ISSN 1045-6333

EXPLAINING VARIATION IN TAKEOVER DEFENSES: FAILURE IN THE CORPORATE LAW MARKET

John C. Coates IV

Discussion Paper No. 297
9/2000

Harvard Law School
Cambridge, MA

The Center for Law, Economics, and Business is supported by a grant from the John M. Olin Foundation.

Explaining Variation in Takeover Defenses: Failure in the Corporate Law Market

John C. Coates IV*

Companies adopt varying takeover defenses prior to IPOs, contrary to simple agency-cost models. Variation in defenses is explained in large part by the quality of legal services provided to entrepreneurs and pre-IPO managers. Data from 320 IPOs in 1991-92 and 1998 show that companies advised by larger law firms with more takeover experience adopt more defenses. In 1991-92, companies with Silicon Valley lawyers adopted almost no defenses; by 1998, Silicon Valley lawyer clients were as likely to use defenses as other lawyers. Companies with high-quality underwriters and venture capital backing are more likely to adopt defenses, and the overall rate of defense adoption increased in the 1990s. Dual class capital structures appear to be distinct, and motivated by non-pecuniary private benefits of control. Together, these findings suggest that, except for dual class structures, defenses are generally optimal at the IPO stage, but not all clients receive that advice from their lawyers.

JEL Class: G32, G34, K22

*Assistant Professor of Law, Harvard Law School.

CONTENTS

List of Appendices, Tables and Figures

Appendices

Tables

Figures

Explaining Variation in Takeover Defenses: Failure in the Corporate Law Market

John C. Coates IV*

Introduction: Takeover Defenses at the IPO Stage

Recent research on adoption of takeover defenses prior to initial public offerings (IPOs) presents legal and finance academics with a two-part puzzle.[1] (1) If, on the one hand, defenses reduce firm value (by increasing agency costs), as Easterbrook & Fischel[2] argued, then why do half of companies adopt substantial defenses prior to IPOs? And if poison pills, the most common defense, are particularly troublesome, as many have argued, why do no companies adopt explicit anti-pill terms in their pre-IPO charters? (2) If, on the other hand, defenses have largely positive effects on firm value (by increasing bargaining power or overcoming some market failure), why do *only* half of companies adopt defenses prior to IPOs? The challenge, in other words, is not simply to explain the presence of defenses at the IPO stage, but to explain the variation in defense adoption.

---

* Assistant Professor of Law, Harvard Law School; B.A., University of Virginia; J.D., New York University Law School. Email: jcoates@law.harvard.edu. I am grateful to Lucian Bebchuk, Bob Clark, Michele Cotton, Rob Daines, Jeff Gordon, Oliver Hart, David Herwitz, Howell Jackson, Christine Jolls, Marcel Kahan, Louis Kaplow, Mike Klausner, Roberta Romano, Andrei Shleifer, Kip Viscusi, and David Wilkins, and to workshop participants at Harvard Law School and Boston University Law School for suggestions and comments on earlier versions of this paper. All errors are mine. In the interest of full disclosure, it should be noted that I was formerly a partner at the law firm of Wachtell, Lipton, Rosen & Katz, generally credited with devising the best-known takeover defense (the poison pill). I am also enormously grateful to P.J. Honerkamp, Manuel Campbell, Heather Crossner, Jim Davis, Michael Davis, Brad Faris, Kai Lee, Tatiana Lapushik, Nikolai Mikhailov, Rahim Oberholtzer, Alex Rao, Derek Squire, Wilbert Watts, Gail Edelman, Rachel Katz, and Raquel Ortiz for research assistance.

[1] Robert Daines & Michael Klausner, *Do IPO Charters Maximize Firm Value? Antitakeover Provisions in IPOs*, Working Paper (Aug. 24, 1999) (available at www.ssrn.com); Laura Casares Field, *Control Considerations in Newly Public Firms: The Implementation of Antittakeover Provisions and Dual Class Shares Before the IPO*, Working Paper (Feb. 10, 1999) (available at www.ssrn.com); Laura Casares Field & Jonathan M. Karpoff, *Takeover Defenses at IPO Firms*, Working Paper (Oct. 27, 1999) (on file with author); Tatiana Lapushchik, *Antitakeover Provisions at the IPO Stage: Empirical Evidence on Mutual Preferences*, unpublished manuscript (Mar. 10, 2000) (on file with author).

[2] Frank Easterbrook & Daniel Fischel, *The Proper Role of a Target's Management in Responding to a Tender Offer*, 94 HARV. L. REV. 1161 (1981).

This paper provides a new answer to both parts of this IPO/defense puzzle.[3] The existence of defenses at the IPO stage may be explained by proposing either that defenses are generally efficient, or that IPO pricing is so poor that defenses (whether efficient or not) are privately optimal for all pre-IPO shareholder-managers to adopt,[4] or both (*general optimality hypothesis*).[5] Variation in defenses may be explained by hypothesizing that the quality of legal services provided to entrepreneurs and other pre-IPO shareholder-managers varies significantly, depending on the experience, size, and location of law firms serving as company counsel at the time of an IPO (*law firm hypothesis*). Together, these two hypotheses imply that the primary reason defenses vary at the IPO stage is because of inefficiencies in the market for corporate legal advice.

In competition with theories advanced in this paper are two categories of explanations for the IPO/defense puzzle, summarized in **Table 1**. First, one might maintain that defenses are in fact generally bad (*general inefficiency hypothesis)* but only some pre-IPO shareholders know this; perhaps, for example, investment banker advice about IPO pricing varies in quality (*banker hypothesis*). Second, the efficiency of defenses may vary with company or pre-IPO shareholder characteristics, so that defenses are optimal at some companies, but not others (*variable efficiency hypotheses).*

This paper develops the law firm hypothesis, describes and analyzes empirical implications of the competing theories, and empirically tests each theory, to the extent feasible, as alternatives to the law firm hypothesis. Data from a sizeable sample (n=160) of IPOs in the 1991-92 period, and an equal-sized confirmatory sample from 1998, are used to test explanations for the IPO/defense puzzle. Firm charters, bylaws, and prospectuses are reviewed, and summary data on defenses are developed. Significant variation in the number, type and strength of defenses found in prior studies is confirmed. These data are regressed against data on law firms to test the law firm hypothesis, and on underwriters to test the banker hypothesis. Also included in the regressions are variables that proxy for different variable efficiency hypotheses (specifically, agency costs, bargaining power, market myopia, and private benefits of control).

The empirical analysis produces several striking results. First, strong evidence is found that the suite of pre-IPO defenses adopted by companies is determined by lawyers. The takeover experience, size and

---

[3] As Daines & Klausner themselves acknowledge, supra note 1, at 31-34, their effort to explain the IPO/defense puzzle produced not answers but more empirical puzzles: they find defenses correlate positively with industry-level research and development and negatively with industry-level takeover activity in the mid 1990s. As discussed in Parts I and III, both findings are contrary to prior theory on how the efficiency of defenses might vary among companies.

[4] That IPO pricing may be generally poor is suggested by studies showing first-day "underpricing" and long-run "overpricing." *E.g.*, Jay R. Ritter, *The Long-Run Performance of Initial Public Offerings*, 42 J. FIN. 365 (1991); Tim Loughran & Jay R. Ritter, *The New Issues Puzzle*, 50 J. FIN. 23 (1995). Poor IPO pricing by itself leaves the IPO/defense puzzle intact, however, for it would mean defenses (while bad for companies) are privately optimal for *all* managers to adopt, since managers would be able to retain more control "for free" (the cost being borne by investors).

[5] The paper is agnostic on whether defenses are efficient, or merely privately optimal.

location of law firms strongly correlate with the number and strength of pre-IPO takeover defenses adopted by companies they advise.[6] Companies advised by larger law firms with more takeover experience adopt more defenses. In 1991-92, companies advised by lawyers located in Silicon Valley adopted fewer defenses, but by 1998, Silicon Valley law firms were just as likely to recommend defenses as law firms elsewhere. Second, companies represented by high-quality underwriters and/or with venture capital backing are *more* likely to adopt defenses, not less, and the rate of defense adoption *increased* during the 1990s. These findings are more consistent with a general optimality hypothesis than a general inefficiency hypothesis. Third, consistent with evidence from Field,[7] some evidence is found suggesting that the most extreme form of takeover defense (dual class capital structures) are distinct from other defenses, and are motivated by high, primarily psychic (*i.e.*, non-pecuniary) private benefits of control. Little evidence is found to support other company-level efficiency explanations for defense adoption. Together, these findings suggest that, with the possible exception of dual class structures, defenses are generally optimal at the IPO stage, but not all lawyers advise clients to that effect. In short, takeover defense variation in IPOs during the period studied is explained by inefficiencies in the market for corporate legal advice.

The paper proceeds as follows. Part I describes the debate on takeover defenses, focusing on ways that legal and economic scholars have suggested defenses might be efficient, and then briefly discusses empirical predictions that follow from these theories. Part II describes the market for corporate legal advice, and offers *a priori* reasons one might expect inefficiencies in that market. Part III sets up an empirical test for the competing theories, describes the sample and methodology, and presents the empirical findings. The paper concludes with a brief discussion of implications.

I. Theories of Takeover Defenses

A. Brief Overview of Defenses

The impetus for the development of modern takeover defenses[8] was the emergence of the hostile tender offer in the 1960s,[9] and its

---

[6] That causation runs from lawyers to defenses, and not the other way around, is shown by the fact that few companies switch law firms in anticipation of an IPO. See note __ infra.

[7] Field, supra note 1.

[8] A note on terminology: Two types of defenses may be distinguished: (1) *transactional defenses*, which are financial or operational transactions anticipating or reacting to a bid and designed to make a takeover more difficult, by raising a firm's share price, paying off the bidder, or reducing a bidder's profit; and (2) *structural defenses*, which are legal terms or mechanisms, often adopted in advance of a bid, designed to deter or impede bids without having a financial or operational effect on the target. This paper focuses on structural defenses, but for brevity refers to "defenses" as shorthand.

[9] See DOUGLAS AUSTIN & JAY FISHMAN, CORPORATIONS IN CONFLICT 7-23 (1970) (documenting rise of hostile tender offer 1956-67); Gerald Davis & Suzanne Stout, *Organization Theory and the Market for Corporate Control: A Dynamic Analysis of the*

stunning rise in importance after Morgan Stanley broke ranks in 1974 to advise on a bid for International Nickel.[10] Through the mid-1980s, companies were able to adopt a number of takeover defenses in the form of charter amendments, the most significant of which in retrospect is the staggered or classified board, which (if properly implemented) imposes a year delay on dissident coalitions of shareholders seeking to replace a majority of a target's board. But charter amendments require shareholder approval,[11] which has not generally been forthcoming since the organization of the institutional shareholder community in the late 1980s.[12] The one significant defense[13] that can still generally be adopted "midstream" (*i.e.*, after a company goes public) is the poison pill.[14] But the pill can be eliminated via proxy fight, and for a large percentage of public companies with poison pills, proxy fights take little longer than tender offers.[15] Despite adoption of pills by 60% of the S&P 1500, there were almost 70 bids in 1995, nearly as many as the peak of the takeover boom of the 1980s.[16]

At some companies, proxy fights can take time: six to 18 months or more depending on state law and companies' specific defenses,[17] as described more fully in Appendix B. But courts generally do not permit companies to adopt midstream defenses that substantially impede proxy fights.[18] In short, midstream defenses are constrained by legal rules and

---

Characteristics of Large Takeover Targets 1980-90, 37 ADM. SCI. Q. 605 (1992) (documenting rapid increase in hostile bids in 1980s).

[10] See BRUCE WASSERSTEIN, BIG DEAL 470 (1998) (describing internal debate at Morgan Stanley over decision to represent a hostile bidder, as no other high-quality Wall Street investment bank had previously done).

[11] *E.g.*, Delaware General Corporation Law (DGCL) § 242.

[12] See John C. Coates IV, *Takeover Defenses in the Shadow of the Pill: A Critique of the Scientific Evidence* 79 TEX. L. REV. (forthcoming 2000) [Coates, Critique] (evidence midstream defenses are not approved by shareholders in 1990s); Gerald F. Davis & Tracy A. Thompson, *A Social Movement Perspective on Corporate Control*, 39 ADM. SCI. Q. 141 (1994) (documenting organization of institutional investor community opposition to defenses in late 1980s).

[13] Modest defenses can be adopted by bylaw amendment, but such amendments can be "undone" by shareholder action. DGCL § 109 (permitting bylaw amendments by shareholders).

[14] *See* Wachtell Lipton Rosen & Katz, The Share Purchase Rights Plan, reprinted in RONALD J. GILSON & BERNARD S. BLACK, THE LAW AND FINANCE OF CORPORATE ACQUISITIONS (2d ed. 1998 Supp.) at 4-12 (setting forth terms of standard poison pill).

[15] *See* John C. Coates IV, *An Index of the Contestability of Corporate Control: Studying Variation in Legal Takeover Vulnerability*, Working Paper (July 17, 1999) [Coates, Index] (describing method of studying how long bids can take, given target's defenses); see text accompanying notes __ infra (control can be obtained by proxy fight in less than 90 days at two-thirds of sample).

[16] See John C. Coates IV, *Measuring the Domain of Mediating Hierarchy: How Contestable are U.S. Public Corporations*?, 24 J. CORP. L. 837, 855 (1999) [Coates, How Contestable?].

[17] Coates, How Contestable?, supra note 16, at 853-55; Coates, Index, supra note 15.

[18] See, *e.g.*, Chesapeake Corp. v. Shore, 2000 Del. Ch. LEXIS 20 (Del. Ch. Feb. 11, 2000) (striking down bylaw amendments that would have required supermajority shareholder vote to amend bylaws); Blasius Indus. v. Atlas Corp., 564 A.2d 651, 654-56 (Del. Ch. 1988) (striking down bylaw amendments that would have impaired consent solicitation); Quickturn Design Sys. v. Mentor Graphics Corp., 721 A.2d 1281, 1291-93 (Del. 1998)

skeptical institutional investors. As a result, starting in the late 1980s, the one moment at which U.S. companies have been able to substantially reduce their legal takeover vulnerability is prior to going public. After an IPO is complete and ownership dispersed,[19] the takeover defenses of a public company in the U.S. in the 1990s have generally been fixed.

B. Theories in which Defenses are All Good or All Bad

Hostile takeovers and takeover defenses have stimulated a large amount of legal and economic scholarship over the past 20 years.[20] Defenses, in particular, have stimulated a striking split of opinion between legal academics, on the one hand, and practicing lawyers, judges and legislators, on the other. Exceptions exist, but academics have generally opposed defenses, and practitioner-commentators have generally supported them.

Positions on both sides of this split have been moderate, to be sure; no practitioner endorses all takeover defenses, regardless of the circumstances,[21] and few academics oppose all takeover defenses.[22] Still, the split is vividly illustrated by the policy positions articulated at the outset of the 1980s by a leading takeover lawyer – Martin Lipton, a founder of the takeover specialist law firm of Wachtell Lipton Rosen & Katz – and two prominent legal academics – Judge Frank Easterbrook and Dean Daniel Fischel of the University of Chicago Law School. In a famous article written from "the target's boardroom," Lipton argued the ordinary business judgment rule should apply to takeover defenses, in which case they would normally be upheld, absent evidence of gross negligence or self-dealing.[23] Easterbrook & Fischel took a diametrically opposed position, arguing that courts should hold directors to a rule of passivity and presume that defenses are illegal.[24]

Each side's perspective on defenses was shaped by their views on takeovers. Lipton argued that hostile bids are disruptive and costly for targets, that coercive bids harm shareholder interests, that bids often exploit stock market mispricing, that asset bust-ups that follow takeovers cause unnecessary and socially harmful layoffs, and that threat of bids

---

(striking down type of pill that would have impaired proxy fight); Carmody v. Toll Bros. Inc., 723 A.2d 1180, 1189-94 (Del. Ch. 1998) (same). Cf. Invacare Corp. v. Healthdyne Technologies, Inc., 968 F. Supp. 1578, 1580 (N.D. Ga. 1997) (upholding such a pill under Georgia law); Amp Inc. v. Allied Signal Inc., 1998 U.S. Dist. LEXIS 15617, (E.D. Pa. Oct. 8, 1998) (same, under Pennsylvania law).

[19] Ownership dispersion takes some time. See text accompanying notes __ infra.

[20] Roberta Romano, *A Guide to Takeovers: Theory, Evidence and Regulation*, 9 YALE J. REG. 107 (1992) (reviewing literature of 1980s); Coates, Critique, supra note 12 (surveying empirical evidence from 1980s and 1990s).

[21] E.g., Martin Lipton & David A. Katz, Teamsters Union Proposes Alternative to Rights Plan, Client Memorandum (Dec. 21, 1995) (criticizing proposed "blooming preferred" on grounds that it would "disenfranchise many shareholders and impair the liquidity of a company's common equity").

[22] See text accompanying notes __ infra.

[23] Martin Lipton, *Takeovers Bids in the Target's Boardroom*, 35 Bus. Law. 101 (1979).

[24] Frank Easterbrook & Daniel Fischel, *The Proper Role of a Target's Management in Responding to a Tender Offer*, 94 HARV. L. REV. 1161 (1981).

reduces investment in good long-run projects.[25] Easterbrook & Fischel argued that takeovers are generally good because they produce immediate profits for target shareholders; transfer assets to those who value them most, improving social welfare; and most importantly, because threat of bids reduces costs that inevitably arise when principals (shareholders) employ agents (target managers), costs exacerbated by collective action problems facing dispersed shareholders of large public companies.[26]

By themselves neither Lipton's nor Easterbrook & Fischel's arguments provide much help in understanding the IPO/defense puzzle. Standing alone, Lipton's position would suggest all companies should adopt defenses prior to an IPO, and Easterbrook & Fischel's position would suggest that no firm should adopt a defense; yet in reality about half do and half do not.[27] The mismatch between first-generation theory and data is unsurprising, since both theories were not positive explanations of firm behavior at the IPO stage, but normative positions taken up to influence legal policy on midstream defenses. To discover more about what might explain pre-IPO defenses, more theory is needed. As will be discussed in Part II, first-generation theories – both the "all good" and "all bad" versions – can be reconciled with pre-IPO data by hypothesizing some failure in the IPO process. Before discussing IPO market failures, however, it is worth focusing on other theories that explain why defenses might be efficient at some, but not all, companies. **Table 2** provides a roadmap to prior theories on defenses.

C. Theories Justifying Some Defenses at Some Companies

Takeover defenses have received partial support from legal commentators such as Bebchuk,[28] Gilson,[29] and Coffee,[30] and economists such as Stein,[31] Shleifer & Summers,[32] and (implicitly) Demsetz[33] and

---

[25] Lipton, supra note 23.

[26] Easterbrook & Fischel, supra note 2.

[27] Daines & Klausner, supra note 1; Field, supra note 1; and Part I.H. infra.

[28] Lucian Bebchuk, *A Theory of Choice Between Concentrated and Dispersed Ownership of Corporate Shares and Votes*, Harvard Law School Working Paper (July 1999) [Bebchuk, Concentrated Ownership]; Lucian Bebchuk, *Toward Undistorted Choice and Equal Treatment in Corporate Takeovers*, 98 HARV. L. REV. 1693 (1985) [Bebchuk, Undistorted Choice]; Lucian Bebchuk & L. Stole, *Do Short-Term Objectives Lead to Underinvestment or Overinvestment in Long-Term Pojects*, 48 J. FIN. 719 (1993).

[29] Ronald Gilson, *Seeking Competitive Bids Versus Pure Passivity in Tender Offer Defense*, 35 STAN. L. REV. 51 (1982).

[30] John Coffee, *Regulating the Market for Corporate Control: A Critical Assessment of the Tender Offer's Role in Corporate Governance*, 84 COLUM. L. REV. 1145 (1984).

[31] Jeremy Stein, *Efficient Capital Markets, Inefficient Firms: A Model of Myopic Corporate Behavior*, 104 Q. J. ECON. 393 (1989); Jeremy Stein, *Takeover Threats and Managerial Myopia*, 96 J. POL. ECON. 61 (1988).

[32] Andrei Shleifer & Lawrence Summers, *Breach of Trust in Hostile Takeovers*, in CORPORATE TAKEOVERS: CAUSES AND CONSEQUENCES 33 (A. Auerbach ed. 1988) (takeovers may facilitate breach of implicit contracts to protect investments in firm-specific human capital, and permit wealth transfers from employees to bidders).

[33] Harold Demsetz, *The Structure of Ownership and the Theory of the Firm*, 26 J.L. & ECON. 375 (1983). Demsetz focused not on defenses but ownership structure, such as the

Grossman & Hart.[34] Most commentators have explicitly or implicitly acknowledged that defenses can be harmful by increasing agency costs, but, they have argued, defenses may also play a valuable role after a bid has emerged (*ex post* justifications), and may also have valuable effects in anticipation of bids (*ex ante* justifications). Such benefits may be anticipated at the time of an IPO, and thus explain the adoption of defenses despite any increase in agency costs they may cause.

1. *Ex post* Justifications

Ex post, defenses may increase target shareholder welfare by solving collective action problems, impeding coercive bid tactics, enabling more bid competition, and allowing target boards to act as bargaining agents for target shareholders and thus to extract a larger share of the gains that successful bids generate.[35] Target shareholders are typically dispersed and rendered largely passive by collective action problems. Hostile bids may create a "pressure to tender," which can (in theory) cause shareholders to accept a bid below their private valuation of the target, and bidders can increase that pressure by using two-tier bid structures, as infamously done by T. Boone Pickens in the 1980s.[36] "White knights" may be willing to pay more than a given hostile bidder, but may need time to investigate the target or complete financing, and defenses may buy that time, allowing target shareholders to increase their gains from the sale of the target. Managers who are loyal – or whose incentives to entrench themselves are constrained by some combination of stock compensation, independent directors, blockholders, and capital and labor markets – can (in theory) use delay imposed by defenses (and the threat of pursuing

---

decision by a pre-IPO shareholder to retain a majority of voting stock, and argued that ownership structure is "an endegenous outcome of a maximizing process in which more is at stake than just accommodating to the shirking [agency cost] problem." Id. See also Harold Demsetz & Kenneth Lehn, *The Structure Of Corporate Ownership: Causes And Consequences*, 93 J. POL. ECON. 1155 (1995).

[34] Grossman & Hart develop a model in which dual class capital structures are endogenous to private benefits of control and liquidity constraints, among other things. Sanford Grossman & Oliver Hart, *One Share – One Vote and the Market for Corporate Control*, 20 J. FIN. ECON. 175 (1988). Defenses, suggests Bebchuk, Concentrated Ownership, supra note 28, can be a weaker form of concentrated ownership structure, and should be analyzed as solving a general optimization problem involving more than minimizing agency costs.

[35] Bebchuk, Undistorted Choice, supra note 28; Lucian A. Bebchuk, *The Pressure to Tender: An Analysis and a Proposed Remedy*, 12 DEL. J. CORP. L. 911, 917-31 (1987); Elazar Berkovitch & Naveen Khanna, *How Target Shareholders Benefit from Value-Reducing Defensive Strategies in Takeovers*, 45 J. FIN. 137 (1990); Gilson, supra note 29; Rene Stulz, *Managerial Discretion and Optimal Financing Policies*, 26 J. FIN. ECON. 3 (1990); Harry DeAngelo & Edward M. Rice, *Antitakeover Charter Amendments and Shareholder Wealth*, 11 J. FIN. ECON. 329 (1983); Jonathan R. Macey, *The Legality and Utility of the Pill Redemption Bylaw*, 26 HOFSTRA L. REV. 835, 841-53 (1998).

[36] See Unocal Corp. v. Mesa Petroleum Co., 493 A.2d 946 (Del. 1985). But see Robert Comment & Gregg Jarrell, *Two-Tier and Negotiated Offers: The Imprisonment of the Free-Riding Shareholder*, 9 J. FIN. ECON. 283 (1987) (blended value of two-tier bids is equivalent to premiums in any-or-all bids, aggregating friendly and hostile in each case).

alternative transactions) to negotiate for a higher price from a hostile bidder on behalf of target shareholders.[37]

In a famous debate over the merits of rules encouraging auctions for targets, auction opponents point out that increasing target shareholder gains at the expense of the bidder is a pure transfer – bidders lose what targets gain – and so (in a static utilitarian framework) has no welfare consequences. Worse, argues Alan Schwartz,[38] reducing a bidder's gains *ex post* reduces the number of bids *ex ante*, and so increases agency costs. Any benefit to target shareholders of auction-enhancing rules such as the Williams Act (or, by implication, defenses with a similar effect) will be outweighed for shareholders generally, auction critics claim.

Auction justifiers reply that increasing target shareholder returns lowers the cost of capital and produces indirect social gains, and that bidder-to-target-shareholder transfers will not have a significant effect on bid incidence, because bidder profits from pre-bid toeholds often outweigh costs of bid search and commencement.[39] In addition, increasing evidence suggests that bidders often if not usually overpay,[40] whether because of hubris, the winner's curse, or buy-side agency problems, and bids may also be induced by the prospect of monopoly rents (despite antitrust laws), or by distortions arising from tax law,[41] so it is not clear whether increasing the number of bids will produce social gains.

Many arguments advanced in the debate over auctions involve conflicts between social welfare and the private welfare of specific takeover participants, and to that extent are irrelevant in trying to develop a positive account of whether defenses are privately optimal prior to an IPO. In addition, many premises in that debate are themselves empirical, and unresolved. Still, *ex post* justifications – referred to henceforth collectively as the "bargaining power hypothesis" for brevity – may be part of the answer to the IPO/defense puzzle.

2. *Ex ante* Justifications

---

[37] Another *ex post* justification is that bids are disruptive and costly, and may encourage rent-seeking, and pills may be less harmful than either transactional defenses that target managers might use if pills were banned or the heavy court oversight that might be necessary to draw the line between harmful and beneficial transactions that could function as defenses. Atreya Chakraborty & Richard Arnott, *Takeover Defenses and Dilution: A Welfare Analysis*, Working Paper (July 1997) (on file with author).

[38] Alan Schwartz, *Search Theory and the Tender Offer Auction*, 2 J.L. ECON. & ORG. 271 (1986). *See also* Easterbrook & Fischel, *supra* note 2; Frank Easterbrook & Daniel Fischel, *Takeover Bids, Defensive Tactics, and Shareholder Welfare*, 36 Bus. Law. 1733 (1981).

[39] Bebchuk, Undistorted Choice, supra note 28.

[40] MARK SIROWER, THE SYNERGY TRAP: HOW COMPANIES LOSE THE ACQUISITION GAME 147 (1997) (table A.1).

[41] RICHARD THALER, THE WINNER'S CURSE 50-62 (1992); Bernard S. Black, *Bidder Overpayment in Takeovers*, 41 STAN. L. REV. 597, 624-26 (1989); Richard Roll, *The Hubris Hypothesis of Corporate Takeovers*, 59 J. BUS. 197 (1986); Steven Kaplan, *Management Buyouts: Evidence on Taxes as a Source of Value*, 44 J. FIN. 611 (1989); Randall Morck, Andrei Shleifer & Robert Vishny, *Do Managerial Objectives Drive Bad Acquisitions*, 45 J. FIN. 31 (1990).

Ex ante justifications turn the tables on auction critics and propose benefits that defenses may achieve by deterring bids. Several *ex ante* justifications have been developed, built on different types of market failure.[42]

a. Myopia and Mispricing

Prominent in the late 1980s were concerns about the effects of uncertainty and asymmetric information on stock market efficiency.[43] Even if stock markets are "informationally efficient," meaning that investors cannot on average outguess market prices using public information, they may not do a good "fundamental" job of pricing target companies.[44] Fundamental pricing efficiency may be impaired either for all companies by market-wide distortions caused by fads, bubbles and informational cascades, or for individual companies engaged in difficult-to-value projects (such as research and development). In some instances, mispricing can be corrected only if companies make disclosures that would harm the firm (*e.g.*, by giving away competitively sensitive information).

If mispricing and myopia are substantial, apparent increases in shareholder wealth from premium takeover bids may be overstated: at best bids would sometimes represent costly rent-seeking, and at worst apparent premiums could mask inefficient transfers of value from target shareholders to bidders. Takeover defenses can reduce the likelihood that opportunistic bids at prices below target companies' true value will succeed or even be made. Alternatively, takeover threats may force target managers to run their companies with the sole goal of maximizing short-term share prices (so as to ward off bids), reducing long-run value by foregoing hard-to-value projects.[45] Bebchuk & Stole show that in companies where the *level* of R&D/capex investment is unverifiable, some

---

[42] Defenses may also facilitate relations between companies and factor markets (*a/k/a* "non-shareholder constituencies") where complete contracts are infeasible or costly. Managers, employees, creditors, customers and suppliers make company-specific investments – in human capital (managers and employees), financial capital (creditors), or fixed assets (suppliers and customers) – that are not fully protected by explicit (legally enforceable) contracts. E.g., Shleifer & Summers, supra note 32; Margaret Blair & Lynn Stout, *A Team Production Theory of Corporate Law*, 85 VA. L. REV. 247 (1999), reprinted in 24 J. Corp. L. 751 (1999); John Coffee, *Stockholders Versus Managers: The Strain in the Corporate Web*, 85 MICH. L. REV. 1 (1986); Ronald Giammarino, Robert Heinkel & Burton Hollifield, *Defensive Mechanisms and Managerial Discretion*, 52 J. FIN. 1467 (1997). Testing these theories is difficult. See note __ infra.

[43] Stein, supra note 31.

[44] See Jeffrey N. Gordon & Lewis A. Kornhauser, *Efficient Markets, Costly Information and Securities Research*, 60 N.Y.U. L. REV. 761, 786-97 (1985); Donald L. Langevoort, *Theories, Assumptions and Securities Regulation: Market Efficiency Revisited*, 140 U. PA. L. REV. 851, 9120-20 (1992); Stephen F. LeRoy, *Efficient Capital Markets and Martingales*, 27 J. ECON. LIT. 1583 (1989); William K.S. Wang, *Some Arguments That the Stock Market is Not Efficient*, 19 U.C. DAVIS L. REV. 341, 375 (1986).

[45] Stein, supra note 31. See also Charles R. Knoeber, *Golden Parachutes, Shark Repellents, and Hostile Tender Offers*, 76 AMER. ECON. REV. 155 (1986). Shareholders that are themselves firms (*e.g.*, mutual funds) may also be imperfectly monitored by their own shareholders, and may be managed for short-term profits rather than portfolio firm value.

net present value projects will not be undertaken; by contrast, in companies where the *productivity* of R&D/capex is unverifiable, some negative net present value projects may be pursued.[46] Defenses can reduce pressure on target managers to maintain the highest possible short-term share price, and thus improve long-run performance.

b. Private Benefits of Control

A final justification for takeover defenses – one that received little attention in takeover debates of the 1980s – takes two distinct forms, both focusing on the benefits that flow from controlling a company. First are theories in which one or more pre-IPO shareholders simply value control at an idiosyncratically high level. Neoclassical economic theory models companies as anonymous black-box production functions, valued solely for their ability to generate wealth, which – assuming "complete markets" – can be used to buy whatever shareholders desire.[47] Thus, idiosyncratic valuation of companies is absent.[48] But complete markets do not exist, and consumers with enough wealth may value companies differently. Entrepreneurs may place special value on companies they create; long association can create attachments that can make control, and the resulting assurance of continued association, uniquely valuable to the CEO or a small number of executives; and companies that involve multiple members of multiple generations of a family (as with Ford Motor) may make control a unique good for members of that family. Tastes for control of a given company may vary.

A second form of private benefits justification combines agency cost theory with incomplete contracts among shareholders. A wedge usually exists between the value of a firm to passive shareholders and the value of control of the firm to a controlling shareholder.[49] In many, perhaps most cases, private benefits taken from a company by a controller reduce by an equal or greater amount the "shared benefits" of ownership (dividends, resale value, liquidation payments), and allowing private benefits to be harvested is thus often inefficient *ex ante*, and companies have an incentive to make credible commitments to minimize them.[50] But at times, the costs of committing not to harvest private benefits will outweigh gains from doing so.[51] Even if Arthur Sulzberger places no idiosyncratic value on being the one person with authority over the front page of the *New York Times*, whatever value that authority has cannot

---

[46] Bebchuk & Stole, supra note 28.

[47] ANDREU MAS-COLELL, MICHAEL D. WHINSTON & JERRY R. GREEN, MICROECONOMIC THEORY 153-57 (1995) (traditional microeconomic theory views firm "merely as a 'black box,' able to transform inputs into outputs," but noting that "If prices ... depend on the production of the firm, the objective of the owners may depend on their tastes as owners").

[48] *E.g.*, Harold Demsetz, *Information and Efficiency: Another Viewpoint*, 11 J.L. & ECON. 1 (1969).

[49] *See* John C. Coates IV, *"Fair Value" as a Default Rule of Corporate Law: Minority Discounts in Conflict Transactions*, 147 U. PENN. L. REV. 1251, 1273-77 (1999).

[50] Id., at 1313-27.

[51] See Bebchuk, Concentrated Ownership, supra note 28; Demsetz, supra note 33.

feasibly be shared with outside shareholders. Ownership of sports' teams,[52] entertainment companies, and companies making luxury items (vineyards and cigar companies, for example) all plausibly offer private benefits that are (second-best) efficient for controllers to retain and harvest, rather than attempt to share or forego.

In either form of private benefits theory, a controller will be inclined to retain a "control lock" – keep control wholly "noncontestable" – by selling less than 50% of the common stock, or by splitting votes and ownership in a dual-class or pyramidal structure.[53] This is especially likely where private benefits are large relative to shared benefits. But as Bebchuk notes, at a lower level of private benefits, a controller may do best by allowing takeover bids but making them more costly by adopting defenses.[54] A control lock may exacerbate agency costs more than its expected value in protecting private benefits. Alternatively, wealth and liquidity constraints may be large enough to prevent a controller from pursuing profitable opportunities requiring outside capital unless she is willing to go public without a control lock, but not so large as to prevent the controller from making takeovers difficult by adopting defenses.

C. Empirical Implications of Prior Theories of Defenses

These different justifications have different empirical implications. *Ex post* justifications will tend to apply to all companies, unless bid competition is predictably more intense for some targets than others, in which case defenses may be more valuable in inducing auctions for companies with less "natural" bid competition. If the goal is to solve collective action problems or increase bid competition, defenses that supplement the Williams Act – such as fair price or supermajority provisions, which impede coercive bids and encourage equal treatment of target shareholders – will be preferred over defenses – such as pills – that may achieve those objectives but also give substantial discretion to target managers. If the goal is to increase target shareholders' bargaining power, some role for a pill may be indicated, particularly if the use of the pill is monitored and constrained by independent directors, institutional shareholders, or courts. But in either case, the *ex post* case for defenses suggests they benefit all companies, subject only to variations in expected bid competition.

The *ex ante* justifications discussed above, by contrast, plausibly apply to some subset of companies. Private benefits of control will vary by owner and company. If market-wide myopia is common, some amount of defense might tend to be generally optimal, regardless of company-specific variations, but the difficulty of valuing a firm with public information is also likely to vary by industry, life-cycle stage, and business strategy. Defenses are not likely to be uniformly optimal for these reasons: some companies will benefit more than others.

---

[52] See Demsetz & Lehn, supra note 33.

[53] Bebchuk, Concentrated Ownership, supra note 28; see also Grossman & Hart, supra note 34; Milton Harris & Artur Raviv, *The Design of Securities*, 24 J. FIN. ECON. 255 (1989).

[54] Bebchuk, Concentrated Ownership, supra note 28.

Ex ante justifications also predict different types of defenses. If market-wide myopia is a problem, defenses that constrain not only bidders but also existing managers will outperform defenses that provide explicit exceptions for manager-sponsored transactions, such as management-led leveraged buyouts (LBOs). If, on the other hand, private benefits of control, or company-specific valuation difficulties are more important, defenses might best apply solely to bids initiated by outsiders.

When one adds negative effects of defenses on value – the expected increase in agency costs caused by reducing threat of takeover, and the reduction in share prices because of fewer premium bids – the empirical picture gets more complicated. If agency costs vary among companies, as they probably do, then combining that variation with a general *ex post* justification of takeover defenses, such as bargaining power, could make it optimal for some companies and not others to adopt defenses. Likewise, if the number or size of premium bids arising from non-agency-cost reasons (*e.g.*, synergies between bidder and target) vary from firm to firm or industry to industry in a predictable way, then different companies could make different assessments of the net benefit or cost of defenses on bid incidence and outcomes. *Ex post* justifications predict that a subset of companies (those with high agency costs or little need for bargaining power) will be better off adopting fewer defenses, after traits linked to *ex ante* justifications are controlled for.

In sum, theoretical justifications for defenses have varying implications for what we should observe companies doing at the IPO stage. If any or all of these theories have something both true and important to say about how corporate control structures are valued, defenses at companies going public should vary with company traits related to anticipated agency costs, bargaining power, potential hard-to-value projects, or private benefits of control. Ideal empirical proxies for these theories are not available. But some seem ready to test: companies expecting large amounts of free cash flow, for example, should have higher agency costs, on average, and defenses should have more detrimental effects on company value than at other companies. Before detailing the empirical tests, however, more discussion of the primary theory tested in this paper – the law firm hypothesis – and its close cousin, the banker hypothesis – is in order.

II. Blame the Lawyers

As noted at the outset, theories in which defenses are either "all good" or "all bad" are not themselves a help in understanding the IPO/defense puzzle (*i.e.*, why roughly half – but only half – of companies adopt defenses before an IPO). More theory is needed to reconcile the IPO/defense puzzle with either an extreme version of the Easterbrook & Fischel position, or an extreme version of the Lipton position. For either polar theory to hold, one would need to look elsewhere for some sort of market failure. Natural places to look are the markets for services provided to companies at the time of the IPO.

Companies about to go public for the first time employ two sorts of specialized agents: investment bankers and lawyers. Generally,

bankers provide advice about the pricing and timing of the IPO, and manage the sales process itself.[55] Lawyers provide advice about securities laws and disclosure obligations, and manage the SEC registration process.[56] Each professional may plausibly affect the defenses a firm adopts prior to the IPO. Without legal advice, the firm is unlikely to adopt defenses, for reasons discussed below. Without financial advice, the firm will not know whether a given defense is likely to result in a lower IPO price, reduce IPO proceeds, or increase dilution of pre-IPO shareholders. Companies are dependent on their specialized agents for information and advice that bears directly on what defenses are likely to be adopted during the IPO process.

Given that background, variation in takeover defenses at the IPO stage can be explained by positing inefficiencies in the provision of either financial or legal advice. If defenses are generally inefficient and the IPO pricing process itself is efficient, companies will pay a pricing penalty for adopting them. But if bankers provide poor advice to companies about possible pricing penalties, then companies may adopt defenses despite such a pricing penalty. If, on the other hand, defenses are generally optimal, then companies should by definition adopt them, but may not, if the lawyers on whom they depend fail to carry out instructions to adopt them, or fail to advise adoption in the first place.

For reasons discussed below, it seems more likely on *a priori* grounds that market inefficiencies affecting adoption of defenses would occur in the market for legal services before it would occur in the market for financial advice (much less in the securities or corporate control markets). Thus, the answer proposed and tested in this paper for the IPO/defense puzzle is that defenses are optimal for most if not all companies, and the main reason defenses are not being generally adopted is failure in the market for legal services. In short: blame the lawyers. That lawyers should not see failure in the legal market as entirely bad should be evident: if lawyers are to blame, then (good, responsive, or adaptable) lawyers may be able to make money by improving on the status quo.[57]

Direct evidence of mistakes can be found in the large number of legal gaffes found in the sample (described in Part III), which suggest that a significant number of attorneys are not paying much attention to basic corporate documents. Somewhat astonishingly, several companies in the sample used "form" charters and bylaws published by third-party service providers (*e.g.*, Blumberg) for generic corporations, with no effort to tailor the forms to the firm or the fact that it was going public. In addition,

---

[55] KENNETH J. BIALKIN & WILLIAM J. GRANT, JR., EDS., SECURITIES UNDERWRITING: A PRACTIONER'S GUIDE (1985) (describing roles of lawyers and bankers); CHARLES J. JOHNSON, JR., CORPORATE FINANCE AND THE SECURITIES LAWS 95-100 (1990) (same); Seymour Jones, M. Bruce Cohen & Victor V. Coppola, *Going Public*, in WILLIAM A. SAHLMAN & HOWARD H. STEVENSON, EDS., THE ENTREPRENEURIAL VENTURE 403-06 (1992) (same).

[56] Id.

[57] The word "may" is a key qualifier. As discussed below, poor advice on one legal issue may be bundled with superior advice on other, more important legal issues, so clients may be unwilling to switch lawyers or add new lawyers because of the poor advice.

however, basic facts about the structure of the legal industry make it likely that lawyers are to blame for variation in defenses prior to IPOs.

A. Failure in the Market for Legal Services

Lawyers write the documents in which defenses are (or are not) contained. Takeover defenses are "chosen" in the first instance not by a manager or shareholder – who focus on other, more important tasks, such as lining up investors, working with investment bankers on the roadshow,[58] and running the business – but by a lawyer. Charters, bylaws, stock certificates and prospectuses are all generated from law firm word processing systems, drafted by associates (or paralegals), reviewed by partners (or associates), and only cursorily (if at all) reviewed by non-lawyers during the IPO process.

Yet IPO lawyers are not lawyers who specialize in takeovers or takeover defense, for the most part.[59] The legal market is sufficiently segmented, and has been for the past 15 years, that most individual lawyers who routinely work on hostile takeovers do not routinely advise companies going public for the first time, and *vice versa*. It is rare for companies going public to be advised by individual lawyers who have current expertise in takeovers. This segmentation is true even at the firm level, albeit to a lesser extent. Leading takeover firms, such as Wachtell Lipton, do not handle a high volume of IPOs; and leading IPO firms, such as Wilson Sonsini, do not (or did not during the early 1990s) handle a high volume of takeovers.[60]

Exceptions exist: Skadden Arps had and has the size and market position to give it a significant role in both IPOs and takeover fights. Still, information and expertise do not readily travel even within law firms.

---

[58] See FRED LIPMAN, GOING PUBLIC 59, 165 (1997) (describing road shows as hectic and requiring full attention from managers and bankers; Microsoft's IPO road show covered eight cities, including London and Edinburgh, in ten days). When Glendale Federal Bank raised equity capital to meet regulatory guidelines in the early 1990s, managers spent eight weeks holding 20 large investor meetings from Los Angeles to London, plus many more small meetings, conference calls, and review sessions. See Official CS First Boston / Glendale Federal Bank Roadshow Tee-shirt (on file with author).

[59] Specialization is complex: lawyers specialize by client, activity (litigation, negotiation, counseling), and legal knowledge; and degree of specialization can be measured by time, revenues, lawyer self-identification or organizational structure. But none dispute the general notion that lawyers are and have become increasingly specialized. RICHARD L. ABEL, AMERICAN LAWYERS 122-23 (1989) (specialization began in 1940s and has increased with each decade; by 1982, 70% of Chicago lawyers surveyed "considered themselves specialists"); MARC GALANTER & THOMAS PALAY, TOURNAMENT OF LAWYERS 2-5, 48-49 (1991) (departmentalization, specialization and differentiation of large law firms all increased from 1960s to 1980s); SUSAN S. SAMUELSON, ED., LAW FIRM MANAGEMENT 1:19-20, 2:13 (1994) ("trend is toward … increased … specialization"); MICHAEL H. TROTTER, PROFIT AND THE PRACTICE OF LAW 50-51 (1997) (increased law firm specialization due to client demand for speed, more law, more competition, more in-house corporate law generalists; and younger lawyers, who specialize to justify high billing rates).

[60] See SAMUELSON, supra note 60, at 1:32-39 (contrasting M&A firms from "high-tech" firms, characterizing Wilson Sonsini as example of "high tech" firm competing not on basis of "expertise" but by offering "broad" services to "narrow" clientele); Lawrence M. Friedman, Robert W. Gordon, Sophie Pirie & Edwin Whatley, *Law, Lawyers, and Legal Practices in Silicon Valley: A Preliminary Report*, 64 IND. L.J. 555, 562 (1989) (same).

Corporate lawyers tend to work alone or in small teams. Law firms are infamously difficult to manage, and partners resist top-down management structures that might facilitate sharing of expertise within a given firm.[61] Lawyers compete internally for prestige and power, and have reasons (beyond traditional collective action problems) to resist sharing information with one another. Long protected by regulatory barriers to entry,[62] free from the threat of hostile takeovers, even today law firms are only incompletely subject to the forces of competition. Lacking access to the public capital markets, law firms have not historically invested in systems and technology to the same extent as other professional service firms.[63] As a result, it is not uncommon for a lawyer to have only the most general idea of what other attorneys are doing at her own firm – even within an area of specialization. In short, lawyers often lack even rudimentary knowledge necessary for systematic and reliable sharing of knowledge within a given firm, particularly expertise viewed as mundane, technical or of low salience to clients.

Lawyers themselves acknowledge that they frequently make mistakes, a phenomenon that extends to the largest and most reputable law firms. A recent survey of partners at firms in the AmLaw 100 by *The American Lawyer* finds that over half (52%) of partners surveyed who worked 60+ hour work weeks "worked so fast they made mistakes."[64] Among partners working less than 55 hours per week on average, 35% admitted they made mistakes. Although exceptions exist, partners work shorter workweeks than associates, so these figures understate errors among lawyers at law firms generally.[65] Self-reporting also

---

[61] ELLEN J. POLLOCK, TURKS AND BRAHMINS: UPHEAVAL AT MILBANK, TWEED (1990) (describing multi-year effort needed to change established law firms' compensation and management structures); JOSEPH W. BARTLETT, THE LAW BUSINESS: A TIERED MONOPOLY 34-36 (1982) (contrasting law firm management with business management).

[62] ABEL, supra note 59, at 48-71; BARTLETT, supra note 61, at 7-23.

[63] BARTLETT, supra note 61, at 27-36. See also Part II.E infra.

[64] *The Partner Survey: The View From the Top*, *AMERICAN LAWYER* 79, 82 (June 1999). On whether lawyers are generally incompetent, cf. Warren E. Burger, *A Sick Profession*?, 5 TULSA L.J. 1 (1968) (majority of trial lawyers incompetent); Roger C. Cramton & Erik M. Jensen, *The State of Trial Advocacy and Legal Education: Three New Studies*, 30 J. LEG. ED. 253 (1979) (reviewing studies finding federal judges report 9% of trial lawyer performances incompetent); AMERICAN BAR ASSOCIATION, STATE OF THE LEGAL PROFESSION 1990 (1991) ["1990 ABA Survey"] at 33, 56 (70% of lawyers report observing incompetence by other lawyers "sometimes" or "often", 10% "often"; 30% of private practitioners report career advancement not determined by quality of work); GEOFFREY C. HAZARD, SUSAN P. KONIAK & ROGER C. CRAMTON, THE LAW AND ETHICS OF LAWYERING 150 (3d ed. 1999) ("defining competence is … difficult"; ethical "discipline for incompetence [is] relatively rare").

[65] At many firms, associates, "legal temps," paralegals, or secretaries, with little training, perform important legal tasks. *Leverage – Call in the Troops*, AMERICAN LAWYER (July 1999), at 84-85 (ratio of associates to partners rebounded from downturn in early 1990s to reach all-time levels in 1998); 1990 ABA Survey, supra note 64, at 20 (58% of lawyers report not receiving frequent instruction, training or feedback from superiors); GALANTER & PALAY, supra note 59, at 65-66 (paralegals increased more rapidly in large firms 1972-1987 than lawyers; legal temp agencies grew from zero in 1983 to 12 in 1988); MARK C. SUCHMAN, ON ADVICE OF COUNSEL: LAW FIRMS AND VENTURE CAPITAL FUNDS AS INFORMATION INTERMEDIARIES IN THE STRUCTURATION OF SILICON VALLEY, Dissertation, Stanford Univ. (1994), at 9, 105 (secretaries); TROTTER, supra note 59, at 49, 57, 76, 101-

underestimates errors, not only because lawyers may be worried about their reputations (researcher promises of anonymity notwithstanding), but also because lawyers will not always notice their own mistakes as they make them, particularly in areas where they are not expert.

The market for lawyers in the IPO context may be especially inefficient. Unlike investors as a class, many pre-IPO shareholders (especially managers) are not repeat players in the IPO market. They depend on experts (law firms and investment banks) to advise them about the conventions and effects of governance term choices. Information asymmetries (between lawyer and client) are likely to be serious:[66] unlike stock markets, where full disclosure is enforced by a strict liability legal regime, clients rely upon the good faith, trustworthiness and reputations of attorneys to provide them with legal knowledge itself but also the information necessary to evaluate the quality of the legal knowledge provided. Securities lawyers rarely undertake the kind of full disclosure or disclosure-oriented self-scrutiny in which they routinely engage on behalf of corporate clients. Information asymmetries are exacerbated by uncertainty and time: any effect takeover defenses have is unlikely to emerge for years after an IPO, at which point the lawyers involved may no longer have a relationship with the IPO client, may no longer work for the same law firm, and may not even be practicing lawyers.[67]

---

11 (decreasing quality of legal work). Such delegation is due in part to the "doubling of associate leverage from 1960 to 1990," and resulting fall in average age of active lawyers. Id. at 49, 101 (founder/managing partner of two large Atlanta law firms with 30 years practice experience, stating "as the … number and percentage of inexperienced associates have increased, the average level of maturity and experience of major firm lawyers has … declined and with it the quality and value of the firms' work product").

[66] Eugene Fama & Michael Jensen, *Separation of Ownership and Control*, 26 J.L. & ECON. 301, 315-17 (1983) (monitoring of lawyers may be impossible even for other lawyers); George M. Cohen, *When Law and Economics Met Professional Responsibility*, 67 FORDHAM L. REV. 273 (1998) at 283-89 (asymmetric information between client and lawyer, resulting agency problems); Ronald J. Gilson, *The Devolution of the Legal Profession: A Demand Side Perspective*, 49 MD. L. REV. 869, 889-92 (1990) ("peculiar characteristic of legal services is that a prospective client will have difficulty determining the quality of services even after they are rendered," impairing market responses of collectivization of information, warranties and reputation).

[67] See TROTTER, supra note 59, at 83 (summarizing surveys and anecdotes of "lawyer burnout," leading to higher levels of early retirement); MACKLIN FLEMING, LAWYERS, MONEY AND SUCCESS (1997), at 26 (legal services may be hard to evaluate if effects or services take place over a period of years); 1990 ABA Study, supra note 64 at 11-12 (45% of post-1984 graduates changed jobs once by 1990, of which 76% had 3+ employers). If mistakes are large and clear, and clients able to impose tort or reputational sanctions for past mistakes of now-departed lawyers, firms would have an incentive to use internal quality controls to prevent mistakes. Rigorous controls on contract terms such as pre-IPO governance terms are (or were) uncommon. ROBERT L. NELSON, PARTNERS WITH POWER: THE SOCIAL TRANSFORMATION OF THE LARGE LAW FIRM 91 (1988) (characterizing "traditional management" of law firms as "ad hoc," with "no regular monitoring"); SAMUELSON, supra note 60, at 2:14 (agreeing large law firm management has been "modified anarchy"). Lack of such controls could mean mistakes were rare or trivial, or not clear *ex post*, or that clients are unable or unwilling to sanction firms.

Information asymmetries may also be exacerbated by conflicts of interest.[68] Most directly, attorneys for start-up companies have increasingly taken explicit or implicit equity stakes in their clients.[69] Direct conflicts between lawyer/owners and manager/owners could affect advice on defenses if defenses had a negative effect on IPO pricing (or if lawyer/owners believed that they did), but the effect were small enough that manager/owners were willing to "pay for" defenses as a form of insurance against the risk of a bid.

Beyond direct conflicts, attorneys representing start-up companies often have multiple relationships with pre-IPO financiers, managers and other participants. When questions of law present conflicts as between pre-IPO shareholders, it is less likely that attorneys will render neutral, objective advice. In reviewing Suchman's studies of Silicon Valley,[70] Bernstein notes that Valley lawyers "may have a strong financial incentive to draft contractual provisions that favor [venture capital] funds at the expense of … entrepreneurs."[71] Regarding defenses, in particular, IPO law firms may correctly anticipate that while their relations with venture capitalists (VCs) will persist after the IPO, their relations with managers may diminish or disappear after the IPO regardless whether the company fails or succeeds – since if it succeeds, the company may become active in merger activity and need a new law firm with expertise in that area.[72] Relative to the interests of VCs, then, the interests of managers may get

---

[68] At the most general level, 44% of lawyers report "sometimes" or "often" observing "unethical behavior" by other lawyers; 7% report observing it "often." 1990 ABA Survey, supra note 64, at 33.

[69] Wilson Sonsini began allowing partners to invest in clients in 1983, although it stated that partners would not take "influential stock positions," and in 1990, after profiting handsomely from early investments in Sun Microsystems, began forming partnerships for investments in clients (at both founding and in later financing rounds) by partners and associates, further enhancing associate investment opportunities in 1999. In May 1990, Cooley Godward began forming similar partnerships. Both firms, as well as Venture Law Group, now routinely obtain two percent equity stakes on top of legal fees from start-up clients seeking representation. Brobeck Phleger also facilitates investments in clients by partners, but apparently only in later rounds when VCs invest, or in VC funds themselves. SUCHMAN, supra note 65, at 120-21 contrasts Silicon Valley firms with more traditional near-by San Francisco firms on this dimension in the sample period: "to succeed within Silicon Valley, lawyers must often defer billing or accept stock in lieu of payment," but "among San Francisco's more traditional firms … such contingent payment schemes [were] often viewed with mistrust" during the late 1980s.

[70] SUCHMAN, supra note 65.

[71] Lisa Bernstein, *Business Lawyering and Value Creation for Clients: The Silicon Valley Lawyer as Transaction Cost Engineer?*, 74 OR. L. REV. 239 (1995), at n. 43.

[72] If a firm grew or bought M&A expertise, the conflict described in the text would disappear. (Other conflicts, however, may appear. See Part III.I infra.) Wilson Sonsini has been pursuing this strategy: its M&A activity grew significantly in the 1990s, representing @Home in its $6.7 billion merger with Excite, and Netscape in its $4.2 billion acquisition by AOL. Decisions at the IPO stage continue to affect clients in the M&A context, however. *E.g.,* Quickturn Design Sys. v. Shapiro, 721 A.2d 1281 (Del. 1998) (Wilson Sonsini client forced to sell to white knight after Mentor bid, largely because of Quickturn's near-absence of pre-IPO defenses left it vulnerable to proxy fight); Krysten Crawford, *Quickturn Design Systems*, THE RECORDER 2 (Dec. 15, 1993) (available in Lexis/News) (reporting Quickturn IPO, with Larry Sonsini as company counsel); see note __ infra (discussing Quickturn fight).

short shrift from IPO lawyers.[73] And the advice they are least likely to give, even if objectively correct, is for the client to bring in new lawyers in order to add expertise to the IPO team.

Even if there is no direct conflict between VC and manager interests, IPO law firms may allocate effort and attention to the former rather than the latter. Since VCs typically sell their stakes in start-up companies shortly following an IPO,[74] they do not have a substantial ongoing interest in whether the company is well-protected from takeover bids. This is not to say that VCs would necessarily oppose defenses. Indeed, if defenses increased company value enough to improve IPO pricing, VCs would want them, and even if defenses have mixed or neutral effects on IPO prices, VCs with experience in the takeover arena may even suggest that managers consider adopting them, as a way of looking out for their entrepreneur clientele and enhancing the VCs' reputation.[75] Still, in general, VCs would not care as much about them as (well-informed or well-advised) managers.

Clients, too, have reasons to not want to switch to new lawyers at the IPO stage.[76] The clients' pre-IPO lawyers are likely to be needed during and after the IPO, simply because they will be much knowledgeable about many aspects of the clients' legal affairs, particularly arrangements with VCs or other pre-IPO outside shareholders, lenders, suppliers, and customers. IPO law firms play an important role in controlling access to capital providers and other third parties, which can give them significant market power, at least in the short run.[77] In addition, long-standing personal relationships, a sense of debt or gratitude if lawyers provided below-market fees during start-up period, and concerns about confidentiality[78] deter clients from switching law firms.[79] Switching costs

---

[73] Suchman, supra note 65, at 111-13 describes Silicon Valley lawyers "subtly steering [entrepreneur] clients toward negotiating positions that comport with prevailing community practices."

[74] See PAUL A. GOMPERS & JOSH LERNER, THE VENTURE CAPITAL CYCLE (1999), at 270 (table 13.1) (on average, VCs distribute 70% of stake in portfolio firm to VC fund investors within one year of IPO).

[75] Black & Gilson propose that VCs have an implicit contract to return control to successful entrepreneurs by allowing start-ups to go public even if IPO proceeds are lower than the price a larger, existing company would pay. Bernard S. Black & Ronald J. Gilson, *Venture Capital and the Structure of Capital Markets: Banks Versus Stock Markets*, 47 J. FIN. ECON. 243 (1998).

[76] Hiring two firms has its own problems. See text accompanying notes __ infra.

[77] SUCHMAN, supra note 65, at 144, 150 (table 6.2) (Wilson Sonsini drafted 43% of 107 first-round high-tech VC financing contracts, making up "full population" of such investments by two leading VC funds in Silicon Valley 1975-90); id. at 109 (giving example of market power); id. at 96 ("Wilson Sonsini … alone controls access to between 40% and 60% of all the venture capital in Silicon Valley"), citing Gail D. Cox, *A Valley of Conflicts*, NAT'L L.J. 1, 48-49 (June 20, 1988); Bernstein, supra note 42, at n. 65 ("Given their control over Silicon Valley's capital flow … and active role in creating and transmitting … information … Silicon Valley lawyers [may be] able to exercise a great deal of market power"); Friedman, *et al.*, supra note 60, at 562 (same).

[78] FLEMING, supra note 67, at 27 (clients "reluctant to disclose important confidences to [new] lawyers … a factor [that] at times … may overrule all others, including costs").

[79] Gilson, supra note 66, at 897-99; Gilson & Mnookin, supra note 79, at 359 (lawyer/client "relationship approaches a bilateral monopoly" because of relationship-specific

may partly explain the appearance of small law firms (fewer than 25 lawyers) as corporate counsel in 10% of the IPO sample analyzed in Part III, despite the general trend toward size in the corporate law firm market. More important, takeover expertise is no more likely to be found in firms with IPO expertise than in firms with pre-IPO expertise – in fact, law firms are more likely to have expertise in both of these early stages of a company's lifecycle than they are to have expertise in takeovers and one (but not both) of these areas.[80] At times, these costs may be worth it, as when an actual takeover bid appears on a company's doorstep. But at the time of an IPO, the remoteness of control contests may make retention of new counsel with takeover expertise a negative net present value proposition.

B. Potential Constraints on IPO Lawyers

Lawyers do face constraints in advising clients on takeover defenses in IPOs, and in choosing effort and care in implementing client decisions. Most directly, clients can monitor their lawyers directly, by asking questions, scrutinizing documents and thinking about defenses themselves. But for the same reason the client has retained the lawyer to begin with (lack of expertise, division of labor), most clients will defer to the advice of the lawyer, and be unable to monitor implementation.[81]

Although in principle a lawyer is ethically obliged to let a client make decisions, a lawyer's ability to frame a complex choice for a client, and to decide (in the course of providing advice) what information to give the client, will so shape the choice that client autonomy is the exception and not the rule for defenses, at least in the context of small- and mid-sized companies. With respect to defenses, conscientious lawyers may even make matters worse, if they lack confidence to provide strong advice about what defenses to adopt. That is because they may be tempted to frame the question as a choice along a continuum: no defenses, some defenses, all (standard) defenses. A client faced with that choice and neutral advice

---

information); see generally Paul Klemperer, *Markets with Consumer Switching Costs*, 102 Q.J. ECON. 375 (1987 (switching costs create market power). For older, larger and more profitable companies, law firm switching costs may be less important, and increasingly so. Gilson, supra note 66, at 914-16; SAMUELSON, supra note 60, at 1:18. Whether such costs are now associated with individual lawyers, rather than law firms, as lateral hiring and lawyer mobility have increased, *id*., does not affect whether such costs reduce market discipline and increase lawyer/client agency costs, for start-ups.

[80] Cf. Friedman, *et al.*, supra note 60, at 558-59 (1989) ("consumption needs for lawyers sharply change [when company decides] to 'go public'"; emphasizing securities law focus of IPO lawyer practice; distinguishing takeover specialists).

[81] FLEMING, supra note 67, at 26 (former judge and practitioner critical of high legal fees in litigation but likening valuation of legal services to "pricing of modern art," subject to "unending analysis and interpretation," the " extent and ultimate worth" of which cannot readily be determined"); Donald C. Langevoort & Robert K. Rasmussen, *Skewing the Results: The Role of Lawyers in Transmitting Legal Rules*, 5 S. CAL. INTERDIS. L.J. 375, 401-02 (1997) (in-house corporate counsel may have limited competence and their own agency problems). Older, larger and more profitable companies are more likely to have better and large in-house legal staffs more capable of monitoring outside firms. On the rise of in-house counsel, see Abram Chayes & Antonia H. Chayes, *Corporate Counsel and the Elite Law Firm*, 37 STAN. L. REV. 277 (1985); SAMUELSON, supra note 60, at 1:19.

from the lawyer about what to do may often be tempted to mimic Goldilocks, and adopt defenses that are neither too strong nor too weak. Because of the ways defenses interact, however, such a choice will tend to produce a net set of defenses much closer to the "weak" end of the continuum than the middle.[82]

Clients can in theory try to double-check advice by turning to another lawyer. But this generally works only if advice is relatively simple and discrete. Otherwise a second-opinion lawyer may provide unverifiably bad advice designed to make the initial lawyer look bad, and the initial lawyer can dismiss any dispute with a second-opinion lawyer as competitively motivated and at worst being a difference in judgment.[83] Further, the client must have at least some knowledge about the matter in question, to even realize that his attorneys may be making a mistake. As in the litigation context, second opinions in the corporate advisory context are of dubious value, and rare.[84] Likewise, concerns about reputation will only constrain lawyers to the extent that the quality of services is observable by third parties and reputational information can be produced and used by others for profit.[85]

---

[82] See Coates, Index, supra note 15.

[83] TROTTER, supra note 59, at 115-17, illustrates difficulties clients have hiring a second lawyer, even one with special expertise. After a matter handled by Trotter's firm stimulated a Senate inquiry, the client's in-house counsel invited a former SEC general counsel to tell his board about securities law risks, with the prospect of handling the SEC investigation (which in fact did ensue). Trotter describes himself as "interrupt[ing] our distinguished visitor to suggest that … it might be appropriate to start the deliberations of the board by inquiring if the company had done anything wrong, which in fact it had not. … In due course my client had the good judgment not to employ the [second lawyer]." In the story, Trotter is vindicated: the "Senate committee held its hearing and moved on…" and "the SEC … closed its file." To Trotter the moral is clear: "It was quite irresponsible for the [second lawyer] to seek to stampede the board into employing him…." Id. Another lesson, however, is also clear: it is difficult for a client to use unaffiliated lawyers for discrete but related matters.

[84] Michael Klausner, Geoffrey Miller, and Richard Painter, *The Law And Economics Of Lawyering Second Opinions In Litigation*, 84 VA. L. REV. 1411 (1998).

[85] Cf. Benjamin Klein & Keith B. Leffler, *The Role of Market Forces in Assuring Contractual Performance*, 89 J. Pol. Econ. 615 (1981) (investment in brand name or reputation may permit otherwise uninformed clients to assess quality of experience goods) and Larry E. Ribstein, *Ethical Rules, Agency Costs and Law Firm Structure*, 84 VA. L. REV. __ (1998) (large law firms have large reputational bond) with OLIVER E. WILLIAMSON, THE ECONOMIC INSTITUTIONS OF CAPITALISM: FIRMS, MARKETS, RELATIONAL CONTRACTING 395-96 (1985) (reputation deters "contract defection" if defection can be made public knowledge, consequences of defection can be ascertained, and parties who experience or observe defection penalize offenders or successors); Cohen, supra note 66, at 288-89 (reputational constraints only function if third parties can verify quality of advice given); and Langevoort & Rasmussen, *supra* note 80 at 410 (same asymmetric information that create lawyer/client agency problem make it hard for third parties to ascertain lawyer misfeasance). Third parties best able to evaluate law firm error and use those assessments to their advantage are other law firms, and law firms do on occasion compete by trumpeting each others' mistakes. Yet clients face similar problems evaluating such claims as they do in seeking second-opinions. In theory, to overcome some of these problems, a third-party reputational intermediary not engaged in legal practice might evaluate law firms neutrally, and sell rankings. No pure intermediary of that sort exists, to my knowledge; the closest substitutes – investment banks, boards, and venture capitalists – are discussed in the text.

A third potential constraint on company counsel in an IPO is underwriters' counsel. Bankers have their own lawyers, who review firm charter and bylaws and securities. But underwriter lawyers have two fairly narrowly defined roles: most important, they must see to it that the disclosure documents, for which underwriters bear potential liability, accurately describe what the firm documents say; and second, they alert underwriters to any terms that are likely to have price effects, or interfere with the offering.[86] For the latter task, the lawyers rely on shared experience with underwriters about what terms are "standard," and generally will only raise questions if the firm is adopting some novel or unusual term. Defenses of the sort studied in this paper are neither novel nor unusual, and would generally be accepted without much discussion by underwriters' counsel. More important, the *absence* of a standard defense would not be itself a reason for an underwriter lawyer to object on behalf of underwriters – any effect that such an omission would have would (properly) be blamed on the company's counsel, and would not plausibly have any direct or indirect effect on the underwriters. Some underwriters' counsel with M&A expertise may point out missing defenses anyway (to look good in front of the underwriters, or to try to edge out company counsel for future business), so some constraint is imposed on company counsel in this way, but many omissions could plausibly go uncorrected.

A final and more general set of potential constraints on company counsel in an IPO are legally informed participants in the process, who may provide "curbside" advice to clients or company counsel about what defenses to adopt. These participants include in-house counsel, as well as managers, VCs, directors, investment bankers or accountants who have legal training or takeover experience. Again, these participants will impose some constraint on company counsel in the IPO process. Still, it is unusual for these participants to have sufficient expertise, interest, and responsibility for monitoring choice of legal terms prior to an IPO to provide more than a weak constraint on company counsel. They may have some effect, but IPO lawyers are likely to have more effect.

C. Where Do Governance Terms Come From?

Given that IPO lawyers often lack first-hand expertise to decide what terms to include in an IPO company's charter and bylaws, or what advice to give clients, how might they go about getting enough information simply to perform those tasks? First, they might research the questions and arrive at independent answers. Second, they might talk to lawyers with that expertise, either in their own firm if possible or at other firms. Third, they might rely on "boilerplate" – form documents used in prior IPOs.

Of the three methods, the first is obviously very expensive and prone to error. Takeover defense analysis is complex. Not only are the legal academic and finance theories outlined in Part I indeterminate and

[86] BIALKIN & GRANT, supra note 55; Jones, et al., supra note 55, at 406.

unresolved,[87] the practical issues are many and difficult. Laws vary from state to state, and even if an IPO company sticks to conventional terms and does not try to innovate, it will need to make three choices for approximately 15 terms: whether to include a given term; whether to include the term in its charter, its bylaws, or remain silent; and under what circumstances and by whom the term can be modified in the future. Together, the number of possible configurations for even a "plain vanilla" set of corporate documents runs into the millions.[88] Many of these choices are questions of judgment, at least on their face, on which highly conflicting advice can be found in the practical and academic literatures. Last but not least, a lawyer must make sure that the documents are internally consistent, consistent with statutory law, and accurately reflect the lawyer's intentions. Reinventing the takeover defense wheel turns out to be harder than it looks.

If the lawyer decides not to rely on her own abilities, but instead to turn to another lawyer with some expertise in takeover defense analysis, she faces different difficulties. Clients may be unwilling to foot two lawyers' bills for the same work, so bringing in another lawyer may reduce the IPO lawyer's profit. Worse, the second lawyer may steal the first lawyer's business. A client may (wrongly, but understandably) expect that "a corporate lawyer" handling its IPO should have expertise in a "corporate law" topic like takeover defense. If the IPO lawyer must go to another firm, the second firm may be able to bundle both types of corporate legal advice together, or at least appear to, for so long as necessary to capture the relationship.[89] If, on the other hand, the first lawyer purposefully minimizes contact between the second lawyer and the client, to minimize the risk of relationship capture, the second lawyer will not have terribly good incentives to provide optimal advice. Even if the two lawyers are in the same firm, the second lawyer will not relish the idea of spending considerable time drafting and tailoring documents (and making related decisions) when he or she will derive little direct benefit from doing so. Those lawyers with "free" time to perform such tasks may

---

[87] For a survey of empirical evidence on defenses showing how unresolved theory is, see Coates, Critique, supra note 12.

[88] If 15 basic but important terms described in Appendix A take on three values (yes, no, silence), and default law can be chosen from two states (Delaware or home state), the resulting possible combinations are 3^{15} x 2 = 28,697,814. Many configurations will be equivalent; many will not represent meaningful arrangements. But the practical complexity is still daunting. Over 75% of the 160 companies analyzed in Part III, had a set of 15 governance terms that were unique within the sample, and no one set accounted for more than 4% of the sample. Similarly, a study of 513 large companies found 318 different combinations of 20 terms reviewed (15 firm-specific terms and five terms imposed by state antitakeover laws). Morris G. Danielson & Jonathan M. Karpoff, *On the Uses of Corporate Governance Provisions*, 4 J. CORP. FIN. 347, 366-67 (1998).

[89] If the IPO lawyer can find a lawyer with some takeover expertise in her own firm, this risk is mitigated, but there remains some risk that the second lawyer will attempt to become the primary lawyer handling that client's future corporate matters. Gilson & Mnookin, supra note 79, at 351 ("it would hardly be surprising were a client's loyalty to shift from its original contact to the lawyer who actually does the work"). This result is particularly likely if the client is going to be engaging in M&A transactions, which have much in common with takeover defense analysis, and less in common with the kinds of disclosure, general corporate and process-oriented advice that IPO lawyers provide.

not be the best lawyers for the job; expert takeover specialists, after all, make large amounts of money, and face equally large opportunity costs for their time.

D. Sources and Likely Effects of Boilerplate

That leaves boilerplate.[90] Boilerplate has more varied effects than might at first be apparent. Boilerplate can be created by firms, or by individual lawyers – that is, a firm can develop and keep current a set of forms that they more or less strongly encourage individual IPO lawyers to use (*internal boilerplate*), or it can let its lawyers borrow boilerplate on an ad hoc basis from various sources, counting on the lawyers to make sensible decisions about where to borrow and how if at all to modify what they borrow (*borrowed boilerplate*). Internal boilerplate will be more efficient than borrowed boilerplate if the firm routinely needs to rely on boilerplate, if for no other reason than word processing costs, but it also requires a significantly greater initial investment, as well as ongoing costs to maintain. It may frequently be cheaper for firms to free-ride on the efforts of competitors, or borrow from other sources close at hand.[91]

Boilerplate can be borrowed from at least three sources: private companies, default law and public companies. The first two are ready-at-hand and very cheap. First, the lawyer can rely on governance terms used by private companies, including terms used by the IPO company itself (*private company boilerplate*). Second, boilerplate (of a sort) can be developed by simply keeping documents to an absolute minimum, so that "gap-filler" default terms supplied by corporate statutes and case law are implicitly adopted (*minimal boilerplate*). However, private company boilerplate and minimal boilerplate will leave companies highly vulnerable to takeover. Private companies have no need of defenses, and in fact generally benefit from having terms that would facilitate hostile takeovers if used by public companies. Shareholder action by written consent, for example, is a benefit to private companies, that may wish to avoid formal shareholder meetings with associated expenses. But for public companies, the ability of shareholders to act by written consent can leave companies quite vulnerable to a hostile takeover bid. The cheapest and easiest boilerplate of all then – a private company's pre-IPO documents, which remain in force if no effort is made by company counsel – will generally make takeovers quite easy.[91a]

---

[90] The nature and likely effects of boilerplate terms are likely to vary by context. The following discussion is confined to boilerplate corporate governance terms, and may not extend to boilerplate terms in contracts or litigation papers.

[91] Cf. TROTTER, supra note 59, at 111, on research memos: "One does not accumulate billable time by preparing indexes to legal memoranda and, of course, billable projects are given precedence. [S]ome firms have employed librarians or other staff to do the job, but the skill level of people hired for this work is often lower than that of lawyers, and they often do not have any experience with the issues researched. … Many firms abandon the effort when they encounter these obstacles."

[91a] E.g., Amended and Restated Certification of Incorporation of ABC Corp. (forms of sample "D stage" preferred stock financing documents prepared at Wilson Sonsini) (on file

Likewise, default law in all 50 states makes takeovers surprisingly easy: Delaware default law permits shareholder action by written consent, and default law in states that follow the Revised Model Business Corporation Act (RMBCA) permits special meetings of shareholders to be called by 10% or more of the shareholders, which can also greatly facilitate a hostile takeover bid. IPO lawyers who look to underlying corporate statutes for guidance on governance terms, or who leave documents silent where they are unsure of the correct choice, will generally choose terms that make takeovers fairly easy. Thus, a bias against takeover defenses is built into the legal system, and to the extent that IPO lawyers lack expertise on the choice of governance terms, the companies they advise will tend to go public with minimal defenses in place.

If an IPO lawyer in a firm without internal boilerplate overcomes inertia and realizes that public companies need special governance terms, she can borrow from terms drafted by other law firms. Borrowing can be conceived as a random draw of defenses from some population, and will have (on average) different characteristics depending on the population. Plausible sources from which a lawyer might borrow include: (1) companies recently gone public with law firms prominent in the IPO world; (2) companies recently gone public with law firms that have takeover expertise; or (3) existing public companies.

If a given IPO lawyer borrows from a randomly chosen public company, defenses will range from many to few, but on average produce terms not optimal for a new public company. Existing public companies do not necessarily have the ability to choose terms on an ongoing basis that would be optimal for a company first going public, because some defenses may benefit the firm *ex ante* but reduce shareholder value once a company goes public. Suppose, for example, pre-IPO shareholders place an idiosyncratic value on control, so they would be willing to sell more cash flow rights for the same price with greater assurance of maintaining control. For such companies, defenses might maximize total value (to both pre- and post-IPO shareholders). But if for whatever reason the company went public without defenses, installing them midstream would represent a transfer of value from outside to inside shareholders. In addition, for reasons that remain mysterious, institutional shareholders do not seem to penalize companies for adopting takeover defenses prior to an IPO, but they have in the 1990s routinely voted against mid-stream adoptions of the very same defenses. Companies that went public prior to the time that defenses became important (in the late 1970s) may not reflect the best choice of defenses for a company going public for the first time. Finally, if borrowing from randomly chosen public companies is pursued by many lawyers, one would expect considerable variation in terms chosen, reflecting underlying variation in the public company population.

If the IPO lawyer borrows boilerplate not from any randomly selected public company, but from a company that recently went public and did not rely on IPO lawyers with takeover expertise, the borrowed

---

with author) (private company charter neither eliminating ability of shareholders to act by written consent nor establishing staggered board).

boilerplate will tend to lack defenses. At least some law firms can be expected to have allowed inertia to determine their clients' governance terms (by relying on private company boilerplate or minimal boilerplate), or to have borrowed from the overall public company population. Thus, the IPO population, too, will on average be biased toward fewer defenses. While drawing from an IPO population will probably improve the choice of boilerplate (since at least some of the prior IPO companies relied directly or indirectly on lawyers with takeover expertise), the choice will still, on average, reflect too few takeover defenses.

Finally, suppose the IPO lawyer relies on internal boilerplate. The results of doing so will tend to be fairly uniform: firms that encourage their lawyers to use standard forms from deal to deal will of course tend to produce IPO documents that track each other more closely than they will track IPO documents in general. While the results will be consistent for that firm, they may be consistently good or consistently bad, from the perspective of optimal advice on takeover defenses. If the firm has initially done a poor job of "reinventing the wheel," or if it has chosen initially to follow a private company format or rely on default law, or if it has borrowed a poor model for its own boilerplate, the resulting series of documents will uniformly reflect that poor choice. As compared to firms that rely on random draws from IPO companies generally or public companies generally, internal boilerplate will lead to the same mistakes being made again and again.

In sum, boilerplate can be expected to have a variety of effects. Boilerplate borrowed from private companies, or boilerplate that tracks default law, will consistently have few defenses. Boilerplate borrowed from public companies generally will have more defenses (on average) than private company or minimal boilerplate, and boilerplate borrowed from companies that recently went public will have yet again a slightly higher level of defenses (on average), but in each case such boilerplate will include fewer defenses than would be adopted by a company advised by a firm with takeover expertise. Boilerplate borrowed from public companies will also tend to exhibit greater variation across companies, because the sources for the boilerplate are more likely to vary. Finally, firms that develop internal boilerplate will show consistency in the defenses chosen, but whether defense are many or few depends on whether firms have takeover expertise, or whether the firm developing the internal boilerplate was self-conscious about lacking expertise and took the trouble to rely directly or indirectly on experts.

E. The Market for Lawyers versus the Market for Bankers

The legal and banking industries can be usefully if briefly contrasted, to show why it seems plausible that the latter would do a better job of providing good advice on a novel or difficult question. The legal industry is fragmented; the banking industry is concentrated.[92] Law firm

[92] Analysis of data on IPOs from Thomson Financial Securities Data (TFSD) shows that the top four lead underwriters captured a 52.2% market share 1990-2000; the Herfindahl-Hirschman Index (HHI) for the top 25 lead underwriters was 856. The top four issuer law

reputations fluctuate, banker reputation does not.[93] Lawyers are paid flat time- or task-based rates; underwriters get paid more if the IPO price is higher.[93a] Would-be lawyers spend three years in school, pass at least one bar exam; investment bankers need do neither.[94] Lawyers are still mostly local, and even today few firms are truly national; top investment banks have long serviced the entire U.S., and are increasingly global.[94a] Law firms can be owned only by lawyers, and cannot raise outside equity to invest in technology or growth; investment banks can be owned by anyone, raise capital easily, and invest massively in technology and product development.[94b] Lawyers are slow; bankers are fast.[94c] Law firms are egalitarian and inertial; banks are hierarchical and restructure

---

firms captured 13.6% of their market; the HHI for the 25 top law firms was 112. See also SAMUELSON, supra note 60, at 1:40 n.3 ("legal industry .is highly fragmented"); Sander & Williams, *Why Are There So Many Lawyers? Perspectives on a Turbulent Market*, 14 LAW & SOC. INQUIRY 437 (1989) (50 top law firms had 8% market share in 1986); MICHAEL PORTER, COMPETITIVE STRATEGY: TECHNIQUES FOR ANALYZING INDUSTRIES AND COMPETITORS 92 (1980) (market fragmented if top 4 firms control under 40%).

[93] Analysis of data on IPOs from TFSD shows just one investment bank appeared in the top 10 lead underwriters only once for years 1990-1992, nine banks appear in the top 10 ranks for all three years, and 19 banks appear in the top 25 ranks all three years. Among law firms, 14 law firms appear once in the top 10 ranks, only two (Skadden Arps and Shiff Hardin) appear in the top 10 all three years, and only eight firms appear in the top 25 for all three years. See also Richard Carter, Frederick Dark, and Ajai Singh, *Underwriter Reputation, Initial Returns, and the Long-Run Performance of IPO Stocks*, 53 J. FIN. 285 (1998) (updating prestige rankings based on tombstone and underwriting allotments; making few changes in ratings of top underwriters).

[93a] JAMES B. ARKEBAUER & RON SCHULTZ, GOING PUBLIC (1998) 85 (IPO lawyers "typically bill by time"); FREDERICK D. LIPMAN, GOING PUBLIC 30-31 (1994) (underwriters charge fees based on percentage of new capital raised).

[94] It is now customary for would-be bankers to spend two years in business school, but there is still no requirement they do so, and many do not. With no additional training, many M&A lawyers switch to banks during peaks in the M&A cycle – whereas investment bankers are legally barred from making the opposite switch during recessions.

[94a] E.g., The Goldman Sachs Group, Inc. Preliminary Prospectus (Apr. 12, 1999) at F-22 to -23 (26% of identifiable assets and 29% of total 1998 revenues from Europe and Asia).

[94b] BARTLETT, supra note 61, at 27-36 (law firms not publicly owned); LISA ENDLICH, GOLDMAN SACHS: THE CULTURE OF SUCCESS 228 (1999) (by 1995, "every … major firm in [investment banking] industry had … transformed themselves into public corporations," save Goldman Sachs, which went public in 1999); The Goldman Sachs Group, Inc. Preliminary Prospectus (Apr. 12, 1999) at 82 (stating "technology is fundamental to our overall business strategy, "with expenditures of … $970 million in 1998 and a budget of $1.2 billion in 1999); David Komansky, *Inheriting the Mantle*, in CHARLES B. WENDEL, ED., THE NEW FINANCIERS 146 (1996) (president of Merrill Lynch, stating "technology is my single biggest concern [and] our most rapidly growing expense"). On whether public ownership would be efficient for law firms, cf. Fama & Jensen, supra note 66 at 315-17 (agency costs and difficulty of monitoring makes public ownership infeasible); Oliver Williamson, *Organization Form, Residual Claimants, and Corporate Control*, 26 J.L. & ECON. 351, 358 (1983) (impossibility of separating client information from and insuring retention of individual lawyers makes public ownership infeasible); Ronald J. Gilson & Robert H. Mnookin, *Sharing Among the Human Capitalists: An Economic Inquiry into the Corporate Law Firm and How Partners Split Profits*, 37 STAN. L. REV. 313 (1985) at n.30 (suggesting public ownership of law firms may not be inefficient).

[94c] ENDLICH, supra note 94b at 22 (Goldman is "fast-moving organization").

frequently.[94d] Lawyers resist new lines of business; bankers rapidly fill client demand.[94e] Lawyers resist expansion for fear of recession and layoffs; bankers do not blink at layoffs, and banks balloon in booms.[94f] If we had no evidence and had to choose a likely source of inefficiency to explain the IPO/defense puzzle, would we blame the bankers for providing bad advice about IPO pricing? Or would we blame the lawyers?

III. Testing Theories of Defenses at the IPO Stage

Together, Parts I and II suggest a number of predictions about the types of variables that should correlate with the choice of takeover defenses by IPO companies. **Table 3** collects the explanatory and control variables to be tested, and the sign of the coefficient predicted by the hypotheses to which they relate. Each of those variables is now discussed.

A. Law Firm Hypotheses

1. Takeover Expertise

Most straightforwardly, takeover defense adoption should correlate with whether corporate counsels have takeover expertise. As noted in Part II, many firms with takeover expertise do not have IPO expertise, and *vice versa*. However, some firms have significant business in each practice area; to the extent these firms show up in an IPO sample, the companies they advise should generally exhibit higher levels of takeover defense.

Public rankings of lawyer takeover expertise *per se* do not exist.[95] Thus, two new measures of takeover- or merger-related expertise at a given law firm were constructed for this article. First, most straightforwardly, the number of M&A transactions on which a given law firm is primary deal counsel to one of the parties should provide a good measure of M&A expertise. M&A and takeover expertise do not perfectly coincide: the vast majority of M&A transactions involve privately held

---

[94d] ENDLICH, supra note 94b at 22-23 (contrasting relatively flat management structure at Goldman with "steep pyramids [at] most large banking organizations," but noting that even at Goldman there were "two layers" of top management plus "operational divisions").

[94e] ENDLICH, supra note 94b at 17 ("close client relations … enables [investment bank Goldman Sachs] to respond quickly to changing client needs");

[94f] ENDLICH, supra note 94b at 222-24 (layoffs in 1983, 1987, 199 and 1994 of up to 10-20% of workforce at Goldman Sachs, one of world's most prestigious investment banks); CHARLES R. GEISST, WALL STREET: A HISTORY 353-67 (1997) (after 1987 market crash, investment banks contracted and unemployment increased; "Wall Street … still susceptible to severe boom and bust cycles").

[95] Rankings of firms active in M&A existed in the early 1990s, but only for top 20 firms in a given year. In contrast to the investment bank pecking order, which is consistent year to year, particularly within client industries, fewer than 10 law firms appear in the top 20 each year. Thus, the correlation coefficient between MASDC (see text accompanying note __ infra) and the M&A Top 20 rankings for 1990 from *Corporate Control Alert* is modest (.20); if M&A Top 20 rankings are replaced with a dummy variable set to one if a firm appears in the top 20, the coefficient rises to .76.

companies invulnerable to hostile takeover bids, so lawyers who specialize in M&A can have flourishing practices without ever working on hostile bids. Still, the two forms of expertise overlap, and the vast majority of the *dollars* involved in M&A are concentrated in public company deals that involve some hostile takeover risk. M&A lawyers (as with many people) tend to be more attracted to dollars than particular work.

A second measure of takeover expertise is an index of law firms by their takeover-related litigation experience. Takeovers, after all, are heavily litigated, and although court rulings and newspaper reports publicize many aspects of such cases, there is no better way to gain takeover-related legal experience than to fight a takeover battle first-hand. Because of the speed and complexity of such lawsuits, takeover expertise is not compartmentalized in the litigation departments of M&A law firms – corporate lawyers typically work in close company with litigators during the lawsuits, developing litigation and deal strategy together, going to court, and critiquing briefs and motion papers. Spill-over effects, in other words, should be common between takeover litigation and deal advisory expertise. If a given law firm is frequently named as counsel in cases involving takeover or M&A law, one would expect, all else equal, the firm to develop an expertise in advising clients on that law.

2. Law Firm Identity

To the extent law firms rely on boilerplate developed internally, one should expect the identity of the IPO companies' corporate counsels to correlate with the level of takeover defenses adopted by those companies. To the extent such firms also have takeover expertise, the direction of the correlation is clear (positive), but for firms without (much) expertise, the direction of the correlation is less clear: it may be that some firms without expertise are self-conscious about this fact, and borrow boilerplate from firms with takeover expertise (again, a positive relationship should show up); other firms may not only lack takeover expertise, but may out of ignorance, inattention or hubris not realize this fact, and simply maintain internal boilerplate with few defenses (showing a negative relationship). Further complicating matters, however, is the fact that few law firms have a large enough market share of the IPO advisory business for firm-level correlations to show up at statistically significant levels for law firms as a whole. If exceptions exist, they are likely to be very large firms like Skadden Arps and firms prominently associated with start-up companies like Wilson Sonsini in Silicon Valley and Hale & Dorr in Boston.

3. Law Firm Location

Law firms relying on borrowed boilerplate are also likely to exhibit geographic correlations. Law firms that are closer to each in physical proximity are more likely to share information, either formally, or by lateral hiring, or by conscious borrowing from large prominent law firms with high IPO market shares (Silicon Valley law firms are likely to look to Wilson Sonsini; smaller New York law firms are likely to look to Skadden Arps or Sullivan & Cromwell) or via common counterparties

(particularly accountants, investment bankers or VCs), and are more likely to think of one another as salient sources of public company boilerplate.[96]

Geographic concentrations of law firms are likely when economic activity is geographically concentrated, and such concentrations may be sustained or stimulated by geographically concentrated legal practices.[97] In the 1980s, "almost half of [Silicon Valley's] venture capitalists maintain[ed] offices in a single office building in Menlo Park."[98] Law firms were, as late the 1960s, exclusively local.[99] Ample anecdotal evidence exists of high-profile (and presumably well-regarded and competent) New York law firms and investment banks establishing offices in Silicon Valley, Moscow, Prague, London and other remote locations in an attempt to build practices that they had failed to build from their home locations.[100] While some efforts fail, the fact that such efforts are made is evidence that physical proximity matters, notwithstanding the internet and the fax.

Once established (for whatever reason),[101] such concentrations will tend to generate (or be sustained by) law firm networks that themselves

---

[96] Suchman, supra note 65, at 106 quotes a junior partner at a Silicon Valley law firm as saying "other Silicon Valley law firms … often [have] adopted our forms or vice versa." In addition to direct borrowing, geographically proximate firms may have similar clients with similar needs, but resulting contract or defense similarity would then be caused by client type or contracting need and not law firms themselves. Controls for geographic location, industry, size, etc., of clients are included in multivariate models tested in Part III.I.

[97] Recent work contrasts Silicon Valley and Boston's high-tech community on Route 128. Ronald J. Gilson, *The Legal Infrastructure of High Technology Industrial Districts: Silicon Valley, Route 128 and Covenants Not to Compete*, 74 N.Y.U. L. REV. 575 (1999), at 580-86 (reviewing literature); ANNALEE SAXENIAN, REGIONAL ADVANTAGE 1-9 (1994) (contrasting adaptation of Silicon Valley firms to international competition in 1980s with unsuccessful efforts by Route 128 firms; arguing divergence caused by "differences in productive organization," such as density of social networks, openness of labor markets, and degrees of specialization, hierarchy and secrecy, that affect rate of "collective learning and flexible adjustment … experimentation and entrepreneurship").

[98] SUCHMAN, supra note 65, at 24, 29; see also WILLIAM D. BYGRAVE & JEFFRY A. TIMMONS, VENTURE CAPITAL AT THE CROSSROADS 240 (1992) (VC funds concentrated in Silicon Valley).

[99] See GALANTER & PALAY, supra note 59, at 23, 47 ("In 1960 big law firms were clearly identified with a specific locality, as they had been since the origin of the big firm").

[100] Id., at 47 ("by 1980, of the 100 largest firms, 87 had branches"); Karen Dillon, *Brand Names at the Brink*, AMERICAN LAWYER (May 1995), at 5 (12% of Sullivan & Cromwell lawyers work in six foreign offices; 10% of Davis Polk lawyers work in five foreign offices); TROTTER, supra note 59, at 204 ("Cravath … is the only law firm among the sixty largest in the United States with only one U.S. office"). Even law firms as close to Silicon Valley as San Francisco found it necessary to open offices in Palo Alto to compete with Wilson Sonsini and other law firms in Santa Clara County. SUCHMAN, supra note 65, at 35, 120-21 (quoting interview subject, a lawyer at a Palo Alto office of a San Francisco law firm, as saying "here, in 1991, the guys in San Francisco still didn't understand how a business deal is struck in the Valley.").

[101] Silicon Valley's growth was famously rapid – "As recently as 1950, [Silicon Valley] … touted itself … as 'the Prune Capital of America,'" SUCHMAN supra note 65, at 6 – and fueled by proximity and interchange with Stanford University. Id. Less known are roles played by (1) the Department of Defense, NASA, and Lockheed, see EVERETT M. ROGERS & JUDITH K. LARSEN, SILICON VALLEY FEVER: GROWTH OF HIGH-TECHNOLOGY CULTURE 39, 269 (1984); SAXENIAN, supra note 97 at 20-27 & 178 n.38 (1994) (defense and NASA contracts fueled Silicon Valley growth 1940-1970, by 1964 Lockheed employed over 12,000 in Santa Clara County); (2) interchange of biotech specialists with University of

share information and develop network-specific norms and standard practices. In the VC financing stage, for example, Silicon Valley lawyers use "cookie cutter" forms into which they "cram" even deals that don't completely fit.[102] Geographically standardized arrangements concentrate activity still further: Silicon Valley lawyers interviewed by Suchman, for example, contrasted the small amount of argument or negotiation over venture capital finance agreements when the transaction involved "one of the other Silicon Valley law firms" with the way that "lawyers in other parts of the country … go crazy over a lot of stuff that would draw a yawn from a Silicon Valley lawyer."[103] Geographically standardized practices may also work to "creating socially constructed barriers to entry that prevent [non-local] lawyers from effectively competing for [local] business."[104] Geographically proximate law firms will tend to think of other local firms as their most dangerous competitors, and thus be more interested in keeping up with the others are doing, so that (perceived) best practices will be more readily copied within geographic localities.

Since New York law firms are more numerous and may be more diverse in size and nature of practice, geographic effects might be less pronounced for lawyers based in New York.[105] Still, among law firms of similar size and reputation, New York firms are expected to exhibit tendencies to adopt similar corporate documents. And because there are more law firms based in New York, statistical studies of a random draw of law firms in IPOs are more likely to uncover regularities in the documents drafted by law firms in New York than firms in other areas.

California at San Francisco, see SUCHMAN, supra note 65, at 20; and (3) federal tax, pension and securities legislation that stimulated VC funds in Silicon Valley, see BYGRAVE & TIMMONS, supra note 97, at 24-66 (describing legal changes 1978-81, rising market share 1978-88 of VC limited partnership funds, favored in Silicon Valley, relative to small business investment corporations).

[102] SUCHMAN, supra note 65 at 99-106.

[103] SUCHMAN, supra note 65 at 105-06; see also Mark C. Suchman & Mia L. Cahill, *The Hired Gun as Facilitator: Lawyers and the Suppression of Business Disputes in the Silicon Valley*, 21 L. & SOC. INQUIRY 679 (1996).

[104] Bernstein, supra note 71, at 253.

[105] New York retains the largest share of large firms, large firm revenue, and large firm profit, see *The AmLaw 100 Profits Per Lawyer, By City*, AMERICAN LAWYER (July 1999), at 123-25 (breaking down nation's largest 100 law firms by headquarters location), but its share of large firms has fallen from more than half to less than a quarter since the 1960s, see GALANTER & PALAY, supra note 59, at 48. New York also has very small generalist law firms representing the "other hemisphere" of the profession (individual clients), making it as or more diverse on size and practice dimensions than other locales. In race and gender diversity, however, it lags: in a 500+ firm sample 1980-90, New York had fewer women and minority lawyers, both associates and partners, than Chicago, Los Angeles, or the District of Columbia. ELIZABETH CHAMBLISS, NEW PARTNERS WITH POWER? ORGANIZATIONAL DETERMINANTS OF LAW FIRM INTEGRATION, Dissertation, U. Wisc. (1992), at 70.

4. Law Firm Size[106]

Larger law firms should exhibit more correlations among themselves. They will rely on internal boilerplate more often than small law firms, which will need to rely on borrowed boilerplate for novel matters. Larger law firms are also more likely to have adopted "form documents" and to encourage or require lawyers to use those forms in their individual practices. Larger law firms have broader clienteles, and are capable of supporting more intensively specialized lawyers,[107] and so should have more takeover expertise for IPO lawyers to draw upon. Even if (as argued in Part II) sharing of expertise within firms is hard, it seems likely to be less difficult than sharing expertise between firms, on average. Thus, larger law firms should tend to include more defenses, on average.

5. Reincorporation to Delaware

One last law firm effect may be caused by reincorporation. Nearly all companies choose either Delaware or their home (headquarters) state as their state of incorporation. Put otherwise, Delaware is the only state in which companies choose to reincorporate when they are about to go public. Often this reincorporation is accomplished from the home state just prior to going public. For such companies, the need to draft a new charter and bylaws that complies with Delaware law may prompt greater effort by the company counsel to review firm defenses, and at a minimum will often prevent company counsel from simply carrying forward private company boilerplate into the IPO documents. Thus, companies incorporated in Delaware will tend to have more defenses – not because Delaware default law imposes more defenses, but because the lawyers involved are more likely to do a better job on defenses as part of the IPO process.

B. Constraints on Law Firm Effects

Law firm effects should be mitigated by other variables that proxy for whether the IPO companies have direct or indirect access to alternative sources of legal expertise, that may constrain or modify company counsels' choice of takeover defenses. In particular, high levels of M&A activity in a given company's industry prior to an IPO will increase the salience– and make both managers and other IPO participants more aware – of takeover risk. Assuming defenses are optimal or neutral, industry-level M&A activity should make companies more likely to adopt defenses. Likewise, larger, older, less speculative, more profitable companies with pre-IPO shareholders that are sophisticated (VC funds), should have better access

---

[106] On the rapid growth of law firms through 1990, see GALANTER & PALAY, supra note 59, at 40-46 (100+ lawyer firms grew from less than 12 in 1960 to 251 in 1986; largest firms grew faster than profession; "market share of fifty largest firms doubled" from 1972 to 1986); ABA SURVEY, supra note 64 (lawyers in 60+ lawyer firms grew from 12% in 1984 to 21% in 1990).

[107] SAMUELSON, supra note 60, at 1:30, 2:17.

to independent legal advice. Assuming, again, that defenses are optimal or neutral for all companies, but not all lawyers know this, fewer defenses should be observed at companies that are smaller in size, are younger, engage in unit offerings, are owned by individuals, have less prestigious lead underwriters, and have lower earnings at the time of the IPO. Conversely, more defenses should be observed at companies that are VC-backed.

C. Alternative Hypotheses and Control Variables

Drawing on theories described in Part I, the following additional correlations are tested, both as alternative hypotheses, and as controls on the law firm hypotheses.[108]

1. General Inefficiency / Banker Hypotheses

If agency costs make defenses uniformly suboptimal, and the only reason that companies are adopting defenses is because some bankers are falling down on the job of informing companies about defense price effects, one would expect to see companies with lower quality underwriters adopting more defenses. One would also expect that sophisticated pre-IPO shareholders – such as VC funds – would be more likely to know of any price penalty that defenses impose on an IPO, and (since they are not themselves control shareholders) to resist defenses more strongly than other pre-IPO shareholders.[109]

2. Agency Cost / Bargaining Power Hypotheses

Bargaining power theory provides a reason for all companies to adopt defenses, and agency cost theory provides a reason for all companies *not* to adopt them. But in each case, these reasons may be stronger at some companies than others so that, together, they could explain defense variation. Defenses might be efficient at companies where the incremental agency costs created by defenses are lower than the value of bargaining power at some companies, but inefficient at other companies.

Higher agency costs can be expected to exist where companies have higher levels of cash flow and free cash flow. Agency costs are also likely to be higher at older and larger companies, which are more mature and more likely to be the "cash cows" usually said to be prime candidates for managerial slack. Conversely, agency costs are likely to be lower at companies with more debt. In each case, defenses should be inversely correlated with the proxy for agency costs: fewer defenses at companies with more cash flow and companies that are older and larger; more

[108] Adequate empirical proxies for company-specific capital are hard to identify, and none seem capable of distinguishing defenses adopted to protect company-specific capital from defenses adopted to protect private benefits. Thus, the company-specific hypothesis seems at this point practically non-testable.

[109] But see Black & Gilson, supra note 75 (suggesting VCs informally pre-commit to give up control even if doing so reduces “exit” value of their investment).

defenses at companies with more debt. Agency costs also vary by industry; if this variation is large relative to other factors, defenses should also vary by industry. Finally, some agency cost theorists predict that companies with more defenses will be managed less diligently, so that companies with more defenses would have lower returns on equity or assets, and should encounter more financial distress or bankruptcy than other companies.

The expected bargaining power of defenses will vary with the time a target would need to develop alternatives to a bid, as well as how much competition exists for the target regardless of defenses.[110] Daines & Klausner suggest increases in bargaining power are most value-enhancing when bid activity is otherwise low, and use M&A activity in a company's industry in the five years around the IPO as a measure of this activity.[111] Some company characteristics may make hostile takeovers more difficult, providing some companies with natural bargaining power, and making defenses less valuable. For example, high levels of debt impede "bootstrap" bids, high levels of shareholder dispersion impeded proxy fights, and hostile takeovers in high-tech or people-specific industries are more difficult, because (as is said) their "assets walk out the door each night." Defenses may thus be less valuable at companies with high leverage or shareholder dispersion, VC-backing, or in the development stage (prior to product sales).

3. Market Myopia Hypothesis

Because myopia theory relies on the existence of private information, it may be impossible to test dispositively. Nevertheless, the theory suggests that defenses may be more important for companies that are hard to value. High levels of planned capital expenditures or research and development expenditures might make a company harder to value, whereas high levels of fixed assets (property, plant and equipment) might make a company easier to value (at least when inflation is low and interest rates and fixed asset prices are stable). Companies are on average harder to value if they are in high-tech industries, or are in either the development stage or the growth stage (after sales have begun, but before they turn profitable), since their value is in the future, and there are fewer guides for valuation.[112] Such companies are likely to have more defenses.

---

[110] Together, the Williams Act, Proxy Rules and poison pill impose a minimum of 30-60 days delay on all bids for U.S. public companies, allowing bid competition to emerge.

[111] Daines & Klausner, supra note 1 find a positive correlation between industry-M&A and defenses, leading them to reject the bargaining power hypothesis, but industry-M&A may not be a good proxy for the expected value of bargaining power from defenses, as industry-M&A can shift dramatically over time. *See* Mark L. Mitchell & J. Harold Mulherin, *The Impact of Industry Shocks on Takeover and Restructuring Activity*, 41 J. FIN. ECON. 193, 207 (1996) ("50% of the takeovers in [any] given industry [in 1980s] cluster within a two-year period").

[112] Dawn Farber, *Cerent: The $6.9 Billion Question*, unpublished manuscript (April 2000) (on file with author) at 46-51; *Finding Ways to Profit from Internet Ventures: How Goldman Values Internet Firms*, CRAIN'S N.Y. BUS. (June 15, 1998) at 12; Suchman & Cahill, supra note 103.

4. Private Benefits of Control Hypotheses

As with myopia, the existence of private benefits is by definition difficult to test. For "psychic" private benefits, possible empirical proxies include whether the CEO founded the company, the CEO's tenure with the company, whether the company is named after the CEO or a major ongoing shareholder, and whether the company is owned by an individual or family. Private benefits of whatever kind are unlikely to motivate defense adoption if the CEO is using the IPO to sell shares (as opposed to dilute her ownership by raising more equity capital), since CEO sales may signal an intent to retire or sell out entirely in the near future.

Where private benefits of control are sufficiently high, owners may elect to retain a "lock" on control, so that takeover defenses become less important. Ownership structures that allow for such a "lock" may thus be substitutes for defenses. If so, fewer defenses are expected at companies with dual class capitalization, or where pre-IPO shareholders retain more of the voting stock after the IPO. Where executives own fewer shares prior to the IPO, they may be less able to choose defenses to maximize their private benefits, since non-executive shareholders are likely to insist on a structure that maximizes shared benefits. IPOs with VC-backing, lower levels of CEO ownership, or higher levels of independent director ownership, would thus have fewer defenses.

Finally, non-psychic private benefits (of a certain type) may vary with company industry. In particular, Field finds a strong correlation between dual class capitalizations in the printing, publishing and communications industry.[113] If dual class capital structures are chosen to protect such private benefits, then (controlling for dual class structures) one would expect more defenses at companies in industries in which dual class capitalizations are more common ("dual class industries").

D. Description of Sample

The main sample began with 180 public companies chosen randomly from companies that completed firm commitment initial public offerings (IPOs) during 1991 and 1992 (120 from 1991, and 60 from 1992), in each case from IPOs reported by *Going Public: The IPO Reporter*, which prior to 1998 regularly published a comprehensive annual list of firm-commitment underwritten IPOs during the previous year. *Going Public* also identifies IPOs of closed-end investment companies and real estate investment trusts, and because such organizations have qualitatively different business and governance structures, those IPOs were excluded. For similar reasons, three limited partnerships in the original sample were excluded, leaving 162 companies. The final sample represents 17% of the roughly 1000 ordinary business corporations that went public during those years, and 14% of the roughly 1200 total IPOs.

[113] Field, supra note 1. Combining industry data from Compustat with analysis of data on dual class capitalizations from IRRC, I was able to confirm Field's findings for the broader group of mature public companies making up the Standard & Poor's 1500. See Demsetz & Lehn, supra note 33 for similar findings regarding media firms and sports teams.

Dependent and independent variables determined for the main sample are described next, followed by summary statistics, mean comparisons and univariate analysis, and finally a multivariate regression analysis. To confirm and update some of the paper's findings, a separate sample of 200 IPOs from the first nine months of 1998, derived from Lapuschik,[114] was augmented with law firm data. This confirmatory sample is discussed in Part III.I.

E. Dependent Variable

For each company, data on company-specific governance terms were gathered from a review and analysis of each company's prospectus, charter, bylaws and (in a few cases) the terms of the securities issued. Each of those documents was required to be filed with the SEC by the company.[115] In a few cases, companies failed to make required filings of charters or bylaws, or appear to have filed incomplete or outdated versions; in such cases, review of the IPO prospectus and subsequent filings on Forms 10-Q or Form 10-K were made to obtain the correct documents, with two companies for which filings were unavailable being excluded from the sample, leaving 160 companies. Charter amendments at sample companies from the date of the IPO to the present were reviewed.[116] Some data were unavailable for some companies, leaving fewer observations in some regressions.

1. Governance Terms

Each company's documents were reviewed for whether the company had adopted any or all of 10 variable governance terms relevant to takeover vulnerability, as listed on **Appendix A**. Each term was coded in a dummy variable, indicating whether the term was included, affirmatively excluded, or was not addressed in the company's documents. In addition, the location of each present term (charter or bylaws) was noted. State corporate law was analyzed for each state in which a sample company was incorporated, and default law on the 10 relevant terms was coded. Together, the company-specific governance variables and the

[114] Lapushchik, supra note 1. The Lapuschik sample was randomly chosen from Hoover's Online, an online commercial service that tracks public companies, and excluded limited partnerships and REITS. Also excluded were companies that did not have at least one mutual fund investor as of December 31, 1988.

[115] Since 1994 (and before that for some large firms), SEC filings have been made available online via the SEC's EDGAR system. However, most firms that became public companies prior to 1994 have never re-filed their charters or bylaws, so such documents are not available via EDGAR, and only occasionally available through databases in widespread use such as LEXIS. Pre-EDGAR documents can be obtained from the SEC via commercial services, but only at a non-trivial per-firm cost; charters, but not bylaws, are typically available from the firm's state of incorporation, and only at a non-trivial cost.

[116] Bylaw amendments are of less concern because shareholders retain the ability to amend bylaws in all of the jurisdictions in the sample. Bylaws thus enter into the contestability algorithm only where firms restrict shareholders' ability to amend the bylaws in the charter.

default law variables provide a large percentage of the information necessary to analyze the sample companies' structural takeover defenses.

2. Contestability Index

As I have discussed elsewhere, empirical research on takeover defenses has to date provided limited useful information.[117] Among other failings, prior research has not attempted to systematize defenses to arrive at a unified measure of legal takeover vulnerability, but instead has either studied defenses on a defense-by-defense basis (and so did not control for defense interactions), or aggregated defenses in a theoretically unmotivated way (introducing high levels of noise). To provide consistency with prior research, this paper reports summary data using a term-by-term approach, with emphasis on the two single defenses that have the greatest impact on takeovers (classified boards and dual class capital structures). It also uses those specific defenses as dependent variables in alternative models to check the robustness of the base model. But the focus of the paper is on a new dependent variable – called the "contestability index," or "CI" – which is constructed from individual governance terms and is offered as a better measure of legal vulnerability to takeover than any one term alone (or any simple aggregation of terms).

The contestability index is complicated, such that a full description of how it works is deferred to **Appendix B** (and is also contained in a separate working paper).[118] Briefly, the contestability index is composed of (1) governance variables and (2) an algorithm that maps those variables onto a numerical index that equals the number of days necessary for a majority shareholder coalition to replace a majority of the board. Governance terms used in the index are determined as discussed above. Where documents are silent, default law is analyzed to supply missing terms. Together, this analysis establishes four things: (a) the normal procedure for shareholders to elect directors, (b) the procedures (if any) that shareholders have to short-circuit the normal process, (c) the procedures (if any) that shareholders have to change any of the foregoing rules, and (d) any constraints on the board's ability to block tender offers with a poison pill.

Analysis of these rules for a given company will indicate a "shortest path" for a majority shareholder coalition to replace the target's board. One "shortest path" – the way someone not familiar with corporate law would expect the process of director election would work – is simply for the shareholders to wait until their next, regular annual meeting and elect a majority of the board at that meeting. In fact, this is the "shortest path" at a small subset of companies, and even for these companies, the time until the next regular meeting can vary substantially depending on where the company is incorporated and when in the calendar year the effort to replace the board begins.

For a majority of companies, shareholders can "act early" through one of two routes: they can call a special meeting, or they can act by

[117] See Coates, Critique, supra note 12.

[118] See Coates, Index, supra note 15.

written consent in lieu of a meeting. At most of these companies, shareholders can also stage a "coup" by removing the board, or "pack" the board by expanding it, and in either case filling the resulting vacancies. At many companies, bylaws that on their face might restrict these "shortest paths" can themselves be changed by shareholders.

At another subset of companies – those with effective staggered boards – shareholders must be willing to wait through two election cycles to replace a majority of directors. Many companies that have staggered boards, however, are vulnerable to "coups" of the sort just described, whether via "early action" or at a regular shareholders' meeting. A small subset of companies with staggered boards also have cumulative voting provisions that enable managers to retain a lock on control for between two and three years. Finally, another small subset of companies have adopted implicit or explicit prohibitions on poison pills, so that a proxy fight is not necessary: a takeover may be accomplished by tender offer with the minimal delay imposed by the Williams Act.

The index should remedy several problems with prior research. By focusing on delay caused by different terms, the index extracts from governance terms those features that have both an actual and highly variable effect on takeovers at different companies, and disregards those terms (*e.g.*, fair price provisions) that have effects (*e.g.*, deterrence of two-tier bids) that are duplicated by other terms (*e.g.*, poison pills, control share statutes),[119] and also disregards events (such as pill adoptions) that in themselves have little effect on a company's takeover vulnerability.[120] In addition, the index captures the way governance terms affecting takeovers interact.[121] A company's full complement of terms can make takeovers both harder and easier than a single term would imply. The index reflects those interactions, and provides significantly improved information about the legal vulnerability to takeover of the companies in the sample.

F. Explanatory and Control Variables

Basic IPO data, including lead manager, offering size and date of offering, were taken from *Going Public*, and confirmed from the companies' SEC filings. Some pre-IPO and just-post-IPO characteristics – such as law firm identity and location;[122] director and officer (D&O)

[119] See Coates, Critique, supra note 12 (part III.B).

[120] Id. (part III.A).

[121] Id. (part III.C).

[122] Lawyer location and size were coded both at office and firm levels. That is, data were gathered on (1) where lawyers primarily responsible for a given IPO were located, based on information in the issuer's registration statement filed with the SEC for the IPO, and how many lawyers were located in that office, and (2) where the largest office of each law firm was located, and the number of lawyers in the firm as a whole, using information from the National Association of Law Placement, or where NALP did not include a firm, from Martindale-Hubbell, Inc. For location, law firm office is hypothesized to have a larger effect than headquarters, based on likely information flows among lawyers in a given office and the relative autonomy of separate teams of corporate lawyers. For size, total firm size is hypothesized to have a larger effect than office size, as capital resources and costs and benefits of standardization of IPO documentation seem more likely to be determined by the size of a firm as a whole. Data reported reflect those hypotheses unless otherwise noted.

ownership; pre-IPO shareholder ownership retention; firm and legal age; development-stage status; and CEO compensation, age and tenure, and whether the CEO founded the company – were gathered from IPO prospectuses. Sponsorship by VC or LBO funds was taken from annual lists of IPOs published in *Venture Capital Journal* and *Buyouts*, respectively, and confirmed from the companies' SEC filings. Ownership by individuals or families and corporate parents – *i.e.*, splitoffs or equity carve-outs – were obtained from prospectuses.[123] Carter-Manaster rankings of underwriter prestige were taken from Carter, Dark & Singh.[124] For more precise definitions of explanatory variables, see **Appendix C**.

Pre-IPO financial data were obtained from the companies' IPO prospectuses, and post-IPO financial data were taken from COMPUSTAT. Post-IPO events (such as merger or bankruptcy) were researched through searches of the *Wall Street Journal*, *Dow Jones Newswire* and *New York Times*, and through searches on news articles on Lexis. Post-IPO ownership structure was obtained from company proxy statements filed with the SEC, and post-IPO charter amendments were obtained by reviewing filings on Form 10-K and 10-Q.

Data on law firm size and law firm locations were taken from annual directories published by the National Association of Law Placement, Martindale-Hubbell, Inc. and Harvard Law School's Office of Career Placement. As empirical proxies for law firm takeover expertise, three simple, new indices were constructed.[125] First, to focus on M&A experience that plausibly requires takeover expertise, law firms were indexed by a variable called MASDC, which is the number of transactions in a subset of SDC's M&A database for the three-year period (1988-1990) prior to the IPO sample period for which a given law firm acted as counsel to one of the principal parties to the deal. To focus on deals that involve some risk of a hostile "bust-up" bid, deals were included only if they involved majority acquisitions of public companies that lack controlling shareholders (n=1131). The second and third indices (SUITSALL and SUITSDEL) use appearances in merger or takeover-related litigation in the period preceding the IPO. A Lexis search was conducted, in Delaware and all state courts in the period 1980-1990, for any of the following words or phrases: *merger*, *acquisition*, *takeover*, *tender offer*, or *proxy fight*. Duplicate cases were excluded. The results were two numbers, which proxy for a law firm's M&A-litigation experience for the period prior to the IPO sample period.

---

[123] Selection of defenses may be distorted by parent-level agency problems when the company going public is owned by an existing public company, so corporate parentage is controlled for in the model.

[124] Carter, Dark & Singh, supra note 92.

[125] In addition to the constructed law firm indices, law firm rankings were taken from *Corporate Control Alert* (for top M&A firms), *American Lawyer* (for firms with the highest revenues per lawyer and profits per partner), and *Going Public* (for top IPO firms). Regression results for those variables, not reported, were qualitatively the same as for the constructed law firm indices.

Standard industrial classification (SIC) codes were obtained from the companies' SEC filings on Form S-1.[126] Three-digit SIC codes are also used to construct a proxy variable for recent industry-level M&A activity, similar to the approach in Daines & Klausner: all mergers and acquisitions involving public targets with market capitalization of at least $10 million in the three-year period prior to the sample IPOs were analyzed, and transactions were counted for each target's 3-digit SIC code, producing an index of recent industry-level M&A activity (MAINDACT).[127]

G. Descriptive Data

1. Company Variables

Table 4 gives a general sense of the kinds of companies going public in the early 1990s. Many small, unknown and development-stage high-tech companies can be found, particularly in the biotech industry. DNX planned to insert human DNA into mice to turn them into hemoglobin factories. Embrex was developing a method to allow chickens to be vaccinated in the egg – a tiny labor savings but one that could be leveraged over six billion chickens hatched each year in the U.S. But the sample also includes large, well-known and mature companies. The Equitable insurance company used its IPO to convert from mutual to stock ownership, and remains one of the 50 largest companies in the world; CompUSA has become the country's largest computer retail chain; and Danskin is a long-established and well-known maker of women's exercise clothing. The sample is distributed among 76 different 3-digit SIC groups, and 38 2-digit SIC groups. Sizeable clusters (10 or more companies) are found in a few industry groups, with more than 10 companies in only three industries: health services, medical instruments, and electronics.

Set forth on **Table 5** are summary financial and operational data on companies in the sample. The typical company was founded (often as a partnership or unincorporated entity) in 1983 and incorporated (or reincorporated) in 1986, making the median company nine years old at the IPO, with a "legal age" of five.[128] **Figure 1** shows the distribution of

---

[126] SIC codes present difficulties. There are an insufficient number of firms per 4- or 3-digit code to use SIC codes as controls, 2-digit codes are so broad in scope as to be of little use for firm-level analysis, and many firms engaged in related businesses are scattered through multiple 2-digit codes.

[127] As in Daines & Klausner, friendly and hostile deals were both counted, as friendly deals are often quasi-hostile. See G. William Schwert, *Hostility in Takeovers: In the Eyes of the Beholder?*, Working Paper (available at www.ssrn.com) (April 1999). Because recent industry-level M&A activity seems more likely to increase the salience of takeover risk and hence manager attention to defenses than it is to affect the expected efficiency of defenses as bargaining tools, industry counts were not scaled: high levels of large deal activity attract attention from managers regardless whether it is a large percentage of industry assets or firms.

[128] Prior researchers report IPO firm age, *e.g.*, Field, supra note 1, at 5 (average firm age of 18, median of 8 in IPOs 1988-1992); Wayne Mikkelson, Megan Partch & Kshitij Shah, *Ownership and Operating Performance of Companies that Go Public*, 44 J. FIN. ECON. 281 (1997) (median firm age of 5 in IPOs 1980-1983); Jay Ritter, *The Long-Run Performance of Initial Public Offerings*, 46 J. FIN. 3 (1991) (average firm age of 13, median of 6 in IPOs

company ages. By 1999, seven or eight years later, about a third (31%) had been acquired, and another 3% had gone bankrupt.[129]

Most companies were small, with median assets of $21 million.[130] At the IPO, fixed assets comprised about half of total assets, and most companies were barely profitable, with median earnings of $0.6 million, although median earnings rose significantly to $2.3 million in the first year post-IPO. The median company had 350 employees, little working capital and only $4.5 million in long-term debt, and raised proceeds of $24 million in the IPO. Stock was sold to a median 415 shareholders, with pre-IPO shareholders retaining on average 64% of the votes.[131]

Over the next five years, most companies remained barely profitable, with median earnings of $0.4 million and negative average free cash flow. Over that period, the median company spent $4.3 million per year on capital expenditures, invested $400,000 per year in R&D, and generated an ROA of 1% and an ROE of 5%.[132] About a third of the sample, however, produced high earnings, and threw off significant levels of free cash flow. Most of these were equity carve-outs or reverse LBOs. Examples include International Specialties Products, with average annual earnings of $61 million and free cash flow of $39 million, and Interstate Bakeries, with average annual earnings of $35 million and free cash flow of $60 million. But a few "pure" IPOs also generated sizeable earnings and cash flow in the five years post-IPO. Examples included Broderbund Software, with $16 million of earnings and $21 million of free cash flow, and Marquette Electronics, with $13 million of annual earnings and $15 million of free cash flow. Thus, it remains plausible that variation in free cash flow might explain variation in defenses.

2. CEO Variables

Table 5 also presents data on the CEO of the sample companies. The average CEO was 48 at the time of the IPO, and had eight years of experience at the company; about half (48%) of the companies were founded by the person who was CEO in the IPO, and a few (6%) are named after the CEO.[133] About 8% of CEOs sold stock and saw their proportionate stakes in their companies decline as a result of the IPO; the

---

1975-1984), but it is often ambiguous whether the data refers to original founding of the company's principal line of business ("firm age") or the (re)incorporation of a legal entity going public ("legal age"), or some mix of the two. SEC rules do not require or specify rules for disclosure of this datum. Legal age is often (much) lower, especially for reverse LBOs or equity carve-outs, and even first-time IPOs recently reorganized in anticipation of the IPOs, but firm age is itself often ambiguous, as business lines shift over time and can be bought or sold without formal change to a legal entity.

[129] Cf. Field, supra note 1, at 43 (table 11) (16% of IPOs acquired in 5 years, 23% in 7 years); Mikkelson, Partch & Shah, supra note 127 (24% of IPOs acquired in 5 years, 36% in 10 years). Varying overall M&A activity alter M&A hazard rates in a fixed post-IPO period.

[130] Average company size was much larger, because of outliers such as The Equitable.

[131] See Field, supra note 1, at 32 (table 1) (similar findings).

[132] Cf. Mikkelson, Partch & Shah, supra note 127 (ROE of .02 over 5 years post-IPO for 283 IPOs 1980-1983).

[133] See Field, supra note 1, at 32 (table 1) & 39 (table 7) (similar findings).

vast majority maintained or increased their voting power and equity ownership.

3. Law Firm Data

The sample confirms that as with legal services generally,[134] the market for corporate legal services in IPOs is highly fragmented: 160 companies turned to 111 different law firms for legal advice on one of the most important transactions in a company's life-cycle. The top 10 law firms in the sample accounted for less than a third of the sample; only one (Wilson Sonsini) captured more than five percent; and no law firm captured more than 10% of IPOs in the sample. **Table 5** shows that sample law firms are geographically concentrated in New York City (30%), California (19%), and Boston (11%), and about a quarter are scattered throughout the U.S. Most law firms (52%) are located in the same state as the company they advise, and more than half of the rest (51%) are located in New York City.[135] California law firms do not capture a large share of out-of-state company IPOs.

At the IPO, corporate counsel ranged in size from 2-lawyer shops to the Jones Day and Skadden Arps behemoths, each with more than 1,000 attorneys. Still, as **Figure 2** shows, most firms were large: the median firm had 214 attorneys, and the particular office working on the IPO had 131. Nearly half (47%) were in *American Lawyer's* AmLaw 100 for 1991 (based on gross revenues).[136] Since then, sample law firms have grown slowly to a median of 162 in 1998, or about 5% a year. In the early 1990s, many law firms laid off attorneys and retrenched, consistent with average slow growth over the decade.[137] By 1998, 12 (8%) sample law firms had disappeared, 10 by dissolution, two by merger into other law firms.[138]

Law firms in the sample worked on 20 public target M&A transactions 1988-1990, and litigated an average of 43 M&A cases in all

---

[134] See note 92 supra.

[135] The other locations where law firms are able to capture more than 5% of the out-of-state company sample are Boston (12%), Washington, D.C. (6%), Texas (6%) and Chicago (5%).

[136] Of those in the AmLaw 100 (for which the top rank is 1 and the bottom is 100), the median rank (based on revenues per lawyer) was 66.

[137] SAMUELSON, supra note 60, at 1:24 ("major firms in every market … reported sharply lower profits for 1990").

[138] Fink Weinberger dissolved 1993 after expanding in real estate in late '80s; Gaston & Snow dissolved 1991 after mismanagement; defections, and insolvency; Johnson & Gibbs dissolved 1995 after rapid growth in '80s, recession, layoffs, defections, and illness of founder in early 1990s; Townley & Updike dissolved in 1995 after Dorsey & Whitney hired away 10 top rainmakers and merger efforts with Coudert failed. Other vanished law firms were: Cascone & Cole; Cohen & Cohen; Grayson Givner; Katz Karacic; McKenna & Fitting; Mandell & Zaroff; O'Connor Broude; and Trotter Smith (founded by TROTTER, supra note 59). Several handled more than one sample IPO, increasing the mortality rate reflected on Figure 2 to 9%. By comparison, Hildebrandt, Inc., reported in GALANTER & PALAY , supra note 59, at 55 n.120, found 10% of midsize firms, making up 25% of firms at the time, dissolved or merged in just two years ended 1988. One can infer either that law firms in the instant sample were larger than "mid-size" firms studied by Hildebrandt, or the 1990s were a more stable environment for law firms than the mid-1980s, or both.

federal and state courts in the 1980s, including seven in Delaware courts. Again, those numbers are skewed by M&A-intensive Skadden, which in those periods alone worked on 186 public M&A deals and handled 325 M&A lawsuits, including 86 in Delaware courts. After Skadden, the M&A indices fall off rapidly; the median number of M&A deals is four, and the median number of M&A lawsuits is 17 (including one Delaware case). Independent rankings from *Corporate Control Alert* and *Going Public* Reporter show about 20% of sample law firms were in the M&A Top 20 in 1991, and an overlapping 20% were in the IPO Top 40 in 1991.

Table 7 lists the law firms that are in the top ten of the sample by number of sample IPOs and by indices of M&A deals and M&A litigation. Considerable overlap exists, so that 15 firms fill out all 30 spots on the three top ten M&A lists. Correlation coefficients exceed 0.85 for each pair of M&A variables (see **Table 8**). Sample law firms with high M&A indices predictably include mostly large New York firms (Skadden, Sullivan & Cromwell, Weil Gotshal), but geographic dispersion can also be seen, with law firms from Chicago (Kirkland & Ellis), Los Angeles (Latham), Cleveland (Jones Day), Houston (Baker & Botts) and Philadelphia (Morgan Lewis) showing up on one or more list. Boston law firms are notably absent from these top 10 lists.

4. Governance Terms

In total, 15 categories of governance terms were encountered, set out in **Appendix A**, and were coded in dummy variables (essentially "yes," "no," or "no choice"). **Table 5** reports summary statistics on these terms.[139]

Most companies adopted normal capital structures, with a single class of common stock having one vote per share, but 18 (11%) adopted dual class structures. Of these, 13 (8%) sell low-vote stock in the IPO, suggesting that the structures are intended to maintain a "lock" on control.[140] Blank check preferred, which enables poison pills to be adopted regardless of the number of authorized common shares not yet issued, was provided for by 86% of companies, and the number of authorized common shares was sufficiently large that pills were possible to adopt at an additional 10% of companies, leaving only 4% of companies with an implicit pill ban, and none with an explicit prohibition on pills.[141]

---

[139] Not reflected are sui generis governance terms adopted by a small number (<5%) of firms that relate to their industry, ownership structure, or other factors. Thus, notwithstanding the near-total contracting freedom that firms theoretically have at their disposal, they rarely exercise it. This finding is consistent arguments I and others have made elsewhere that transaction costs, signalling effects and network externalities may substantially constrain choice of governance terms by firms. See John C. Coates IV, *Fair Value as a Default Rule of Corporate Law: Minority Discounts in Conflict Transactions*, 147 U. PENN. L. REV. 1251, 1295-1306 (1998).

[140] Daines & Klausner find dual class structures in 6% of IPOs 1994-1997, and Field finds dual class structures in 7% of IPOs 1988-1992, and 5% of her sample have dual class structures and sell low-vote stock to the public.

[141] Daines & Klausner find blank check preferred in 95% of IPOs 1994-1997.

After dual class structures, the single most significant structural defense (the classified board) was in place at the time of the IPO in 34% of the sample companies. However, at 69% of companies, shareholders could remove directors without cause, and at 34% of companies, shareholders had the power to expand and "pack" the board, so that the takeover defense effects of 18% of the classified boards in the sample were avoidable. At 70% of companies, shareholders may act by written consent (51%) or by vote of 50% or fewer shareholders call a special meeting (67%) or both. Given that cumulative voting fell out of favor in the United States well before the sample period,[142] a surprisingly large 13% of companies chose to permit it (either expressly in their charters or by not reincorporating to one of the vast majority of states that permit or presume its elimination). Of those 20 companies, only two had classified boards (which as described in Appendix B can turn cumulative voting from a takeover vulnerability into a defense).

5. State of Incorporation, Default Law and Contestability Index

To calculate a firm's legal takeover vulnerability, it is necessary to not only review governance terms, but also review default corporate laws supplied by the 23 states where the companies were organized. **Table 5** reports summary statistics on state of incorporation. Delaware was the choice of state of incorporation for 62% of public companies,[143] California was second with 8% of the companies, and no other jurisdiction was chosen by more than 5% of companies. Over 95% of companies incorporated in Delaware or their headquarters jurisdiction, whereas only one of the Delaware companies was actually headquartered in Delaware. A review of state laws shows the default contestability index (CI) for Delaware companies (and thus the majority of public companies) was 45. For other states in the sample (28% of which follow the RMBCA), the default index was either 65 or 90.

---

[142] *See generally* Jeffrey N. Gordon, *Institutions as Relational Investors: A New Look at Cumulative Voting*, 94 COLUM. L. REV. 124, 145-46 (1994) (noting that mandatory cumulative voting was law in 22 states in late 1940s, but was default law in only six states and mandatory in none by 1992); for data on cumulative voting, *see* Sanjai Bhagat & James A. Brickley, *Cumulative Voting: The Value of Minority Shareholder Voting Rights*, 27 J.L. & ECON. 339 (1984) (24% of NYSE firms had cumulative voting in 1982); CHARLES M. WILLIAMS, CUMULATIVE VOTING FOR DIRECTORS (1951) at 66-69 (in 69 proxy fights 1943-1948, 60% of targets had cumulative voting, and estimating that 40% of 2,900 overall firm sample had cumulative voting, most due to mandatory statutes, but 9% from voluntary choice); David Ikenberry & Josef Lakonishok, *Corporate Governance Through the Proxy Contest: Evidence and Implications*, 66 J. BUS. 405, 414 (1993) (in 97 proxy contests 1968-1987, 34% of targets had cumulative voting). Analysis of data from INVESTOR RESPONSIBILITY RESEARCH CENTER, CORPORATE TAKEOVER DEFENSES (1995 & 1997), shows that about 11% of the S&P 1500 and the 500 other large or high-profile firms tracked by IRRC had cumulative voting in 1997, but half of these firms also had classified boards, which can turn cumulative voting from a takeover vulnerability into a defense, rather than a vulnerability; as described in Appendix C, and of the remaining firms, many presumably had cumulative voting for a long time, and are unable to obtain shareholder approval to abolish it.

[143] Field & Karpoff, supra note 1, at 37 (table 3) find a similar 59% of their sample incorporate in Delaware.

Data on governance terms were then combined with the contestability algorithm to compute an actual contestability index (CI) for each company. **Table 5** reports summary statistics for the contestability index. The mean contestability index for the entire sample was 167. The lowest index in the sample was for companies with implicit pill bans (CI = 30), and the highest for those companies with effective staggered boards and cumulative voting (CI = 998). The most common CI was 45, and the distribution was left-skewed: the 25th percentile and the median of the distribution of the index were both 45, and the 75th percentile was 211.

Most companies, in other words, left themselves fairly vulnerable to a hostile takeover, but a significant minority (28%) installed much more resistant defenses. Because of the dichotomous character of most governance terms, CIs do not appear in a smooth distribution across the range of possible CIs, but instead cluster in five groups (with some variation within the clusters). **Figure 4** groups companies into five categories based on the index and shows the u-shaped distribution of overall legal takeover vulnerability.

Exactly 50% of all companies varied from default law; CIs of sample companies exceeded CIs that would be imposed by default law by an average of 148, with differences ranging from -35 to +950. Only 43% of Delaware companies varied from default law, with actual CIs exceeding Delaware's default CI by an average of 183, with differences ranging from 0 to +950. By contrast, 90% of California companies did, but actual CIs were lower than California's default CI by an average of -12, ranging from -20 to +30.

6. D&O Ownership, Retention, and Amendments

In an IPO, pre-IPO shareholders do not usually sell control, instead on average retaining a majority of the firm's stock. In the sample, the median stake sold is only 35%, with less than 25% of IPOs involving sales of 50% or more of the pre-IPO shareholders' stake.[144] Directors and officers (D&Os) own a large percentage of the retained stake: the median post-IPO ownership by D&Os as a group, and by the CEO alone, were 42% and 8%, respectively.[145] Because governance terms can generally be changed by majority shareholder vote, the retention of majority stakes by pre-IPO shareholders suggests that governance terms at the time of the IPO might not reliably be the governance terms that will apply in the future, and thus might not have any real effect on the takeover vulnerability of a firm. If true, this reasoning would suggest that companies would amend their governance terms following the IPO but before they sold down their majority stakes.

[144] Cf. Field, supra note 1 (in 1,019 1988-1992 IPOs, average of 32% of voting shares sold, cutting median D&O ownership from 73% to 50%); Mikkelson, Partch & Shah, supra note 127 (in 283 1980-1983 IPOs, average of 32% of voting shares sold, cutting median D&O ownership from 68% to 44%).

[145] Mikkelson, Partch & Shah report that D&Os retain an average of 44% of the companies in their sample of 283 IPOs 1980-1983. Mikkelson, Partch & Shah, supra note 127.

After five years, by contrast, fewer than 5% of IPO companies were majority controlled by pre-IPO shareholders, and average D&O ownership fell below 20% between five and ten years after the IPO.[146] Thus, the companies in the sample studied in this paper should have "fixed" their CIs well before the present. [number] or __% of companies amended their charters at least once after the IPO. However, __% of such amendments had no effect on the CI (and consisted primarily of increases in authorized capital stock). Only three amendments changed the CI, and of those only two took place prior to the point at which the firm's directors and officers ceased to own majority voting control (both resulted in an increase in the CI).

7. Underwriters; Other Summary Data

Data on the managing underwriters (a/k/a lead managers) in the sample are shown in **Table 6.** As in the legal market, the market for lead managers is fragmented, with only two banks (Lehman Brothers and Merrill Lynch) serving as lead managers in 10 or more sample IPOs. The average Carter-Manaster ranking for the full sample was 7.18; when the 15 sample investment banks not included in those rankings are excluded, the median stays unchanged, but the average rises to 7.94.

Practitioners sometimes report that defenses generally, and dual class IPOs in particular, cluster in times of "hot" IPO markets.[147] As shown by **Figure 5,** the early '90s saw moderate but increasing IPO activity. While the number and dollar volume of IPOs doubled from 1990 to 1991, and rose significantly from 1991 to 1992, the years were at neither at the high nor the low end of an IPO cycle, with average activity during the period matching overall averages for the period 1980-1996. **Figure 6** shows the monthly incidence of IPOs, dual class control structures and classified boards within the sample period. Sample IPOs are distributed across the two-year period. (Recall that twice the number of IPOs were drawn from 1991 than from 1992.) No time clusters or trends are apparent. Clustering may not have occurred in the sample period, however, as it was only an average period for IPOs in general, compared to both earlier and later years, and in any event, sample size limits make finding such clusters difficult.

---

[146] Cf. Mikkelson, Partch & Shah, supra note 127 (after 5 years, <5% of 283 IPOs 1980-1983 have majority shareholder, and 60% of directors are independent).

[147] E.g., Laird H. Simmons III, *Pre-Offering Planning*, in JOHN E. RILEY & LAIRD H. SIMONS III, HOW TO PREPARE AN INITIAL PUBLIC OFFERING (Practising Law Institute 1997), at 95 (partner at Fenwick & West, asserting that "in strong markets, antitakeover provisions are not normally a problem, but in weaker markets … such provisions are more difficult to sell"). On "hot" IPO markets generally, see GOMPERS & LERNER, supra note 74, at 213-37 ("venture capitalists take firms public at market peaks, relying on private financings when valuations are lower" and "seasoned venture capitalists appear more proficient at timing IPOs"); Roger McNamee, *How to Fix the IPO Market*, 3 UPSIDE 24 (1991) (practitioner stating that "the whole problem can be summed up in the phrase 'IPO window'"); Roger G. Ibbotson & Jeffre F. Jaffe, *'Hot' Issue Markets*, 30 J. FIN. 1027 (1975) (documenting "hot issue" markets); Robert J. Shiller, *Speculative Prices and Popular Models*, 4 J. ECON. PERSP. 55 (1990) (developing model of IPOs as subject to fads, which underwriters exploit by rushing companies to market).

H. Mean Comparisons and Univariate Regressions

Data on governance terms and the contestability index can be partitioned based on other variables, and the means compared as first tests of some of the theories described in Parts II and III. Summary data on partitions, and related mean comparisons, are shown in **Table 6**, and summary data on defenses installed by the specific top law firms in the sample are shown in **Table 7**.[148] Univariate regressions are also used to supplement these comparisons, as a preliminary step toward the multivariate analysis in Part III.I.

1. Law Firm Identity and Location

At the most general level, law firm identity appears to affect defenses. One-way analysis of variance shows that mean CIs differ across law firms ($p<.01$). More detailed analysis is limited by the fact that as noted above, law firms rarely serve more than once or twice as corporate counsel in the sample. The only exceptions are Skadden Arps (seven companies) and Wilson Sonsini (nine companies). Both appear to use boilerplate, but the two firms appear to use radically different suites of defenses. Six of Skadden's seven clients have classified boards, none permit shareholders to remove directors without cause, two have dual class control structures, and five have CIs of 605. In striking contrast, only one of the nine Wilson Sonsini clients has a classified board, all allow removal of directors without cause, none have dual class control structures, and six have CIs of 45. Companies advised by Skadden Arps have a mean CI of 525, well above the mean for any other partition tested; those advised by Wilson Sonsini, by contrast, have a mean CI of 68, well below the sample average of 180. A t-test and a Wilcoxon rank-sum test easily reject the hypotheses that the mean and median CIs for companies advised by the two firms are the same, or that the two firms make similar recommendations regarding classified boards or dual class capital structures ($p<.001$).

Consistent with the hypothesis that geographic networks have an effect on corporate governance terms, the effect of law firm location generalizes beyond Wilson Sonsini to the few companies advised by other Silicon Valley-based lawyers in the sample.[149] Companies advised by

[148] Unless otherwise noted, mean comparisons are two-tailed t-tests with unequal variance.

[149] Each of Wilson Sonsini's two early local competitors – Ware & Friedenrich and Fenwick, Davis – appear once in the sample. Friedman, *et al*, supra note 80, at 560-61 (early growth of Wilson and Ware firms). From 1980 through today, Wilson Sonsini left local competition behind, growing from 12 lawyers in 1975 to 120 in 1988, 214 in 1991, 299 in 1996, 448 in 1998. Ware & Friedenrich, which also had 12 lawyers in 1975, grew more slowly, to 66 in 1988, 86 in 1991, 132 in 1996 and 269 in 1998 (after merging with Gray Cary). In the late 1980s, Wilson Sonsini began to face more competition from branch offices of San Francisco law firms, particularly Brobeck & Phleger and Cooley Godward, see SUCHMAN, supra note 40, at 34-44, and, more recently from Gunderson Dettmer (a 1995 spin-off of Brobeck), Venture Law Group (a 1997 spin-off of Wilson), and Palo Alto offices of Davis Polk, Simpson Thacher, and Sullivan & Cromwell. Lawyer attrition has soared, from spin-offs, lateral moves to out-of-state firms, and moves in-house at start-ups: Wilson lost 110 associates in 1999. Still, Wilson Sonsini remains the leading firm in

Valley law firms have a mean CI of 52, compared to a mean CI of 188 for companies advised by law firms outside the Valley, a mean of 179 for companies advised by New York law firms. Beyond the immediate confines of Santa Clara County, defenses are more varied, but evidence suggests that San Francisco-based law firms active in Silicon Valley follow Wilson Sonsini's lead and installed few defenses at their client companies: clients of Brobeck Phleger's main office in San Francisco, for example, all had CIs of 45, and none had either classified boards or dual class structures.[150] Beyond Silicon Valley and San Francisco, Silicon Valley results do not generalize to other California law firms. Once all California law firms are included, mean CI rises to 130, not statistically different from the mean CI of 192 for non-California law firms.

2. State of Incorporation

Additional differences show up when defenses are compared by the jurisdiction of incorporation of the IPO companies. Companies incorporated in Delaware had more defenses than average (mean CI of 188 versus 121 for non-Delaware companies, $p<.03$), and adopt classified boards more frequently than non-Delaware companies (38% versus 26%).[151] By contrast, companies incorporated in California have fewer defenses than average (mean CI of 45, $p<.001$). Not a single California company in the sample adopted a classified board, compared to 33% for the full sample ($p<.00$).

3. Headquarters; Industry; Pre-IPO Industry M&A

In contrast to state of incorporation, headquarters location appears to have little to do with takeover defenses, and industry little to do with defenses other than dual class structures.[152] Companies headquartered in California had a mean CI of 142, statistically equivalent to that of companies headquartered in New York (162), Massachusetts (148),

---

Silicon Valley today, with 600 lawyers in the year 2000 and the leading market share of IPOs in 1998.

[150] One Bay Area exception is Cooley Godward, which has an average CI of 420 and installs classified boards at two of its three sample clients. Although the subsample is too small to test apparent differences rigorously, Cooley's willingness to depart from Silicon Valley standards in the IPO context is mirrored by a distinctive contract style in the VC context in the same period. See SUCHMAN, supra note 65, at 271-72 (contrasting Wilson Sonsini contracts with Cooley contracts). By contrast, Brobeck Phleger's VC contract innovation, *id*. at 264 (characterizing Brobeck VC agreements as "paradigm-pushing"), is not mirrored in this sample of IPOs. Also of interest is that Cooley's Palo Alto office was as or more well known as its San Francisco office by the sample period, yet the latter office handled each sample IPO.

[151] In their multivariate regressions, Field & Karpoff find Delaware companies have more defenses, supra note 1 at 38 (table 4), especially shareholder meeting requirements, id., at 39 (table 5), but are no more likely to have classified boards.

[152] SUCHMAN, supra note 65, at 158-62, finds law firm location, headquarters location and VC location each separately affect VC financing contracts, but with controls for industry, investment size and investor diversity, only law firm location effects persist in a combined regression (model 10 in table 6.7).

Pennsylvania (217), or elsewhere in the sample (167). Companies headquartered in Silicon Valley had CIs that are not significantly different from those headquartered outside Silicon Valley, whether in California or elsewhere. Classified boards were no less common at companies headquartered in California (27%), New York (34%), or elsewhere in the sample (33%).

Mean and median CIs for particular industry subgroups were also not strongly different from the full sample.[153] One-way analysis of variance shows insignificant variation across industry groups of mean CIs or incidence of dual class control structures or classified boards ($p>.25$), and a Kruskal-Wallis test shows insignificant variation of median CIs ($p>.80$). Nor do industry and company location interact in any discernible way: defenses at high-tech companies headquartered in California (or Silicon Valley) did not differ significantly from high-tech companies headquartered elsewhere, either as a group or within specific high-tech industries.[154] Nor are industry or company patterns of defense adoption revealed by simply eyeballing the sample. Defenses are adopted by some but not all of the larger, well-known companies in mature industries, and some but not all of the smaller, development-stage companies in high-tech industries. Defenses were adopted by some but not all companies intending to use IPO proceeds to pay down debt, and some but not all companies intending to the use IPO proceeds to fund additional research and development.

4. Development Stage, Unit Offerings, Bankruptcies, M&A

About 23% of the sample companies were still in the development stage, and about 11% of the IPOs are unit offerings.[155] Consistent with the hypothesis that defenses are optimal for companies, and failure to adopt defenses indicates bad legal advice or weak constraints on company lawyers, both types of companies adopted significantly fewer defenses: a mean CI of 107 for development-stage companies, compared to 179 for other companies, and mean CI of 56 for companies engaging in unit offerings, compared to 175 for other companies ($p<.05$ for each). The small number of companies in the sample that go bankrupt in the five-year

[153] Except for dual class structures, apparent differences in **Table 6** are not robust. At the 2-digit SIC level, health services companies in the sample have higher CIs than average, but at the 3-digit level, they have lower CIs, and median CIs are not significantly different from the full sample at either level. Computer equipment companies, which have a lower than average CI at both 2- and 3-digit levels and are less likely to have dual class control structures, have statistically indistinguishable median CIs at both levels, and statistically similar odds of having classified boards.

[154] High tech industries, by 3-digit SIC categories, are computer equipment (357), software (737), electronics (367), medical instruments (384), and "biotech," drugs (283) and health services (809). These industries drive Silicon Valley. SUCHMAN, supra note 65, at 13-23; EVERETT M. ROGERS & JUDITH K. LARSEN, SILICON VALLEY FEVER: GROWTH OF HIGH-TECHNOLOGY CULTURE (1984). Mean CIs, and classified board and dual class incidence, are nearly the same for California-HQ vs. non-California-HQ, and Silicon-Valley-HQ vs. non-Silicon-Valley-HQ, in each industry, and as in all high tech industries as a group.

[155] Two thirds of the unit offerings in my sample are development stage companies. Field excludes unit offerings, and finds fewer (7%) development-stage companies.

post-IPO period adopted fewer defenses of any type, whereas the effect of defenses on M&A activity in that period was not significant. Companies engaged in unit offerings were also significantly less likely to adopt classified boards (11%, compared to 35% for other companies, $p<.02$). Dual class structures, however, were no less common at development-stage companies or companies conducting unit offerings.

5. Underwriters, Owner Type and CEO Variables

In a simple regression of CI on Carter-Manaster ratings for the lead underwriters in the sample, the coefficient was positive and statistically significant ($p<.02$), as shown in Table 6. Likewise, companies with higher-quality underwriters were more likely to install classified boards ($p<.01$). Among IPOs involving the top ten lead managers in the sample, which have higher than average C-M ratings, only those involving Robertson Stevens (4% of the sample) had significantly lower than average CIs or classified boards, and regressions of top ten sample underwriters on CI and classified board were positive and statistically significant.

Prior to the IPO, about 9% of the sample companies were owned in whole or in part by corporate parents, another 19% by LBO funds,[156] about 35% by VC funds,[157] and about 32% by individuals or families[158] (with slight overlap among these categories). With one exception, none of these partitions show significant differences among mean or median CIs, or incidence of classified boards or dual class structures. If any efficiency or agency-cost effects flow from corporate ownership or sophisticated financial backing, simple one-way comparisons do not reveal them.

An exception to these non-results is companies owned by individuals or families, which are more likely to adopt dual class control structures, consistent with the private benefits hypothesis. Consistent with that theory, companies that use an owner name in their business name are also more likely to adopt dual class structures. Together, these findings support prior theories that private benefits of control may motivate retention of a control "lock" – but these factors do not appear to affect

[156] Cf. Field, supra note 1, at 16 (12% of 1,019 IPOs 1988-1992 are equity carve-outs, and 21% reverse LBOs). Ritter, supra note 4, found a tiny number of reverse LBOs (15 of 1,526 IPOs 1975-1984) because LBOs themselves were rare prior to the 1980s. Daines & Klausner, supra note 1, at 13, purposely oversampled reverse LBOs and VC-backed IPOs.

[157] VC backing in the sample is similar to overall VC backing of IPOs in the sample period, as reported by Venture Economics in *Venture Capital Yearbook* (1997), with VCs backing 287 or 30% of 988 firm commitment non-closed-end fund IPOs reported in *Going Public Reporter* in 1991-1992; *see also* Sahlman, *Structure and Governance of Venture Capital Organizations*, 27 J. FIN. ECON. 473 (1990) (30% of non-fund IPOs 1977-1988 above $1 offer price were VC-backed). VC backing in the sample is slightly higher because *Venture Capital Yearbook* (which relies largely on self-reporting by VCs) is slightly less reliable than inspection of IPO prospectuses. Only two of 17 unit offerings in the sample have VC backing; if excluded, VC backing rises to 41%. Cf. Field, supra note 1, at 32 (table 1) (VC-backing at 45% of 1,019 IPOs 1988-1992; sample excludes unit offerings).

[158] Field, supra note 1, at 32 (table 1) shows a much lower 4% for family-owned firms, because she counts only firms owned by a single individual.

other types of defense adoption. Somewhat contrary to these findings, but consistent with Daines & Klausner, the fact that a company was founded by the person who is the CEO at the time of the IPO has no effect on adoption of any type of defense in simple mean comparisons.

6. Summary of Mean Comparisons

In sum, it appears that it is primarily the identity or location of the law firm that affects defense adoption, not location or industry of the company going public. Law firm identity and location have clear relationships with defenses adopted.[159] Law firm effects likely account for the relationship between defenses and state of incorporation. Because the decision to reincorporate prior to the IPO is made almost exclusively by companies reincorporating in Delaware, one can infer that the decision to reincorporate is commonly initiated and requires drafting and filing of new corporate documents by corporate counsel, who in the process reconsider a company's defenses, resulting in more defenses being adopted. Passive adoption of default law by companies not reincorporating is consistent with the fact that companies incorporated in states that follow the RMBCA's control-related default provisions have a low mean CI of 100 ($p<.001$), and fewer classified boards (23%, $p<.06$), whereas dual class structures, which in every state must be expressly and consciously installed, do not vary by state of incorporation, with 7-8% adopting them in Delaware, California, RMBCA states, and other states.

In addition to law firm effects, underwriters have an apparent effect on defense adoption, but contrary to the general inefficiency and banker hypotheses, companies advised by higher-quality underwriters are more likely to adopt defenses, not less. If price penalties are imposed by the IPO market as a result of defense adoption, it seems likely that pre-IPO shareholders are aware of that fact, and variation in defense adoption cannot be attributed to failure in the market for underwriter services. In contrast to strong law firm and underwriter effects, few effects are industry or headquarters location, coupled with strong differences based on law firm identity, law firm location, and companies' states of incorporation, together suggest that the lawyer-client relationship has more to do with defense adoption than with relationships between company and investor or between company and CEO, or with the general view of the investor community about the efficiency effects of defenses.

These inferences are reinforced by the striking fact that the number of classified boards, and mean and median CIs, are statistically the same for companies with ordinary one-share/one-vote capital structures as for dual class firms (both for dual class structures as a whole, and for companies that sell low-vote stock in the IPO). This similarity suggests either that dual class capital structures are not viewed as substitutes for other types of defenses, or that the process that generates other defenses is sufficiently imprecise or unconstrained that defenses are not fine-tuned to

[159] This is despite the fragmented nature of the market for legal advice in the IPO context, with resulting difficulties in finding empirical regularities even in sizeable samples.

reflect something as basic as whether pre-IPO owners intend to retain a "lock" on control.

7. Gaffes

One final preliminary finding supports the general hypothesis that lawyer-client agency costs are an important part of the contracting process leading to defense adoption in IPOs. In the sample, the process of reviewing governance terms uncovered a large number of "gaffes" or apparent legal mistakes.[159a] Some gaffes are clear, such as contradictions between charter and bylaws, or between charter and mandatory terms of state corporate law. Also found are what appear to be "functional mistakes," such as the selection of staggered boards (which impose more delay on shareholders' ability to appoint a new board majority) but the simultaneous inclusion of terms (such as allowing shareholders to act by written consent and remove directors) that "undo" the effect of a staggered board, rendering it useless. **Table 5** reports summary statistics on gaffes: conflicting or illegal provisions are observed in 10% of the sample, and functional mistakes appear in 18% of the sample.

Clear gaffes and functional mistakes reinforce the evidence suggesting that lawyers have much to do with defense variation. If the constraints on law firms were significant and general, one would not expect to ever see such clear gaffes as illegal provisions. Although some of what are apparently functional mistakes may have been intentional, justifications for such provisions are not compelling.[160] In any event, the fact that clear gaffes (other than arguable mistakes) were also commonly found in the sample reinforces the general impression that lawyers working on IPOs do not spend much time perfecting, much less fine-tuning, provisions with a clear and nuanced sense of the client's advantage in mind.

I. Multivariate Regression Analysis

1. Basic Findings

The effects of law firms on takeover defense incidence are tested in ordinary least squares (OLS) regressions, shown in **Table 8**. The

[159a] Gaffes were not initially sought in the research and were discovered as a by-product of the governance term review process. As a result, only the most egregious and clear gaffes were likely to be found, and data reported likely understates gaffes in the sample.

[160] For example, staggered boards that can be avoided by shareholder action have been justified on the ground that they provide board stability and were not intended to serve as takeover defenses. But there is no strong reason that a board that is not staggered could not provide for stability in other ways. It could adopt a resolution or bylaw specifying that directors' ongoing tenure would be up for review every few years or so, and stating that directors would be ordinarily replaced in a planned and careful manner. Such a resolution or bylaw would not deter a hostile bid or shareholder effort to remove the board, but would otherwise provide the same degree of "stability" provided by staggered board provisions, which do not after all prevent board members from resigning whenever they wish.

various hypotheses described in Parts and III may be formalized in a simple model as follows:

$$\text{Defenses} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

where X_1 is a vector of explanatory variables and X_2 is a vector of control variables and ε is a standard error term. The principal dependent variable is the contestability index (CI) described in Part III.B, detailed in **Appendix B**, and designed to measure a company's legal takeover vulnerability as a function of how long it takes a majority of shareholders to replace a majority of the company's board of directors. As data is missing for some companies (primarily companies not found in COMPUSTAT), the number of observations declines as the models become more complex.

Model (1) presents the simplest model, containing two law firm variables (SUITSDEL and SILVAL) and two control variables (MAINDACT and CM2). Each law firm variable is statistically significant and has the predicted sign. Consistent with the hypothesis that law firms expert in M&A advise clients to adopt defenses before an IPO, the more M&A-related lawsuits involving a company's IPO counsel in the 1980s, the stronger the defenses that company adopts (measured by its contestability index). Consistent with the hypothesis that law firm identity and location affect legal advice, clients advised by law firms based in Silicon Valley adopt many fewer defenses (measured by the CI) than clients advised by law firms based elsewhere, even after controlling for law firms' M&A experience. Both law firm expertise and law firm geography matter.

In addition, consistent with the findings of Daines & Klausner,[161] significantly *more* defenses are adopted by companies in industries experiencing higher levels of M&A activity in the three years prior to the IPO. This finding is consistent with the hypothesis that industry-level bids increases the salience of takeover risk to managers, which in turn increases monitoring of defense-adoption by managers. This finding is contrary to the notion that pre-IPO industry-level M&A activity forecasts the bargaining power targets will need should a bid emerge, and thus (assuming defenses are otherwise harmful) the value of defenses. Interpretation of coefficients is straightforward: For every 10 Delaware M&A lawsuits involving IPO counsel, its client increases the time it takes shareholders to replace a majority of the board by 27 days; companies with Silicon Valley law firms can be taken over in 122 fewer days, on average, than other sample companies; and for every 10 M&A transactions in a company's industry, a company increases its time-to-takeover by 63 days.

Finally, inconsistent with the general inefficiency and banker hypotheses, underwriter quality has a positive and statistically significant impact on defenses. Better quality underwriters recommend more defenses, controlling for law firm expertise, location and industry-M&A activity.

[161] See Daines & Klausner, supra note 1.

2. Controls, Alternative Specifications, and Robustness Checks

The basic regression is extended in models (2) through (7) in **Tables 8-10**, with the addition of several variables as controls and tests of alternative hypotheses, and in model (8) by correcting for heteroscedasticity. In addition to confirming the law firm effects in each case, mixed support is found for the private benefits of control and firm-specific capital hypotheses (which cannot readily be distinguished in the models used). No evidence is found to support the agency cost and market myopia hypotheses, nor is there evidence found that shareholder dispersion, leverage or size are substitutes for defenses. Finally, alternative specifications of both dependent and independent variables confirm the primary findings of the base model.

To briefly review the relevance of the variables added:

1. VCs are sophisticated pre-IPO shareholders focused on the bottom line, more likely to insist on value-maximizing terms and to constrain shirking by IPO law firms.
2. Development-stage companies and companies engaged in unit offerings may be more at risk from bids (valuation uncertainty may allow bidders to buy them on the cheap), or less at risk (lack of due diligence and valuation uncertainty may deter bids), and as high-risk companies may get lower quality legal advice.
3. High R&D intensity and capital expenditure levels may make a company harder to value, and so more (or less) subject to bids.
4. Older, more profitable companies engaged in larger offerings may have better lawyers, or better in-house counsel or access to other sources of legal advice.
5. Older companies, and companies founded by the CEO, may be associated with higher levels of company-specific human capital or psychic private benefits of control. As CEO tenure increases, these factors may also become more important.
6. If defenses increase agency costs, they may be most harmful at larger, older companies with more free cash, where managerial shirking or misinvestment is most likely.
7. Companies that are larger, or have more dispersed shareholders may be harder to acquire, and so have less need for defenses.
8. Companies with more leverage (higher debt/asset ratios) may be harder to acquire, or less likely to misinvest free cash and so face a lower risk of bids.

In addition, dual class control structures, which are not incorporated into the definition of the contestability index, are first included as a control, then tested for as a separate dependent variable, and finally included in an ordered logit along with other defenses.

Models (2) and (3) in Table 8 includes a subset of these controls, and differ only in that (2) – which is the base model against which the remaining regressions are compared – includes natural log of offer size as a control, and (3) includes company size (natural log of total assets). In models (4) through (7) the rest of these controls are added to the base

model.[162] Each of models (5) through (7) adds a control to the base model. Finally, a Cook-Weisberg test indicates heteroscedasticity in the base model, so it is re-estimated with robust standard errors, shown as model (8) in Table 9.

The results of the base model hold in each regression. Coefficients on each variable in model (1) have the same signs and approximate coefficients and levels of significance in models (2) through (8).[163] The explanatory power (adjusted R-squared) doubles to 28% in the base model, and rises slightly in remaining models. Where significant, coefficients on control variables are consistent with the law firm hypothesis, and several variables that do not show significant relationships with defenses in simple mean comparisons become significant. Once law firm effects are controlled for, VCs *increase* defenses; development-stage companies are less likely to use defenses; and *more* defenses are likely at larger companies. Defenses are more likely at companies that are older, up to the hoary age of 130 years, after which the negative coefficient on AGECSQ dominates the positive coefficient on AGECO.

The finding on company age is consistent with the private benefits of control hypothesis, as is the fact that companies founded by the CEO have more defenses than other companies. The latter relationship is sensitive, however, shows up significant only in the more complex models, and CEO tenure has no effect on defenses.[164] The results provide no support for the agency cost hypothesis: larger and older companies (save the very oldest) have more defenses, and free cash flow has no strong relationship with defenses (and its sign is positive).[165] Results are also inconsistent or inconclusive for the myopia hypothesis: development-stage companies are *less* likely to adopt defenses, and neither R&D intensity nor capital expenditures nor unit offerings correlate significantly with defenses. As in simple mean comparisons, dual class structures are unrelated to other defenses, as are shareholder dispersion and leverage.

The robustness of the base model is also tested using alternative empirical proxies for M&A expertise or tendency to use boilerplate. Because the primary measures of a law firm's M&A expertise (SUITSDEL, SUITSALL and MASDC) are highly collinear, only SUITSDEL is included in the regressions in **Tables 8-10**. All of the

---

[162] The possibility of multicollinearity is excluded by confirming that none of the correlations between regressors in Models (2) through (8) exceed 0.2. Still further control variables listed in Table 9 were tested in unreported regressions, including company location, industry, post-IPO profitability.

[163] Underwriter quality is omitted from the base model because CM2 is highly collinear (~.7 correlation) with LNOFFSZ, as it is in Carter, Dark & Singh, supra note 92. In unreported regressions using CM2 instead of offer size, similar findings were obtained: the sign on CM2 remains positive throughout, although its statistical significance is marginal in some models. See also note 167 infra (unreported regression of CM2 and other predictors of classified boards).

[164] Cf. Daines & Klausner, supra note 1, who find no strong correlation between CEO founders and defense adoption in their model.

[165] Transformations of cash flow (including log-normalization and exponentiation) also produced no results, nor are the non-results on cash flow sensitive to other controls. A variable truncated at zero to count only positive cash flow, and a dummy set to one if cash flow were positive, and different post-IPO measurement periods, all had no effect.

primary results hold, however, when that variable is replaced in unreported regressions with SUITSALL or MASDC (coefficients vary slightly but statistical significance levels remain above 99%). The models also produce results when SUITSDEL is replaced with a combination of LAWFRM1 and LAWFRMSQ, which have negative and positive coefficients, respectively, although these results are less statistically significant ($p<.05$) and less robust to other controls. Law firm size matters, but less than M&A expertise, and has a curvilinear relationship with defenses: moderate CI (~200) at small firms (<50 lawyers), low CI (~100) at mid-sized firms (50-150 lawyers), and high CI (~400) at large firms (>150 lawyers).

Finally, robustness of the primary findings from the base model is tested by using alternative dependent variables. Perhaps the contestability index, though theory-driven, is also driving the results in some way. Dual class capital structures and (together with the poison pill) classified boards are worth separate exploration as defenses that require shareholder approval and have the greatest potential to deter bids.[166] Such defenses in isolation from other defenses have also been the subject to prior empirical work.[167] Models (9) through (11) are logit regressions with CLASS or DUALCON as dependent variables, and model (12) is an ordered logit regression that includes classified boards and dual class structures in a four-level ranking of increasing "toughness," in line with prior research (see **Appendix C** for the definition). In models (10) through (12), SILVAL is omitted because none of the Silicon Valley clients in the sample adopt dual class structures, making SILVAL a perfect "anti-predictor" of such defenses.

Again, results of the base model continue to hold. Model (9), which predicts board classification in the sample correctly 74% of the time, also predicts that as a law firm's M&A expertise increases from the 10th percentile to the 90th percentile (using SUITSDEL, and holding other factors constant), the odds its clients will adopt a classified board increase by about 20%. Clients of Silicon Valley law firms are less likely to adopt classified boards, and companies in industries where takeover risk is higher, that are backed by VCs, that are older (up to a point), or engaged in larger offerings are more likely to adopt classified boards. The insignificance of other controls in model (9) compared to the base model suggests they are less related to classified boards than they are to other governance terms, such as whether shareholders can call special meetings or remove directors without cause.[168]

---

[166] Coates, Critique, supra note 12.

[167] Daines & Klausner, supra note 1; Field, supra note 1.

[168] In a separate, simple unreported logit regression containing just UNIT, MASDC, RETAIN, and CM2, similar results are also obtained, with each variable is significantly related to board classification. In that model, as law firm M&A experience increases from the 10th percentile (zero deals) to 90th (71 deals), odds of board classification increase from 28% to 44%; as Carter-Manaster ratings of the lead underwriter increase from the 10th percentile (rating of 2) to the 90th (rating of 9), odds of board classification increase from 18% to 37%; as pre-IPO shareholder share retention increases from the 10th to the 90th percentile, odds of board classification increase from 21% to 46%; and unit offerings have a 23% lower chance of having a classified board.

Consistent with the result in model (4) that dual class structures are themselves not correlated with other defenses, model (10) shows that (non-law-firm) *predictors* of dual class structures differ from predictors of other types of defenses. Model (11) presents a much simpler, and more powerful estimation of dual class structures. A large proportion of dual class incidence in the sample is predicted by three variables from the mean comparison analysis in Part III.H: SUITSDEL, NAME and FAMILY. Consistent with Field,[169] dual class structures seem both qualitatively different from other defenses, and also seem related to (non-pecuniary) private benefits of control, represented here by NAME and FAMILY. Law firm effects, however, persist – SUITSDEL (and alternate expertise variables) are the only variables that have a significant effects in *all* of the regressions, regardless of whether the dependent variable is the contestability index, classified boards or dual class structures. The ordered logit results, finally, confirm the main results of both this simplified model (for dual class structures) and the base model (for other defenses). The fact that the ordered logit has lower predictive power, and that some of the control variables that are consistently significant in the other models are not significant in the ordered logit, confirms the theoretical inferiority of simply ranking defenses in broad categories with little regard to the interactions among them.[170] But it does not undermine the main evidentiary conclusions of the base model: law firms affect defense incidence.

3. The 1998 Sample

To see if the primary findings from the main sample persisted during the 1990s, a separate sample of 160 IPOs was randomly chosen from the first nine months of 1998. The number of variables investigated was significantly reduced from those investigated in the main sample (solely for time and budgetary reasons). Independent variables gathered were lead underwriter and Carter-Manaster rating; law firm identity, location, and M&A expertise (using an updated version of MASDC); offer size; earnings for the fiscal year in which the IPO took place; and state of incorporation. Dependent variables tested consisted of the following governance terms: classified boards, dual class capital structures, and elimination of shareholders' ability to act by written consent or call a special meeting, which are the dependent variables used to construct the variable DEFENSE tested for the main sample in model (12) in Table 10.

Again, basic findings from the main sample are confirmed. Defenses are common at the IPO stage, but continue to vary significantly among companies. And defenses were more common when companies were (a) advised by law firms with more M&A expertise; (b) represented

[169] Field, supra note 1.

[170] For theoretical reasons that the contestability index is a better measure of legal takeover vulnerability, see Coates, Index, supra note 15.

by higher-quality underwriters, (c) incorporated in Delaware, or (d) engaged in larger offerings.[171]

Several contrasts between the temporal samples are worth highlighting. First, general defense incidence in the 1998 sample is higher than in the main sample. Classified board incidence at the IPO stage has risen from 34% to 66%, an increase of roughly 12% per year.[172] Companies in the lowest rank (weakest defenses) of the DEFENSE variable fell from 55% in 1991-92 to 42% in 1998, while companies in the highest rank (toughest defenses) rose from 23% in 1991-92 to 39% in 1998. Using DEFENSE and dual class structures to predict what CI would have been had the full index been constructed for the 1998 sample,[173] predicted CI was 219, 31% higher than in 1991-92. On the other hand, companies adopting dual class capital structures dropped by almost half, from 11% in 1991-92 to 6% in 1998,[174] consistent with the view those structures are adopted from reasons distinct from other types of defenses. Delaware's dominance rose during the 1990s, with 70% of IPOs in the 1998 sample incorporating there.

Finally, defenses adopted by companies advised by Silicon Valley law firms no longer depart as dramatically from other law firms, both absolutely and after controlling for M&A expertise (which increased somewhat for Silicon Valley firms in the 1990s).[175] Classified boards were installed at 25% of Wilson Sonsini's clients, and a dual class structure at another; four of Brobeck Phleger's nine clients adopted classified boards, and another a dual class structure; and for Silicon Valley clients as a whole, half adopted classified boards (compared to none for the main sample).[176] Predicted CI for Silicon Valley law firm clients was 213, slightly below but statistically the same as for the full sample.

J. Interpretations

One clear implication of both the mean comparisons in Part III.H and the multivariate analysis in Part III.I. is that law firms with more

---

[171] Coefficients (p-values) on separate ordered logit regressions using DEFENSE as the dependent variable are as follows: MASDC 0.009 (p<.06); CM2 (0.349 (p<.03); DEINC 1.340 (p<.00); and LNSZ 0.707 (p<.00).

[172] This time trend is consistent with Field, who finds classified boards in 35% of IPOs 1988-1992, and Daines & Klausner, who find classified boards in 44% of IPOs from 1994-1997. The trend is all the more interesting given that existing public companies have almost never adopted classified boards in the same time period, see Coates, Critique, supra note 12, and that total incidence of classified boards in large companies tracked by IRRC has risen much more slowly, as reflected on **Figure 3.**

[173] In an OLS regression of DEFENSE on CI, the R-squared is 32%. If dual class structures are further controlled for, the R-squared rises to 52%.

[174] Here, all dual class capital structures are compared, rather than dual class control structures, which have been used in most of the analysis for the main sample; data on whether companies sold low-vote stock was not gathered for the 1998 sample.

[175] Wilson Sonsini's SUITSDEL rating, for example, rose from 1 in the 1980s, to 13 in the 1990s, while ratings remained constant for Skadden Arps (86 in the 1980s, 84 in the 1990s), Sullivan & Cromwell (10 in the 1980s, 12 in the 1990s).

[176] Compared to other law firms in Silicon Valley, Cooley Godward's clients continued to be most likely to adopt defenses, with all four adopting classified board structures.

expertise pay more attention to defenses. This is true even though (at the IPO stage) the likelihood of a takeover is remote and of relatively little near-term importance to anyone, whether investors or managers or lawyers. Law firms with M&A expertise thus must either instill an awareness of defenses in lawyers regardless of the context, or cause defense adoption by relying on internal boilerplate that includes a large number of defenses.

Law firm size also matters in the multivariate regressions, although not in simple mean comparisons, nor as consistently as M&A expertise. Other things held equal (and particularly, M&A expertise), larger law firms are more likely to include defenses than smaller law firms, in part because larger firms are more likely to have M&A expertise, but also because large firms are more likely to use boilerplate, so that large firms with expertise tend to uniformly include defenses, large firms without expertise tend to uniformly exclude them, and small and mid-sized firms are more variable in the defenses they recommend.

Law firms based in Silicon Valley installed fewer defenses in 1991-1992, even compared to other law firms of a similar size or with similar levels of M&A expertise. The best interpretation of this finding is not clear, but one plausible explanation is that firm identity and location (as with firm size) indicate standardized documentation, with corresponding effects on average defense usage by clients. Prior to the mid-1990s, few hostile bids were made for high-technology or other companies highly dependent on human capital; although the Silicon Valley effect persists even after a control for industry-level M&A is introduced, the combination of low levels of M&A activity in high-tech industries plus a tight-knit legal community may have made defenses even less likely in Silicon Valley than elsewhere. Lawyers who are highly successful in one line of work, too, may suffer from a touch of hubris when they begin to diversify; Wilson Sonsini's intimate knowledge and expertise of the needs of private companies as they move from start-up through several rounds of private financings may have made them less anxious than they should have been about advising companies in the IPO stage about issues (governance terms) that would have little effect for years.[177]

Consistent with this interpretation, data from the 1998 sample show that Silicon Valley lawyers began to install more defenses as the risks of not doing so became apparent. The mid-1990s have witnessed several high-profile takeovers of companies heavily dependent on human capital: GE's bid for Kemper; IBM's 1995 bid for Lotus; and Softkey's 1995 bust-up bid for The Learning Company (TLC).[178] The last bid, in

---

[177] Cf. SAMUELSON, supra note 60, at 1:47-50 (case study of Csaplar & Bok, Boston law firm highly successful in net lease financings that made flawed diversification efforts and eventually merged with Gaston & Snow just months before it failed).

[178] Susan Antilla, *Kemper Board Discusses Hostile G.E. Bid*, N.Y. TIMES (Mar. 17, 1994) at D4 (GE bid for Kemper, a financial services company); J. FRED WESTON, KWANG S. CHUNG & JUAN A. SIU, TAKEOVERS, RESTRUCTURING, AND CORPORATE GOVERNANCE (2d ed. 1998), at 170 (IBM/Lotus case study); Lisa Benshoff, Deals and Suits, Legal Times at 13 (Dec. 4, 1995) (listing lawyers involved in Softkey/Learning Company fight); Lawrence M. Fisher, Softkey Reaches Agreement to Buy Learning Company, N.Y. Times (Dec. 8, 1995) at D2 (Softkey succeeds in bid for The Learning Company).

particular, were highly salient to Silicon Valley lawyers and executives, given that TLC was based in Silicon Valley and Wilson Sonsini served as counsel to disappointed suitor Broderbund, which had agreed to acquire TLC before Softkey launched its bid. Although TLC's need to obtain shareholder approval for its deal with Broderbund and Softkey's willingness to overbid Broderbund explain Softkey's victory, TLC's weak defenses meant that it did not have the option of canceling its merger with Broderbund and attempting to remain independent.[179] Given this fight, which directly involved Silicon Valley's premier law firm in a high-profile takeover battle, it would have been surprising to find Wilson Sonsini clients had *not* increased their use of pre-IPO defenses in the 1990s.[180]

Another finding from both mean comparisons and multivariate regressions is that defenses are much more likely to be adopted by companies in industries with higher levels of pre-IPO M&A activity. On one level, this may not seem surprising: if takeovers are more common, defenses are more useful – *i.e.*, efficient and value-increasing. But without more, this analysis fails for two reasons. First, current industry-level M&A activity is a poor predictor of M&A activity beyond the next year or two, and companies are usually invulnerable to hostile bids for a year or two after an IPO.[181] Second, even if post-IPO bid risk was more likely when pre-IPO industry-M&A activity was high, it is not clear why that makes defenses optimal. If defenses simply impede bids, they should harm IPO pricing, inducing fewer defenses on average; and if defenses improve value by providing bargaining power, high industry-M&A activity should make defenses less valuable, not more.[182] A simpler interpretation is that high industry-M&A activity raises the profile of takeover risk, making managers (VCs, directors, *etc*.) more likely to monitor lawyers with respect to defenses before the IPO, and lawyers more likely to install defenses.

Overall, the results are inconsistent with the general inefficiency and banker hypotheses. Defenses are more likely when better underwriters are involved, so that managers of companies adopting defenses seem more likely to be aware of any price penalty the IPO market may impose.

---

[179] TLC was vulnerable because its charter permitted its shareholders to call a special meeting and remove existing directors. Kidsco Inc. v. The Learning Company, 674 A.2d 483 (1995). TLC was able to delay Softkey's proxy fight and hostile bid briefly by adopting a bylaw delaying the special meeting until some time after the initial TLC/Broderbund merger agreement could be submitted to TLC shareholders, id., but Softkey would have been able to prevail in less than two months, one way or another.

[180] Even more salient for Silicon Valley was the 1998 battle between Mentor Graphics and Quickturn. Larry Sonsini served both as counsel in both its 1993 IPO see Krysten Crawford, *Quickturn Design Systems*, THE RECORDER 2 (Dec. 15, 1993) (available in Lexis/News) (reporting Quickturn IPO, with Larry Sonsini of Wilson Sonsini as company counsel), and during Mentor's bid in 1998, see Mentor Graphics's bid for Quickturn, see Quickturn Design Sys. v. Shapiro, 721 A.2d 1281 (Del. 1998). The near-absence of pre-IPO defenses put pressure on Quickturn to sell to a white knight after its heavily litigated effort to remain independent failed. Id. This fight came too late in 1998, however, to explain the increased defenses for Silicon Valley clients in the 1998 sample.

[181] Mitchell & Mulherin, supra note 110; see Part III.G.4 (change in ownership structure over five years post-IPO).

[182] Daines & Klausner, supra note 1.

Likewise with VC-backed companies. If defenses are generally inefficient, IPO pricing must be much weaker than is often thought,[183] and getting worse: defenses are more common in 1998 IPOs than they were in 1991-92, and lawyers based in Silicon Valley have learned, over time, to recommend more defenses.

Finally, the data suggest that dual class capital structures are qualitatively different from other types of defenses. Dual class structures do not correlate with other defenses; they do correlate with variables that proxy for non-pecuniary private benefits of control (family-ownership and companies that share names with ongoing shareholders), which in turn do not correlate with other defenses; and they have declined over time, the opposite of the trend for other defenses. While some evidence suggests that other defenses are also affected by non-pecuniary private benefits of control, that evidence (CEO founders are more likely to adopt normal defenses) does not carry over to dual class structures. Other variable efficiency hypotheses (agency costs, bargaining power, market myopia) receive no support from the data.

Conclusion: Implications

Data from 320 IPOs in 1991-92 and 1998 confirm recent findings that companies adopt varying amounts and types of takeover defenses prior to IPOs, contrary to simple agency-cost models. A substantial portion of the observed variation in defenses can be explained by variations in the quality of legal services provided to entrepreneurs and pre-IPO managers. Companies advised by larger law firms with more takeover experience adopt more defenses. In 1991-92, companies with Silicon Valley lawyers adopted almost no defenses; by 1998, Silicon Valley lawyers were as likely to recommend defenses. Companies with high-quality underwriters and venture capital backing are more likely to adopt defenses in both periods, and the rate of defense adoption increased from 1991-92 to 1998. Dual class capital structures appear to be quite distinct from other defenses, and motivated by non-pecuniary private benefits of control. Together, these findings suggest that, except for dual class structures, defenses are generally optimal at the IPO stage, but not all clients receive that advice from their lawyers.

These findings have implications for corporate law and finance, for contract theory, and for the legal profession. The most immediate and striking implications are for the legal profession. Problems of legal quality appear to afflict some of the highest-profile transactions and some of the best-paid lawyers. That implies that lawyer/client agency problems are

[183] *E.g.*, Jeffrey D. Gordon, *The Mandatory Structure of Corporate Law*, 89 COLUM. L. REV. 1549, 1557-61 (1989) (IPO are generally efficient); Fred D. McChesney, *Economics, Law and Science in the Corporate Field: A Critique of Eisenberg*, 89 COLUM. L. REV. 1530, 1534-38 (1989) (same); Ralph K. Winter, *The "Race for the Top Revisited": A Comment on Eisenberg*, 89 COLUM. L. REV. 1526, 1526-29 (1989) (same); FRANK EASTERBROOK & DANIEL FISCHEL, THE ECONOMIC STRUCTURE OF CORPORATE LAW (1991) at 4-7 (same).

serious and widespread, and perhaps even dangerous for many clients.[184] Reputational bonds that law firms use to insure high quality are weak at best. Silicon Valley law firms certainly had and have powerful brand names, and hold themselves out as "corporate law" firms. Yet they seem to have provided inferior advice to IPO clients on takeover defenses in the early 1990s. Advice about defenses was in all likelihood incidental to the reason such firms were retained. Takeover defense advice was, in essence, bundled with other services more important to clients. In retrospect, clients may still be content with their choice of lawyers.

Yet even if we convince ourselves that legal services for large corporations are second-best efficient, the existence of bundles of excellent and poor services even in that strata of the legal profession suggests that much more transformation of the industry is to come. If lawyers cannot provide a complete package of products and services that meet client needs, non-lawyers will pick up the slack. Only tasks for which lawyers have a regulatory monopoly (such as litigation) are likely to remain distinct from the broader "knowledge" market that has been and almost certainly will be dominated by non-lawyers. Whether lawyers can or will want to compete in that broader market, the "transformation" of the American legal profession in the 1980s was just the beginning.[185]

The findings of the paper also raise questions about how courts and other lawmakers set default rules of contract law. If lawyer/client agency problems distort terms adopted in even the context of public corporations and multi-million dollar stock offerings, where contract terms are public and legal mistakes available for all to infer, it seems reasonable to expect that lawyer/client agency problems also distort terms set in contexts that generate lower levels of lawyer and client scrutiny. To reach judgments about what default rules are most efficient in a given context, lawmakers will often face a conflict between terms adopted by private parties who have good legal representation and those who do not.

At a minimum, widespread, serious lawyer/client agency problems increase the tension between a rule favoring majoritarian defaults, on the one hand, and a rule favoring a hypothetical bargain between two perfectly informed (or even well-informed) parties. If courts were to review an IPO sample from 1991-92, they would find a high degree of heterogeneity in terms adopted, but a majority of companies adopting relatively few defenses, and the majoritarian outcome would accordingly be few defenses. But if the court were to infer what two well-informed parties would have agreed to based on the defenses adopted by companies advised by law firms with M&A expertise, the court would reach the opposite conclusion.

A final set of implications, and ones most germane to takeover defenses, should interest corporate legal and finance scholars. Simple

---

[184] Cf. HAZARD, KONIAK & CRAMTON, supra note 64, at 150 ("market probably operates quite well as a competence filter with regard to sophisticated clients such as large business corporations").

[185] Cf. Gilson, supra note 66, at 893 ("familiar patterns of lawyer-client relations and important aspects of law firm structure can be usefully understood as responses to quality uncertainty concerning legal services", with implication that structural change may be stimulated by changes in ability of or need for clients to evaluate quality of services).

agency cost models of how and when defenses are adopted utterly fail to predict the control structures adopted in one of the most important moments in a firm's life-cycle (the IPO). At a minimum, the data suggest that defenses are optimal for pre-IPO shareholders to adopt at a large subset (and in 1998, a majority) of new firms. Given the findings that companies advised by law firms with more M&A expertise, higher-quality underwriters, and VC funds are all more likely to adopt defenses, and that pre-IPO defenses are more common now than in the past, it seems more plausible that such defenses are optimal for *all* firms than it is that they are optimal for none. It is still possible for defense opponents to argue that defenses are not a good idea for some companies, but opponents now have the burden of identifying which firms those are, and why, and making an empirical case to support their claims.

It is possible, of course, for defense scholars to concede that defenses are privately optimal for all pre-IPO shareholder/managers to adopt, but insist nonetheless that they reduce both firm value and social welfare.[186] But that position entails abandoning the theory that IPO pricing is efficient. Such a concession thus calls into question many premises on which conventional corporate scholarship (including hostility to defenses) has been built. If IPO pricing is generally poor, can we infer anything about the governance terms not found in corporate charters? Not-seen terms like bans on insider trading, "other constituency" provisions, or even co-determination, all become candidates as efficient terms. If IPO pricing is poor, do we expect secondary market pricing to be better? If so, how and why, precisely? If not, then high-premium bids are not only not indicators of more fundamentally efficient owners of targets' assets, but they are also not necessarily good measures of current firm value.

The argument and findings presented in this paper do not fully resolve the many questions surrounding takeover defenses. Nevertheless, an answer to half of the IPO/defense puzzle now seems clear: variation in legal takeover defense vulnerability at the IPO stage is explained in large part by variation in the quality of legal advice provided to pre-IPO owners

---

[186] One could maintain both that IPO pricing was efficient and that defenses were at once privately optimal and socially inefficient by accepting that some terms fixed at the IPO entail externalities, see Lucian A. Bebchuk & Luigi Zingales, *Corporate Ownership Structures: Private Versus Social Optimality*, John M. Olin Center for Law, Economics, and Business, Harvard Law School (Discussion Paper No. 181, 1996). But that position, too, would call into question much conventional scholarship on corporate law, *e.g.*, FRANK EASTERBROOK & DANIEL FISCHEL, THE ECONOMIC STRUCTURE OF CORPORATE LAW (1991) (likelihood of externalities when charters chosen minimal).

and managers. The evidence also seems compelling that defenses are privately optimal for all companies, even if not all lawyers provide that advice. In sum, blame the lawyers.

Appendix A

Governance Terms Regulating Control Over Public Corporations Without Control Shareholders

Fixed Governance Terms – Mandatory Federal Securities Law and Practice

1. Tender offers must remain open for 20 business days.

2. Proxy solicitations must be "precleared" by the SEC, which takes 30-45 days.

Fixed Governance Terms – Mandatory Nonvarying State Corporate Law

3. All corporate power is held by the board, not by shareholders.

4. Neither the board nor shareholders may amend the charter unilaterally.

Varying Governance Terms – Varying and/or Default State Corporate Law

5. Do directors have the power to create "poison pills," which limit shareholders from acquiring more than 5-30% of the company's stock?

6. Does the board have terms of one, two or three years?

7. How frequently must the board call an annual meeting of shareholders?

8. May shareholders act by written consent in lieu of a meeting?

9. May <51% of shareholders call a special meeting? May <10%?

10. May shareholders remove directors without cause?

11. May shareholders fill vacant board seats?

12. May shareholders increase the size of the board?

13. May shareholders amend the bylaws without board action?

14. May shareholders "cumulate" their votes?

15. Does the board have "blank check" authority to issue preferred stock?

Appendix B

An Index of (Legal) Contestability

Rather than studying individual anti-takeover defenses in isolation, or aggregating them in ways not motivated by theory, as prior research has done, the contestability index described below unifies governance terms in a tractable system by asking a simple question: *how much delay would a firm's governance terms impose on a majority shareholder coalition that desired to change the composition of a majority of the board?*

The index consists of two components: a set of variables that derive from a company's governance terms, and an algorithm that transforms those variables into a single number. The description of the index proceeds as follows: First, the law that establishes rules included in the index is first generally discussed. Second, the primary governance variables are discussed and formally defined. Third, a number of instrumental variables are constructed, and each is discussed and formally defined. Fourth, the algorithm is presented, consisting of seven mutually exclusive cases that take as inputs certain of the primary or constructed variables and produce as outputs the contestability index. Finally, two brief sets of illustrations are given.[187]

9. Overview of Governance Terms

Every public company has a set of "governance terms" that regulate how easily shareholders can assert control rights over the company. Terms are set forth in (1) U.S. federal securities law, (2) the corporate code of the state where a firm is incorporated, and (3) firm-specific terms, consisting of (a) of securities issued by the firm, (b) the firm's charter, and (c) the firm's bylaws. Governance terms vary by firm, because firm founders choose where to (re)incorporate, and thus default law, and most state corporate laws provide considerable (if not total) flexibility for firms to vary from default law in their charters and bylaws.[188] Federal securities laws, by contrast, apply generally to all

---

[187] One caveat is in order: Although the contestability index is simple in concept, the devil is in the details; as many practitioners will attest, legal innovations, case law developments or legislative or regulatory action will almost certainly eventually render some of what follows obsolete over time.[187] Despite this caveat, readers should take some comfort from the fact that little of what follows is new or has changed since (at least) the late 1980s.

[188] In general, conflicts between terms are resolved the same order. Federal securities laws override conflicting state corporate codes (because of the supremacy clause of the U.S. Constitution); state corporate codes override conflicting terms of individual firms' securities; such terms typically override conflicting charter terms (because the specific overrides the general); and charter terms typically override bylaws. However, many state corporate provisions govern only in the absence of overrides in the charter and/or bylaws, as specified in the state law, and the decision of whether or not two terms conflict is itself often a matter of some debate. See, e.g., the debate over whether the Williams Act conflicted with (and therefore preempted) state takeover laws, an issue that resulted in two U.S. Supreme Court decisions and a plethora of lower federal court decisions, all reviewed

"public" companies, including all firms with equity securities listed on a stock exchange and all firms with $10 million in assets and 500 or more shareholders.[189] Terms imposed by federal law are contained in the Securities Exchange Act of 1934, which governs both proxy solicitations and tender offers, and the rules and interpretations of the Securities and Exchange Commission adopted thereunder, and the most important of those terms are summarized on **Appendix A**. (How and why each of these terms may be important will become evident in the presentation of the index below.)

State laws impose a large number of governance terms on firms, usually (but not always) as default terms. State corporate codes, for example, typically set mandatory rules concerning how frequently shareholders must meet, but default law governs how the number of directors on the board is set.[190] Many of these rules vary from state to state, but two important ones do not: (1) corporate statutes always provide that boards, not shareholders, manage the corporation, thus requiring shareholders to go through the board selection process to seize working control of the firm; and (2) corporate statutes in all states effectively give both the board and shareholders veto power over charter amendments, so that a majority of both groups is required for charter changes.

Roughly 50% of the largest firms in the U.S. are incorporated in Delaware, and no other state has more than a 5% share of the remaining market for corporate charters. Nearly all firms not incorporated in Delaware are incorporated in the states in which their headquarters are located, making the state corporate laws of all 50 laws potentially relevant to a full analysis of a random sample of U.S. public firms. However, concentration of economic activity in large public corporations headquartered in states such as New York, California, and Illinois, and the small number of large companies headquartered in less populous states such as Montana, North Dakota and West Virginia, means that the number of states relevant to an analysis of even relatively sizeable samples will usually not exceed 25. More important for purposes of large-scale research, most state corporate codes follow (with no or only a small number of variations) a single model set out in the Model Business Corporation Act (or its successor, the Revised Model Business Corporation Act), which in its annotated form provides a helpful reference for determining relatively quickly what default terms will govern a particular control contest.[191]

---

in John C. Coates IV, *State Takeover Statutes and Corporate Theory: The Revival of an Old Debate*, 64 N.Y.U. L. REV. 806 (1989). One might not predict conflicts between or among firm-specific terms at a given firm, since those drafting and adopting the terms would presumably not want to create uncertainty or an opportunity for litigation, but straightforward conflicts are surprisingly common.

[189] See Securities Exchange Act of 1934 § 12(g) and SEC Rule 12g-1.

[190] In addition, states have adopted takeover laws that may affect takeovers, but these laws rarely have much impact on takeovers in today's legal environment. See Coates, Critique, supra note __.

[191] Model Bus. Corp. Act Ann. (1984 & Sup. 1997) (hereinafter, "RMBCA").

Since there is no formal limit to the length or complexity of firm-specific terms, the result is (in theory) an infinite number of corporate governance terms. In practice, transaction costs and simple exhaustion of variations in governance structures put a ceiling on the number of terms applicable to any given firm. Even fewer will plausibly have a material effect on takeovers. For the vast majority of companies, firm-specific governance terms were limited to approximately 12 primary categories, of which two (director indemnification or exculpation and standard contingent voting rights for ordinarily non-voting preferred stock) would not plausibly have an effect on takeover fights, leaving 10 legally significant categories of primary terms, listed in **Appendix A**.

Researching the full complement of firm-specific terms can be difficult. Every public company must file its charter and bylaws, as well as terms of its equity securities and material debt securities, with the SEC, which then makes these publicly available. Since 1994 (and before that for some large firms), SEC filings have been made available online via the SEC's EDGAR system. However, most firms that became public companies prior to 1994 have never re-filed their charters or bylaws, so such documents are not available via EDGAR, and only occasionally available through databases in widespread use such as LEXIS.[192] Firms must also generally describe the terms of their securities, as well as basic governance terms in their charters, bylaws and state law, as part of their routine filings with the SEC, [193] but such descriptions are sometimes inaccurate, often vague, and usually incomplete.[194]

Two shareholder-service firms, Investor Responsibility Research Center (IRRC) and the Institutional Shareholder Services (ISS), maintain databases of governance terms for the largest U.S. public corporations, and IRRC publishes materials based on its database. These databases only cover a portion of the public company universe: smaller firms, and firms that have been taken over, gone bankrupt or otherwise ceased to be reporting companies are generally dropped. More important, these databases were not designed to be reliable guides to all of the information necessary for evaluating a firm's legal takeover vulnerability. Thus, none of these databases includes all of the terms that may be important to a takeover fight. In addition, they have a sufficient number of errors,[195] so attempting to study the relationship among terms or between terms and other firm characteristics is hazardous, particularly for multivariate

[192] Pre-EDGAR documents can be obtained from the SEC via commercial services, but only at a non-trivial per-firm cost; charters, but not bylaws, are typically available from the firm's state of incorporation, and only at a non-trivial cost.

[193] Some terms (e.g., staggered boards) can be easily determined from annual proxy statements or prospectuses. Others (e.g., the existence of a pill, although not the potential for one) can be easily determined from footnotes to audited financial statements contained in annual reports.

[194] Interview with Virginia Rosenbaum (July 7, 1999).

[195] To the credit of both organizations, the number of errors is smaller than one might predict. Still, it is suggestive that attorneys working on takeover fights never rely on these databases, and in my own practice experience I came to expect at least one error per set of 20-30 governance terms per firm under study.

regressions involving small subsamples (for example, firms subject to hostile takeover bids in a given year).[196]

2. Contestability Algorithm

Despite the large number of variations, a relatively simple algorithm can reduce nearly all significant governance terms to a single continuous[197] variable (expressed in days). This time-to-takeover variable – the "contestability index" (CI or index) – obviously abstracts from many factors that have been plausibly assumed to affect the contestability of corporate control: ownership structure, firm size and profitability, bidder characteristics, management quality, industry-specific regulation, etc. Nevertheless, the variable captures the way that bidders, practitioners, and arbitrageurs think about the effect of securities and corporate law and firm-specific governance terms on the relative difficulty of a takeover for a given company, and impounds the effects of 15 different legal rules into a single, easy-to-grasp metric.[198]

The algorithm can be described in two stages: (1) analysis of terms and definition of variables, and (2) determination of the index.

a. Analysis of Terms

First, governance terms are analyzed to define variables needed for determination of the index. Most variables are readily determinable from a firm's charter or bylaws ("primary variables"). Others are constructed from one or more of such primary variables.

[196] The difficulties affect investors as well. For cost-conscious investors, ascertaining the legal takeover vulnerability of public companies is inexcusably expensive. To improve the situation, the SEC could require all firms to (1) "EDGARize" their charters, bylaws and forms of securities; and (2) disclose in plain English (a) the time a majority shareholder coalition would legally need to replace a majority of the board, and (b) if charter or bylaw amendments would change the time required. EDGARizing charters and bylaws involves a trivial cost per firm, need be done only once, and would produce a clear public good.

[197] Technically, the contestability index is not a continuous variable. It is bounded from below by zero, and in the real world does not take on non-integer values. In this respect, however, it is not different from using salaries or other dollar-denominated variables as dependent variables, which are also bounded from below by zero and discrete below some threshold of size. In general, however, the CI should function as a continuous variable over plausible ranges of predicted values.

[198] It is not suggested that the use of formal definitions and the algorithm described below are specifically used by practitioners. In some respects, there is a tension between arriving at a formal, tractable measure of legal takeover vulnerability for a large number of firms at multiple points in time for research and analytical purposes and the task before practitioners or arbitrageurs, which is to assess the legal takeover vulnerability of a specific company at a specific (if moving) point in time. What follows, for example, will be too precise for many purposes, and not precise enough for other purposes. Nevertheless, the description that follows is a fairly close description of what is done in law firms, investment banks and hedge funds whenever a given public company is put "in play."

(1) Primary Variables

Determination of the index depends straightforwardly on a number of governance terms. A number of categorical variables, set forth in **Table B-1**, are set equal to "1" if relevant provisions are expressly contained in the firm's charter or bylaws, "0" if they are expressly denied or prohibited in the firm's charter or bylaws, and set equal to "9" if the charter and bylaws are silent.[199] In addition, a bounded continuous variable "SEATS" is defined as the number of board seats of the firm, determined by reference to the most recent relevant SEC filing (typically the most recent regular proxy statement). **Table B-1** also sets forth where the primary variables enter into either other variable definitions or the algorithm itself.

The only exceptions to this scheme are the variables "STATE," "ANNUAL" and "WORKAROUND." "STATE" is simply a firm's state of incorporation, which determines shareholder power over board selection, both as a default and a mandatory matter, as discussed more below. "ANNUAL" is the number of days that may elapse between annual shareholder meetings before shareholders can compel another; this varies from state to state, as set forth in **Table B-5**. "WORKAROUND" is defined as "0" if relevant provisions of the charter or bylaws impose supermajority requirements on bylaw amendments by shareholders, and "1" otherwise.[200] Shareholders are permitted to amend the bylaws in all states.[201] Absent charter or shareholder-approved bylaw terms raising the shareholder vote required to amend the bylaws,[202] a majority of determined shareholders will be able to "work around" any terms found in the bylaws that slow or interfere with their taking control of the board. In particular, terms commonly found in the bylaws include terms (a) specifying the number of directors, or providing that the number may be set only by the board, (b) limiting the circumstances under which directors may be removed to "cause" only, and (c) limiting the right to fill vacancies to the board. Some firms attempt to provide for staggered boards in their bylaws, something prohibited in most states, and permitted in Delaware only in

[199] If relevant provisions are contained in both charter and bylaws, and are contradictory, then the conflicts are resolved as discussed in note 2 supra.

[200] Additional variables "WORKAROUND-67" and "WORKAROUND-80"could be defined to take account of the possibility that a bidder or dissident shareholder group could obtain the necessary supermajority votes to meet supermajority requirements of 67% or 80%. For the basic index, however, it is assumed that if a vote of greater than 50% is required, the vote cannot be obtained.

[201] See RMBCA Annot. § 10.20(b); DGCL § 109.

[202] Even such limitations on shareholder bylaw amendment power are of uncertain legality in Delaware and many other states. For purposes of the index, close questions such as this will generally be resolved against shareholders on the theory that bidders will generally want to have a clear legal path to bid victory before launching an expensive takeover bid. Thus, the following analysis assumes that such charter or shareholder-approved bylaw provisions restricting bylaw amendments by shareholders are legal. There is the further possibility that *boards* could (under concurrent bylaw amendment power typically granted in the charter) amend the bylaws to add supermajority vote requirements on future bylaw amendments by shareholders. This sort of restriction, too, has been enjoined by the one court that has considered the question, seems on its face highly unlikely to survive legal challenge, and so will not be considered in the following analysis. [cite Chesapeake case]

initial or shareholder-approved bylaws. Other firms attempt in their bylaws to limit shareholder rights to call special meetings or act by written consent, despite the fact that default law in most states permits such rights to be limited only in the charter. Even where such provisions are legal, shareholders can work around such provisions by successively amending the bylaws and then taking whatever action would have otherwise been prohibited. By and large, such workarounds can be accomplished in little more than the time normally required for a proxy fight.

Where firm-specific governance terms are located can be important in evaluating the takeover vulnerability of a given firm. **Table B-2** sets forth several categorical variables are determined by inspecting a firm's charter and bylaws, each variable set to "1" if the relevant governance term is located in the charter, "2" if located in the bylaws, and "0" if no express term exists.

Finally, variables relating to a firm's authorized and issued capital stock are determined by reference to the charter and the most recent relevant SEC filing prior to the date with respect to which the index is being determined. **Table B-3** sets forth these variables and their definitions. Each variable equals the relevant number of shares.

In addition to the foregoing primary variables, a number of additional, more complex variables are constructed on the basis of the primary variable. Each of these variables is separately discussed below. **Table B-4** sets forth these variables, as well as their formal definitions. **Table B-4** also lists where these variables enter into the algorithm.

(2) Pill Bans

If a firm either has explicitly or implicitly adopted a prohibition against a poison pill in its charter, then the firm cannot adopt a poison pill, and no further analysis of terms is needed. Here the point is not whether a firm has a pill at any given point in time, since the presence or absence of a pill is almost always irrelevant to a firm's takeover vulnerability. Rather the point is whether the firm has the *ability* to adopt a pill in the future.

Explicit bans on pills are relatively simple to imagine, although they are so rare as to be almost nonexistent for research purposes. (Their rarity must be one of life's great mysteries to those who believe that pills are uniformly and generally harmful to shareholder value.) Charter prohibitions on pills would clearly be legal in Delaware and under the RMBCA.[203] Explicit prohibitions on pills contained in bylaws are legal in Oklahoma,[204] illegal in Georgia,[205] and are unlikely to be found legal in Delaware.[206] For firms in states in which bans on pills contained in

[203] See DGCL §§ 102, 141, 157 & 242; RMBCA §§ 2.02, 6.24, 8.01 & 10.03.

[204] See [Fleming]. Given this decision, and given the ability of a majority of shareholders in all 50 states to adopt bylaw amendments without board concurrence or approval, the index of all firms incorporated in Oklahoma is effectively 30.

[205] See [Invacare].

[206] See Lawrence A. Hamermesh, *Corporate Democracy and Stockholder-Adopted Bylaws: Taking Back the Street?*, 73 TULANE L. REV. 409 (1998); Charles F. Richards, Jr. and Robert J. Stearn, Jr., *Shareholder By-Laws Requiring Boards of Directors to Dismantle*

bylaws are legal, no further analysis of terms is needed; the index is given in Case 1 under "Determination of Index" below.

Implicit bans on pills may arise as a result of the relationship between a company's outstanding and authorized capital stock. In general, for a pill to sufficiently dilute a bidder to make it a meaningful deterrent to a hostile bid, a firm needs to have at least twice the number of authorized common shares than it has outstanding. Suppose, for example, that a firm has 100 shares outstanding, and 120 authorized. It adopts a pill, which at most can result in the issuance of 20 more shares. Suppose the pill trigger is 10%. The bidder buys 11 shares, the pill is triggered, and all other shareholders exercise their rights. The result is that the bidder's ownership and voting rights are diluted from 11% to 9%. Clearly this will not normally be a meaningful takeover deterrent. At 200 authorized shares, the bidder can be diluted down to 5.5%, and at 300, 3.7%. Calculating economic dilution is more complicated, and economic dilution can have deterrent effects even if voting dilution is not significant, but generally speaking "the key driver [of the deterrent effect of the pill] is the flood of new shares issued upon exercise [of the pill],"[207] so that when the "flood" is constrained by a low level of authorized but unissued shares, the deterrent effect of a pill will be greatly weakened.

This analysis, however, is complicated by the possibility of fractionalizable preferred shares serving as synthetic common shares. Based on IRRC data as of December 31, 1998, more than 90% of public companies have adopted charter provisions giving boards "blank check" authority to issue preferred stock as needed without further shareholder approval, and preferred stock may be issued in lieu of common stock, making limits on common stock in the charter irrelevant for purposes of implicit prohibitions on pills. Even limits on the number of preferred shares that may be issued pursuant to such authority are generally non-binding, because each share preferred can be "fractionalized" – that is, issued in fractional units, with each fractional unit being given (pursuant to the "blank check" authority) rights equivalent to a single common share (with the result being that each whole preferred share has rights equivalent to large multiples of a single common share). Suppose again there are 100 common shares outstanding, 120 common shares authorized, but now 10 shares of "blank check" preferred stock authorized and unissued. The board can authorize the issuance of preferred shares with 10x normal common stock rights (voting rights and rights to participate in dividends and other distributions), and then adopt a pill consisting of rights to purchase $1/10^{th}$ of a share of preferred stock. The bottom line is as if the 10 shares of preferred had been converted into 100 shares of common

---

Rights Plans Are Unlikely to Survive Scrutiny Under Delaware Law, 54 BUS. LAW. 607 (1999).

[207] [cite to Bruner] Bruner carefully analyzes the various effects of various types of pills there and, consistent with the analysis here, characterizes as "weak" but effective a pill that results in the issuance of 3x pre-trigger outstanding shares. see id., at 8 (Table B-1) & 31 ("weak" pill effective deterrent with 2x exercise multiple and 2x purchase multiple, which at their weakest would be based on a purchase value double the expected future stock price, which results in issuance of [(purchase value / future stock price)+1] = 3).

stock for purposes of the pill, restoring (marginal) deterrent effect to the pill.

Thus, for an implicit ban on pills to be effective, the firm needs to (a) have authorized common stock equal to less than 200% of its current outstanding and (b) either not have granted blank check authority or have granted blank check authority subject to constraints on fractionalization of preferred stock. Although uncommon, about five percent of public companies fall in this category, based on a sample of 165 firms that went public in 1990-1992. As with explicit bans on pills, no further term analysis is needed for such firms, and the index is given in Case 1 under "Determination of Index" below.

Formally, a variable "PILLBAN" should be set equal to "0" unless either of the following is true, in which case, "PILLBAN" should equal "1": (1) the number of authorized common shares is at least 200% of the number of outstanding common shares

$$CSAUTH > 2 * CSOUTST$$

or (2) there is at least one authorized but unissued preferred share and the charter gives the board "blank check" authority to set the terms of unissued preferred shares

$$PSAUTH - PSOUTST > 1 \text{ and } BLANK = 1$$

(3) Coups via Removal or Board Packing

Default law in most states, including Delaware, permits shareholders to remove directors without cause.[208] Firms may attempt to restrict this ability,[209] but if the restrictions are in the bylaws and shareholders are able to amend the bylaws, such restrictions can be "worked around" (as discussed above). Removal power gives shareholders the ability to mount a "coup" rather than waiting for regularly scheduled elections of directors. Directors can simply be removed and replaced.[210]

[208] The only exceptions are New Jersey, which permits removal without cause only if the charter expressly permits, and New York and Texas, which permit removal only if the charter or bylaws expressly permit. In addition, Maine, Montana and Nevada require a two-thirds vote to remove directors without cause, as a matter of default law.

[209] Delaware law does not appear to permit any restrictions on removal by shareholders at firms that do not have staggered boards, whether in the charter or bylaws. DGCL § 141. Outside Delaware, charter restrictions would appear to be valid under the RMBCA, but for the same reason (*inclusio unius est exclusio alterius*), the legality of restrictions on removal contained in the bylaws is doubtful. Because of the ability of shareholders to "work around" restrictive bylaws at most firms, the issue will not often be of significance. Such bylaws are presumed invalid for the rest of the analysis.

[210] It might seem that power to fill those vacancies is also necessary for an effective coup to be carried out; however, in Delaware, if at the time of filling any vacancy, the directors in office constitute less than a majority of the whole board, the Chancery Court may upon application by 10% shareholders order an election. DGCL 223(c) Thus, if shareholders can remove the entire board in one fell swoop, a coup can be mounted even if they do not technically have the power to fill vacancies. A similar outcome could be expected even in states that do not expressly provide for such an emergency election.

Default law in every state except Massachusetts and Ohio permits shareholders to fill vacancies.[211]

If the firm has a staggered board, then default law in Delaware and a few other states (Kansas, Texas and Maryland) permit shareholders to remove directors only *with* cause or as otherwise provided expressly in the charter. Thus, at firms with staggered boards in these states, a coup is only possible via removal if the charter expressly permits.

A shareholder "coup" may also be possible by "packing the board." If shareholders are (a) permitted to set the number of directors and (b) fill the newly created and vacant board seats, they can increase the size of the board by the number of existing seats plus one, and then fill those newly created vacancies, thereby taking control of a majority of the board. Default law in every state provides that the number of directors is to be set as specified in the charter or bylaws; thus, as a default matter, board packing may not be permitted. However, shareholders not only may "work around" bylaw restrictions on setting the number of directors, they may also give themselves express authority to set the number.

In general, the variable "COUP" is set equal to "1" unless both (a) removal is blocked and (b) board packing is blocked, in which case the variable is set equal to "0." Formally defining a variable to represent shareholder "coup" power is complicated by state-by-state variations, and the full definition of "COUP" is set out in **Annex B-1**.[212] Definitions for Delaware firms, and for firms in the majority of states that follow the RMBCA, are set out there.

At Delaware firms, for removal to be blocked, the charter must (a) provide for a staggered board and (b) prohibit or remain silent on removal. Delaware law does not allow the bylaws to permit removal at firms with staggered boards, and at firms without staggered boards, removal appears to be a rare mandatory term that cannot be varied either in the charter or bylaws.[213] For board packing to be blocked at Delaware firms, one of three things must be true: (i) vacancy filling by shareholders must be prohibited in the charter or bylaws, and if the latter, the bylaws must require a supermajority vote to be amended by shareholders; (ii) the charter fixes (or prohibits the changing by shareholders of) the number of directors, or (iii) the bylaws fixes (or prohibits the changing by shareholders of) the number of directors, and bylaw amendments require a supermajority vote.

---

[211] As with removal restrictions, charter restrictions on vacancy filling by shareholders are valid under RMBCA § 8.10, and for that reason bylaw restrictions are not. See note 23 supra. By contrast, the DGCL gives the power to fill vacancies as a default matter to the directors; the shareholder right to fill vacancies is a common law right, Moon v. Moon Motor Car Co., 151 A. 220 (Del. Ch. 1930); Campbell v. Loew's, Inc., 134 A.2d 852 (Del. Ch. 1957). Vacancy filling powers could thus presumably be restricted in the charter or bylaws of a Delaware firm, although bylaw restrictions have never been tested. Folk, at 485. Again, shareholders can "work around" the absence of express authority to fill vacancies at most firms by adopting a bylaw giving them that authority.

[212] As with workarounds, additional variables "COUP-67" and "COUP-80" could be added to account for possible supermajority requirements.

[213] See DGCL § 141.

For firms that follow the RMBCA, for removal to be blocked, the charter must prohibit removal; as with the DGCL, the RMBCA does not permit removal to be restricted in the bylaws.[214] For board packing to be blocked at RMBCA firms, one of three things must be true: (i) vacancy filling by shareholders must be prohibited in the charter;[215] (ii) the charter fixes (or prohibits the changing by shareholders of) the number of directors, or (iii) the bylaws fix (or prohibits the changing by shareholders of) the number of directors, and bylaw amendments require a supermajority vote.

(4) Early Shareholder Action

To bring a "coup," shareholders must be able to act. Normally, they can act only at annual meetings, which occur every 12-18 months or so. Shareholders can accelerate the process of electing directors, however, if (as at the majority of firms) they can call and then act at a special meeting, or if they can act by written consent "in lieu of" a meeting.

Default law in Delaware and a few other states (including Florida, Illinois, Michigan and New Jersey) provides for shareholder action by written consent, and permits restriction of this power only in the charter, not the bylaws.[216] States that follow the RMBCA allow shareholder action only by *unanimous* written consent, which for public companies is effectively a prohibition.[217] On the other hand, while Delaware does not permit shareholders to call a special meeting as a default matter, the RMBCA allows 10+% of shareholders to call a special meeting. The RMBCA rule may be mandatory, but in any event it permits supermajority requirements only in the charter, not in the bylaws.[218] Only in three states (New York, Minnesota and Indiana) are shareholders not given the ability to act "early" as a matter of default law. Some states raise the percentage of shareholders required to call a special meeting to higher levels, such as 25% (Georgia and Ohio), or permit companies to raise the levels in the charter (often up to some maximum, such as in Ohio and Texas, which permit the charter to raise the level to 50%).

Formally, for firms in Delaware or states that follow Delaware on action by written consent (see **Table B-4**), the variable "EARLY" is set equal to "1" unless the charter expressly prohibits or imposes supermajority requirements on shareholder action by written consent

---

[214] RMBCA § 8.08.

[215] See note 25 supra.

[216] DGCL § 228; RMBCA § 7.04.

[217] Thus, workarounds are not relevant to consent prohibitions. Outside Delaware, consents must be expressly permitted. In Delaware, consent prohibitions must be in the charter to be effective, which shareholders cannot change without board concurrence. See note 23 supra.

[218] Thus, workarounds are not relevant to prohibitions on shareholder rights to call special meetings. In Delaware, special meeting calls by shareholders must be expressly permitted. Outside Delaware, prohibitions on and supermajority requirements for special meeting calls by shareholders are either illegal or must be in the charter to be effective, which shareholders cannot change without board concurrence. See note 25 supra.

CONSENT = 0 and CONLOC = 1

in which case they are set equal to "0." For firms that follow the RMBCA (see **Table B-4**), the same variables are also set equal to "1" unless the charter expressly prohibits or imposes supermajority requirements on shareholders calling special meetings,

SM50 = 0 and SMLOC = 1

in which case those variables are set equal to "0."[219] For firms in New York, Minnesota and Indiana, "EARLY" is set equal to "0" unless CONSENT = 1 and CONLOC = 1.

(5) Annual Meeting Requirements

With one or two exceptions (designed primarily for mutual fund companies), state corporate codes all require firms to hold annual meetings of shareholders, whether or not requested by shareholders. State laws, however, vary considerably in how much leeway they permit in when an annual meeting is required. At one extreme, for example, Nevada requires annual meetings every 12 months; at another extreme, Pennsylvania requires annual meetings to be held within six months of the time designated for the meeting in the firm's charter or bylaws, with at least one in every calendar year, a formulation that can permit up to 18 months of delay between meetings; and Delaware requires annual meetings within 13 months of the last held meeting. Because the variation in these requirements can have a substantial effect on how long takeover fights can last, they are reflected in the index.

Formally, a variable "ANNUAL" is constructed by reference to state law, taking on the values reflected in **Table B-5**.

(6) Cumulative Voting and Staggered Boards

For firms with staggered boards, cumulative voting may add delay to a takeover.[220] Whether or not delay is added depends on whether or not insiders own enough stock, or can persuade enough unaffiliated shareholders to vote with them, so as to use the ability to cumulate votes and hold onto one seat per election. For firms with staggered boards and a small enough number of board seats relative to the number of accumulated voting power of the insiders, this effect may delay a takeover. The minimum number of voting shares necessary for directors and officers to retain one seat ("HOLD") depends on the number of board seats (SEATS or "B" in the following formula) and the number of outstanding voting shares

[219] As with workarounds and coups, additional variables "EARLY-67" and "EARLY-80" could be added to the analysis. Again, supermajority requirements on early action appear to be rare.

[220] See [cites on cumulative voting].

(assumed to equal common shares outstanding, CSOUTST, or "S" in the following formula), as follows:

$$HOLD = [(B / (3B + 9)) +(5 / 3S)] / S$$

The formula reflects the classic cumulative voting formula for how many shares incumbent managers need to elect N′ directors, given that N directors are to be elected at the next meeting, and S shares outstanding.[221] It also reflects the additional constraint that incumbents need to elect at least B/3 directors at each annual meeting to be able to stretch out their incumbency to a total of three meetings, rather than only two.

b. Determination of Index

With these definitions in hand, the contestability index can be calculated. The following calculation can be readily programmed into standard spreadsheet programs using the foregoing analysis of terms and definition of variables. There are seven mutually exclusive cases.

Case 1

If PILLBAN = 1, then CI = 30

If the company cannot adopt a poison pill, then the index equals 30, which is the minimum tender offer period under the Williams Act, plus 2-5 days for preparation. The remaining cases assume the firm can adopt a poison pill.

Case 2

If PILLBAN = 0, COUP = 1, and CONSENT = 1, then CI = 45

If the shareholders can act by written consent and can mount a "coup," then the index equals 45, which is the minimum period of time practically necessary to prepare and clear consent solicitation materials with the SEC under the federal proxy rules, circulate the materials and file them with the firm.

Case 3

If PILLBAN = 0, COUP = 1, and SM10 = 1, then CI = 65

If the shareholders cannot act by written consent but less than 10% of shareholders can call a special meeting of shareholders, and at the meeting shareholders can mount a "coup," then the index is 65. If shareholders call a special meeting, the firm is generally required to hold such a meeting within 10-60 days (the minimum period specified in the

[221] [Give classic formula with cite.]

notice of meeting under all corporate codes). The index represents the maximum 60 day delay before the meeting and 5 days for preparation and proper demand of the meeting. No additional time is added for processing under the federal proxy rules because such processing periods are assumed to run concurrently with the 60-day notice period under state law.

Case 4

If PILLBAN = 0, COUP = 1, SM10 = 0, and SM50 = 1, then CI = 90

If the shareholders cannot act by written consent, and 10-50% of shareholders can call a special meeting, and at the meeting shareholders can mount a "coup," the index is 90, which reflects the minimum time practically necessary for shareholders to (a) spend 20-30 days to solicit consents/demands to call the special meeting (which will require a prior filing with the SEC, as with written consent solicitations) and (b) 60 days for the company to hold the meeting (during which time the shareholder may solicit proxies to act at the special meeting).[222]

Case 5

If PILLBAN = 0, EARLY = 0 and (CLASS = (0 or 2) or COUP = 1) then

CI = (ANNUAL* 0.5) + 23

If shareholders cannot act "early," and the board is not staggered, or (regardless of whether the board is staggered) shareholders are able to mount a "coup" at a shareholder meeting, then the index will depend on how long shareholders must wait until the next annual meeting.[223] For practical analysis of a given company's vulnerability to takeover at any given moment in time, of course, the appropriate measure would be to simply add onto the date of the last annual meeting the value of and subtract the current date from the sum. At a given point in calendar time, in other words, a given firm's legal vulnerability to takeover depends on how long it has been since the last annual meeting and how much

[222] If a supermajority of shareholders can call a special meeting, then the index will be presumed to reflect a practical inability of shareholders to do so, given the difficulty of obtaining supermajority votes for a preliminary step in a takeover bid. Unusual circumstances might indicate that such a supermajority might be forthcoming -- for example, where a bidder is making a large premium offer and the target directors are attempting to "just say no" to the bid, or where a supermajority of shareholders have tendered into an offer already. In those cases, the index might be more appropriately set at 90. In any event, with the foregoing analysis complete, terms defined, and algorithm programmed into a spreadsheet, the index can be recalculated readily to examine relative legal takeover vulnerability making different assumptions about the size of the shareholder coalition mobilized against the target.

[223] Massachusetts switches the normal default rule on classified boards, so for Massachusetts firms only, the algorithm for Case 5 is: If PILLBAN = 0, EARLY = 0 and (CLASS = 0 or COUP = 1) then CI = (ANNUAL* 0.5) + 23.

flexibility the target board has under state law to delay the next annual meeting. **Figure B-1** illustrates the determination of the index for a company incorporated in Delaware, which requires annual meetings within 13 months of the last annual meeting, i.e., within a maximum of 390 days.[224] The legal vulnerability to takeover of a given firm that falls under Case 5, as a function of calendar time, takes on a saw-toothed form shown in **Figure B-1**.

Starting approximately 45 days prior to each annual meeting,[225] the firm's index rises suddenly to the maximum of 390, and then declines during the year until a date approximately 345 days after the last annual meeting. At this point, any bidder wanting to use the upcoming annual meeting to coordinate shareholders against existing directors must commence its proxy statement filing and preclearance process with the SEC to leave sufficient time to solicit and obtain a majority of proxies. The precise cut-off point will vary depending on target shareholder dispersion, the number of target shareholders willing to support a bid, and the degree of target resistance, all of which can affect the time needed for a proxy fight. Nevertheless, at some point around 45 days prior to the scheduled annual meeting, the index again rises discontinuously to its maximum, reflecting the fact that the bidder has lost its chance, for the next year, to begin an effective proxy fight. As a result of this fluctuation, bidders sometimes wait until the point in the calendar year when the target is most vulnerable before commencing a bid, but often other factors (financial risk, potential competition, regulation) may prompt a bidder to commence without regard to where the target is in its annual meeting cycle.

For purposes of research or analysis of a large number of firms at varying points in annual meeting cycles, a precise calculation of each firm's index is neither feasible nor necessary. Instead, an average index can be calculated, equal to the expected time to the next annual meeting from a (random) point in the annual meeting cycle that shareholders decide to wage a proxy fight or a bidder decides to launch a hostile bid. As reflected in the formula given above, the index equals the 45-day minimum for proxy preclearance plus 50% of the time before shareholders can judicially compel another annual meeting (less 45), or

$$(\text{ANNUAL} - 45) * 0.5] + 45$$

which after rounding simplifies to

---

[224] DGCL § 211(c). Delaware law also requires an annual meeting within 30 days of the date designated for the annual meeting in the bylaws. Id. However, most companies allow boards to amend bylaws, making this requirement non-binding in many circumstances.

[225] In an actual takeover fight, the target could hold its annual meeting at any point prior to the maximum of 390 days after the last annual meeting, so that the cut-off for commencement of a proxy fight may be earlier than reflected in **Figure B-1**. Firms must generally provide advance notice of the scheduling of an annual meeting in order to prevent them from lulling bidders into inaction and then scheduling an annual meeting sufficiently close in time so as, in effect, to push past the cut-off point for an effective proxy fight. [cite to caselaw on moving of annual meeting dates; note effect of 14a-13].

ANNUAL * 0.5 + 23

Advance notice periods frequently required by bylaws will not generally add any additional time to a proxy fight, because they can run concurrently with SEC preclearance.

Case 6

If PILLBAN = 0, COUP = 0, CLASS = 1, and
either (STGLOC = 1 or WORKAROUND = 0), and
either (CUMUL = 0 or INSIDE < HOLD), then

CI = (ANNUAL* 1.5) + .23

If shareholders cannot mount a “coup," and the board is staggered (either in the charter or, if shareholders cannot workaround the bylaws, in the bylaws), then shareholders will have to fight through at least two annual meetings, which means waiting at least one full annual meeting cycle, plus an expected average time of 50% until the first annual meeting. If shareholders may not cumulate their votes, then only 1.5 annual meeting cycles will be necessary on average. (The ability of shareholders to act "early" is irrelevant to control fights unless they can also mount a "coup.") Even if shareholders may cumulate votes, but insiders own less than the minimum percentage of outstanding voting shares necessary to hold onto a seat with cumulative voting, then, again, only 1.5 annual meeting cycles will be necessary on average.[226]

In each case, the index is equal to 45 days' minimum SEC preclearance for the next annual meeting (as discussed for Case 5), plus 50% of the time to the next annual meeting less 45 days for SEC preclearance already included (again as discussed for Case 5), plus 100% of the time to the number of annual meetings needed to obtain a majority of the board, given by multiplying the time between annual meetings by 1.5, and adding 23. [227]

As with Case 5, analysis of a particular company at a given point in time would not use the average expected time to the next annual meeting, but would calculate an actual time, resulting in an index that

[226] For Massachusetts firms only, the algorithm for Case 6 is: If PILLBAN = 0, COUP = 0, CLASS = (1 or 2) and either (CUMUL = 0 or INSIDE < HOLD), then CI = (ANNUAL * 1.5) + 23.

[227] This analysis assumes a staggered board has three classes, as with nearly all staggered boards. The law of most states (including Delaware and those that follow the RMBCA), as well rules of the New York Stock Exchange, see New York Stock Exchange Listed Company Manual § A-15, at A-280, limit the number of classes to three. Two classes are sometimes seen, and four are permitted in New York and North Carolina. In the two-class case the index equals 1.25 * ANNUAL + 23, as delay consists of one normal annual meeting cycle, weighted at 50%, as in Case 5. Evenly divided classes are equivalent to three classes (bidders will assume deadlock may not provide control). If classes are lopsided, with one more seat in one class than the other, the odds the larger class will be elected at the next meeting are 50/50. If the odds of an even or lopsided split are also 50/50, the probability a majority will not be elected at the next annual meeting is 75%, resulting in a total expected time to majority control of (0.5 + 0.75)*ANNUAL + 23.

fluctuates over the annual meeting cycle, but shifted upward by the total time between annual meetings. This is illustrated in **Figure B-2**.

Case 7

If PILLBAN = 0, COUP = 0, CLASS = 1, CUMUL = 1 and INSIDE ≥ HOLD, then

CI = (ANNUAL* 2.5) + .23

If shareholders cannot act "early," a "coup" cannot be mounted, the board is staggered, shareholders may cumulate their votes, and directors and officers own more than the minimum percentage of outstanding voting shares necessary to hold onto a seat with cumulative voting, then insiders will be able to hold onto a majority of board seats through two elections rather than just one, increasing the index to equal the time between annual meetings multiplied by 2.5, plus 23. [228] This analysis assumes that directors and officers are assumed to vote as a "block" against the dissident coalition or bidder; this assumption may not be valid in all cases, but is a reasonable simplification for research.

3. How the Index Works: Four Examples

To briefly illustrate how the contestability index would be determined for real companies, consider the following public companies: CompUSA, Inc., Dell Computer Corp. Exxon Corp. and Alteon, Inc. CompUSA and Dell are well-known, Texas-based computer retailers; Exxon is of course one of the largest companies in the world; and Alteon is a small-cap health-care company. None has a shareholder with more than 20% of the voting stock; none has a dual-class capitalizations; thus, each is subject to a hostile takeover bid (although a bid for Exxon might be impossible to finance). Exxon is the direct corporate descendant of Standard Oil of New Jersey, founded in 1882, and is still incorporated in New Jersey, although it moved its headquarters from New York to Texas in 1990. CompUSA, Dell and Alteon were founded in the 1980s and are all incorporated in Delaware. Dell went public in 1988, CompUSA and Alteon in 1991. **Table B-6** sets forth a subset of the governance, location and capital stock variables used in the index for each company, as well as two of the constructed variables.

For all four firms, calculation of the contestability index is simplified because all have blank check authority in their charters and sufficient authorized and unissued preferred stock, so that none bans pills, and each firm will be able to adopt a pill in response to a bid (if it has not previously done so). For Exxon and Dell, the calculation is also simplified because neither has a staggered board, rendering cumulative voting and inside ownership irrelevant for purposes of the index. Both Alteon and

[228] For Massachusetts firms only, the algorithm for Case 7 is: If PILLBAN = 0, COUP = 0, CLASS = (1 or 2), CUMUL = 1 and INSIDE > HOLD, then CI = (ANNUAL * 2.5) + 23.

CompUSA have staggered boards, but only CompUSA's is effective, because at Alteon shareholders can both mount a "coup" and act "early," in advance of an annual shareholders' meeting. An "early coup" is also possible at Dell. At Exxon, a "coup" is possible, but shareholders must wait until the next annual shareholders' meeting, making a "coup" irrelevant; and at CompUSA shareholders can neither mount a coup nor act early.

Based on this analysis, the indices for Exxon, Dell, Alteon and CompUSA can be determined from Algorithm Cases 2, 4 and 5, and equal 208, 45, 45 and 608, respectively. Thus, a bidder can expect to bring a takeover bid for either Dell or Alteon to a closing within 45 days, absent antitrust concerns, bid competition, or some effective transactional or litigation defense, whereas at Exxon it will take between two and 14 months, and at CompUSA, it will take a minimum of 13 months, and could take over two years. As asserted at the outset, the legal takeover vulnerability of the three firms varies significantly, based on each firm's set of takeover defenses and governance terms**.**

4. Contestability Indices Under Default Law

Another way to illustrate the way the index works is to consider what indices would apply to firms that do not vary from default governance rules supplied by state law. Interestingly, the result of a strict default law analysis is uninteresting: all states provide that the board's authority to issue or set the terms of common or preferred stock extends only so far as expressly provided in the charter; thus, all firms begin life with a ban on pills implicitly in place. All firms, however, grant boards at least some flexibility to issue stock, for obvious financing reasons, and nearly all grant boards sufficient flexibility in this authority that an implicit ban on pills is absent.

If a ban on pills, then, is assumed to not be part of default law, the analysis of the contestability index under default law becomes only slightly more interesting. **Table B-7** sets forth governance variables imposed by default law, as well as two constructed variables and the index itself, for the major incorporation jurisdictions, as well for the states that follow the RMBCA. Variations remain remarkably minor: indices range only from 45 to 90, nowhere near the range found in any random sample of public companies.

Perhaps surprisingly, Delaware imposes the *lowest* amount of delay on takeovers as a matter of default law. California and RMBCA states impose only slightly more delay: they effectively prohibit shareholder action by written consent but allow special meetings to be called by 10% of the shareholders. Pennsylvania only partially lives up to its reputation as being the state most inhospitable to takeovers: it bars shareholder action by written consent and requires 20% of shareholders to call a special meeting, thus imposing the highest hurdle of any state's default law to "early" action by shareholders, but the delay expected even under Pennsylvania default law for a takeover bid is still only a modest 90 days. Massachusetts, on the other hand, imposes no more delay than does the RMBCA, despite its infamous imposition of staggered boards as a matter of default law during the Norton takeover battle, and despite its

being one of the few states to not give shareholders the ability to remove directors as a default matter: the ability of shareholders to pack the board under default law defeats the effectiveness of the staggered board provision anyway.

Annex B-1

Definition of COUP for DELAWARE Firms

(1)(a)(i) If CLASS = 1 and (STGLOC = 1 or WORKAROUND = 0) and [REM = (0 or 2) or REMLOC = 2], and

(1)(b)(i) VAC = 0 and [VACLOC = 1 or (VACLOC = 2 and WORKAROUND = 0)], or

(1)(b)(ii) NUMSET = 0 and NUMLOC = 1, or

(1)(b)(iii) (NUMSET = 2 or NUMLOC = 2) and WORKAROUND = 0, then **COUP = 0**

(2) Else **COUP = 1**

Explanation

Delaware default law on removal of directors without cause depends on whether the board is classified: if it is, removal is prohibited unless the charter expressly permits it; if it is not classified, removal is permitted, and neither charter nor bylaws may prohibit it. To be effective, a staggered board must be specified in the charter, or, if in the bylaws, the shareholders must not be able to amend by the bylaws without a supermajority vote. Thus, at Delaware firms without classified boards, coups are mandatory. At Delaware firms with classified boards, coups are still possible if the board may be packed, or if the charter permits removal without cause. Default law permits directors to fill vacancies, but does not shareholders to set the number of directors unless so specified in the bylaws. Thus, to prevent board packing: (i) vacancy filling must be prohibited in the charter or bylaws, and if the latter, the bylaws must require a supermajority vote to be amended; (ii) the charter may prohibit shareholders from setting the number of directors; or (iii) the bylaws may prohibit or be silent on shareholders' ability to change the number of directors, if the bylaws may not be changed without a supermajority vote.

RMBCA (Modal Non-Delaware) Definition of COUP

(1)(a)	IfREM = 0 and REMLOC = 1, and	
(1)(b)(i)	VAC = 0 and VACLOC = 1, or	
(1)(b)(ii)	NUMSET = 0 and NUMLOC = 1, or	
(1)(b)(iii)	(NUMSET = 2 or NUMLOC = 2) and WORKAROUND = 0, or	
(1)(b)(iv)	STATE = MA, VAC = (0 or 2), and WORKAROUND = 0)], then	**COUP = 0**
(2)	Else	**COUP = 1**

Explanation

Default law in most states permits shareholders to remove directors without cause unless otherwise provided in the charter. Thus, the first part of the definition – labeled (1)(a) above – specifies that a coup is not possible only if removal is barred and the bar is in the charter. In addition, for a coup to not be possible, shareholders must not be able to pack the board. Board packing has two steps: changing the number of directors and filling the resulting vacancies. Most states allow shareholders to fill vacancies unless otherwise provided in the charter; thus, case (1)(b)(i) above requires the charter to specifically bar shareholders from filling vacancies. Alternatively, board packing may be blocked if (ii) shareholders are expressly barred from changing the number of directors in the charter or (iii) the bylaws are silent or prohibit directors from changing the number of directors, and need a supermajority vote to amend the bylaws. A special case is added for Massachusetts, which uniquely requires shareholders to be granted the power to fill vacancies either in the charter or bylaws. This standard definition of COUP does not apply to firms in Delaware, Maine, Montana, Nevada, New Jersey, New York, Ohio, or Texas, which also have unusual provisions regarding removal; definitions of "COUP" for those states are set forth elsewhere in this Appendix.

Definition of COUP for OHIO Firms[229]

(1) If REM = 0 and (REMLOC = 1 or WORKAROUND = 0) then **COUP = 0**

(2) Else **COUP = 1**

Explanation:

Ohio does not permit shareholders to fill vacancies; thus, a coup is not possible via packing the board. Shareholders may remove directors without cause (even if the firm's board is staggered) unless the charter or bylaws provide Else. Thus, unless either the charter expressly provides shareholders may not remove directors, or the bylaws provide shareholders may not remove directors and may not be amended without a supermajority vote, a coup is possible.

Definition of COUP for MAINE, MONTANA, NEVADA and NEW JERSEY Firms[230]

(1)(a) If [REM = (0 or 2) or REMLOC = 2] and

(1)(b)(i) VAC = 0 and VACLOC = 1, or

(1)(b)(ii) NUMSET = 2 or (NUMSET = 0 and NUMLOC = 2)] and WORKAROUND = 0, or

(1)(b)(iii) (NUMSET = 0 and NUMLOC = 1)

then **COUP = 0**

(2) Else **COUP = 1**

Explanation

New Jersey does not permit removal of directors without cause unless it is expressly provided for in the charter; Maine, Montana and Nevada require a two-thirds vote for shareholders to remove directors without cause. Unless the charter changes these rules and permits removal without cause by a shareholder majority, the only way for shareholders to mount a coup is by packing the board. There are three different reasons packing the board may be impossible: (i) the shareholders may not fill vacancies by express provision of the charter; (ii) the charter and bylaws are silent on whether or not shareholders may fix the number of directors, or the bylaws prohibit shareholders from changing the number of directors, and shareholders may only amend the bylaws with a supermajority vote; and (iii) the charter prohibits shareholders from setting the number of directors.

229 To be verified.

230 To be verified.

Definition of COUP for NEW YORK Firms

(1)(a)(i) If	REM = 0 and REMLOC = 1, or	
(1)(a)(ii)	REM = 0 and REMLOC = 2 and WORKAROUND = 0, or	
(1)(a)(iii)	REM = 2 and WORKAROUND = 0, and	
(1)(b)(i)	VAC = 0 and VACLOC = 1, or	
(1)(b)(ii)	NUMSET = 0 and NUMLOC = 1, or	
(1)(b)(iii)	NUMSET = 0 and NUMLOC = 2)] and WORKAROUND = 0, or	
(1)(b)(iv)	NUMSET = 2 and WORKAROUND = 0, then	**COUP = 0**
(2) Else		**COUP = 1**

Explanation

New York does not allow shareholders to remove directors as a default matter, so the ability to remove directors may not be available in three situations: first, where the charter expressly prohibits it (case (1)(a)(i)); second, where the bylaws prohibit it and may not be amended without a supermajority vote it (case (1)(a)(ii)); and third, where the charter and bylaws are silent, and the shareholders cannot amend by the bylaws to add the power to remove directors without a supermajority vote it (case (1)(a)(iii). In addition, as with the standard definition of COUP, shareholders must also be prevented from packing the board, which can be done in one of four ways.

Definition of COUP for TEXAS Firms[231]

(1)(a)(i)	If CLASS = 1 and (STGLOC = 1 or WORKAROUND = 0)	
	and [REM = (0 or 2) or REMLOC = 2], or	
(1)(a)(ii)	CLASS = 0 and REM = (0 or 2) and WORKAROUND = 0, and	
(1)(b)(i)	VAC = 0 and [VACLOC = 1 or (VACLOC = 2 and WORKAROUND = 0)], or	
(1)(b)(ii)	NUMSET = 0, or	
(1)(b)(iii) then	(NUMSET = 2 or NUMLOC = 2) and WORKAROUND = 0,	**COUP = 0**
(2) Else		**COUP = 1**

Explanation

Texas follows Delaware law on removal, but expressly requires shareholders be given the ability to remove directors in the charter or bylaws, even in firms without classified boards. But such a power may be added by shareholders unless a supermajority vote is required for shareholders to amend the by laws.

231 To be verified.

Table B-1.

Primary Governance Variables for Contestability Index

Variable	Where Variable Enters	Definition of Variables "0" if expressly prohibited in firm documents, "1" if expressly permitted in firm documents, "2" if documents are silent
Categorical Variables		
BLANK	Definition of PILLBAN	Directors are given "blank check" authority to set terms of preferred stock
REMOV	Definition of COUP	Shareholders are permitted to remove directors
NUMSET	Definition of COUP	Shareholders are permitted to set the number of directors
CLASS	Definition of COUP; Cases 5, 6 & 7	The board is classified into multiple classes
CONSENT	Definition of EARLY; Case 2	Shareholders are permitted to act by written consent.
SM10	Case 3	>10+% of shareholders are permitted to call special meetings
SM50	Definition of EARLY; Case 4	>50+% of shareholders are permitted to call special meetings
CUMUL	Cases 6 & 7	Shareholders can vote cumulatively in director elections
VAC	Definition of COUP	Shareholders are permitted to fill vacancies
Additional Categorical Variables		
STATE	Definitions of COUP and EARLY	A firm's state of incorporation
ANNUAL	Cases 5, 6 & 7	See Appendix C
WORK-AROUND	Definition of COUP	= "0" if charter or bylaws impose supermajority requirements on bylaw amendments, else = "1"
Continuous Variable		
SEATS	Definition of HOLD	Total number of board seats, including vacancies

Table B-2

Location Variables for Contestability Index

Variable	Where Variable Enters	Definition of Variables "0" if documents are silent, "1" if express provision in charter, "2" if express provision in bylaws
BLANKLOC	Definition of PILLBAN	Location of term granting black check authority
REMLOC	Definition of COUP	Location of term restricting shareholder ability to remove directors without cause
NUMLOC	Definition of COUP	Location of term restricting shareholder ability to set number of directors
STGLOC	Definition of COUP	Location of term establishing staggered board
CONLOC	Definition of EARLY	Location of term prohibiting shareholders from acting by written consent
SMLOC	Definition of EARLY	Location of term imposing higher levels of shareholder call for special meetings
VACLOC	Definition of COUP	Location of term restricting shareholder ability to fill vacancies

Table B-3

Capital Stock Variables for Contestability Index

Variable	Where Variable Enters	Definition of Variables
CSAUTH	Definition of PILLBAN	Number of shares of authorized common stock
CSOUTST	Definitions of PILLBAN and HOLD	Number of shares of outstanding common stock
PSAUTH	Definition of PILLBAN	Number of shares of authorized preferred stock (aggregating all classes)
PSOUTST	Definition of PILLBAN	Number of shares of outstanding preferred stock (aggregating all classes)
INSIDE	Cases 6 & 7	Number of common shares beneficially owned by directors and officers

Table B-4

Constructed Variables for Contestability Index

Variable	Where Variable Enters Algorithm	Definition of Variables
PILLBAN	Case 1	= “1” if CSAUTH < 2 * CSOUTST or [PSAUTH – PSOUTST > 1 and BLANK = 1 and BLANKLOC = 1], else = “0”
EARLY	Cases 5, 6 & 7	For firms in the following states: IN, MN, NY = "1" if (CONSENT = 1 and CONLOC = 1) or (SM50 = 1 and SMLOC = 1), else "0" For firms in the following states: : DE, FL, GA, IL, MI, NJ, NV, OK, and WI = “0” if CONSENT = 0 and CONLOC = 1, else = “1” For other firms: = “0” if SM50 = 0 and SMLOC = 1, else = “1”
COUP	Cases 2, 3, 4, 5, & 7	See Appendix B
HOLD	Cases 6 & 7	= { [SEATS / (3 * SEATS + 9)] + [5 / (3 * CSOUTST)] } / CSOUTST

Table B-5

Maximum Days Between Annual Meetings

State	Days	State	Days	State	Days
Alabama	450	Louisiana	390	Ohio	390
Alaska	390	Maine	390	Oklahoma	390
Arizona	390	Maryland	390	Oregon	420
Arkansas	420	Massachusetts	420	Pennsylvania	540
California	450	Michigan	450	Rhode Island	390
Colorado	420	Minnesota	450	South Carolina	510
Connecticut	420	Mississippi	420	South Dakota	390
Delaware	390	Missouri	390	Tennessee	420
Florida	390	Montana	420	Texas	390
Georgia	420	Nebraska	390	Utah	450
Hawaii	390	Nevada	540	Vermont	420
Idaho	450	New Hampshire	390	Virginia	450
Illinois	420	New Jersey	390	Washington	420
Indiana	420	New Mexico	390	West Virginia	390
Iowa	420	New York	390	Wisconsin	420
Kansas	390	North Carolina	420	Wyoming	420
Kentucky	420	North Dakota	390		

Notes: Most state corporate statutes expressly provide that a court may order an annual meeting if one has not been held within a designated time. In many states, the specified time is the earlier of some number of months after the end of the fiscal year or some number of months after the last annual meeting. For such states, it is assumed (as is most common) that the last annual meeting was held within four months of the end of the fiscal year (i.e., by the end of April following a December 31 fiscal year end). Thus, in state like North Carolina, which provides for a court-ordered meeting if none has been held before the earlier of six months after the end of the fiscal year or 15 months' after its last annual meeting, it is assumed that the appropriate cut-off is June 30, six months after the most common fiscal year end, which will be approximately 420 days after the last annual meeting.

New York does not provide in its statute for court-ordered annual meetings, but recognizes a common law right of shareholders to compel a meeting. *Auer v. Dressel*, 306 N.Y. 427 (1954). No statutory or case law could be found in Alaska, Louisiana, Maine, Maryland, Minnesota, Missouri, North Dakota, Ohio, Oklahoma or Pennsylvania. However, given that 48 states require annual meetings, courts are assumed to be willing to rely on equitable powers to compel a meeting if one is not held. The two states not requiring annual meetings are Minnesota and North Dakota; Minnesota provides that if none held within 15 months, 3% of shareholders may demand a meeting. For states that do not statutorily provide for a court-ordered meeting, a 390-day period is assumed, on the theory that a court would be reluctant to force a meeting until at least a full year had passed, and the practicalities of distributing proxy material required by the SEC for all shareholder meetings would make holding one earlier than 30 days after the anniversary of the last meeting unlikely. An exception is Pennsylvania, which specifies a meeting must be held within six months of the date designated therefor, which should give a target company at least six months after the last annual meeting before a court would intervene.

Table B-6

Illustrations of Contestability Index

FIRM	STATE	CLASS	CUMUL	CONSENT	SM10	SM50	REMOV	VAC	WORKAROUND	NUMSET	BLANK	BLANKLOC	STGLOC	CONLOC	SMLOC	NUMLOC	REMLOC	VACLOC	PILLBAN	EARLY	COUP
EXXON	NJ	0	0	0	0	0	0	1	1	1	1	1	0	0	1	2	0	2	0	0	1
DELL COMPUTER	DE	0	0	1	1	1	0	0	0	0	1	1	0	0	1	2	2	2	0	1	1
ALTEON	DE	1	0	1	0	0	1	0	1	0	1	1	1	2	2	2	2	2	0	1	1
CompUSA	DE	1	0	0	0	0	0	0	1	0	1	1	1	1	2	1	1	1	0	0	0

Table B-7

Contestability Index Under Default Law
(assuming no implicit bans on pills)

STATE	CLASS	CUMUL	CONSENT	SM10	SM50	REMOV	VAC	WORKAROUND	NUMSET	EARLY	COUP	INDEX
DELAWARE	0	0	1	0	0	1	1	1	1	1	1	45
RMBCA / CALIFORNIA	0	0/1	0	1	1	1	1	1	1	1	1	65
NEW YORK	0	0	0	0	0	0	1	1	1	0	1	65
PENNSYLVANIA	0	1	0	0	1	1	1	1	1	1	1	90
MASSACHUSETTS	1	0	0	1	1	1	0	1	1	1	1	65
NEW JERSEY	0	0	1	1	1	0	1	1	1	0	1	45

Appendix C

Variable Definitions

AGECO is the age of an issuer's business (*i.e.*, the year of the IPO less the oldest year given by the issuer as the date of its founding or organization in either its IPO prospectus or latest annual report on Form 10-K).

AGECSQ is AGECO squared.

AGEFIRM is the age of an issuer's legal entity (*i.e.*, the year of the IPO less the year of the latest of the issuer's incorporation or most recent reincorporation given by the issuer as the date of its founding or organization in either its IPO prospectus or latest annual report on Form 10-K).

AGEFSQ is AGEFIRM squared.

BUST is a dummy set to one if the issuer had been delisted as a result of bankruptcy between the IPO and the end of 1999, as reported by COMPUSTAT and confirmed by searches in Lexis and other news sources.

CAHQ is a dummy set to one if the issuer's principal place of business at the IPO is in California, given by the IPO prospectus.

CAINC is a dummy set to one if the issuer is a California corporation at the IPO, given by the issuer's charter at the IPO and confirmed in the IPO prospectus.

CAP5ASST is the ratio of the issuer's average annual capital expenditures in the five years after the IPO to book value of the issuer's assets at the IPO, from COMPUSTAT.

CEOAGE is the age of the CEO at the IPO, given by the IPO prospectus.

CEOTEN is the number of years the CEO has worked at the issuer, given by the IPO prospectus.

CEOFOUND is a dummy set to one if the CEO at the IPO founded the issuer. FCF5 is the average annual free cash flow over the five years after the IPO.

CEOPRE is the percentage voting power held immediately before the IPO by the person who is chief executive officer at the time of the IPO (CEO), given by the IPO prospectus. Where an issuer does not have a dual class capital structure, this is also be the percentage equity owned by the CEO before the IPO.

CEOPOST is the percentage voting power held by the CEO immediately after the IPO, given by the IPO prospectus.

CEOSOLD is a dummy set to one if the CEO reduced her voting power in the IPO, determined from the IPO prospectus.

CI or CONTESTABILITY INDEX -- see Appendix B.

CLASS as dependent dummy variable, set to one if the issuer had a classified board.

CM2 is the Carter-Manaster rating, given by Carter, Dark & Singh (1998), for the lead underwriter in the IPO, given by the IPO prospectus.

DEBTASST is the ratio of book value of the issuer's long-term debt to book value of assets at the IPO.

DEFENSE as dependent dummy variable, ranking an issuer's legal takeover vulnerability, most to least, by their takeover defenses, given by reference to default law of an issuer's state of incorporation and the issuer's charter and bylaws and IPO prospectus, as follows:

> Rank 1: Issuers that permit shareholders to "act early," either by written consent of a majority of shareholders in lieu of a meeting, or by permitting a majority or less of shareholders to call a special meeting of shareholders.
>
> Rank 2: Issuers that do not permit shareholders to "act early," and do not have classified boards.
>
> Rank 3: Issuers that do not permit shareholders to "act early" and have a classified board.
>
> Rank 4: Issuers that have a dual class capital structure and sell low-vote stock in the IPO.

N.B. For reasons discussed in Appendix B, this ranking is an imperfect index of an issuer's legal takeover vulnerability, but it is (a) simpler to determine from public information than a firm's contestability index, (b) a better approximation of a firm's legal takeover vulnerability than merely using single defense terms, such as board classification or dual class structure, in isolation, and (c) requires fewer degrees of freedom with little loss of theoretical power than loading all relevant defenses into a term-by-term unordered multinomial logit (when defenses are the regressand) or as separate independent variables (when defenses are the regressor). It is also similar to a ranking used by Daines & Klausner (1999).

DEINC is a dummy set to one if the issuer is a Delaware corporation at the IPO, given by the issuer's charter at the IPO and confirmed in the IPO prospectus.

DEVEL is a dummy variable set to one if the IPO prospectus discloses the issuer was in the development stage (*i.e.*, had not yet begun shipping product or providing services) at the time of the IPO. [CONFIRM DEFINITION FROM SEC RULES]

DOPRE is the percentage voting power held by directors and officers (D&O) immediately before the IPO, given by the IPO prospectus.

DOPOST is the voting power held by D&O immediately after the IPO, given by the IPO prospectus.

DUALCLAS is a dummy set to one if the issuer had a dual class capital structure at the time of the IPO, given by the charter and confirmed in the IPO prospectus.

DUALCON is a dummy set to one if the issuer had a dual class capital structure and sold low-vote stock in the IPO. See Field (1999) for reasons this variable may differ from DUALCLAS.

EARN1 is the issuer's net income in the first fiscal year ended after the IPO, from COMPUSTAT

EARNPOS is a dummy set to one if an issuer had positive earnings in the last period reported in the IPO prospectus.

FAMILY is a dummy set to one if the issuer was majority owned by an individual or a family of related individuals prior to the IPO.

FCF5 is an issuer's average annual operating income before income taxes, depreciation and amortization charges (OBITDA) over the five fiscal years after the IPO, from COMPUSTAT.

FCF5POS is an issuer's average annual OBITDA, if positive, over the five fiscal years after the IPO, from COMPUSTAT.

IDOPRE is the percentage voting power held by independent D&O immediately before the IPO, given by the IPO prospectus. "Independent" means not an officer.

IDOPOST is the percentage voting power held by independent D&O immediately after the IPO, given by the IPO prospectus.

LAW1 is the number of lawyers at the office working on the IPO of the law firm serving as issuer's counsel in the year of the IPO, as reported by Martindale-Hubbell, Inc.

LAWFRM1 is the total number of lawyers in the law firm serving as issuer's counsel in the year of the IPO, as reported by Martindale-Hubbell, Inc.

LAWFRMSQ is LAWFRM1 squared.

LBO is a dummy set to one if the issuer is owned in part by a leveraged buy-out (LBO) fund prior to the IPO, as indicated in year-end surveys in *BUYOUTS* (an industry publication) and confirmed by the IPO prospectus. The variable was set to one when it was clear from the prospectus that an IPO was backed by a LBO fund or had recently undergone an LBO even though it was omitted from the year-end surveys.

LNASSET0 is the natural log of the book value of the issuer's assets at the end of the last period reported in the IPO prospectus.

LNOFFSZ is natural log of the IPO offer size, and LNASSET0 is the natural log of the book value of the issuer's assets at the end of the last period reported in the IPO prospectus.

MA is a dummy set to one if the issuer had been delisted as a result of being acquired or had engaged in a "merger of equals" (i.e., a merger in which the counterparty had assets with a book value of at least 20% of the sample issuer) between the IPO and the end of 1999, as reported by COMPUSTAT and confirmed by searches in Lexis and other news sources.

MAINDACT is a count from SDC data of merger or acquisition transactions over $10 million in the period 1988-90 that involved targets with the issuer's 3-digit SIC code, given by the IPO prospectus. Only majority acquisitions of publicly held targets without control shareholders were included.

MASDC is a count from SDC data of merger or acquisition transactions over $10 million in the period 1988-90 that involved the IPO issuer counsel as counsel to one of the principal parties. Only majority acquisitions of publicly held targets without control shareholders were included.

NAME is a dummy set to one if the issuer's corporate name includes or consists of the name of a pre-IPO majority shareholder, given by the IPO prospectus.

PPEASST is the ratio of the issuer's book value of net property, plant and equipment (PPE) to the book value of its total assets as of the most recent date reported in the IPO prospectus.

PPENET is the book value of the issuer's PPE as of the most recent date reported in the IPO prospectus.

PBIND is a dummy set to one if the issuer's primary 3-digit SIC code, given by the IPO prospectus, is one in which a large number of issuers were reported to have dual class capital structures in Field (1999). An alternative specification, PBINDB, was set to one if the issuer's primary 3-digit SIC code is one in which a large number of issuers were reported to have dual class capital structures in the sample studied in this article.

RMBCA is a dummy set to one if the issuer is incorporated at the IPO in a state that follows the Revised Model Business Corporation Act's provisions governing special meetings, action by written consent, removal of directors by shareholders, determination of the number of board seats, and filling of board vacancies, and board classification. State of incorporation is determined from the issuer's charter and confirmed in the IPO prospectus; whether a state follows the RMBCA is determined by the Revised Model Business Corporation Act Annotated.

RD5ASST is the ratio of the issuer's average annual research and development expenses in the five years after the IPO to book value of the issuer's assets at the IPO, each given by COMPUSTAT.

RETAIN is the percentage of voting power retained by pre-IPO shareholders after the IPO, given by the IPO prospectus.

ROE is average annual return on equity over the five full fiscal years after the IPO, from COMPUSTAT.

ROA is average annual return on assets over the five full fiscal years after the IPO, from COMPUSTAT.

SHH1 is the number of issuer's shareholders at the end of the first fiscal year after the IPO, from COMPUSTAT.

SILVAL is a dummy set to one if the office representing a given IPO issuer is in located in Silicon Valley (*i.e.*, Palo Alto, California).

SPLIT is a dummy set to one if the a public company is both the largest shareholder of the issuer and the public company owned more than 20% of the issuer prior to the IPO, as indicated by the IPO prospectus.

SUITSALL is a count of decisions by all Federal and state courts reported in Lexis in lawsuits 1980-89 in which the law firm acting as issuer counsel was mentioned

and in which one of the following was mentioned: "merger," "acquisition," "proxy fight" or "tender offer."

SUITSDEL is a count of decisions by Delaware courts reported in Lexis in lawsuits 1980-89 in which the law firm acting as issuer counsel was mentioned and in which one of the following was mentioned: "merger," "acquisition," "proxy fight" or "tender offer."

UNIT is a dummy set to one if the IPO was a unit offering of stock and warrants, as indicated by the IPO prospectus.

VC is a dummy set to one if the issuer is owned in part by a venture capital (VC) fund prior to the IPO, as indicated in year-end surveys in *GOING PUBLIC* (an industry publication) and confirmed by the IPO prospectus. The variable was set to one when it was clear from the prospectus that an IPO was backed by a VC fund even though it was omitted from the year-end surveys.

Table 1
Theories of Variation in Takeover Defenses

	General Inefficiency + Banker Hypotheses	**Variable Efficiency Hypotheses**	**General Optimality + Law Firm Hypotheses**
Implications for Optimality of Defenses for Pre-IPO Managers	Defenses optimal at no companies	Defenses optimal at some companies, not at others	Defenses optimal for all companies
Implications for Efficiency of Defenses at IPO Stage	Defenses inefficient at all companies	Defenses efficient at some companies, inefficient at others	No clear implications; depends on efficiency of IPO pricing
Assumptions about IPO pricing	IPO pricing assumed to be efficient	IPO pricing assumed to be efficient	IPO pricing may or may not be efficient
Source of variation in defense adoption at the IPO stage	Variation in quality of advice given by investment bankers about price effects of defense adoption	Variation in: increase in agency costs caused by defenses value of bargaining power created by defenses value of factor-market company-specific investments induced by defenses value of hard-to-value permitted by defenses private benefits of control produced by defenses	Variation in quality of advice or services of lawyers advising pre-IPO managers on defenses

Table 2
Theories of Efficiency Effects of Takeover Defenses

Con	Pro *Ex post*	Pro *Ex ante*
Premium Bids Defenses prevent target shareholders from receiving premium bids	Coercive Bids Defenses solve collective action problems for target shareholders	Market Myopia Defenses prevent bids when stock prices are temporarily depressed by bubbles or fads, and ease pressure on target managers to maximize stock price, allowing them to make optimal long-term investments in hard-to-value projects
Allocative Efficiency Defenses prevent or impede higher-valuing users from obtaining target assets, reducing social welfare	Bid Competition Defenses enhance bid competition, by encouraging auctions and providing time for competing bids to emerge, thus increasing bid premiums	Incomplete Contracts / Company-Specific Capital Defenses reduce the risk of opportunistic bids motivated by rent-seeking, and reinforce "implicit contracts" between companies and input factors, such as executives, employees, creditors, customers or suppliers, allowing creation of valuable company-specific investments despite the absence of complete contracts
Agency Costs Defenses increase agency costs (shirking or misinvestment) by reducing threat of hostile bid	Bargaining Power Defenses give targets bargaining power, allowing well-motivated target managers to negotiate with bidders for a share of deal synergies	Private Benefits of Control Defenses deter costly bids brought to obtain rents that target managers cannot efficiently commit to sharing with shareholders, such as hard-to-detect self-dealing and/or non-pecuniary (or "psychic") benefits of control

Table 3
Theories, Variables Tested and Predicted Signs

Theory / Variable	Law Firm Hypothesis	Banker Hypothesis	Agency Costs	Bargaining Power	Market Myopia	Private Benefits of Control
M&A experience of law firm	+					
Law firm identity	+/–					
Law firm location	+/–					
Law firm size	+/–					
Recent industry-level M&A activity	+			–		
Delaware company	+					
Company / offer size	+		–	–		
Company age	+		–			+
Venture capital backing	+	–		–	–	
Development stage	–			–	+	
Unit offering	–					
Underwriter quality	+	–				
Earnings	–					
Losses only	+				–	

Table 3 (cont'd)
Theories, Variables Tested and Predicted Signs

Theory / Variable	Law Firm Hypothesis	Banker Hypothesis	Agency Costs	Bargaining Power	Market Myopia	Private Benefits of Control
Free cash flow			–			
Debt / assets			+	–		
Bankrupt post-IPO			–			
ROE post-IPO			–			
Industry			+/–	+/–	+/–	+/–
Dual class						–
Stock sold by pre-IPO shareholders in IPO				–		–
Number of shareholders				–		
R&D intensity (R&D/assets)					+	
Capital ex / assets					+	
Property, plant and equipment					–	
CEO founder						+
CEO tenure						+
Stock sold by CEO in IPO						–
Company named after owner						+
Dual class industry						+
Family ownership						+

Table 4
"Eyeballing the Sample"

company	description of business	use of proceeds	stage	index
Equitable	insurance	convert to stock form	mature	45
Duracell	battery manufacturing	reverse LBO (KKR)	mature	45
Danskin	women's exercise clothing and hosiery designer	reduce debt	mature	608
CompUSA	computer retail chain	fund rollout	growth	608
EZCorp	2d largest operator of pawnshops in the United States	fund growth	growth	45
Pharmchem	examine "175,000 urine specimens" per month for illegal drug use	fund growth	growth	45
Osteotech	process human bone for nonprofit donation agencies	R&D	development	45
Embrex	vaccinate eggs to cut labor costs (6 billion chickens/year in US)	R&D	development	203
DNX	put human DNA into mice to create hemoglobin factories	R&D	development	218
Regeneron	treatments for Alzheimer's, Parkinson's, Lou Gehrig's diseases	R&D	development	608

Table 5
Summary Data

Variable	observations	% positive	mean	minimum	quartile1	median	quartile3	maximum
Founded	160		1973	1851	1973	1983	1987	1992
Incorporated	160		1983	1925	1981	1986	1989	1992
Offering Size ($MM)	160		$49.30	$2.5	$10.4	$24.0	$40.0	$770.0
% Votes Retained by pre-IPO Owners	155		64%	0%	56%	65%	76%	100%
% Votes Owned by D&O Post-IPO	155		40%	0%	25%	42%	55%	86%
% Votes Owned by CEO Post-IPO	155		15%	0%	2%	8%	20%	86%
Dual Class Capitalization at IPO	0	11%						
Dual Class to Maintain Control	0	8%						
Splitoff (equity carve-out)	0	9%						
Reverse LBO	0	19%						
Venture Capital Backing	0	35%						
Individual/Family Ownership	0	32%						
No. of Shareholders (1 yr post-IPO)	142		8737	40	190	415	1260	1012900
CEO Age at IPO	155		49	32	43	48	54	71
CEO Tenure at IPO	155		8	0	3	6	10	41
CEO Founded Company	0	48%						
Firm Uses Owner Name	0	6%						
Development Stage at IPO	0	23%						
Unit Offering	0	11%						
Earnings (1 yr pre-IPO) (MM)	155	65%	$22.09	($78.10)	($1.02)	$0.56	$3.38	$2,083.00
Total Assets (1 yr pre-IPO)	155		$917.21	$0.00	$6.45	$21.17	$87.75	$74,917.00
Working Capital (1 yr pre-IPO)	155		$33.26	($56.08)	$0.15	$3.81	$13.34	$3,000.00
Long-Term Debt (1 yr pre-IPO)	155		$113.06	$0.00	$0.70	$4.63	$44.48	$4,639.00
Earnings (1 yr post-IPO)	149	66%	$12.95	($169.00)	($2.71)	$2.26	$7.99	$1,118.00
Total Assets (1 yr post-IPO)	148		$1,020.84	$0.12	$15.35	$40.76	$115.59	$74,917.56
Cash on Hand (1 yr post-IPO)	146		$54.57	$0.00	$2.07	$7.82	$25.08	$3,784.00
Fixed Assets (1 yr post-IPO)	146		$207.27	$0.00	$2.83	$9.93	$26.67	$20,452.00
Earnings (5 yr avg)	149	54%	$12.54	($84.49)	($4.69)	$0.42	$7.88	$530.00
Free Cash Flow (5 yr avg)	148	32%	($0.40)	($1,489.47)	($10.45)	($2.75)	$1.58	$954.80
Buybacks (5 yr avg)	152	52%	$5.29	$0.00	$0.00	$0.00	$0.58	$252.09
Capex (5 yr avg)	152	95%	$47.61	$0.00	$1.41	$4.30	$13.81	$4,098.20
R&D (5 yr avg)	160	50%	$11.34	$0.00	$0.00	$0.04	$5.25	$976.60
ROE (5 yr avg)	155		($0.22)	($11.12)	($0.30)	$0.05	$0.13	$7.14
ROA (5 yr avg)	155		($0.15)	$5.71	$0.14	$0.01	$0.05	$0.28
Company Bankrupt Since IPO	5	3%						
Company Merged or Acquired Since IPO	50	31%						
Classified Board	54	34%						
Cumulative Voting	20	13%						
Blank Check Preferred	138	86%						
Implicit Ban on Pills	7	4%						
Coup Possible	132	83%						
Classified Board Avoidable	29	18%						
Clear Gaffe (ex Failed Cl. Boards)	16	10%						
Contestability Index	160		167.45	30	45	45	211	998

Table 5 (cont'd)
Summary Data

	observations	%
Headquarters		
California	33	21%
Delaware	1	1%
New York	16	10%
Massachusetts	13	8%
New Jersey	11	7%
Texas	10	6%
Illinois	7	4%
Pennsylvania	6	4%
North Carolina	5	3%
Connecticut	4	3%
Florida	4	3%
Minnesota	4	3%
Tennessee	4	3%
Colorado	3	2%
Michigan	3	2%
Missouri	3	2%
Ohio	3	2%
Virginia	3	2%
Other	27	17%

	observations	%
Incorporated		
Delaware	99	62%
California	12	8%
Massachusetts	6	4%
New York	5	3%
Minnesota	4	3%
North Carolina	4	3%
Pennsylvania	3	2%
Other	27	17%
RMBCA control terms	44	28%

	observations	%
Company Counsel Location		
New York City	48	30%
Boston	18	11%
California	30	19%
Silicon Valley	10	6%
California (ex Silicon Valley)	20	13%
Texas	11	7%
Illinois	9	6%
Philadelphia	6	4%
DC	4	3%
Minnesota	4	3%
Ohio	4	3%

	observations	%
Location of Law Firm Relative to Company		
In-state	93	58%
Out-of-state	67	42%
Out-of-state Law Firm Location		
New York	34	51%
Massachusetts	8	12%
DC	4	6%
Texas	4	6%
Illinois	3	5%
Other	14	21%

	observations	%	mean	minimum	quartile1	median	quartile3	maximum
Size of Law Firm (yr of IPO)	160		272.55	2	72	214	381	1072
Size of Law Firm Office (yr of IPO)	160		160.01	2	60	131	215	489
Size of Law Firm Office (1998)	160		191.45	0	63	162	274	597
Law Firm Rankings								
M&A Top 20 (1991)	0	19%						
IPO Top 40 (1991)	0	19%						
AmLaw 100 (Gross Revenue) (1991)	76	48%						
1-Average Rank (GR) (AmLaw only)	76		60	1	34	69	88	99
1-Average Rank (RPL) (AmLaw only)	76		63	8	51	66	81	98
1-Average Rank (PPP) (AmLaw only)	76		65	5	47	75	86	96
1-Average Rank (GR) (0=not in)	160		28	0	0	0	68	99
1-Average Rank (RPL) (0=not in)	160		30	0	0	0	63	98
1-Average Rank (PPP) (0=not in)	160		31	0	0	0	73	96
Underwriter Rankings								
Carter-Manaster (1998) (CM only)	145		7.94	2	7	8.75	8.88	9
Carter-Manaster (1998) (0=not in)	160		7.19	0	6.72	8.75	8.88	9

Table 6
Mean Comparisons of Defenses

		Mean CI			classified board			dual class control	
	%	yes	no						
Full Sample		162.226			0.333			0.075	
Splitoff (equity carve-out)	0.088	154.430	162.980	0.890	0.429	0.475	0.071	0.954
Reverse LBO	0.189	148.900	165.330	0.700	0.267	0.378	0.067	0.836
Venture Capital Backing	0.377	194.600	142.606	0.167	0.400	0.176	0.050	0.315
Family Ownership	0.318	144.350	170.600	0.480	0.224	0.058	0.204	0.003
Firm Uses Owner Name	0.065	109.300	165.920	0.353	0.200	0.359	0.400	0.065
CEO Founded Company	0.487	174.470	150.650	0.490	0.320	0.905	0.080	0.926
Development Stage at IPO	0.234	107.170	179.050	0.033	0.250	0.258	0.111	0.459
Unit Offering	0.110	55.760	175.460	0.000	0.118	0.016	0.059	0.738
Company Bankrupt Since IPO	0.031	49.000	165.900	0.000	0.000	0.000	0.000	0.000
Company Merged or Acquired Since IPO	0.314	151.320	167.230	0.660	0.300	0.544	0.120	0.210
Skadden Arps	0.040	525.000	165.160	0.021	0.710	0.075	0.286	0.280
Wilson Sonsini	0.060	68.330	187.770	0.000	0.220	0.458	0.000	0.000
Company Counsel in								
New York City	0.314	178.700	154.670	0.536	0.340	0.905	0.100	0.467
Boston	0.113	204.440	156.840	0.451	0.500	0.155	0.000	0.000
Philadelphia	0.031	152.200	162.550	0.870	0.200	0.534	0.000	0.000
California	0.189	141.670	167.010	0.560	0.233	0.174	0.033	0.215
Silicon Valley	0.057	51.670	168.860	0.000	0.111	0.073	0.000	0.000
Elsewhere in CA	0.132	180.240	159.490	0.680	0.286	0.618	0.048	0.549
Incorporated in								
Delaware	0.616	187.690	121.310	0.060	0.378	0.127	0.082	0.705
California	0.075	45.410	171.760	0.050	0.000	0.000	0.083	0.923
New York	0.031	165.130	161.900	0.950	0.200	0.534	0.200	0.557
Massachusetts	0.038	148.000	162.780	0.870	0.667	0.163	0.000	0.000
Pennsylvania	0.019	217.000	161.170	0.650	0.333	1.000	0.000	0.000
RMBCA States (control provisions)	0.277	100.110	185.990	0.020	0.227	0.065	0.068	0.827
Headquarters in								
California	0.201	142.750	167.130	0.560	0.219	0.100	0.031	0.171
New York	0.101	165.130	161.900	0.950	0.375	0.728	0.250	0.107
Massachusetts	0.101	135.850	164.560	0.640	0.462	0.365	0.000	0.000
Pennsylvania	0.038	251.170	158.740	0.300	0.333	1.000	0.000	0.000

Table 6 (cont'd)
Mean Comparisons of Defenses

		Mean CI		classified board		dual class control	
	%	yes	no				
Full Sample		162.226			0.333		0.075
Dual Class Capitalization at IPO	0.113	159.440	162.580	0.950	0.222	0.260	0.667 na
Dual Class to Maintain Control	0.075	162.930	153.670	0.860	0.167	0.153	1.000 na
Gaffe / Functional Mistake	0.094	209.000	157.350	0.444	0.733	0.002	0.067 0.892
Industry (3-digit SIC)							
drugs (283)	0.100	239.130		0.220	0.500	0.190	0.060 0.830
computer svcs. (incl. software) (737)	0.090	265.210		0.140	0.430	0.480	0.000 0.000
medical instruments (384)	0.060	163.600		0.990	0.300	0.830	0.000 0.000
holding companies (671)	0.050	231.500		0.430	0.630	0.140	0.130 0.690
health services (809)	0.040	73.290		0.000	0.430	0.640	0.000 0.000
computer equipment (357)	0.030	50.000		0.000	0.200	0.530	0.000 0.000
restaurants (581)	0.030	189.200		0.810	0.600	0.330	0.000 0.000
electronic components (367)	0.030	98.250		0.200	0.000	0.000	0.000 0.000
telephone communications (481)	0.030	229.000		0.640	1.000	0.000	0.000 0.000
control devices (382)	0.020	40.000		0.120	0.000	0.000	0.330 0.510
motor vehicles & supplies (501)	0.020	127.670		0.710	0.000	0.000	0.000 0.000
Lead Underwriters (CM2)							
Lehman Bros. (7.50)	0.060	177.400		0.840	0.300	0.830	0.200 0.350
Merrill Lynch (8.88)	0.060	250.500		0.280	0.600	0.120	0.100 0.800
Alex. Brown (8.88)	0.050	255.500		0.350	0.630	0.140	0.000 0.000
Goldman Sachs (9.00)	0.050	159.250		0.960	0.500	0.390	0.130 0.690
First Boston (9.00)	0.040	313.860		0.190	0.710	0.080	0.140 0.640
Kidder Peabody (8.83)	0.040	203.000		0.680	0.290	0.790	0.140 0.640
Montgomery (8.75)	0.040	126.140		0.660	0.290	0.790	0.000 0.000
Prudential (8.75)	0.040	203.710		0.700	0.430	0.640	0.000 0.000
Morgan Stanley (8.88)	0.040	262.330		0.400	0.500	0.480	0.000 0.000
Painewebber (8.75)	0.040	118.500		0.380	0.170	0.350	0.000 0.000
Robertson (8.75)	0.040	48.330		0.000	0.000	0.000	0.000 0.000
				OLS		logit	logit
Top Ten Lead Manager Average	0.520	196.330		0.030	0.410	0.020	0.070 0.900
Top Eight Lead Manager Average	0.440	217.020		0.010	0.480	0.000	0.100 0.440
CM2	7.180			0.020		0.010	0.680

Table 7
Defenses by Top Law Firms in Sample

				Client Takeover Defenses			Takeover Expertise		
	1991 HQ	LAWFRM1	IPOs	Mean CI	CLASS	DUALCON	MASDC	SUITSALL	SUITSDEL
Wilson Sonsini	Palo Alto	214	9	50	0%	0%	12	2	1
Skadden Arps	New York	996	7	525	86%	29%	186	325	86
Brobeck Phleger	San Francisco	403	4	50	0%	0%	8	34	2
Hale & Dorr	Boston	280	4	330	50%	0%	9	43	1
Latham & Watkins	Los Angeles	607	4	190	50%	0%	34	52	4
Bachner Tally	New York	48	3	45	0%	0%	1	4	0
Cooley Godward	San Francisco	334	3	418	67%	0%	4	7	0
Kirkland & Ellis	Chicago	439	3	108	33%	0%	23	110	9
Morgan Lewis	Philadelphia	641	3	52	33%	0%	11	117	1
Sullivan & Cromwell	New York	387	3	163	100%	0%	143	130	10
Weil Gotshal	New York	597	3	49	0%	0%	71	161	18
Debevoise	New York	375	2	45	0%	50%	30	36	3
Simpson Thacher	New York	455	2	45	0%	0%	97	74	3
Willkie Farr	New York	343	2	55	0%	0%	28	47	2
Baker & Botts	Houston	431	1	45	0%	0%	8	71	10
Cahill Gordon	New York	222	1	695	100%	0%	40	103	10
Fried Frank	New York	371	1	605	100%	0%	101	116	13
Jones Day	Cleveland	1072	1	605	100%	0%	29	99	2
Kramer Levin	New York	124	1	45	0%	0%	10	54	4
Tenzer Greenblatt	New York	72	1	65	0%	0%	0	24	7

Definitions (see Appendix C for details)

LAWFRM1:	number of lawyers in 1991
IPOs:	number of IPOs in sample
CI:	contestability index (see **Appendix B**)
CLASS:	classified boards
DUALCON:	dual class capital structure, low-vote stock sold to public in IPO
MASDC:	number of public company M&A transactions 1988-90 in Securites Data Co.
SUITSALL:	number of cases in Lexis 1980-89 with "merger, acquisition, proxy fight or tender offer"
SUITSDEL:	number of Delaware cases in Lexis 1980-89 with "merger, acquisition, proxy fight or tender offer"

Table 8
Primary Regression Results:
Determinants of Defenses

Ordinary least squares regressions, with contestability index (CI) as dependent variable. The sample includes 159 IPOs 1991-92.

SUITSDEL is a count from Lexis of M&A-related Delaware lawsuits 1980-89 involving IPO company counsel. *SILVAL* is a dummy set to one if IPO company counsel is in Silicon Valley. *MAINDACT* is a count from SDC data of public company M&A transactions in the issuer's 3-digit SIC code 1988-90. *CM2* is the Carter-Manaster rating of underwriter prestige. *VC* and *DEVEL* are dummies set to one if the IPO was backed by a VC firm or if the issuer was in the development stage. *AGECO* is the age of the issuer's business, and *AGECSQ* is AGECO squared. *LNOFFSZ* is natural log of the IPO offer size, and *LNASSET0* is the natural log of the book value of the issuer's assets at the IPO. *CEOFOUND* is a dummy set to one if the CEO at the IPO founded the issuer. *FCF5* is the average annual free cash flow over the five years after the IPO. *EARN0* is the issuer's net income at the IPO. *SHH1* is the number of issuer's shareholders at the end of the first year after the IPO. DUALCON is a dummy set to one if the issuer had a dual class capital structure and sold low-vote stock in the IPO.

	(1)		(2)		(3)		(4)	
	ordinary least squares, contestability index (CI) as dependent variable							
	coefficient	p-value	coefficient	p-value	coefficient	p-value	coefficient	p-value
intercept	114.879	0.000	-74.013	0.231	-5.903	0.946	-88.413	0.196
SUITSDEL	2.582	0.000	3.217	0.000	3.372	0.000	3.326	0.000
SILVAL	-135.108	0.049	-168.885	0.015	-166.569	0.018	-197.566	0.011
MAINDACT	6.080	0.011	7.692	0.001	7.469	0.002	6.237	0.022
CM2	11.995	0.039						
VC			96.434	0.006	104.685	0.003	121.188	0.003
DEVEL			-58.398	0.110	-65.846	0.109	-55.323	0.187
AGECO			5.187	0.002	5.200	0.002	4.706	0.018
AGECSQ			-0.040	0.007	-0.038	0.011	-0.036	0.053
CEOFOUND			61.996	0.121	50.479	0.122	82.400	0.022
LNOFFSZ			23.275	0.056			30.952	0.083
LNASSET0					0.691	0.926		
FCF5							0.386	0.438
EARN0							-0.002	0.160
SHH1							2.251	0.214
DUALCON							-79.696	0.219
observations		159		154		154		135
F		8.25		7.62		7.23		5.06
Prob > F		0.000		0.000		0.000		0.000
R-squared		0.176		0.323		0.311		0.352

Adj R-squared	0.155	0.280	0.268	0.283
Root MSE	195.53	180.16	181.67	186.54

Results similar if SUITSDEL replaced with any of the following (which are all highly collinear, with all corr. coefs. > .8):

SUITSALL, a count from Lexis of M&A-related lawsuits 1980-89 involving IPO company counsel.

MASDC, a count from SDC of public target M&A transactions 1988-90 involving IPO company counsel.

LAWFRM1, the number of attorneys at IPO company counsel in 1991, and LAWFRMSQ, the square of LAWFRM1.

Table 9
Additional Controls and Alternative Hypotheses

Models (5) through (8) are ordinary least squares regressions, with contestability index (CI) as dependent variable (see Appendix B). See Table 8 for primary model and variable definitions. Model (9) is an ordinary least squares regressions, with contestability index (CI) as dependent variable, identical to model (4), but with White-Huber robust standard errors. The sample includes 159 IPOs 1991-92. Results shown for the following additional control variables: *UNIT* is a dummy set to one if the IPO was a unit offering of stock and warrants. *DEBTASST* is the ratio of book value of the issuer's long-term debt to book value of assets at the IPO. *RD5ASST* is the ratio of the issuer's average annual research and development expenses in the five years after the IPO to book value of the issuer's assets at the IPO. *CAP5ASST* is the ratio of the issuer's average annual capital expenditures in the five years after the IPO to book value of the issuer's assets at the IPO.

	(5)		(6)		(7)		(8)	
	OLS, contestability index (CI) as dependent variable						OLS, CI as dependent variable, robust standard errors	
CI	coefficient	p-value	coefficient	p-value	coefficient	p-value	coefficient	p-value
intercept	-74.313	0.271	-74.390	0.236	-76.991	0.245	-74.013	0.170
SUITSDEL	3.217	0.000	3.217	0.000	3.140	0.000	3.217	0.000
SILVAL	-168.884	0.016	-168.889	0.016	-179.275	0.013	-168.885	0.000
MAINDACT	7.692	0.001	7.701	0.001	6.272	0.019	7.692	0.004
VC	96.542	0.009	96.546	0.007	112.814	0.004	96.434	0.011
DEVEL	-58.542	0.132	-58.593	0.114	-60.123	0.137	-58.398	0.044
AGECO	5.190	0.002	5.187	0.002	4.981	0.007	5.187	0.005
AGECSQ	-0.040	0.008	-0.040	0.007	-0.038	0.019	-0.040	0.030
CEOFOUND	62.017	0.058	61.998	0.057	68.391	0.048	61.996	0.061
LNOFFSZ	23.331	0.142	23.321	0.123	25.963	0.108	23.275	0.064
UNIT	0.627	0.991						
DEBTASST			0.354	0.971				
RD5ASST					-0.779	0.804		
CAP5ASST					-495.293	0.875		
observations		154		154		142		154
F		6.81		6.81		5.57		6.73
Prob > F		0.000		0.000		0.000		0.000
R-squared		0.323		0.323		0.321		0.323
Adj R-squared		0.275		0.275		0.263		
Root MSE		180.79		180.79		185.33		180.16

No significant results (or changes in other results) for same models with any or all of the following control variables (see Appendix C for

LBO	CEOAGE	CEOPRE	DOPRE	IDPRE	PBIND	ROE	AGEFIRM	EARNPOS
SPLIT	CEOTEN	CEOPOST	DOPOST	IDPOST	PPENET	ROA	AGEFSQ	EARN5
FAMILY	NAME	CEOSOLD	RETAIN	CM2	PPEASST	FCF5POS	DUALCLAS	CAHQ

No significant results or changes in other results for same models with fixed effects including yearly dummies.

Table 10
Alternative Specifications

Models (9) through (11) are logit regressions, with *CLASS* and DUALCON as dependent dummy variable, set to one if the issuer had a (a) classified board or (b) dual class capital structure and sold low-vote stock in the IPO. Model (12) is an ordered logit, with *DEFENSE* as dependent dummy variable, ranking defenses in tiers (see Appendix C for a description). See Table 8 for primary model and variable definitions. FAMILY is a dummy set to one if the issuer was majority owned by an individual or a family of related individuals prior to the IPO. *NAME* is a dummy set to one if the issuer's corporate name includes or consists of the name of a pre-IPO majority shareholder. In each case, the sample consists of IPOs 1991-92.

	(9)		(10)		(11)		(12)	
	logit, CLASS as dependent variable		logit, DUALCON as dependent variable				ordered logit, DEFENSE as dependent variable	
	coefficient	p-value	coefficient	p-value	coefficient	p-value	coefficient	p-value
intercept	-3.741	0.000	-3.731	0.006	-4.346	0.000		
SUITSDEL	0.020	0.066	0.018	0.077	0.020	0.064	0.017	0.031
SILVAL	-1.937	0.091						
MAINDACT	0.048	0.101	-0.140	0.142			0.045	0.103
VC	0.859	0.052	-0.724	0.394			0.504	0.200
DEVEL	-0.422	0.402	1.240	0.103			0.110	0.792
AGECO	0.040	0.059	0.025	0.482			0.046	0.013
AGECSQ	0.000	0.051	0.000	0.335			0.000	0.007
CEOFOUND	0.380	0.360	0.130	0.866			0.497	0.187
LNOFFSZ	0.574	0.004	0.377	0.199			0.808	0.000
FAMILY					2.458	0.004	1.053	0.020
NAME					1.798	0.034	1.668	0.027
	observations	154	observations	154	observations	154	observations	154
	chi2	28.42	chi2	12.06	chi2	23.01	chi2	37.57
	Prob > chi2	0.001	Prob > chi2	0.149	Prob > chi2	0.000	Prob > chi2	0.000
	Pseudo R-sq.	0.146	Pseudo R-sq.	0.143	Pseudo R-sq.	0.273	Pseudo R-sq.	0.107

Figure 1

Company Ages at IPO

(Business and Legal)

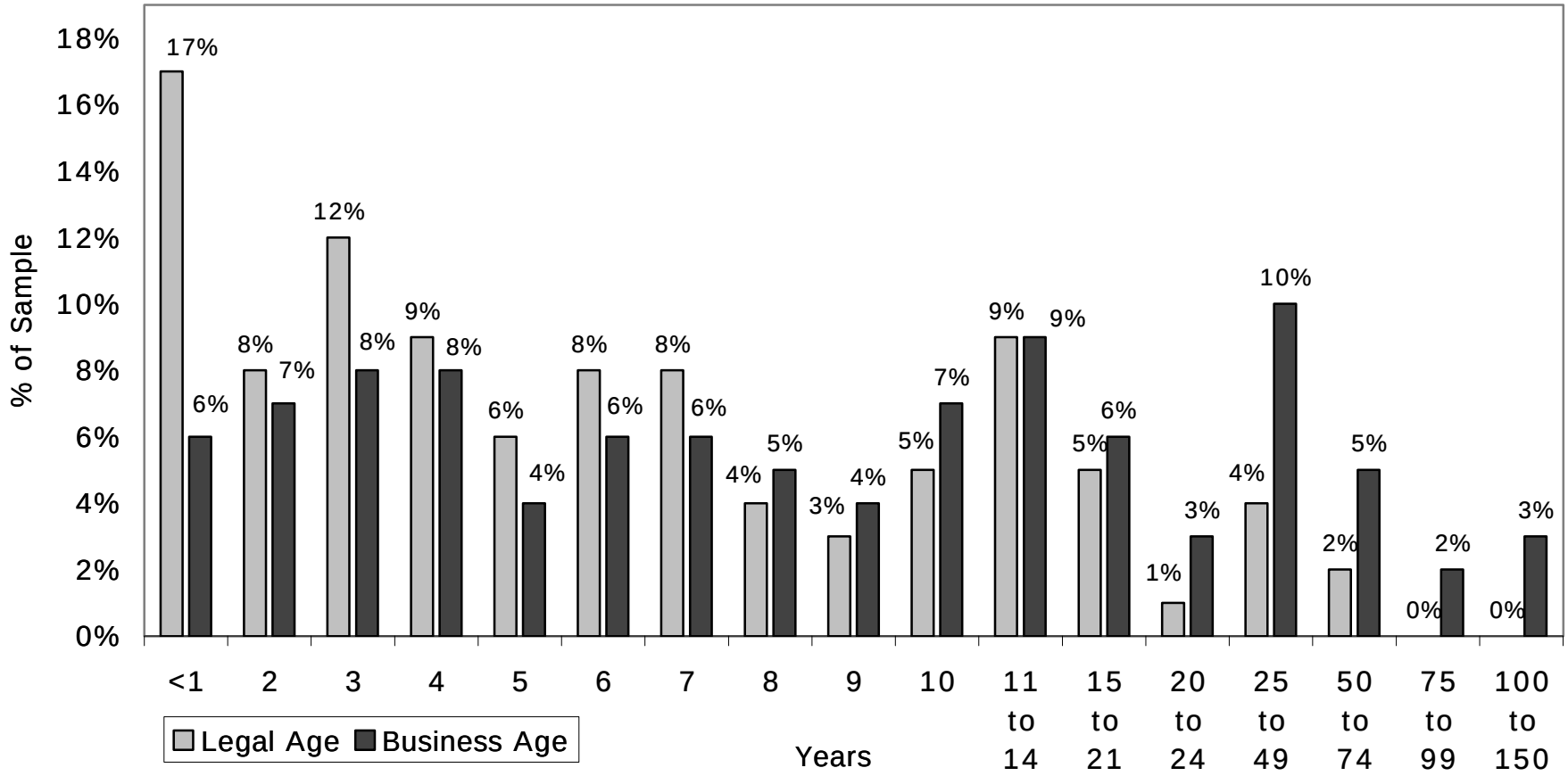


Figure 2

Law Firm Size

Distribution of Company Counsel in Sample of 1991 IPOs in 1991 and 1996

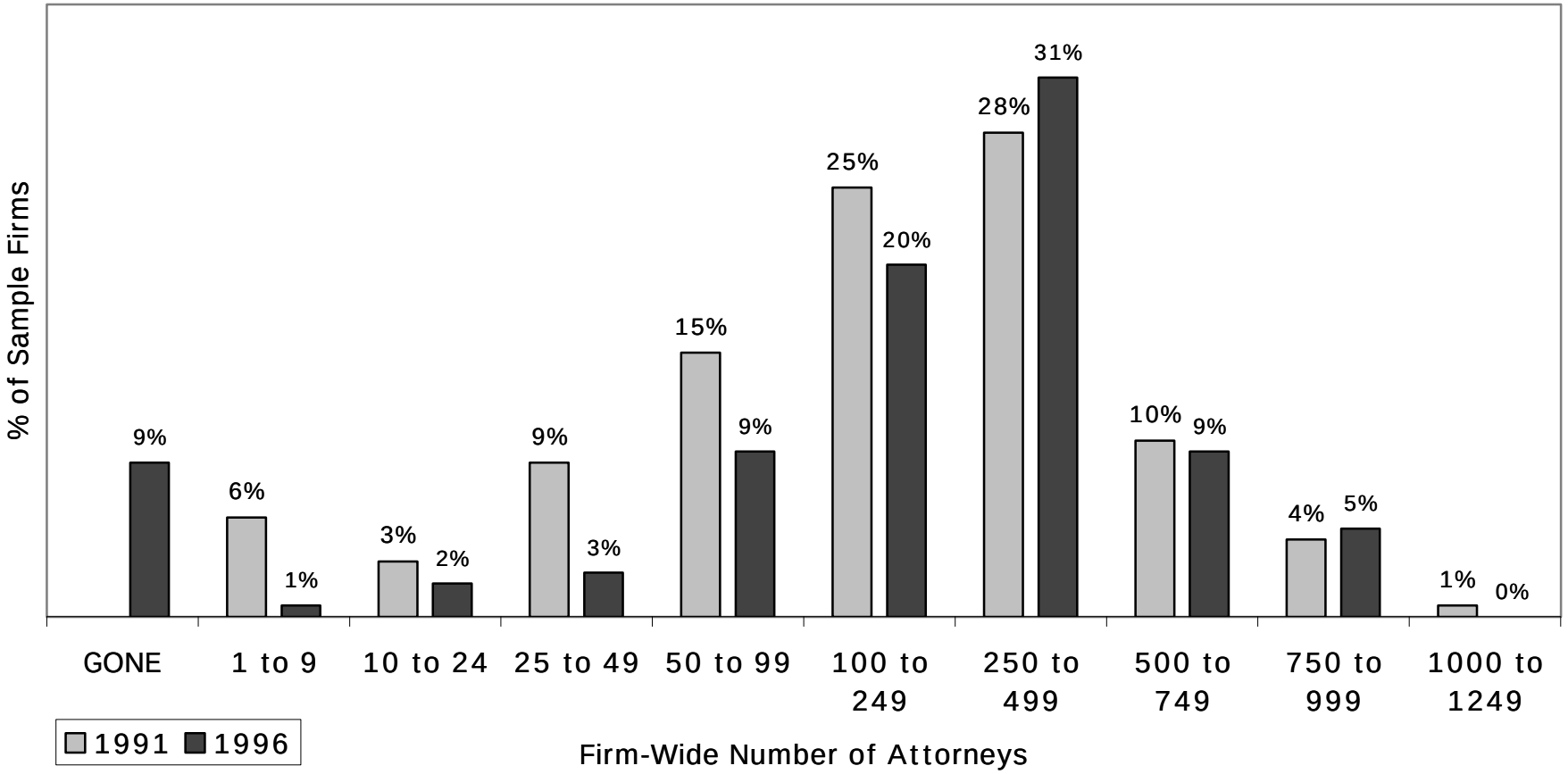


Figure 3

Classified Board Incidence in IPOs

1988-1998

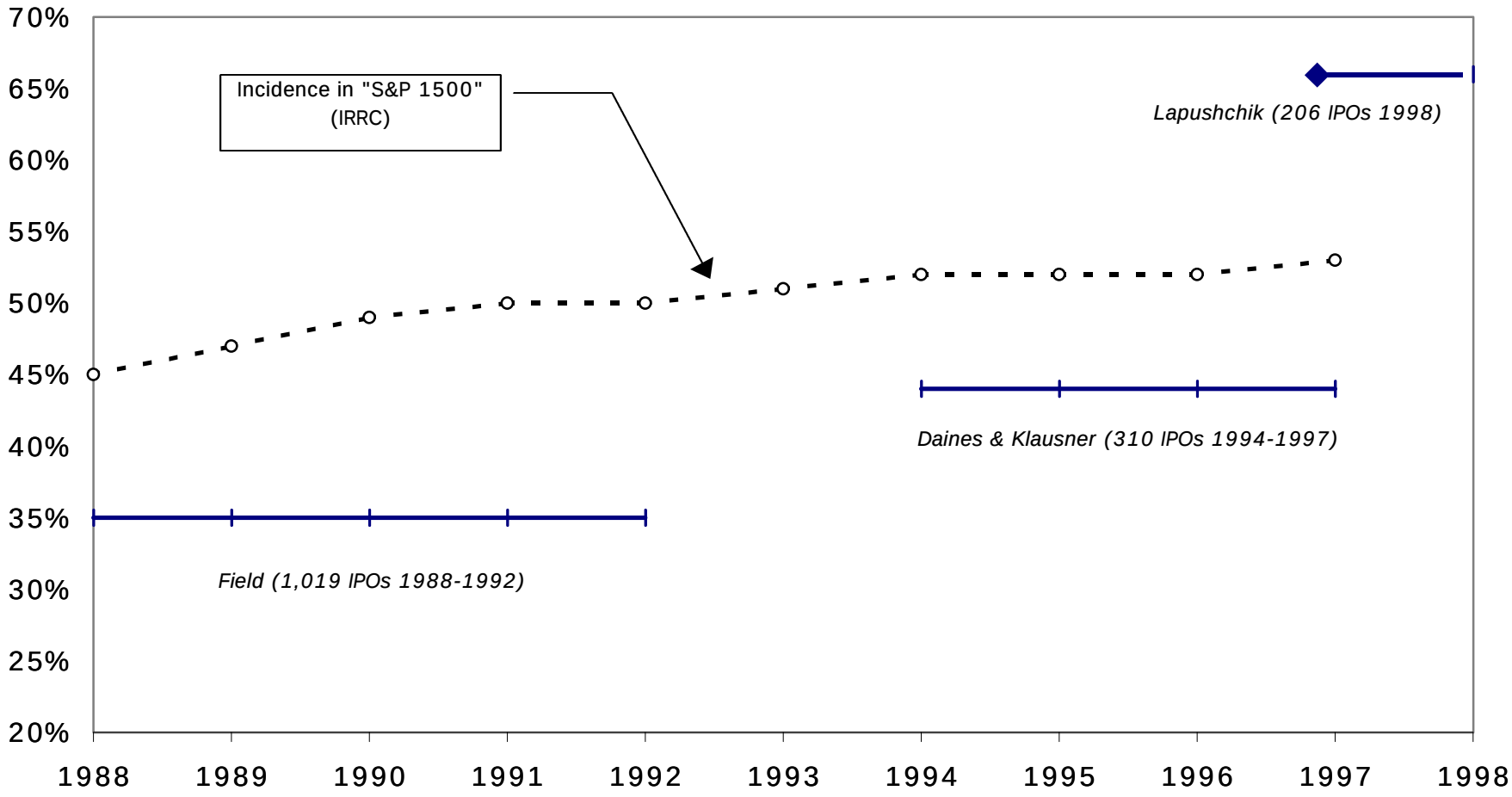


Figure 4

Distribution of Defenses

IPO Sample and Fortune 20

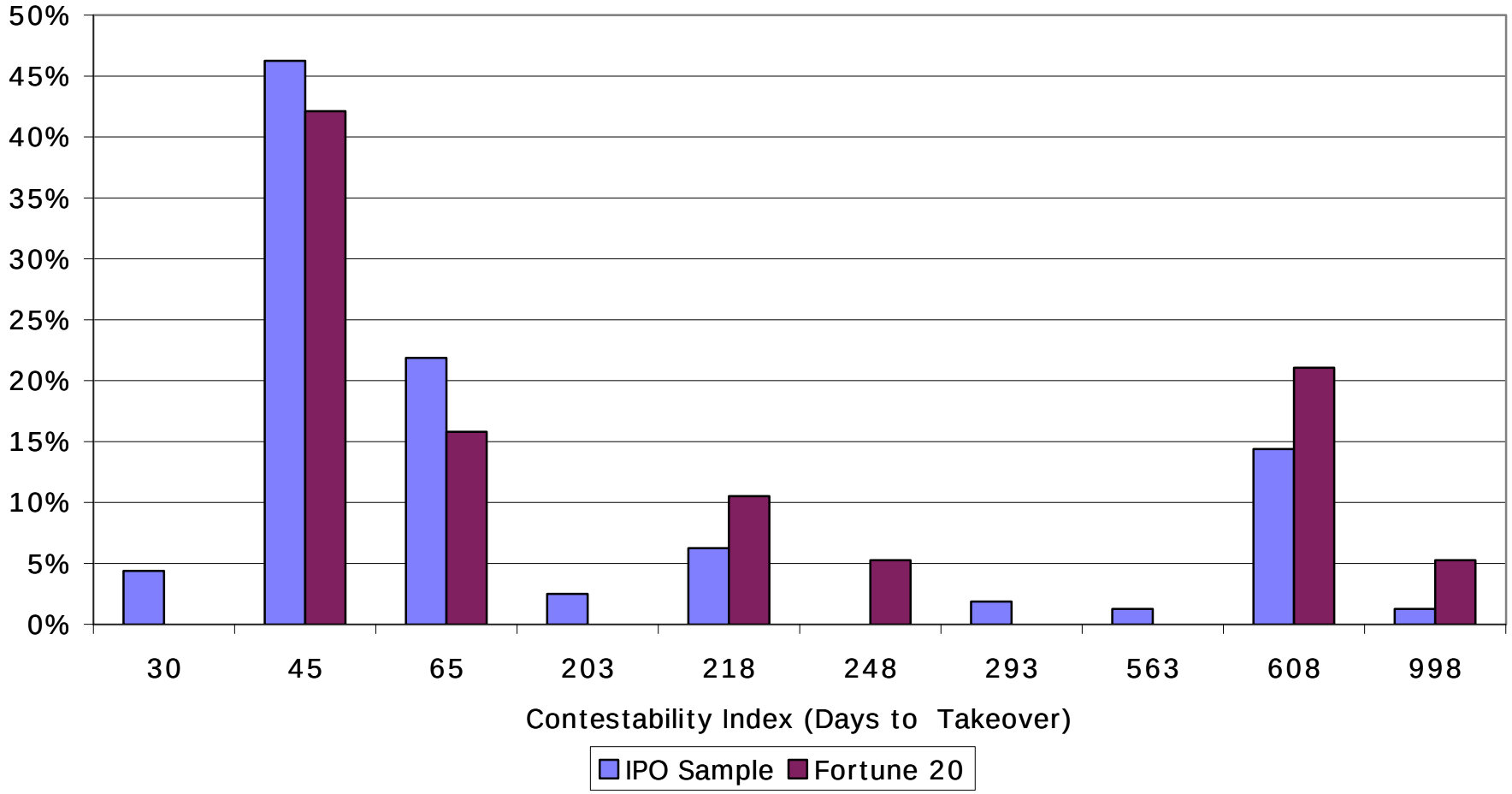
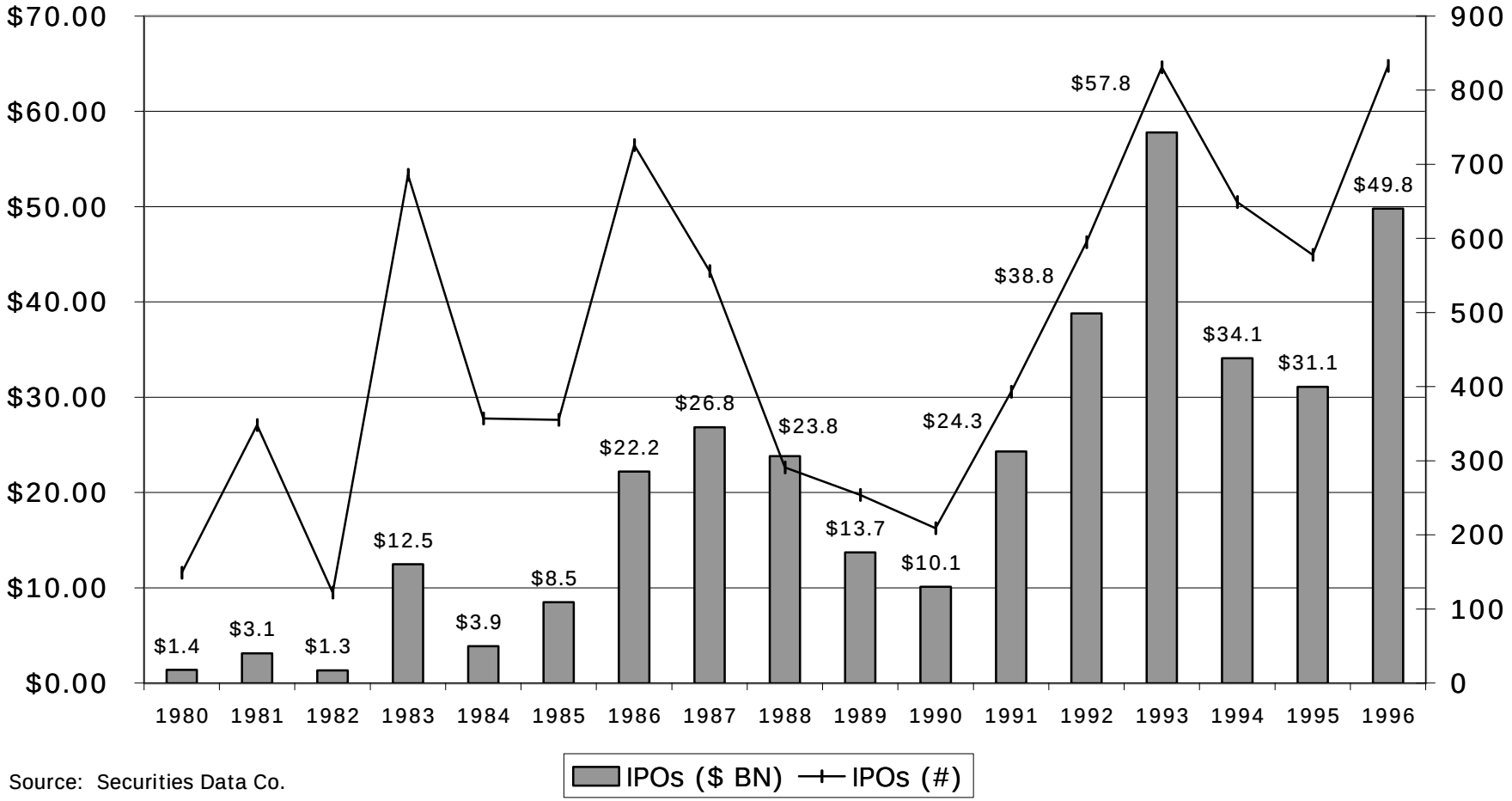


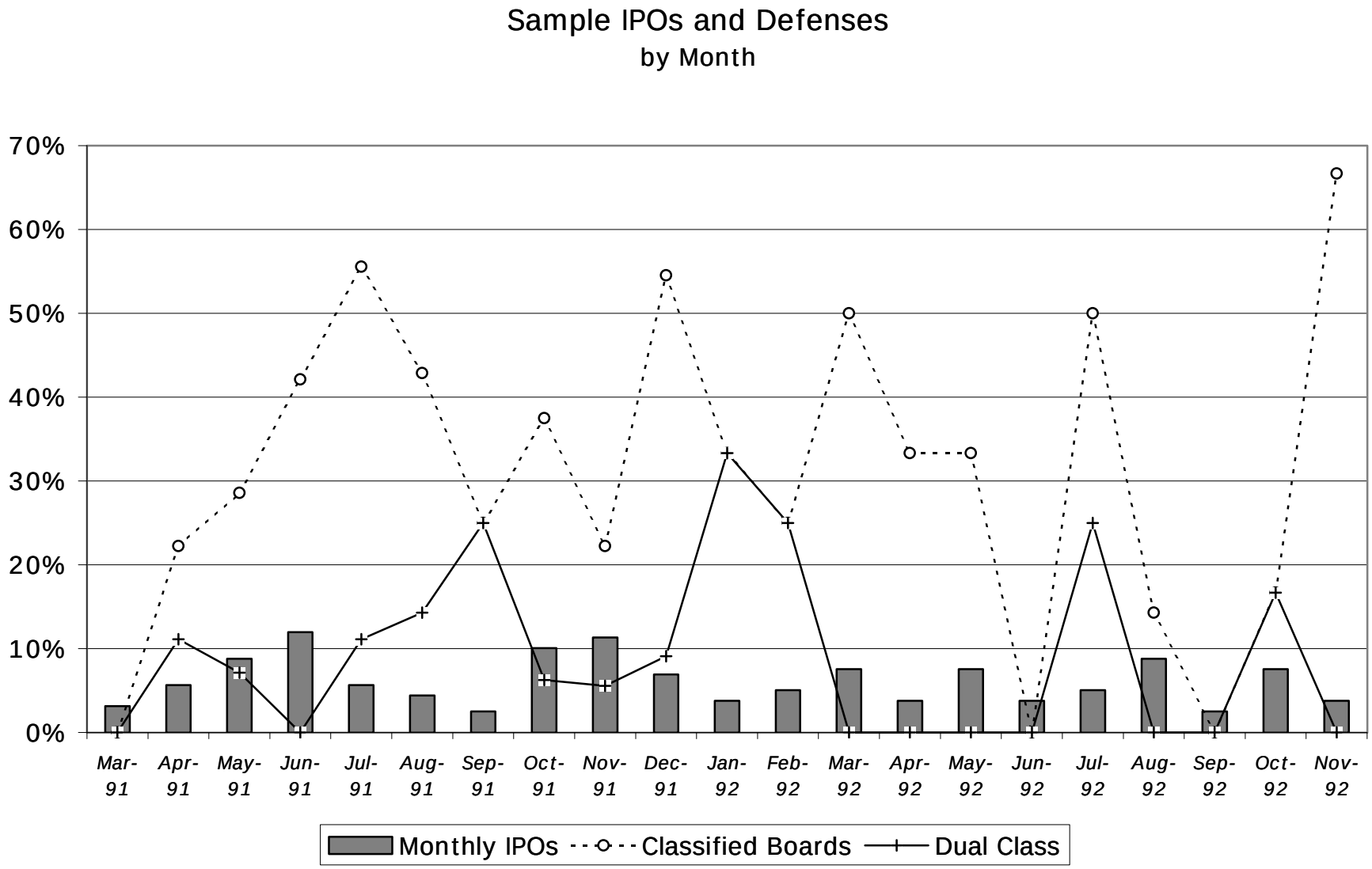
Figure 5

Initial Public Offerings
1980-1996



Source: Securities Data Co.

Figure 6


Sample IPOs and Defenses
by Month
70%
60%
50%
40%
30%
20%
10%
0%
Mar-91
Apr-91
May-91
Jun-91
Jul-91
Aug-91
Sep-91
Oct-91
Nov-91
Dec-91
Jan-92
Feb-92
Mar-92
Apr-92
May-92
Jun-92
Jul-92
Aug-92
Sep-92
Oct-92
Nov-92
Monthly IPOs
Classified Boards
Dual Class