratti & Stulz, supra note 46, at 4. The authors reach this conclusion even as to the banking sector—arguably one of the few industries in a legitimate position to gauge the impact of the coming storm. As illustrated above, however, the findings in this study extend to the broader market, which presumably had less information concerning the likely magnitude of the financial crisis.

^{122.} See, e.g., Core et al., supra note 69, at 656; Gompers et al., supra note 19, at 137–39; Lehn et al., supra note 69, at 908.

^{123.} One plausible explanation, consistent with both the standard reverse-causation narrative and the cost-component of the NSW*mcc* equation presented herein, is that managers simply got it wrong: firms that had been underperforming their peers did not expect to outperform their peers and entrenched themselves as a result of the massive surge in M&A activity during the period prior to the financial crisis. But, these companies collectively performed better during the financial crisis due, perhaps, to their more conservative business strategies or long-term investment horizons made possible by reduced exposure to the market for corporate control.

investigation: why did previously entrenched firms, or those that entrenched immediately prior to the sample period, perform better? While this Article's findings are suggestive, they cannot conclusively answer the question.

VI. CONCLUSION

This Article examines the correlation between managerial entrenchment and stock returns during the economic crisis of 2007– 2008. Unlike earlier studies, which found highly significant, negative correlations between high entrenchment and returns during the 1990s, more entrenched firms fared better in the aggregate than less entrenched companies during the sample period. In fact, the best performing group of firms was that with moderate, above-average levels of entrenchment. Further, firms that entrenched the most during the year immediately prior to the sample period outperformed firms that decreased their level of entrenchment or maintained a consistent level of entrenchment throughout.

The findings presented are largely consistent with the theoretical framework developed herein, in which the net impact of the market for corporate control is a balance of costs and benefits, and varies depending on macroeconomic climate. Specifically, one should expect that the benefits of the takeover threat are minimized during recessions, and thus the correlation between low entrenchment companies and positive abnormal returns observed during periods of strong economic growth should be weakened. These findings also suggest that this balance is fragile, and that the costs could, for some companies, outweigh the benefits. While the results of this study do not (and cannot) prove the theory set forth herein, they present preliminary evidence that while the market for corporate control provides a measure of managerial accountability, its net wealtheffects can vary, and that less entrenchment is not necessarily correlated with increased shareholder value during all periods.

APPENDIX A: E-INDEX DEFINITIONS

IRRC Governance Definitions (1990–2006)

Classified board or Staggered board:

A board of directors, divided, for the purpose of election, into separate classes. In most instances there are three classes, with the directors in each class serving overlapping three-year terms. Staggering directors' terms makes it more difficult for dissidents to seize control of a target company immediately, even if they control a majority of the company's stock, since only one-third of the directors stand for election in any one year. With a classified board, also known as a staggered board, the shareholders' ability to affect the makeup of the board is limited because it would take at least two elections to replace a majority of the board.

Golden Parachute:

A severance agreement/contract between a company and an executive contingent on a change in corporate control.

Poison Pill:

Shareholder rights plans are among the more complicated antitakeover devices. Although their terms and conditions vary considerably, the purpose of a poison pill is to force potential bidders to negotiate with a target company's board of directors. If the board approves the deal, it may redeem the pill. If the board does not approve a bid and the potential acquirer proceeds anyway, the pill would be "triggered," causing actions that would make the target financially unattractive or dilute the voting power of the potential acquirer. Under a typical plan, shareholders are issued rights to purchase stock in their own company or in the acquiring company at a steep discount (usually half price) if a hostile bidder acquires a certain percentage (usually 15% or 20%) of the outstanding shares. Unlike anti-takeover charter and bylaw amendments, poison pills do not have to be ratified by shareholders.

Supermajority vote requirement:

A vote that requires support from more than a majority of the shares entitled to vote. Supermajority provisions establish shareholder vote requirements that are higher than the minimum levels set by state

law to approve a merger or other business combination. They typically require the approval of the holders of two-thirds, 75% or 80% or more of the outstanding shares for actions that otherwise would require simple majority approval.

Source: IRRC Governance Definitions (1990–2006), Wharton Research Data Services, http://wrds-web.wharton.upenn.edu/wrds/support/Data/_001Manuals%20and%20Overviews/_115RiskMetrics/Overview%20of%20 IRRC%20Legacy%20Governance%20Database%20on%20WRDS.cfm (last visited Jan. 25, 2011).

RiskMetrics Governance Definitions (2007–Present)

Classified board or Staggered board:

A board of directors, divided, for the purpose of election, into separate classes. In most instances there are three classes, with the directors in each class serving overlapping three-year terms. Staggering directors' terms makes it more difficult for dissidents to seize control of a target company immediately, even if they control a majority of the company's stock, since only one-third of the directors stand for election in any one year. With a classified board, also known as a staggered board, the shareholders' ability to affect the makeup of the board is limited because it would take at least two elections to replace a majority of the board.

Golden Parachute:

A severance agreement/contract between a company and an executive contingent on a change in corporate control. [Note that data in this field may be inconsistent for the 2006 through 2008 data years; in some cases "Yes" indicate that an NEO at the company has such a contract but in other cases "Yes" indicates that an NEO at the company has a contract that provide for a cash severance payment > 3X salary + bonus].

Poison Pill:

Shareholder rights plans are among the more complicated antitakeover devices. Although their terms and conditions vary considerably, the purpose of a poison pill is to force potential bidders to negotiate with a target company's board of directors. If the board approves the deal, it may redeem the pill. If the board does not

approve a bid and the potential acquirer proceeds anyway, the pill would be "triggered," causing actions that would make the target financially unattractive or dilute the voting power of the potential acquirer. Under a typical plan, shareholders are issued rights to purchase stock in their own company or in the acquiring company at a steep discount (usually half price) if a hostile bidder acquires a certain percentage (usually 15% or 20%) of the outstanding shares. Unlike anti-takeover charter and bylaw amendments, poison pills do not have to be ratified by shareholders.

Supermajority vote requirement:

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Source: Risk Metrics Governance Definitions (2007–Present), WHARTON RESEARCH DATA SERVICES, http://wrds-web.wharton.upenn.edu/wrds/support/Data/_001Manuals%20and%20Overviews/_115RiskMetrics/Risk Metrics%20Governance%20Definitions.cfm (last visited Jan. 25, 2011).

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APPENDIX B: HISTORICAL ENTRENCHMENT DATA

Historic Entrenchment Data (Ex. Dual Class Firms)

Year	Average Entrenchment	E0	E1	E2	E3	E4	E5	E6
1990	2.229	181	249	328	342	197	50	9
1993	2.324	149	236	336	341	220	56	5
1995	2.310	151	243	350	346	228	52	3
1998	2.273	181	328	439	430	271	48	10
2000	2.452	125	297	409	459	305	64	10
2002	2.498	120	255	446	457	308	75	7
2004	2.549	104	257	468	515	337	71	7
2006	2.505	90	294	453	482	327	62	4
2007	3.667	6	51	188	413	379	299	95
2008	3.485	4	52	245	415	332	253	61

Source: Entrenchment data is derived from Lucian A. Bebchuk, E-Index Data Collection, HARVARD.EDU, http://www.law.harvard.edu/faculty/ bebchuk/data.shtml (last visited Jan. 25, 2011).

APPENDIX C: MONTHLY ABNORMAL RETURNS

Long/Short Portfolios (July 2007 – December 2008)

Long/Short Portfolio	Baseline Model	Ex-Financial
E-Index 0-1 / E-Index 6	0.01	0.36
	(0.374)	(0.500)
E-Index 0-1 / E-Index 5-6	-0.52	-0.27
	(0.411)	(0.613)
E-Index 0-1-2 / E-Index 5-6	-0.32	-0.19
	(0.333)	(0.465)
E-Index 0-1-2 / E-Index 4-5-6	-0.58***	-0.32
	(0.251)	(0.298)
E-Index 0-1-2-3 / Index 4-5-6	-0.44***	-0.34**
	(0.169)	(0.189)

This table illustrates the monthly abnormal returns for various longshort portfolios derived from the E-Index data-set. Both the baseline and ex-financial models regress excess returns from each long-short portfolio on the three Fama-French factors-which benchmark market, firm size, and book-to-market effects-along with a momentum factor (each of which was obtained from Ken French's data library). The ex-financial portfolios exclude firms classified as Banking, Insurance, Real Estate, and Trading according to the Fama-French 48 category industry classification. See E. Fama & K. French, Industry Costs of Equity, 43 J. Fin. Ec. 153, 179-181 (1997) (listing categories by SIC codes). All portfolios were constructed using equal-weightings of each component. Portfolios were adjusted in January 2008 to account for E-Index changes between 2007 and 2008 data. Standard errors are reported in parentheses, and significance at the 15%, 10%, and 5% is indicated by *, **, and *** respectively.

APPENDIX D: MONTHLY ABNORMAL RETURNS

Standalone E-Index and E Portfolios (July 2007 – December 2008)

	Abnormal Return
Standalone Portfolio	(Standard Error)
Negative ΔE	-0.06
	(0.472)
$0 \Delta E$	-0.34
	(0.226)
1 ΔΕ	0.12
	(0.191)
$2 \Delta E$	0.04
	(0.191)
$3+\Delta E$	0.23
	(0.314)
E0-1	-0.46
	(0.317)
E2	-0.22
	(0.257)
E3	-0.01
	(0.187)
E4	0.26*
	(0.168)
E5	-0.03
	(0.279)
E6	-0.69**
	(0.360)

This table illustrates the monthly abnormal returns for various standalone E-Index and ΔE portfolios derived from the 2006, 2007 and 2008 E-Index data-sets. Returns were calculated as above, pursuant to the baseline model (*see* Appendix C, *supra*), except that ΔE portfolio composition remained constant throughout the sample period. Standard errors are reported in parentheses, and significance at the 15%, 10% and 5% levels is indicated by *, **, and *** respectively.

APPENDIX E: ANNUAL MERGER AND ACQUISITION DEAL VOLUME AND VALUATION

U.S. Public Company Targets – NYSE and NASDAQ (1999-2008)

(1))) 2000)			Average Deal
Year	Number of Deals		Premium (%)
	NYSE/ NASDAQ	All Public	NYSE/
1000	-	Targets 1003	NASDAQ Only
1990	639		21.13
1991	531	859	25.5
1992	539	843	17.84
1993	594	922	28.83
1994	863	1301	169.61
1995	1002	1456	31.18
1996	1093	1641	16.16
1997	927	1327	23.32
1998	918	1323	23.56
1999	875	1231	41.84
2000	839	1189	31.59
2001	616	858	37.06
2002	405	605	29.69
2003	385	572	54.39
2004	354	517	22.2
2005	327	510	59.63
2006	391	570	22.99
2007	496	721	26.42
2008	457	655	46.19
Ν	12251	18103	
Mean			
(Entire Period)	645	953	38.38
Mean (2007-2008)	477	688	36.31
Mean (1990-1999)	798	1191	39.90
Weighted Mean			
(Entire Period)			39.33

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Weighted Mean	
(2007-2008)	35.90
Weighted Mean	
(1990-1999)	41.21

Source: Data derived from the ThomsonONE M&A Deal Analysis database, ThomsonOne.com, https://www.thomsonone.com (last visited Jan. 25, 2011) filtering for: Target Nation (United States); Target Public Status (Public); and where applicable Target Primary Stock Exchange by Country (NASDAQ or New York). Deal activity is categorized by year merger acquisition based on the date a or becomes effective/unconditional. Deal premiums are calculated by comparing the deal price to the target company's stock price close one day prior to the deal announcement.