

2010

The Role of Independent Directors in Startup Firms

Brian Broughman

Indiana University Maurer School of Law, bbroughm@indiana.edu

Follow this and additional works at: <http://www.repository.law.indiana.edu/facpub>

 Part of the [Business Organizations Law Commons](#)

Recommended Citation

Broughman, Brian, "The Role of Independent Directors in Startup Firms" (2010). *Articles by Maurer Faculty*. Paper 358.
<http://www.repository.law.indiana.edu/facpub/358>

This Article is brought to you for free and open access by the Faculty Scholarship at Digital Repository @ Maurer Law. It has been accepted for inclusion in Articles by Maurer Faculty by an authorized administrator of Digital Repository @ Maurer Law. For more information, please contact wattn@indiana.edu.

THE ROLE OF INDEPENDENT DIRECTORS IN STARTUP FIRMS

Brian J. Broughman*

Abstract

This Article develops a new theory to explain the widespread use of independent directors in the governance of startup firms. Privately held startups often assign a tie-breaking board seat to a third-party independent director. This practice cannot be explained by the existing corporate governance literature, which relies on diffuse ownership and passive investment—features unique to the publicly traded firm. To develop an alternative theory, I model a financing contract between an entrepreneur and a venture capital investor. I show that allocating a tie-breaking vote to an unbiased thirdparty can prevent opportunistic behavior that would occur if the firm were controlled by its entrepreneur or VC investor. Rather than monitoring management, independent directors in a startup firm “arbitrate” disputes between entrepreneurs and investors. Consistent with my theory, empirical data from Silicon Valley startups illustrate several mechanisms entrepreneurs and VCs use to select an unbiased independent director. My analysis has implications for corporate law, as it suggests that heightened fiduciary protections could undermine the role of the independent director in startup firms.

I. INTRODUCTION

Independent corporate directors have attracted considerable attention from academics and policymakers in light of recent corporate scandals. Following the passage of the Sarbanes-Oxley Act (SOX), publicly traded firms are required to have an audit committee comprised solely of independent directors,¹ and both the NYSE and NASDAQ now require independent directors to comprise a majority of

* © 2010 Brian J. Broughman, Associate Professor, Indiana University Maurer School of Law – Bloomington. For helpful comments on earlier versions of this paper, I would like to thank Bobby Bartlett, Lisa Bernstein, Margaret Blair, William Carney, Robert Cooter, Lauren Edelman, Jesse Fried, Darian Ibrahim, Leandra Lederman, Larry Ribstein, Dan Rubinfeld, Gordon Smith, Lynn Stout, Steve Tadelis, Eric Talley, Tom Ulen and workshop participants at Arizona, Berkeley, Case Western, Drexel, George Mason, Indiana-Bloomington, San Diego, Stanford, UCLA, Virginia, the 2007 Law and Society Conference, the Institute for Humane Studies, and the 2008 Conglomerate Junior Scholars Workshop. Jonathan McPike provided valuable research assistance. This project was generously supported by a grant from the Kauffman Foundation. Most importantly, I thank the many entrepreneurs who agreed to provide data for this project.

¹ See Sarbanes-Oxley Act of 2002 § 301, 15 U.S.C. § 78j-1(m)(3) (2006).

the board of each listed company.² In a publicly traded firm, independent directors are expected to monitor management on behalf of dispersed equity holders.³ Though the effect on financial performance is uncertain, policy makers consistently view independent directors as an integral part of healthy board oversight.⁴

This interest in independent directors focuses exclusively on the governance of publicly traded firms. Academic writers have almost completely overlooked the role of independent directors in *privately* held firms. Yet, privately held startup firms frequently include independent directors on their boards, often in key tie-breaking positions.⁵ Firms financed by venture capital (VC)⁶ allocate one-quarter of their board seats to independent directors. More than half of the time, the entrepreneur and VC investors (the VCs) share control of the board with an independent director holding the tie-breaking vote.⁷

The use of independent directors in privately held startup firms cannot be explained by the existing literature. Under the dominant theory, independent directors are expected to monitor management on behalf of dispersed common stockholders.⁸ This theory only applies to publicly held firms where there is a clear

² See NYSE LISTED COMPANY MANUAL § 303A(1) (2002); NASDAQ MANUAL, R. 5606(b)(1) (2009). These reforms are consistent with earlier reform proposals, which generally called for a higher percentage of independent directors on corporate boards; see, e.g., MELVIN A. EISENBERG, *THE STRUCTURE OF THE CORPORATION* 170–85 (1976) (suggesting that greater independent director representation on corporate boards would improve monitoring of management).

³ See *infra* notes 125–133 and accompanying text.

⁴ See, e.g., Barry D. Baysinger & Henry N. Butler, *Corporate Governance and the Board of Directors: Performance Effects of Changes in Board Composition*, 1 J.L. ECON. & ORG. 101, 102–04 (1985) (finding that board composition has only a mild effect on firm performance); Sanjai Bhagat & Bernard Black, *The Uncertain Relationship Between Board Composition and Firm Performance*, 54 BUS. LAW. 921, 922 (1999) (finding that increased independent director representation does not correlate with improved firm performance); Roberta Romano, *Corporate Law and Corporate Governance*, 5 INDUS. & CORP. CHANGE 277, 279–97 (1996) (discussing theoretical justifications for the use of independent directors and reviewing empirical studies of board composition).

⁵ See Brian Broughman & Jesse Fried, *Renegotiation of Cash Flow Rights in the Sale of VC-Backed Firms*, 95 J. FIN. ECON. 384, 388–90 (2010); Steven N. Kaplan & Per Strömberg, *Financial Contracting Theory Meets the Real World: An Empirical Analysis Of Venture Capital Contracts*, 70 REV. ECON. STUD. 281, 287–89 (2003).

⁶ In this Article, VC refers to both “venture capital” and “venture capital investors.”

⁷ See Kaplan & Strömberg, *supra* note 5, at 287–88.

⁸ For a description of alternative theories of the independent director, see *infra* notes 125–139 and accompanying text. The dominant explanation for the use of independent directors—the monitoring role—is based on diffuse ownership and passive investment. Other explanations, however, also cannot explain the use of independent directors in VC-backed firms. See generally Margaret M. Blair & Lynn A. Stout, *A Team Production Theory of Corporate Law*, 85 VA. L. REV. 247 (1999) (proposing a theory of board mediation based on governance arrangements in publicly held firms). Even the definition

separation between ownership and control.⁹ In a privately held startup, by contrast, ownership is concentrated and investors have sufficient control rights to monitor management directly.¹⁰ VCs do not need an independent director to monitor management, since the VCs perform this task themselves. Independent directors serve a different role in privately held startup firms.

This Article develops an alternative theory based on the financing contract between a firm's entrepreneurs and VCs. The structure of a startup's board, including the use of independent directors, is endogenous to the financing contract.¹¹ Thus, the relevant question is: why would a firm's entrepreneurs and VCs want to share control of their board with an outside party holding the tie-breaking seat?

To answer this question, I consider the parties' divergent financial interests. Entrepreneurs typically hold common stock, while VCs hold preferred stock. Preferred stock includes a liquidation preference entitling its holder to priority over common stock in a liquidation or sale of the firm. As a result, VCs may favor a quick exit and wish to avoid risky strategies that could benefit common stockholders. This conflict affects a variety of important decisions faced by startup firms—whether to hire a new CEO, when to sell the firm, how much to invest in a new technology, and so forth.

Unfortunately, the financing contract is necessarily incomplete and cannot fully align the parties' interests across such decisions.¹² As a result, the allocation of board seats becomes particularly important. If either party controls the board, it can use this position opportunistically, causing the firm to pursue actions that benefit it at the expense of the welfare of the firm as a whole. The financial contracting literature only considers two possibilities: (1) VC control, and (2) entrepreneur control.¹³ Both arrangements are subject to opportunistic behavior by the controlling party.¹⁴

of an independent director is different in the startup firm context, as compared to the publicly traded firms, emphasizing that the same theory does not apply in both settings.

⁹ See *infra* notes 128–133 and accompanying text.

¹⁰ See *infra* notes 128–133 and accompanying text.

¹¹ For an illustration of this approach, see generally OLIVER E. WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM* (1985) (developing a theory showing that corporate governance arrangements are designed to reduce ex post opportunism). With respect to board composition particularly, see Benjamin E. Hermalin & Michael S. Weisbach, *Endogenously Chosen Boards of Directors and Their Monitoring of the CEO*, 88 AM. ECON. REV. 96 (1998).

¹² Contractual incompleteness may be due to bounded rationality, transaction costs, or non-verifiable information. See generally Philippe Aghion & Patrick Bolton, *An Incomplete Contracts Approach to Financial Contracting*, 59 REV. ECON. STUD. 473 (1992) (modeling the allocation of control as an incomplete contract between an entrepreneur and an investor).

¹³ See *infra* note 38 and accompanying text.

¹⁴ The risk that entrepreneurs face when the VCs control the board is discussed in Jesse M. Fried & Mira Ganor, *Agency Costs of Venture Capitalist Control in Startups*, 81 N.Y.U. L. REV. 967 (2006). Conversely, the risk that VCs face when the entrepreneurs

Adding an independent director to the board allows a new alternative: control of the board can be shared with an independent director acting as the tie-breaking vote. To illustrate, consider a board with three directors: an entrepreneur, a VC, and an independent director. I refer to this arrangement as “ID-arbitration” to emphasize the independent director’s position as a quasi-arbitrator. The independent director can settle disputes that may arise between the entrepreneur and VC. ID-arbitration avoids deadlock without leaving the entrepreneur or the VC vulnerable to unilateral actions by a controlling party.

More importantly, the presence of an independent director may prevent conflicts from ever materializing. Under ID-arbitration, neither the entrepreneur nor the VC can take any action opposed by the other party without obtaining the support of the independent director. The parties must propose actions that they expect will be endorsed by the independent director. Similar to analysis of final offer arbitration, the entrepreneur and VC will converge towards the action preferred by the independent director.¹⁵ The independent director does not need to “arbitrate” actual conflicts, but rather, primarily serves as a commitment mechanism that forces the entrepreneur and VC to compromise. Provided the independent director is relatively unbiased, competition for the independent director’s support limits the threat of opportunism.

This form of board-level arbitration replaces controlling party opportunism with independent director discretion. The desirability of this arrangement depends on how independent directors use their discretion. If an independent director always sides with the same party or otherwise colludes with one of the primary parties, this arrangement is no different than giving the entrepreneur or VC control. However, if the independent director is relatively unbiased, then ID-arbitration can improve corporate governance.¹⁶

It is an empirical question whether any factors constrain the independent director’s discretion. Using evidence from a sample of fifty-four VC-backed firms, I provide data on the allocation of board control, describe how the parties select

control the board is discussed in William W. Bratton, *Venture Capital on the Downside: Preferred Stock and Corporate Control*, 100 MICH. L. REV. 891 (2002).

¹⁵ Convergence towards the arbitrator’s “fair” outcome is an established result in the literature on final offer arbitration. See *infra* notes 80–81 and accompanying text. The intuition behind my analysis is similar to the convergence of political platforms as predicted by the median voter theorem. See generally Anthony Downs, *An Economic Theory of Political Action in a Democracy*, 65 J. POL. ECON. 135 (1957). In essence, the entrepreneur and VC create a median voter by adding an independent director to the board.

¹⁶ ID-arbitration can improve the operation of local business norms. The entrepreneur and VC may want their relationship to be governed by business norms; however, such norms are hard to define and specify in the contract. Furthermore, a firm’s internal conduct may be difficult for outside parties to observe, and consequently, business norms may be violated with little penalty from the local community. Allocating a tie-breaking board seat to an independent director with industry experience, however, lets the parties commit to such norms as interpreted by the independent director. For a discussion of Silicon Valley norms, see *infra* note 99.

independent directors, and discuss the qualifications of the independent directors in this sample. The data illustrate numerous safeguards that entrepreneurs and investors use to ensure an impartial and qualified director.

I conclude by discussing implications for fiduciary duties in VC-backed firms. Fiduciary obligations could potentially limit opportunistic conduct in VC-backed firms; however, for reasons discussed in this Article, fiduciary obligations, as interpreted by Delaware courts, place a weak constraint on opportunistic behavior by either party. My analysis of the independent director suggests a reason for this hands-off approach. The types of disputes that a court would need to adjudicate in startup firms are typically business decisions: whether to sell the firm, which investment to pursue, etc. Determining the efficient outcome of such disputes requires experience with startup firms and familiarity with the relevant industry—qualities that a judge generally does not have. However, unlike judges, independent directors often have significant industry experience and are arguably more qualified to “adjudicate” such disputes.

The remainder of this Article is organized as follows. Part II explains the cash flow and control rights in a typical VC financing contract, and describes data from past studies on the allocation of board seats in VC-backed firms. Part III describes the problem of opportunistic conduct that can occur if a firm’s board is controlled by its entrepreneurs or VCs. Part IV explains how an unbiased independent director as tiebreaker can prevent opportunism. Part V supports my theory with data from a sample of VC-backed firms located in Silicon Valley. Part VI considers existing academic theories of the independent director and discusses why these cannot account for the use of independent directors in VC-backed firms. Part VII then discusses implications of my theory for corporate law and fiduciary obligations.

II. BACKGROUND ON VENTURE CAPITAL CONTRACTING

This Part considers the allocation of cash flow rights and control rights in VC financing contracts. VC-backed startups almost always issue two classes of stock: common (held by the entrepreneurs and employees) and convertible preferred (held by the VCs). While researchers have identified incentives and tax explanations for the use of convertible preferred stock, it also creates a significant conflict of interest between a startup’s entrepreneurs and VCs. The existence of such conflicts makes the allocation of board seats between entrepreneurs and VCs particularly important. Empirical studies show that control of the board is typically shared with a third-party independent director holding the tie-breaking seat.

A. Cash Flow Rights

VC-backed startups typically issue two classes of stock: (1) common (held by entrepreneurs and employees) and (2) convertible preferred (held by VCs).¹⁷ Convertible preferred stock has two key features. First, it includes a liquidation preference. When the firm is sold or dissolved, preferred stockholders are entitled to be paid the full amount of their liquidation preference before common shareholders receive anything. The liquidation preference usually equals the amount invested (“1X preferences”) but can be a multiple of that amount and may include unpaid dividends.¹⁸ Second, a preferred stockholder can choose to convert her shares into common stock at a pre-specified ratio. Upon conversion, liquidation preferences and any other rights associated with the preferred stock are eliminated. A VC holding preferred stock will generally choose to convert into common stock only if the company is sold or liquidated for a sufficiently high price.¹⁹

Researchers have offered several explanations for convertible preferred stock.²⁰ First, preferred stock can address an information asymmetry at the time of investment.²¹ Before investment, the entrepreneur may have better information than the VC regarding the value and feasibility of the project.²² VCs may be concerned that the entrepreneur plans to sell them equity at an inflated price.²³ If

¹⁷ See William A. Sahlman, *The Structure and Governance of Venture-Capital Organizations*, 27 J. FIN. ECON. 473, 510 (1990); Kaplan & Strömberg, *supra* note 5, at 286. Angel investors (which provide financing to similar types of start-ups as VCs, but at an earlier point in the start-up’s growth) typically receive common stock. See Darian M. Ibrahim, *The (Not So) Puzzling Behavior of Angel Investors*, 61 VAND. L. REV. 1405, 1406, 1422 (2008).

¹⁸ VCs’ convertible preferred stock sometimes includes participation rights (often referred to as “participating preferred”). Participating preferred entitles the holder not only to a liquidation preference, but also to share with common shareholders, on a pro rata basis, in any additional value available for distribution to shareholders, usually up to a specified amount (say, three times the original investment). Thus, the VCs will convert their participating preferred shares into common stock only if the amount they would receive as common stockholders exceeds the sum of their liquidation preference plus the value of their participation rights. My analysis assumes, for ease of exposition, that the VCs hold nonparticipating preferred stock; however, this assumption does not affect my analysis, since the basic conflict between preferred and common stock exists regardless of participation rights.

¹⁹ If the firm is sold in an IPO (initial public offering) meeting certain conditions, the financing agreement may require the VCs to convert to common (mandatory conversion) even if the preferred stock would offer a higher payout. See Thomas Hellmann, *IPOs, Acquisitions, and the Use of Convertible Securities in Venture Capital*, 81 J. FIN. ECON. 649, 650 (2006). In most settings, however, conversion is not required.

²⁰ See Fried & Ganor, *supra* note 14, at 983.

²¹ *Id.*

²² *Id.*

²³ *Id.*

the VCs are issued preferred stock, however, the entrepreneur cannot profit from her private information, since the liquidation preference protects the VC's claim.²⁴ The use of preferred stock allows the entrepreneur to credibly signal that the firm has a high value.²⁵ Second, preferred stock shifts additional risk to entrepreneurs and can provide stronger incentive effects for the entrepreneur than if the firm were financed entirely with common stock.²⁶ Finally, the dual-class structure has a tax benefit, since it allows the firm to price separately (1) the common stock issued to entrepreneurs and employees, and (2) the preferred stock issued to VCs. As explained by Gilson and Schizer, the use of preferred stock effectively allows the startup to shift some employee income from high ordinary tax rates to low capital gains tax rates.²⁷

However, despite its many advantages, preferred stock also creates a conflict. Because common shareholders and preferred shareholders have different cash flow rights, their interests in how the startup is run can diverge.²⁸ In certain states of the world, VCs' liquidation preferences give them debt-like cash flow rights, while making common shareholders analogous to option holders. Preferred-holding VCs may favor less-risky strategies than common shareholders. This conflict is relevant to a variety of important decisions frequently faced by VC-backed firms—whether to hire a new CEO, when to sell the firm, how much to invest in a new technology, and so forth. Neither party will always favor the strategy that maximizes total shareholder value.

²⁴ *Id.*

²⁵ See *id.*; Sahlman, *supra* note 17, at 510 (“A security that is senior in rights to common stock in effect lowers the economic value of the common. Members of the management team can therefore buy the common stock at low prices without incurring taxable income.”); see also Jeremy C. Stein, *Convertible Bonds as Backdoor Equity Financing*, 32 J. FIN. ECON. 3, 3–4 (1992) (arguing that corporations use convertible debt to avoid adverse selection costs associated with equity financing).

²⁶ See Sahlman, *supra* note 17, at 510–11.

²⁷ See Ronald J. Gilson & David M. Schizer, *Understanding Venture Capital Structure: A Tax Explanation for Convertible Preferred Stock*, 116 HARV. L. REV. 874, 876 (2003).

²⁸ Fried & Ganor, *supra* note 14, at 993–96. My analysis in this paper focuses on the conflict between preferred stock and common stock caused by the different cash flow rights assigned to each group. This conflict, however, is endogenous to the financing contract, and thus could be removed by giving both parties common stock. However, for the reasons discussed above, see *supra* text accompanying notes 20–27, the parties are likely to demand preferred stock regardless of the conflict it creates. This is not necessarily true outside the United States. See Douglas J. Cumming, *Capital Structure in Venture Finance*, 11 J. CORP. FIN. 550, 581–82 (2005) (reporting that VCs receive a variety of different types of securities, including common stock, in Canadian VC financing transactions). Nonetheless, I restrict my analysis in this paper to VC investments for preferred stock. For an alternative analysis based on a conflict between private benefits and cash flow rights, see generally Aghion & Bolton, *supra* note 12; Brian J. Broughman, *Independent Directors and Board Control in Venture Finance* (Jan. 23, 2008) (unpublished manuscript), available at <http://ssrn.com/abstract=1123840>.

B. Control Rights

The existence of such conflicts makes the allocation of control rights particularly important. The VC financing arrangement addresses the allocation of control in two primary ways. First, the parties often negotiate for protective provisions, which give the protected party—usually the VC—the right to veto certain transactions, such as the sale of company assets or any amendment to the corporate charter.²⁹ Second, the parties negotiate board control. Protective provisions only create a right to block unfavorable transactions. Board control gives the controlling party the critical ability to *initiate* fundamental transactions.³⁰ Giving either party unilateral control of the board, however, potentially exposes the non-controlling party to opportunistic behavior.³¹

Board seats in VC-backed firms are typically allocated on a class-specific basis as specified in the financing documents.³² This makes it possible to classify each director into one of three categories: (1) VC, (2) entrepreneur, or (3) independent director.³³ In a study documenting over 200 rounds of VC financing, Kaplan and Strömberg find that VCs hold approximately 41% of the total board seats, entrepreneurs hold 35%, and independent directors hold the remaining 23%.³⁴ Despite the fact that VCs hold more board seats than the other parties, they generally do not control the board. Rather, board control is typically shared. VCs

²⁹ Fried & Ganor, *supra* note 14, at 987.

³⁰ *Id.* The venture capital literature offers various explanations for VCs' control rights, especially board control. See generally Broughman & Fried, *supra* note 5 (explaining that board control allows VCs to sell the firm without needing to carve out additional payments to common stockholders); Fried & Ganor, *supra* note 14, at 994 (arguing the VC board control makes it easier for VCs to exit their investment over the possible objections of other parties); Paul A. Gompers, *Optimal Investment, Monitoring, and the Staging of Venture Capital*, 50 J. FIN. 1461 (1995) (noting that staged financing facilitates monitoring the CEO); Thomas Hellmann, *The Allocation of Control Rights in Venture Capital Contracts*, 29 RAND J. ECON. 57 (1998) (arguing that VC control of the board can reduce entrepreneur agency costs by allowing VCs to monitor the entrepreneur and fire her if necessary); Josh Lerner, *Venture Capitalists and the Oversight of Private Firms*, 50 J. FIN. 301, 302–03 (1995) (same); D. Gordon Smith, *The Exit Structure of Venture Capital*, 53 UCLA L. REV. 315 (2005) (same as Fried & Ganor, *supra*).

³¹ See Ronald J. Gilson, *Engineering a Venture Capital Market: Lessons from the American Experience*, 55 STAN. L. REV. 1067, 1081 (2003).

³² The allocation of board seats is typically specified in the corporate charter and in voting agreements negotiated in connection with each round of financing. Class-specific board seats emphasize that the use of independent directors is not simply an accident of shareholder voting, but rather is explicitly contracted over by the parties.

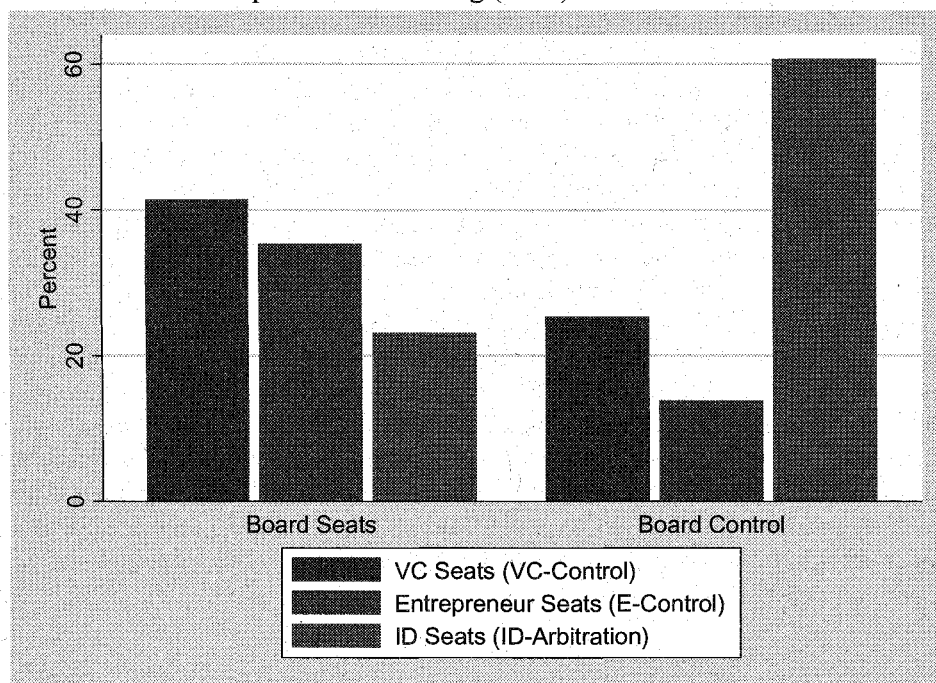
³³ Angel investors generally do not receive board seats. However, if an angel is awarded a board seat, I classify the seat based on the type of equity held by the angel: (1) "VC" if the angel holds preferred stock and (2) "entrepreneur" if the angel holds common stock.

³⁴ See Kaplan & Strömberg, *supra* note 5, at 288.

control the board 25% of the time and entrepreneurs control the board 14% of the time.³⁵ In the remaining firms (61%), VCs and entrepreneurs share control of the board with third-party independent directors holding the tie-breaking vote(s).³⁶

Figure 1: Allocation of Board Seats and Board Control

Data Source: Kaplan and Strömberg (2003)



The financial contracting literature models the allocation of control between an entrepreneur and an investor, but overlooks the use of independent directors. In a foundational paper, Aghion and Bolton show that control should be awarded to the entrepreneur, whenever possible, to protect the entrepreneur's private benefits; however, investor control may often be necessary to ensure the investor's participation.³⁷ Aghion and Bolton's study is complimented by a number of recent articles that focus specifically on the allocation of control rights in VC-backed firms.³⁸ These studies treat control as an indivisible right that can be held at any

³⁵ *Id.*

³⁶ *Id.*

³⁷ See Aghion & Bolton, *supra* note 12.

³⁸ See generally Erik Berglöf, *A Control Theory of Venture Capital Finance*, 10 J.L. ECON. & ORG. 247 (1994); Bernard S. Black & Ronald J. Gilson, *Venture Capital and the Structure of Capital Markets: Banks Versus Stock Markets*, 47 J. FIN. ECON. 243 (1998); Wouter Dessein, *Information and Control in Alliances & Ventures*, 60 J. FIN. 2513 (2005); Hellmann, *supra* note 19; Hellmann, *supra* note 30; Andrei A. Kirilenko, *Valuation and Control in Venture Finance*, 56 J. FIN. 565 (2001); Leslie M. Marx, *Efficient Venture*

given time by only one party—either the entrepreneur or the VC. The financial contracting literature largely ignores the independent director, and consequently fails to explain ID-arbitration, the most commonly observed startup board configuration.

Some legal academics have noted the frequent use of independent directors in VC-backed startups.³⁹ However, these articles often assume independent directors are either controlled by the VCs or controlled by the entrepreneurs. Smith, for example, examines corporate charters from a sample of VC-backed firms.⁴⁰ He concludes that independent director board seats will *either* be controlled by the entrepreneurs or the VCs, depending on who holds more equity at the time.⁴¹ Fried and Ganor argue that “so-called ‘independent directors’ are often not truly independent of the VCs,”⁴² suggesting that VCs may functionally control the board even when an independent director holds the tie-breaking vote. In both of these articles the independent director is generally treated not as a true third party, but rather as an entrepreneur or as an investor.

In contrast, Bratton, as well as Kaplan and Strömberg, treat the independent director as a distinct third party, who may sometimes vote with the entrepreneurs and sometimes vote with the VCs.⁴³ Bratton notes that independent directors may be used because the entrepreneur and VC investor cannot explicitly contract over the relevant contingencies: the parties may “prefer to grapple with unverifiable facts . . . in the black box of the boardroom” and may intentionally appoint a third-party independent director to act as a tiebreaker.⁴⁴ These articles, however, do not consider how a tie-breaking independent director changes the incentives of the entrepreneur and VC.

Capital Financing Combining Debt and Equity, 3 REV. ECON. DESIGN 371 (1998); Klaus M. Schmidt, *Convertible Securities and Venture Capital Finance*, 58 J. FIN. 1139 (2003); Vijay Yerramilli, *Joint Control and Redemption Rights in Venture Capital Contracts* (ECGI Working Paper Series in Finance, 2004), available at <http://ssrn.com/abstract=481362>.

³⁹ See, e.g., Bratton, *supra* note 14, at 899–901; Fried & Ganor, *supra* note 14, at 987–88; Smith, *supra* note 30, at 330–37.

⁴⁰ See Smith, *supra* note 30, at 324–27.

⁴¹ See *id.* at 332–337. Smith’s data is based primarily on corporate charters rather than voting rights agreements. See *infra* note 114 and accompanying text.

⁴² Fried & Ganor, *supra* note 14, at 988.

⁴³ See Bratton, *supra* note 14, at 899–901; Kaplan & Strömberg, *supra* note 5, at 300. In Kaplan and Strömberg’s analysis, sharing control with an independent director creates a modified form of state-contingent control: “We interpret the situation where neither the VC nor the founder is in control as similar to state-contingent control. For example, in boards where . . . [independent] board members are pivotal, it seems plausible that these members will vote with the VC as founder performance declines.” Kaplan & Strömberg, *supra* note 5, at 300. This analysis effectively collapses shared control into either E-control or VC-control depending on the state of nature. Bratton also considers a tie-breaking independent director a substitute for state contingent control. See Bratton, *supra* note 14, at 919.

⁴⁴ Bratton, *supra* note 14, at 918.

In contrast, I model ID-arbitration directly, as a *three-party decision-making structure*. I show that ID-arbitration can create incentives to compromise that are not present under state-contingent control. By accounting for these incentives, I show that ID-arbitration can prevent opportunistic conduct that would occur under alternative governance arrangements.⁴⁵

III. THE PROBLEM: ENTREPRENEUR AND INVESTOR OPPORTUNISM

This Part describes a hypothetical conflict between an entrepreneur holding common stock and a VC holding preferred stock. Due to each party's respective cash flow rights, the VC prefers a different strategy than the entrepreneur. The firm's choice of action depends on who controls the board. Neither entrepreneur control (E-control) nor VC-control, however, will lead to the efficient outcome, creating both ex post and ex ante inefficiencies.

A. Model Setup: Hypothetical Conflict

Consider the following hypothetical problem: Startup Corporation, similar to the majority of VC-backed firms, has authorized two classes of stock: common stock and convertible preferred stock.⁴⁶ Startup issued 100 shares of common stock to its founder (the entrepreneur) and sold 100 shares of convertible preferred stock at \$1 per share to a VC investor (the VC). The VC's preferred shares carry a 1X liquidation preference plus any unpaid dividends (i.e. cumulative dividends). In other words, if Startup is sold or liquidated the VC is entitled to receive \$100 plus unpaid dividends before the entrepreneur receives any payment. Each preferred share may be converted at the VC's option into a single share of common stock.⁴⁷ Upon a full conversion each party would own 100 shares of common stock.

Two years after investment, the VC's liquidation preference has increased to \$120 though unpaid dividends. At this time Startup must choose from one of three

⁴⁵ ID-arbitration is a different mechanism from state-contingent control and may be used even when verifiable signals are available. See Broughman, *supra* note 28, at 7.

⁴⁶ A conflict between entrepreneurs and VCs can be caused by (1) private benefits and/or (2) divergent cash flow rights. In the following hypothetical, I focus on cash flow rights rather than private benefits. My reason for this emphasis is purely illustrative: cash flows are easier to specify than private benefits. While there are some limitations to using cash flow rights, this choice does not change the basic result of the model. See generally Broughman, *supra* note 28 (reaching a similar finding using a model based on private benefits). While the basic result of the two models is the same, there are some technical differences. Most importantly, private benefits are non-transferable and cannot be directly contracted over, while cash flow rights are endogenous to the financing contract. This suggests that cash flow rights could always be realigned to remove the conflict; however, as discussed in Part II, there are several reasons for the VCs' use of convertible preferred stock.

⁴⁷ This hypothetical assumes a pre-money valuation of \$100 and a post-money valuation of \$200.

possible strategies: (1) a No-risk strategy; (2) a Low-risk strategy; or (3) a High-risk strategy. The No-risk strategy entails a sale of the firm for \$160. Startup has already found a buyer who is willing to pay this amount, and the sale would not involve any risk. If Startup declines the sale it must choose one of the other two strategies by deciding how much to invest in a new technology (the R&D investment). The Low-risk strategy requires a relatively small R&D investment, while the High-risk strategy requires a larger R&D investment. The Low-risk and the High-risk strategies each have a 50% chance of Success and a 50% chance of Failure; however, the relative payoffs for Success and Failure depend on the level of risk. Under the Low-risk strategy, Success yields a payoff of \$240, and Failure yields a payoff of \$100. Under the High-risk strategy, Success yields a payoff of \$300, and Failure yields a payoff of \$0. For ease of analysis, I assume the payoffs under all three strategies are determined immediately, removing any timing concerns. The three strategies are summarized in table 1:

Table 1: Alternative Strategies

Strategy	Description	Outcomes	Expected Value	
No-risk	Sale of firm	\$160	\$160	
Low-risk	Small R&D investment	Failure	50% * \$100	\$170
		Success	50% * \$240	
High-risk	Large R&D investment	Failure	50% * \$0	\$150
		Success	50% * \$300	

The expected payoff from each strategy is shown in the last column of table 1. The Low-risk strategy has the greatest expected value (\$170, versus \$160 or \$150), and is the socially optimal choice.⁴⁸ The question, however, is whether Startup will pursue the optimal strategy.

Due to transaction costs, bounded rationality, or non-verifiable information, the financing contract is incomplete and the parties cannot contract over this decision.⁴⁹ Instead Startup's choice of action depends on who controls the board of directors.⁵⁰ I assume that none of the three strategies would violate the board's fiduciary obligations, regardless of who controls the board (this assumption is relaxed in Part VII).⁵¹ The controlling party will select the strategy that maximizes

⁴⁸ I assume that the entrepreneur and the VC are both risk-neutral and there is no discounting of uncertain payoffs.

⁴⁹ Even if the parties could foresee this particular situation, it may not be cost-effective to contract over remote possibilities, or it may be impossible to verify the relevant conditions before a court.

⁵⁰ I assume that each strategy is sufficiently important to Startup's business to require board authorization. Obviously, the sale of the firm would also require a shareholder vote. For ease of analysis, however, I focus solely on board control.

⁵¹ Fiduciary obligations provide, at best, a weak constraint against opportunistic use of control. See *infra* Part VII.

its private interest, potentially at the expense of the firm's aggregate welfare. Because of the preferred stock liquidation preference the parties have different interests with respect to the three strategies.

No-Risk Strategy: The sale would yield an immediate payment of \$160. The preferred stock liquidation preference grants the VC the right to receive \$120. On the other hand, if the VC were to convert to common stock, it would own 100 shares of common stock and be entitled to half of the sale proceeds, giving the VC \$80 out of the \$160 sale price. Consequently, the VC will elect to receive the full liquidation preference of \$120, and the entrepreneur will receive the residual sale proceeds of \$40.

Low-Risk Strategy: Startup makes a small R&D investment. Case 1: The investment is a Success and the firm receives a payoff of \$240. This payoff makes the VC indifferent between converting to common stock and receiving its liquidation preference. The VC will receive \$120, and the entrepreneur will receive the remaining \$120.⁵² Case 2: The investment is a Failure and the firm receives a total payoff of \$100. The VC will not convert to common. Since the liquidation preference (\$120) exceeds the total payout (\$100), the VC will receive the entire amount by retaining its preferred stock. Given that there is an equal chance of Success and Failure, the expected payoff to the VC from the Low-risk strategy is \$110, and the expected payoff to the entrepreneur is \$60.⁵³

High-Risk Strategy: Startup makes a large R&D investment. Case 1: The investment is a Success and the firm receives a payoff of \$300. This payoff is sufficiently high to cause the VC to convert to common. If the VC does not convert it will simply receive the liquidation preference of \$120. By converting, however, the VC will hold half of the outstanding common stock and will receive \$150 (50% of \$300). The entrepreneur holds the remaining common stock and will also receive \$150. Case 2: The investment is a Failure, and both parties receive nothing. Since there is a fifty percent chance of Success, under the High-risk strategy the expected payoff to the VC is \$75, and the expected payoff to the entrepreneur is \$75.⁵⁴ These results are summarized in table 2.

⁵² This follows since converting to common stock would entitle the VC to half of \$240, which equals the VC's liquidation preference of \$120.

⁵³ The VC's expected payoff from the Low-risk strategy is $(.5)\$120 + (.5)\$100 = \$110$. The entrepreneur's expected payoff from the Low-risk strategy is $(.5)\$120 + (.5)\$0 = \$60$.

⁵⁴ The VC's expected payoff from the High-risk strategy is $(.5)\$150 + (.5)\$0 = \$75$. The entrepreneur's expected payoff from the High-risk strategy is $(.5)\$150 + (.5)\$0 = \$75$.

Table 2: Party Payoffs

Strategy	Outcomes	Expected Value	Expected Payoff to VC	Expected Payoff to Entrepreneur
No-risk	\$160	\$160	\$120	\$40
Low-risk	50% * \$100 50% * \$240	\$170	\$110	\$60
High-risk	50% * \$0 50% * \$300	\$150	\$75	\$75

Because of the liquidation preference, the expected value of the VC's cash flow right decreases with risk, while the entrepreneur's payoff increases with risk.⁵⁵ As this would suggest, the highest expected payoff for the VC comes from the No-risk strategy, while the High-risk strategy gives the entrepreneur her best payoff. Absent renegotiation, neither party has an incentive to pick the Low-risk strategy, even though this is the efficient policy.

Ideally, the parties would foresee this problem *ex ante* and include a clause in the original contract specifying that Startup will pursue the Low-risk strategy in this particular scenario. However, such detailed contracting is often infeasible. Despite such limitations, the parties can (consistent with empirical data) contract over the allocation of board control, thereby determining *who* gets to select the strategy Startup will pursue.⁵⁶

The parties contract over three possible allocations of board control: (1) E-control, (2) VC-control, and (3) ID-arbitration. In the first two cases, either the entrepreneur or the VC respectively controls a majority of Startup's board seats, and can use this position to unilaterally select the firm's action. Under ID-arbitration, the choice of action is the result of deliberation and voting among the entrepreneur, the VC, and the independent director. To model the firm's decision making under ID-arbitration, I consider a three-party bargaining process similar to final-offer arbitration. The remainder of this Part models Startup's choice of action under E-control and VC-Control. Part IV then examines Startup's choice of action under ID-arbitration.

⁵⁵ This conflict motivates several studies. *See, e.g.*, Broughman & Fried, *supra* note 5, at 386–87 (suggesting that preferred stockholders are more likely to favor an immediate sale of the firm than common stockholders); Fried & Ganor, *supra* note 14, at 993–96 (same).

⁵⁶ In my model, board control is endogenous to the financing contract. For a similar approach, see generally Hermalin & Weisbach, *supra* note 11. The contracting literature refers to such decision-making rights as *residual control*. *See, e.g.*, Sanford J. Grossman & Oliver D. Hart, *The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration*, 94 J. POL. ECON. 691, 691–92 (1986) (distinguishing between specific contractual rights and residual control rights). From a normative perspective, the firm ought to allocate residual control so as to minimize the cost of bad decisions.

B. Board Control Without an Independent Director

Without an independent director, Startup's board will either be (1) controlled by the entrepreneurs, (2) controlled by the VCs, or (3) the board will be deadlocked. None of these arrangements is particularly desirable. I focus on E-control and VC-control rather than deadlock, since deadlock rarely occurs in VC-backed firms,⁵⁷ and it is less efficient.⁵⁸ E-control and VC-control, though preferable to deadlock, are still susceptible to opportunistic behavior, creating both ex post and ex ante inefficiency.

1. Ex Post Inefficiency

From an ex post perspective, the concern is whether Startup pursues the efficient strategy after investment. As table 2 illustrates, neither party has an incentive to pick the efficient outcome (the Low-risk strategy).⁵⁹ In each case, the controlling party will use its position opportunistically, causing the firm to pursue a strategy that benefits the controlling party at the expense of the firm's aggregate welfare.⁶⁰

The parties may solve, or at least mitigate, the inefficient choice of action through renegotiation. Under E-control, for example, the VC is likely to recognize that the entrepreneur will pursue the High-risk strategy. To avoid this outcome the VC may try to bargain with the entrepreneur ex post. There is an opportunity for a Pareto improvement, since the aggregate payout under the Low-risk strategy is \$20 higher than the aggregate payout under the High-risk strategy. This \$20 difference represents a potential renegotiation surplus.

I assume the parties have equal bargaining power and will split the surplus evenly (the "Nash Bargaining Solution").⁶¹ Under E-control, the VC will offer to pay the entrepreneur \$25 if the entrepreneur agrees to pursue the Low-risk strategy

⁵⁷ See *infra* Table 4.

⁵⁸ Deadlock creates a risk of bilateral holdup, since either party can block any action. See Aghion & Bolton, *supra* note 12, at 486 (proving that deadlock is less efficient than giving control to the entrepreneur or the investor).

⁵⁹ In practice, VCs may have other contractual protections against entrepreneur opportunism, including participation rights, staged financing, protective provisions, and redemption rights. See Sahlman, *supra* note 17, at 503–06. For a broader discussion of available contractual protections, see William Carney, *The Theory of the Firm: Investor Coordination Costs, Control Premiums, and Capital Structure*, 65 WASH. U. L.Q. 1, 23–56 (1987). These rights may reduce, but not eliminate, the risk of entrepreneur opportunism. At the same time, such provisions increase the risk of VC opportunism. See Gilson, *supra* note 31, at 1085–86.

⁶⁰ By assumption, none of the strategies violate the board's fiduciary obligations. The possible impact of fiduciary obligations is considered in Part VII.

⁶¹ For a description of the Nash Bargaining Solution, see Ken Binmore, Ariel Rubinstein & Asher Wolinsky, *The Nash Bargaining Solution in Economic Modelling*, 17 RAND J. ECON. 176, 176–79 (1986).

instead of the High-risk strategy.⁶² This arrangement would benefit both parties. The entrepreneur can expect to receive \$85 after renegotiating to the Low-risk strategy (\$60 + \$25), as opposed to \$75 without renegotiation. The VC expects to receive \$85 after renegotiating (\$110 - \$25) as compared to \$75 without renegotiation.

A similar analysis applies under VC-control. Except now, the entrepreneur must pay the VC to choose an alternative strategy. Assuming equal bargaining power, the entrepreneur will offer to pay the VC \$15 to switch to the Low-risk strategy. This would make both parties better-off. After renegotiation, the entrepreneur's expected payoff would go from \$40 to \$45, while the VC's expected payoff would go from \$120 to \$125.⁶³ These results are summarized in table 3.

Table 3: Renegotiation

Board Control	Without Renegotiation		Renegotiation Payment (Nash Bargaining Solution)	After Renegotiation	
	Choice	Payoffs		Choice	Payoffs
Entrepreneur	High-risk	E = 75 VC = 75	VC pays E \$25	Low-risk	E = 85 VC = 85
VC	No-risk	E = 40 VC = 120	E pays VC \$15	Low-risk	E = 45 VC = 125

Provided there are no transaction costs, and the parties have symmetric beliefs and are not wealth constrained, renegotiation of this sort will *always* lead to the ex post efficient outcome. This is a direct application of the Coase Theorem, with board control analogous to a property right.⁶⁴ Consistent with the Coase Theorem, ex post efficiency does not depend on the allocation of control in the ex ante contract. The allocation of board control will have a distributional consequence—it determines who has to bribe whom—but it should not affect the firm's ultimate choice of action. There is evidence suggesting renegotiation of this sort is sometimes used in the sale of VC-backed firm.⁶⁵

⁶² The bargaining range is between \$15 and \$35. If the parties follow the Nash Bargaining Solution they will agree to \$25, splitting the surplus in half.

⁶³ After renegotiation, the entrepreneur's expected payoff equals \$45, which is determined by subtracting \$15 (payment to the VC) from \$60 (the entrepreneur's expected payoff under the Low-risk Strategy). Similarly, after renegotiation, the VC's expected payoff equals \$125, which is determined by adding \$15 (payment from the entrepreneur) to \$110 (the VC's expected payoff under the Low-risk Strategy).

⁶⁴ See generally Ronald H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960). The incomplete contracting literature refers to control rights as property rights, in part to emphasize the possibility of Coasian renegotiation in contractual settings. See, e.g., Grossman & Hart, *supra* note 56, at 718 (noting that residual control rights, similar to Coasian property rights, can be renegotiated ex post).

⁶⁵ In a study documenting the sale of VC-backed firms, Broughman and Fried find that common stockholders at the target firm receive an additional "carveout" payment (i.e.

There are several reasons, however, to question how often the assumptions supporting Coasian renegotiation are satisfied. First, renegotiation may involve significant transaction costs. The cost of renegotiation may increase if there are several entrepreneurs or VCs (as is often the case in startup firms),⁶⁶ or if it is difficult to specify or enforce the new bargain. Such transaction costs may entirely prevent renegotiation, or at least diminish the renegotiation surplus. Second, if the parties have asymmetric beliefs, renegotiation may fail. It is often argued, for instance, that entrepreneurs are overly optimistic.⁶⁷ The entrepreneur may legitimately believe that the expected payoff from her preferred strategy is so high that there is no bargaining range to negotiate over. Third, liquidity constraints may limit the availability of renegotiation. The entrepreneur, for example, may have limited wealth and thus be unable to pay the VC to take an alternative action.⁶⁸ So, while renegotiation could theoretically ensure an ex post efficient outcome, it may be limited in practice.

Furthermore, the choice of action cannot be fully solved through contingent control, a strategy emphasized by the financial contracting literature.⁶⁹ The financing contract could award the VC extra board seats if the entrepreneur fails to satisfy a financial milestone or other performance targets specified in the contract.⁷⁰ Contingent control can be an improvement over both E-control and VC-

a side payment) from the VCs in approximately one-quarter of the recorded transactions. Broughman & Fried, *supra* note 5, at 391–93. The VCs were more likely to offer such carveout payments when the VCs did not control the board, and thus needed the consent of common stockholders to sell the firm.

⁶⁶ See Robert P. Bartlett, III, *Venture Capital, Agency Costs, and the False Dichotomy of the Corporation*, 54 UCLA L. REV. 37, 64–70 (2006).

⁶⁷ See Manuel A. Utset, *Reciprocal Fairness, Strategic Behavior & Venture Survival: A Theory of Venture Capital-Financed Firms*, 2002 WIS. L. REV. 45, 100–02 (2002).

⁶⁸ This approach is exemplified by the model in Aghion & Bolton, *supra* note 12, at 473 (assuming the entrepreneur has no initial wealth), and in Hellmann, *supra* note 19, at 656 (suggesting that a wealth constrained entrepreneur may not be able to bribe the VC by transferring additional shares of equity, since the entrepreneur's equity may be necessary for incentive purposes).

⁶⁹ See generally Aghion & Bolton, *supra* note 12 (emphasizing the benefits of contingent control).

⁷⁰ See *id.* Aghion and Bolton suggest that the standard debt financing contract is a form of contingent control. See *id.* at 490. In a typical debt financing, the entrepreneur retains control of the firm as long as she does not default on the loan. *Id.* However, if the entrepreneur defaults, the creditor typically has the right to take control of the firm (through bankruptcy). *Id.* Kaplan and Strömberg find evidence that contingent control is used in VC-backed firms; however, it rarely applies to the board. See Kaplan & Strömberg, *supra* note 5, at 293. For example, in about 19% of the investment rounds in their sample, the VCs gain the right to elect a majority of the firm's board if the company fails to redeem preferred stock on demand. *Id.* This contingency, however, is less meaningful than it appears. VCs typically do not obtain the right to redeem their shares until 5 years after investment. *Id.* at 291. Even after this period, redemption is rarely in the VCs' interest, since it would typically force a cash-strapped firm to liquidate itself at below market value.

control.⁷¹ However, it cannot solve the hypothetical problem illustrated above for the simple reason that neither the entrepreneur nor the VC would select the efficient outcome if given control.⁷² At best, contingent control may pick the lesser of two inefficiencies.

Finally, protective provisions cannot generally solve the problem. In some instances a protective provision held by the non-controlling party may prevent an opportunistic outcome. For example, a VC may hold a protective provision requiring its consent before any amendments can be made to the firm's corporate charter. The VC may use this provision to block the entrepreneur from pursuing excessive financing (which generally requires a charter amendment to create a new class of preferred stock), even if the entrepreneur controls the board. In this particular example, the protective provision may prevent a suboptimal outcome (excessive financing). However, protective provisions generally do not solve the problem, for two reasons. First, the non-controlling party would need a protective provision to cover every possible instance of controlling party opportunism, which is an impossible requirement given contractual incompleteness. Second, and more importantly, protective provisions create a problem of bilateral holdup. The party protected by the protective provision could threaten to block desirable outcomes as well as undesirable ones. The protective provision effectively creates a form of deadlock, since the consent of both the controlling party and the protected party is necessary for the board to take any affirmative action.⁷³

2. *Ex Ante Inefficiency*

Even if renegotiation can sometimes lead to the ex post efficient outcome, it cannot solve the ex ante problem. From an ex ante perspective, the concern is whether the parties will enter into the contract. The VC and the entrepreneur both need to be assured that their expected return from the project is greater than its cost, in terms of financial investment and lost opportunities. If this condition is not satisfied, the affected party will not enter into the contract in the first place.

Kaplan and Strömberg find only one firm where the allocation of board seats is contingent on a contractual measure of financial performance. *Id.*

⁷¹ The entrepreneur's incentives may be better aligned with the firm's overall welfare when the firm is performing well, while the VC's interests are better aligned with the firm's overall welfare when the firm is performing poorly. If the contract can award control to the entrepreneur when the firm is performing well, and to the VC when the firm is performing poorly, it is easy to see how this arrangement could be an improvement over E-control and over VC-control.

⁷² When there are more than two actions to choose from, as is the case in the hypothetical discussed above, contingent control will be inadequate whenever the efficient outcome is not either party's first choice.

⁷³ In the extreme, one could imagine a very broad protective provision that would require the non-controlling party's consent before any board action can be taken. This is functionally identical to deadlock.

Following the economic literature, I refer to this as the “participation” constraint.⁷⁴ I first consider the problem from the VC’s perspective and then from the entrepreneur’s perspective.

Recall that the VC makes an initial investment of \$100 in exchange for shares of preferred stock. If we assume an interest rate of zero and no outside options, the VC’s participation constraint is satisfied whenever its expected payoff is greater than \$100. Because the VC’s expected payoff depends on the allocation of board control, some board configurations may satisfy the VC’s participation constraint while others violate it. If the VC controls the board it can ensure that its participation constraint is satisfied. The VC will use its board control to select the No-risk strategy. This gives the VC an expected payoff of \$120, which is greater than its initial investment of \$100.

The VC’s participation constraint, however, is *not* satisfied under E-control. As noted above, the entrepreneur will select the High-risk strategy if she controls the board. This strategy gives the VC a *lower* expected payoff (\$75) than its initial investment (\$100). Recognizing the problem, the VC will refuse to invest under E-control.⁷⁵

A similar *ex ante* problem can be seen from the entrepreneur’s perspective. While the entrepreneur may not invest much money into Startup, she may be leaving a high paying job at an established firm to work for Startup. The benefits she received from her previous job are an opportunity cost, analogous to the VC’s financial investment. The entrepreneur will only enter into the project if her expected benefits from Startup exceed her opportunity cost. To illustrate, assume the entrepreneur would receive \$50 from her previous job. To ensure the entrepreneur’s participation, Startup must pledge expected benefits greater than \$50 to the entrepreneur. This constraint is satisfied when the entrepreneur controls the board (payoff = \$75), but not when the VC controls the board (payoff = \$40).

If we simultaneously consider both parties’ participation constraints we immediately see a serious problem. The VC will refuse to invest under E-control and the entrepreneur will refuse to invest under VC-control. If E-control and VC-control are the only possible board configurations, Startup will never get off the ground, since neither arrangement ensures the participation of both parties. This problem occurs despite the fact that the project is socially desirable. If the parties could somehow agree to follow the Low-risk strategy, the expected surplus would be \$170, which is greater than the sum of the entrepreneur’s opportunity cost (\$50)

⁷⁴ This is often called the “individual rationality” constraint, and in the financing literature it is sometimes referred to as the investor’s “financing” constraint. Regardless of the terminology, the concept is the same.

⁷⁵ My discussion here is based on the implicit assumption that the VC and the entrepreneur can forecast, at the time of the *ex ante* contract, their expected return under each allocation of board control. This may be an unrealistic assumption; however, even if the VC cannot forecast this particular scenario, it can recognize the general problem: giving control to the entrepreneur exposes the VC to opportunistic action in numerous situations that may arise. The risk of opportunistic conduct (even if it cannot be precisely forecast) may cause some VCs to refuse to invest *ex ante* if the entrepreneurs demand control.

and the VC's investment (\$100). The problem is the controlling party cannot credibly tie its hands and commit to the efficient outcome.⁷⁶

Part III.B.1 explains that renegotiation could lead to the ex post efficient outcome under certain assumptions, but renegotiation cannot generally solve ex ante inefficiency. The trouble is that the distributive consequences of renegotiation become important when considering the ex ante problem. The non-controlling party must *pay* the controlling party a sufficient amount to ensure that the controlling party benefits from the renegotiation. This payment is subtracted from the non-controlling party's ex ante expected benefits, hindering efforts to satisfy participation constraints through renegotiation.⁷⁷

Rather than solving the problem of ex ante inefficiency, renegotiation can actually make the situation worse. The availability of renegotiation gives the controlling party an incentive to endogenously create additional hold-up opportunities. This may give the controlling party leverage to demand additional concessions from the other party. For example, a controlling VC may threaten to replace the entrepreneur as CEO. In response the entrepreneur may make various concessions to keep her job. The VC, however, can make the same threat the next month, demanding further concessions. The ideal solution is not renegotiation but a mechanism that allows both parties to commit to non-opportunistic behavior. The next Part considers whether adding an independent director to the board provides such a commitment mechanism.

IV. THE SOLUTION: INDEPENDENT DIRECTOR ARBITRATION

Independent directors expand the menu of governance structures that a firm may consider. In particular, the entrepreneur and VC may share control of the board with an independent director as tiebreaker (ID-arbitration), an arrangement frequently used in firms financed by venture capital.⁷⁸ In this Part, I consider the simplest form of shared control, a board with three directors: one entrepreneur, one

⁷⁶ This problem is a variation of the famous holdup problem considered in corporate governance and contracting literature. See generally Williamson, *supra* note 11 (arguing that the threat of ex post holdup may cause underinvestment ex ante); Grossman & Hart, *supra* note 56 (same).

⁷⁷ The renegotiation described in table 3 illustrates the problem. For example, assuming equal bargaining power, under E-control, the VC pays the entrepreneur \$25 to switch to the Low-risk strategy. After renegotiation, the VC's expected payoff is \$85. While this is better than the VC's expected payoff without renegotiation, it does not satisfy the VC's ex ante participation constraint, since the payoff remains less than the VC's initial investment of \$100. The analogous problem exists from the entrepreneur's perspective. See *supra* Table 3.

⁷⁸ The independent director also allows other governance arrangements, which I do not consider. For example, independent directors could hold enough board seats to constitute a strict majority. An independent director majority, while now required in publicly-held firms, is unusual in VC-backed firms.

VC, and one independent director.⁷⁹ I show that ID-arbitration will lead to the efficient outcome, provided the independent director is relatively unbiased. With an unbiased independent director, ID-arbitration can remedy both ex post and ex ante inefficiency.

A. Arbitration Setup

I model the choice of action under ID-arbitration with a structured bargaining process similar to final-offer arbitration. The entrepreneur and VC will each propose a strategy. If they propose the same strategy, there is no disagreement, and Startup will pursue this strategy regardless of the independent director. However, if they propose different actions, the independent director must choose between the two proposals. Similar to an arbitrator under final-offer arbitration, the independent director cannot introduce a compromise. Rather, she must simply vote for one of the two proposals put forward by the parties. This bargaining process reflects the fact that the independent director is not one of the firm's primary constituencies and typically plays a more passive role in management than the entrepreneur and VC.

This bargaining game illustrates two points. First, when the entrepreneur and the VC agree on a strategy the independent director is irrelevant. The entrepreneur

⁷⁹ Not all firms that share control with an independent director have this exact structure. A startup's board may include more than three directors or multiple representatives from each group. I focus on this three-member board, however, because it is the most basic form of ID-arbitration, and the incentives generally apply to other forms of shared control. There are two caveats to this point. First, in firms with multiple entrepreneurs or VCs sitting on the board, my model of ID-arbitration captures the relevant incentives provided that the entrepreneurs have similar interests and the investors have similar interests. This is generally a reasonable assumption since each group holds similar cash flow rights (i.e., the entrepreneurs all hold common stock and the VCs hold various classes of preferred stock). There are, however, some reasons why the interests of early VCs may diverge from later round investors. See Bartlett, *supra* note 66, at 71–80; see also *Benchmark Capital Partners IV, L.P. v. Vague*, No. Civ.A. 19719, 2002 WL 1732423, at *2–6 (Del. Ch. July 15, 2002) (describing a conflict between different classes of preferred stock). The possibility of conflicts between different VCs (or between entrepreneurs) does not necessarily remove the benefits of an independent director as arbitrator; however, it would require additional analysis of voting and coalition formation that is not considered here.

Second, the board may be structured so that either the entrepreneurs or the VCs hold exactly half the board seats. For example, a four-member board could have two VCs, one entrepreneur, and one independent director. Since they hold half the seats, the VCs can effectively veto any action that they do not support. This arrangement favors the status quo by giving the VC a blanket veto right. The VCs, however, do not hold a majority, and thus need the support of the independent director to take any affirmative action opposed by the entrepreneur. Therefore, my analysis of ID-arbitration is still relevant to understanding decision-making in boards with this type of structure (at least for actions requiring affirmative board authorization).

and VC already have a majority of the board votes (two out of three). Thus, they can cause Startup to take the proposed action even without the independent director's support. This is important since it means that the independent director cannot holdup the firm. Second, when the entrepreneur and the VC disagree the independent director casts the tie-breaking vote, effectively arbitrating the dispute.

B. Arbitration Results

Under ID-arbitration, the entrepreneur and VC anticipate how the independent director is likely to vote if a conflict should arise. This knowledge affects the strategies that the entrepreneur and the VC will propose *ex ante*. There is no point in proposing a strategy that will be rejected by the independent director, as this would effectively let the other party select the firm's course of action. Instead the parties have an incentive to offer a strategic compromise—a proposal that is likely to be endorsed by the independent director and yet is still acceptable to the proposing party. The literature on final-offer arbitration shows that disputing parties have an incentive to converge upon the outcome favored (or deemed "fair") by the arbitrator.⁸⁰

To illustrate with a concrete example, Major League Baseball salary disputes are frequently resolved through final-offer arbitration. The player and the team each propose a salary to the arbitrator. If either party were to propose an extreme salary (either too high or too low) it will be rejected by the arbitrator, and the other party's proposal accepted. To prevent this outcome both parties have an incentive to make reasonable proposals, trying to win over the arbitrator. In theory, with perfect information, the disputing parties will propose the exact same salary—the amount deemed "fair" by the arbitrator—and there will be no dispute to arbitrate.⁸¹

A similar logic motivates the median voter theorem in political science. In two-party electoral competition the platforms of candidates from rival parties should converge upon the preferences of the median voter. They have an incentive to converge on the median, since otherwise the other party will win.⁸²

Under ID-Arbitration, the entrepreneur and VC effectively *create* a median voter by adding an independent director to their board. In so doing the parties implicitly commit to the independent director's preferred outcome whenever they

⁸⁰ See Vincent P. Crawford, *On Compulsory-Arbitration Schemes*, 87 J. POL. ECON. 131, 131–32 (1979).

⁸¹ See Daniel R. Marburger, *Arbitrator Compromise in Final Offer Arbitration: Evidence from Major League Baseball*, 42 ECON. INQUIRY 60, 60–62 (2004). In practice, evidence from MLB arbitration shows partial convergence to the player's "fair" salary. See *id.* The team typically proposes a slightly lower salary than the player. See *id.* The small gap between the two salary proposals reflects the fact that parties do not have perfect information regarding the arbitrator's notion of a "fair" salary, though they may have a reasonable guess. See *id.*

⁸² See Downs, *supra* note 15, at 138, 142–45; see also ROBERT COOTER, *THE STRATEGIC CONSTITUTION* 25–27 (2000) (explaining why party platforms tend to converge towards the center of the political distribution).

might otherwise disagree. Competition for the independent director's support causes the parties to converge upon the strategy favored by the independent director. This avoids the problem of controlling party opportunism and replaces it with the preferences of the independent director.

Finding an unbiased independent director is critical. If the independent director always sides with the same party or otherwise colludes with one of the primary parties this arrangement is no different than giving the entrepreneur or VC control. A biased independent director effectively gives the favored party an extra board seat. On the other hand, if the independent director is unbiased in some meaningful sense, the parties can commit to a more efficient outcome—through ID-arbitration—than is possible through alternative governance arrangements.

I characterize an *unbiased* independent director as one who places equal weight on the financial interests of the entrepreneur and the VC, and a *biased* independent director as one who favors the interests of one party over the other. Since Startup's aggregate welfare equals the sum of the entrepreneur's interest and the VC's interest, an unbiased independent director will favor strategies that maximize the firm's aggregate welfare.

It immediately follows that ID-arbitration with an unbiased independent director leads to the most efficient outcome. In competing for the independent director's support, the entrepreneur and VC converge upon the welfare maximizing strategy. Intuitively, this is easiest to see in settings, like baseball salary arbitration, where the firm can choose from a continuum of possible strategies. For example, a firm may need to decide how much money to invest in a new technology. In these settings, both the entrepreneur and VC will propose the independent director's preferred outcome and there will be no dispute to arbitrate.⁸³

In the hypothetical described in Part III, the firm must choose from a discrete set of possible actions. This modifies the analysis slightly; however, the parties still converge towards the efficient outcome. To illustrate, an unbiased independent director will prefer the Low-risk strategy (first choice), over the No-risk strategy (second choice), and over the High-risk strategy (third choice). The entrepreneur recognizes that the High-risk strategy is the independent director's least preferred outcome. Consequently, the entrepreneur will not propose the High-risk strategy, even though it is her first choice, since she knows that the independent director will vote against it regardless of what the VC proposes. In fact, proposing the High-risk strategy could result in the No-risk strategy being pursued. The No-risk strategy is the entrepreneur's least preferred outcome. To avoid this result the entrepreneur will compromise and propose the Low-risk strategy—the independent director's first choice and the entrepreneur's second choice—instead. The entrepreneur's strategic compromise causes the parties to converge towards the

⁸³ For a proof of convergence over a continuous action space, see Broughman, *supra* note 28, at 21.

independent director's preferred outcome.⁸⁴ I provide a game theory analysis of this discrete action space bargaining game in the Appendix.

What is important to recognize is that ID-arbitration with an unbiased independent director causes the parties to converge directly upon the efficient outcome. This result does not require renegotiation. Also, the parties do not need to draft a detailed contract specifying this action *ex ante*. ID-arbitration is consistent with incomplete contracting assumptions. Instead of contractual specification, the parties rely on the independent director being able to identify the desirable action at the time a choice needs to be made. Under ID-arbitration the parties can adjust to a rapidly changing business environment without advance contractual specifications and without opportunistic behavior by a controlling party.

Furthermore, ID-arbitration can prevent opportunistic conduct without the need to resort to costly litigation. Fiduciary obligations under corporate law might be an alternative way to prevent opportunistic conduct; however, for reasons discussed in Part VII, fiduciary obligations are a weak constraint on opportunistic conduct by either party. That ID-arbitration is the most common board arrangement may be a direct consequence of the courts' inability to effectively police opportunistic conduct. Regardless of the reason, ID-arbitration suggests a private solution to the problem of opportunism.

Despite its benefits, ID-arbitration is potentially limited by various considerations. First, the independent director needs sufficient information to be able to identify the efficient strategy. Second, the independent director should not collude with (i.e. accept bribes from) the primary parties. Third, the independent director may be biased for various reasons. However, even if the independent director makes mistakes, turns out to be biased, or otherwise colludes with one of the primary parties, the result is no worse than E-control or VC-control. Since the independent director does not have sufficient board seats to holdup the firm or unilaterally control the choice of action. The worst that can happen is the independent director will support the entrepreneur's (or VC's) proposal, even though it is inefficient.

If the independent director is unbiased, ID-arbitration can improve *ex post* and *ex ante* efficiency compared to alternative governance arrangements. The next subsection considers the independent director's incentives.

C. Independent Director Motivations

Independent directors may be motivated by several considerations. Business norms or a significant relationship with one of the two parties may cause an independent director to favor one side over the other. For example, commentators argue that VCs, who are repeat players and have extensive professional networks, may use their position to informally control the selection and behavior of

⁸⁴ In the discrete action game, there are technically two Nash Equilibria (the VC is indifferent between proposing the No-risk and Low-risk strategies). See discussion *infra* Appendix.

independent directors.⁸⁵ Alternatively, independent directors may be motivated by financial interests. Independent directors in VC-backed firms are often given a small share of common stock for their services. Since entrepreneurs also hold common stock, the independent director's equity position may help align his interests with those of the entrepreneur.

Independent directors, however, typically hold a very small share of common stock and this may be insufficient to bias the independent director in a significant way (or it may simply offset the natural bias in favor of VCs). Finally, independent directors also may be influenced by considerations of fairness or altruism.⁸⁶

While I acknowledge that each of the above considerations may influence independent director behavior, I focus on two considerations—loyalty and reelection—related to the independent director's appointment. First, independent directors may feel a sense of loyalty to whichever party nominated them for the position. Loyalty is often used to explain the motivations of directors in publicly held firms.⁸⁷ Second, an independent director may desire to be appointed to the board of other startup firms in the future. This is analogous to the incentive for political reelection. A politician must perform well in her current job and satisfy important constituents if she hopes to be elected to additional positions in the future. Similarly, an independent director's performance on Startup's board may impact whether he is appointed to other firms in the future.⁸⁸ Independent directors obtain some benefit from serving on a startup's board, both the immediate financial compensation paid to the director, and probably more importantly, the access to valuable contacts and information about the relevant industry that the director gains from the experience. To continue receiving such benefits an independent director must satisfy the corporate constituencies that have the power to nominate (and potentially to remove) directors.

Under both the loyalty and the reelection motives, the independent director's interests are shaped by the nominating party (or parties). In VC-backed firms, which party—the entrepreneur, the VC, or possibly both—has the power to select independent directors? According to Kaplan and Strömberg's empirical study, independent director board seats “are to be filled by individuals mutually agreed upon by the VCs and the founders/entrepreneurs.”⁸⁹ Kaplan and Strömberg, however, do not explain the evidence for this view, and some legal scholars disagree with their characterization. Smith, for example, examines corporate charters from a large sample of VC-backed firms.⁹⁰ He concludes, based on an

⁸⁵ See Fried & Ganor, *supra* note 14, at 988.

⁸⁶ See generally Lynn A. Stout, *On the Proper Motives of Corporate Directors (Or, Why You Don't Want to Invite Homo Economicus to Join Your Board)*, 28 DEL. J. CORP. L. 1 (2003) (arguing that corporate directors behave altruistically).

⁸⁷ See LUCIAN BEBCHUK & JESSE FRIED, PAY WITHOUT PERFORMANCE: THE UNFULFILLED PROMISE OF EXECUTIVE COMPENSATION 31, 61–79 (2004).

⁸⁸ See Blair & Stout, *supra* note 8, at 315 (arguing that a director's reputation may affect her likelihood of being appointed to other boards).

⁸⁹ See Kaplan & Strömberg, *supra* note 5, at 287.

⁹⁰ See *infra* note 114 and accompanying text.

alternative interpretation of formal contract language, that independent director board seats will *either* be controlled by the entrepreneurs or by the VCs, depending on who holds more equity at the time.⁹¹ Fried and Ganor, while not questioning Kaplan and Strömberg's formal interpretation, suggest that VCs may still have substantial informal control over the selection of independent directors.⁹²

The answer to this unresolved empirical question affects incentives. If independent directors are typically nominated or otherwise chosen by a firm's VCs, then independent directors have an incentive to favor the interests of the VC when forced to settle disputes between the two parties.⁹³ Conversely, if entrepreneurs typically control independent director appointments, independent directors would have an incentive to favor the interests of the entrepreneur.

On the other hand, if independent director board seats are filled by mutual agreement, the independent director would have an incentive to be impartial. The independent director would feel loyal to both parties and would want to avoid developing a bad reputation among either entrepreneurs or VCs. This point is confirmed by data on arbitrator selection in other contexts. For example, Bloom and Cavanagh record data on arbitrator selection in employment disputes involving New Jersey fire and police officers when the final arbitrator is selected from a list of seven potential arbitrators, and the employer and employee can each veto up to three names from the list.⁹⁴ Bloom and Cavanagh find that arbitrators who consistently favor one side in disputes are more likely to be vetoed by the disfavored side in future arbitrations, and are consequently less likely to serve as an arbitrator in the future.⁹⁵ Similarly, independent directors appointed by mutual agreement have an incentive to resolve disputes in an impartial manner. If an independent director develops a bad reputation among the broader community of entrepreneurs or VCs, he is unlikely to be appointed to serve on future boards.

⁹¹ See *infra* note 115 and accompanying text. Smith's data is based primarily on corporate charters rather than on voting rights agreements. See Smith, *supra* note 30, at 325–26.

⁹² See Fried & Ganor, *supra* note 14, at 988; see also Utset, *supra* note 67, at 105 (stating that VCs are likely to have de facto control over the selection of independent directors due to the VCs' extensive professional networks).

⁹³ Future appointments to other firms may not involve the same entrepreneur or the same VCs. Consequently, I am assuming that an independent director develops a reputation among the broader community of entrepreneurs and VCs based on his performance as a director of Startup. For example, if the independent director consistently favors the VC's interests, this increases the likelihood that *other* VCs (or decreases the likelihood that *other* entrepreneurs) will want to appoint this individual. My analysis assumes at least some minimal ability of the community of entrepreneurs and VCs to communicate among themselves regarding the characteristics of a potential independent director. This communication need not be perfect, but for the reputational effects to be meaningful, it must be loosely correlated with the independent director's traits.

⁹⁴ See David E. Bloom & Christopher L. Cavanagh, *An Analysis of the Selection of Arbitrators*, 76 AM. ECON. REV. 408 (1986).

⁹⁵ *Id.* at 416–18.

V. DATA ON STARTUP BOARDS AND INDEPENDENT DIRECTOR APPOINTMENTS

If independent directors perform the arbitration role that I suggest, we should see evidence of this in the selection of independent directors.⁹⁶ In particular, we should see various steps taken to ensure that independent directors are unbiased. I predict that independent directors will be mutually nominated by the consent of the firm's entrepreneurs *and* VCs. I expect this to show up both in formal appointment rights and in the actual selection of independent directors.⁹⁷

These predictions are consistent with empirical evidence from VC contracts. I consider data from a sample of VC-backed firms located in Silicon Valley. After describing the data source, I present summary statistics on the use of independent directors. Then, I describe how independent directors are selected, through formal appointment rights and informal appointment practices. Finally, I provide additional data on reputational ties and background qualifications for the independent directors in my sample. This data illustrates numerous safeguards that entrepreneurs and VCs use to ensure a relatively unbiased independent director.

⁹⁶ In this Article, I focus on appointment rights and other issues related to the selection of independent directors. My theory, however, also predicts *which* firms are likely to use ID-arbitration. Startup firms are more likely to use ID-arbitration when participation constraints preclude the use of either E-control or VC-control. The VC's participation constraint depends on the amount invested, while the entrepreneur's participation constraint depends on her alternative employment opportunities. Neither party will enter into the contract if their participation constraint is violated. Thus, I predict that, *ceteris paribus*, Startup is more likely to use ID-arbitration relative to E-control (or less likely to use ID-arbitration relative to VC-control) as the amount invested by the VC increases. On the other hand, the entrepreneur's outside employment opportunities should have the reverse effect: Startup is less likely to use ID-arbitration relative to E-control (or more likely to use ID-arbitration relative to VC-control) as the value of the entrepreneur's alternative employment opportunities increases. I test these hypotheses in a separate article. See Broughman, *supra* note 28, at 18–20. I find that the VC demands more control when there is greater uncertainty or risk regarding the firm's financial viability and as the VC invests more money into the project. The VC's participation constraint has the predicted effect, suggesting that ID-arbitration is sometimes used to ensure the VC's participation. I do not, however, test the entrepreneur's participation constraint, since data on the entrepreneur's outside employment opportunities is unavailable.

⁹⁷ I assume the entrepreneur and VC know how the independent director will vote (implicit in this assumption is that the independent director will not make any errors if asked to arbitrate). In reality, however, there may be some uncertainty regarding the independent director's behavior. Uncertainty, while reducing the benefits of ID-arbitration, does not change the basic implications of my theory. See Broughman, *supra* note 28, at 14–16.

A. Data Source

I use hand-collected data regarding fifty-four VC-backed firms located in Silicon Valley that were sold to an acquirer in 2003 or 2004.⁹⁸ To gather additional information about independent director qualifications I sent follow-up surveys to each entrepreneur two years after the original interview. Entrepreneurs from thirty-two out of the original fifty-four firms completed the follow-up survey.

I collected data on the allocation of cash flow rights and control rights. I document board control and director appointments following each round of financing and at the sale of the firm. Since board composition is separately negotiated in each round of financing, the financing contract is the relevant unit of analysis and each firm may represent several data points.

Because my sample is limited to Silicon Valley firms sold in 2003 or 2004, factors unique to the Silicon Valley VC market, to acquired firms, or to this time period could limit the generalizability of my findings. Silicon Valley is a close-knit community where reputational considerations are particularly important.⁹⁹ In addition, firms in the sample population were sold several years after the tech bubble collapsed. Furthermore, I do not observe firms that elected to remain independent. Each of these considerations may have affected the allocation of board control and the use of independent directors. Consequently, my data on independent director appointments may reflect factors unique to the sample population.

These concerns limit the interpretations that can be drawn from the data, but they do not undermine my basic results. The data are used primarily to illustrate governance practices relating to the selection of independent directors. I do not use regressions to statistically test my predictions, and thus I do not need to worry about selection bias affecting coefficient estimates. Rather, my concern is whether

⁹⁸ This data was collected with Jesse Fried in connection with a separate research project. Details on the sample frame and methodology can be found in Broughman & Fried, *supra* note 5, at 387–88. A brief summary of our data gathering efforts follows: We first obtained from www.VentureReporter.net a list of all VC-backed companies located in Silicon Valley (broadly defined to include the entire San Francisco Bay Area) that were sold to an acquirer in 2003 or 2004. *Id.* at 387. For each firm we identified current business addresses for the entrepreneurs (i.e. founders or senior executives) of the subject firm. *Id.* The original sample included 193 firms that met our criteria. *See id.* We were able to find business addresses for a founder or CEO from 141 of the 193 businesses. *Id.* We mailed letters soliciting an interview from entrepreneurs at each firm and promised to keep the information confidential, hiding the identity of the entrepreneur and the startup firm. *Id.* Entrepreneurs from 57 of the 141 firms agreed to be interviewed—a response rate of 40.4%. *Id.* For the current project, 3 firms had to be removed due to incomplete data, leaving a relevant sample of 54 firms.

⁹⁹ *See, e.g.,* Mark C. Suchman, & Mia L. Cahill, *The Hired Gun as Facilitator: Lawyers and the Suppression of Business Disputes in Silicon Valley*, 21 L. & SOC. INQUIRY 679, 697–703 (1996).

the documented governance practices are reflective of startup firms generally. In most cases, the allocation of board seats was determined years before the firm was sold, at a time when the parties may have contemplated an IPO (initial public offering) or other form of exit. Also, the allocation of board control and the use of independent directors in my sample are similar to other empirical studies of startup firms from outside Silicon Valley and from other time periods.¹⁰⁰ This suggests that the use of independent directors is not unique to my sample.

The primary benefit of using this dataset is that it contains detailed quantitative and qualitative data on the background and selection of each independent director. To my knowledge, this type of information is not available in any other existing database.

B. Summary Statistics

The sample firms are primarily from the biotech, telecommunications, software, and internet sectors. This concentration of IT-related businesses is representative of VC financing in general. The firms received on average \$45 million in VC financing over five years of operation and three rounds of financing. At the time of the sale, the VC's aggregate liquidation preferences were on average 1.25 times the amount invested. Results are summarized below (see table 4).

I divide directors into three categories: (1) VC, (2) entrepreneur, and (3) independent director. This classification is based on which party—VCs holding preferred stock or entrepreneurs holding common stock—has the right to appoint each director.¹⁰¹ Independent directors (at least formally speaking) are appointed by holders of both classes of stock. Panel C reports the mean allocation of board seats for all rounds of financing (n=154), and separately for the first round of financing (n=54). The first round of financing may be more relevant to my setting since it involves only one class of preferred stock,¹⁰² and the resulting board configuration does not depend on the allocation of control in prior rounds of financing. Regardless of whether I focus exclusively on the first round, however, the results show a similar use of independent directors.

A startup board has an average of 5.5 directors (the first round board is slightly smaller). For all rounds of financing, VCs hold on average 43.9% of the board seats, entrepreneurs hold 33%, and the remaining board seats, 23.1% of the total, are held by independent directors. The first round results are similar, except entrepreneur representation (38.6%) is somewhat higher and VC representation (36.4%) is somewhat lower. In both cases, however, independent directors constitute about one quarter of the board. For purposes of comparison, I include

¹⁰⁰ See Kaplan & Strömberg, *supra* note 5, at 287–88; see also DOW JONES, VENTUREONE DEAL TERMS REPORT 18–19 (Russ Garland ed., 3d ed. 2005) (describing data from a nationwide survey of VC-backed firms regarding board composition).

¹⁰¹ Angel investors are classified based on their equity holdings.

¹⁰² First round financings avoid complications related to possible conflicts among different classes of VCs. See Bartlett, *supra* note 66, at 71–80 (describing conflicts among different classes of preferred stock).

the allocation of board seats reported by Kaplan and Strömberg—their results (from a nationwide sample of startup firms) are similar to mine, suggesting that the use of independent directors is not unique to Silicon Valley or other features of my sample.¹⁰³

Table 4 (panel C) also shows the allocation of control for each financing round, divided into four categories: (1) VC-control, (2) E-control, (3) Deadlock, and (4) Arbitration. VC-control and E-control occur when the respective party holds more than 50% of the board seats. Deadlock occurs when the entrepreneurs and VCs each hold exactly 50% of the board seats. Arbitration occurs when neither the VCs nor the entrepreneurs control more than 50% of the board seats and one or more independent directors hold the tie-breaking vote. Arbitration is a generalization of the simple three member board—ID-arbitration—discussed above. Arbitration is by far the most frequent category, representing 64.3% of all financing rounds and 70.3% of first round financings. E-control and VC-control account for most of the remaining financing rounds, with Deadlock rarely used.

Table 4: Descriptive Statistics

This table provides descriptive statistics for a sample of fifty-four VC-backed firms sold in 2003 or 2004. Panel A shows industry distribution. The industry for each company is determined by the sector classification provided by www.links.v.com. Panel B reports the mean and median period of operation, number of financing rounds, amount invested, sale price, and liquidation preferences (LP) for the sample firms. Panel C shows the allocation of board seats and board control in my sample firms, and in Kaplan and Strömberg's 2003 study of VC contracts.¹⁰⁴ Data is presented for all rounds of financing and for the first round separately.

Panel A: Industry Distribution of Companies

	<i>Sector</i>				
	Biotech	Telecom	Software	Internet	Other IT
Sample firms (n=54)	8	13	12	10	11

Panel B: Financing Overview

	# obs.	Mean	Med.	SD
Years of Operation	54	5.26	5	2.17
Number of Financing Rounds	54	3	3	1.08
Amount Invested (millions \$)	54	45.37	31	45.8
Sale Price (millions \$)	49	54.62	24.25	105.49
Aggregate LP (millions \$)	51	48.10	36	38.95
LP divided by amount invested	51	1.25	1	0.62

¹⁰³ See Kaplan & Strömberg, *supra* note 5, at 287–88.

¹⁰⁴ See *infra* note 103 and accompanying text.

Panel C: Allocation of Board Seats and Board Control

<i>Mean</i>	<i>Broughman and Fried</i>		<i>Kaplan and Strömberg</i>	
	All Rounds (n=154)	First Round (n=54)	All Rounds (n=201)	First Round (n=95)
Board Seats	5.5	4.6	6.0	5.7
% VC Seats	43.9	36.4	41.4	37.0
% Entrepreneur Seats	33.0	38.6	35.4	38.5
% Ind. Director Seats	23.1	25.0	23.2	24.5
<i>% Firms</i>				
VC-Control	24.7	9.3	25.4	11.6
E-Control	7.1	14.8	13.9	20.0
Arbitration	64.3	70.3	60.7	68.4
Deadlock ¹⁰⁵	3.9	5.6	n/a	n/a

C. Selection of Independent Directors

My sample includes a total of eighty-four independent directors, many of whom sit on the firm's board through multiple rounds of financing. This Part explains how these individuals were selected and provides additional data on reputational ties and background qualifications of the independent directors.

1. Appointment Rights

In VC-backed firms, board seats are allocated on a class-specific basis. This is specifically negotiated in each round of financing and is typically specified in the corporate charter and in a voting rights agreement. The charter determines how many board seats are elected by each series of preferred and common stock. The charter, however, is generally not the decisive document for the selection of independent directors. While the charter may address the issue, more specific language is typically included in the voting rights agreement. The following provision is illustrative:

In any election of directors of the Company to elect the [Independent] Directors, the Investors and the Founders shall each vote at any regular or special meeting of stockholders (or by written consent) such number of voting securities of the Company then owned by them . . . as may be

¹⁰⁵ Kaplan and Strömberg do not separately code for deadlock. Rather, they classify all firms where neither VCs nor founders/entrepreneurs control the board as "shared control." *See id.*

necessary to elect two (2) directors **unanimously approved** by each of the [other directors of the Company].

The “other directors of the company” include all of the directors appointed by the entrepreneurs and appointed by the VCs. This provision effectively ensures that any independent director will be mutually appointed by preferred and common stockholders.¹⁰⁶ In other voting agreements from my sample, the independent director must be “approved by a majority of the Common Stock voting separately as a class and a majority of the Preferred Stock voting separately as a class.” Each of these provisions formally ensures that the entrepreneurs and VCs *both* approve the selection of an outside director before she can be appointed to the board.

Unfortunately, only a small number of firms from my sample shared their full set of contractual documents, including voting rights agreements.¹⁰⁷ However, each such firm included a voting agreement with language similar to the above provision, ensuring a “mutually” appointed director.

To make sure this practice is widely used I also consider published resources documenting VC contracting terms. The National Venture Capital Association (NVCA) provides on their website a set of model legal documents “intended to reflect current practices and customs.”¹⁰⁸ These documents were prepared by a group of leading venture capital attorneys.¹⁰⁹ The standard term sheet provided by NVCA includes a voting agreement as part of the set of legal documents executed in connection with a round of VC financing.¹¹⁰ Furthermore, the voting agreement provided by NVCA uses language very similar to the provision above, requiring that any outside directors be “mutually acceptable” to a majority of the Founders and VCs voting separately.¹¹¹ Other industry publications are consistent with NVCA on this issue.¹¹²

To be sure, there is some confusion regarding the appointment of independent directors, since the standard charter provision does not mirror the language used in the voting agreement. The charter typically authorizes the holders of common and

¹⁰⁶ *Id.* at 287 (describing the outside directors in their study as mutually appointed).

¹⁰⁷ Other than corporate charters, which we were able to obtain from the secretary of state’s office for each state of incorporation, we did not request or receive contractual documents from most of the entrepreneurs participating in the research. Three entrepreneurs, however, volunteered to provide all of their firm’s contractual documents, each of which included a voting agreement with language similar to the above.

¹⁰⁸ See NATIONAL VENTURE CAPITAL ASSOCIATION, <http://www.nvca.org/> (follow “Resources: Model Legal Documents” hyperlink) (last updated Feb. 2010).

¹⁰⁹ *Id.*

¹¹⁰ *Id.* (follow “Term Sheet” hyperlink).

¹¹¹ *Id.* (follow “Voting Agreement” hyperlink).

¹¹² See JACK S. LEVIN, STRUCTURING VENTURE CAPITAL, PRIVATE EQUITY, AND ENTREPRENEURIAL TRANSACTIONS 33 (1997) (describing the use of a neutral or independent director as a compromise between the entrepreneur and the VCs, and noting that the independent director can even be appointed by a designated third party if the entrepreneur and VC cannot agree on an individual).

preferred stock to elect any remaining directors by voting on an as-converted basis.¹¹³ As pointed out by Smith, this is not the same as mutual appointment, since at any given time, either the entrepreneurs or the VCs will hold a majority of equity on an as-converted basis.¹¹⁴ He concludes, based on an examination of charter provisions from over 300 VC-backed firms, that independent directors are typically appointed *either* by the entrepreneurs or the VCs, depending on who holds more equity at the time.¹¹⁵ Smith argues that “a company would not want both this charter provision and the foregoing voting agreement because the two provisions conflict.”¹¹⁶

The fact that the provisions differ, however, does not necessarily imply that a company would not desire both. It is important to recognize that the voting rights agreement has the higher vote threshold—either unanimous approval or a majority of each class of stock voting separately—and consequently, compliance with it implies compliance with the charter. Any director elected by unanimous agreement or by a majority of each class voting separately will also satisfy the typical charter requirement, since she will have the support of a majority of all outstanding equity voting together.

Putting a more stringent threshold in the voting agreement makes practical sense. This practice gives the parties flexibility to amend the bylaws or the voting agreement at a later date (e.g. to add or remove additional directors) without having to file an amended charter with the state. Under standard contractual interpretation, the more specific language contained in the voting agreement will govern over the general language contained in a typical corporate charter. Smith admits that voting agreements, which are not generally included in his sample, could modify his interpretation.¹¹⁷ Voting agreements with this type of language appear to be the norm, and consequently formal appointment rights often (though not necessarily always) require a *mutually* appointed independent director.

This interpretation is supported by qualitative evidence from the interviews I conducted. Among all the interviews, I did not find a single observation in which the selection of an independent director was decided by a contested vote count. I asked each subject how the independent directors at his or her firm were selected. No one claimed that the VCs (or the entrepreneurs) were entitled to select the independent director on account of how many shares that party held on an as-converted basis. Rather, the parties consulted each other and made sure everyone approved the director selected. In fact, in many cases, the identity of the independent director was specifically negotiated as part of the financing, and the name(s) of the independent director(s) were sometimes included directly in the voting agreement. This point further emphasizes that independent director selection is bargained over.

¹¹³ See Smith, *supra* note 30, at 324–28.

¹¹⁴ See *id.* at 330–37.

¹¹⁵ See *id.*

¹¹⁶ See *id.* at 335.

¹¹⁷ See *id.* at 334–36.

As mentioned previously, however, this raises a separate concern. Regardless of the contractual nomination rights, one party may have more bargaining power or influence over independent director selection.¹¹⁸ Consequently, some independent directors may not truly be independent. The VCs, for example, have extensive professional networks and influence in the relevant industry. They may be able to use these sources of power to ensure that the selected director favors the VCs. The data described above records the *formal* classification of board seats, and may understate the true extent of VC control. To address this issue, I also record board classification on a *de facto* basis. The *de facto* coding looks beyond the formal appointment rights and considers which party actually nominated the director and whether either party had a prior relationship with the director. I reclassify an independent director as a VC if the director was nominated exclusively by the VCs, and as an entrepreneur if the director was nominated exclusively by the entrepreneurs. On the other hand, if both parties played a significant role in the selection of the director or both had a prior relationship with the individual, I continue to classify the director as *independent*.

As expected, the percentage of independent directors decreases under the *de facto* coding. On a *de facto* basis both the VCs and the Entrepreneurs gain board seats. Also, several firms that were classified as Arbitration under the formal coding are reclassified as VC-control or E-control under the *de facto* coding. This is represented in table 5.

Table 5: Formal and De Facto Appointments

Mean	All Rounds (n=154)			First Round (n=54)		
	Formal	De Facto	Δ Mean	Formal	De Facto	Δ Mean
Board Seats	5.5	5.5	0	4.6	4.6	0
% VC Seats	43.9	46.6	+2.7	36.4	39.4	+3.0
% E Seats	33.0	34.6	+1.6	38.6	39.5	+0.9
% ID Seats	23.1	18.8	-4.3	25.0	21.1	-3.9
% Firms						
VC-Control	24.7	33.1	+8.4	9.3	16.7	+7.4
E-Control	7.1	9.8	+2.7	14.8	18.5	+3.7
Arbitration	64.3	50.6	-13.7	70.3	59.2	-11.1
Deadlock	3.9	6.5	+2.6	5.6	5.6	0

¹¹⁸ The mere fact that both parties agree on an independent director does not automatically ensure that the director is *independent*. To illustrate, the entrepreneur may agree to the appointment of an outside director whose interests are closely aligned with the VC's (i.e., perhaps the director is a close friend of the VC). The entrepreneur may agree to this director in order to obtain other terms beneficial to the entrepreneur. The *de facto* coding described in table 5 addresses this concern.

If VCs dominate the actual appointment of independent directors, ID-arbitration may be a largely symbolic structure¹¹⁹ that does not operate any differently than pure VC-control. On the one hand, the data suggests that VCs have slightly more influence than entrepreneurs over the selection of independent directors. Under de facto control, the percent of board seats held by VCs increases by 2.7% compared to a 1.6% increase for entrepreneurs and the percentage of boards under VC-control increases by 8.4%, compared to a 2.7% increase for E-control.

These data show that independent directors are not always perfectly impartial, and this bias tends to favor the VCs. On the other hand, the vast majority of the formally coded independent directors remain independent under the de facto coding. And ID-arbitration remains the most common board configuration, representing over half the observations, even under the de facto coding.

2. *Relational Ties to the Independent Director*

It is impossible to directly measure the effect of reputation on independent director selection. Two facts, however, suggest that independent directors face a significant reputational constraint. First, the independent directors in my sample are typically from the same community as the entrepreneur and VC investor. Over two-thirds of the independent directors in my sample population were located in Silicon Valley (broadly defined to include the entire San Francisco Bay Area), the same general area as the sample firms. Second, entrepreneurs and VCs typically have some prior relationship to the firm's independent directors. Both of the primary parties knew the independent director(s) in over 70% of the sample observations.¹²⁰

These geographic and network ties constrain the independent director's discretion. Since all the parties are typically located in the same area it is easier for reputations to form. The preexisting relationship between the independent director and a firm's entrepreneurs and VCs gives the independent director additional incentive to use her discretion in a reasonable manner, assuming she plans to continue working with both parties in the future.

Also, an independent director with strong ties to both of the primary parties may be less susceptible to side payments (i.e. bribes). Side payments are an obvious concern in any three-party distributional game. For example, the VC may offer various explicit or implicit rewards to the independent director if she is willing to support the VC's position. Such payments could undermine the benefits of arbitration, since the independent director may simply sell her discretion to the

¹¹⁹ See generally Mark C. Suchman, *The Contract as Social Artifact*, 37 L. & SOC'Y REV. 91 (2003) (describing the symbolic use of contract).

¹²⁰ This is coded for each round of financing, and it may double count directors who appear in multiple rounds.

highest bidder.¹²¹ Bribes of this sort are legally prohibited as a violation of the director's fiduciary duty of loyalty.¹²² Perhaps more important, this type of collusion is also limited by reputational considerations. An independent director who tends to favor one side over the other may develop a bad reputation in the disfavored community. Given the mutual appointment rights described above, such an independent director may be blocked from future board appointments by the disfavored group. The independent director could lose whatever benefits she expects to gain by serving as a director for future firms. This check only works to the extent that the primary parties are able to observe the independent director's conduct, and communicate this to other parties. Such communications are presumably more effective when the independent director is from the same community as the entrepreneur and VC and they have a preexisting relationship.

If the independent director has an ongoing relationship with both of the primary parties, the reputational constraint can be effective even if the individual does not plan to serve as a director for future firms. If either of the primary parties is upset with the independent director's decision, then that party can directly sanction her for harming the relationship. In this respect, a truly "independent" director—one that neither party knew beforehand—or a director from outside the community, may be less valuable because it would be harder to constrain her through reputational ties. Ideally, the primary parties want an impartial or neutral director, but not a disconnected or outside party.¹²³ The data support this reputational account.

¹²¹ See Jean Tirole, *Hierarchies and Bureaucracies: On the Role of Collusion in Organizations*, 2 J.L. ECON. & ORG. 181 (1986) (explaining the risk of collusion in contracts with more than two parties).

¹²² A director is required to act in the best interest of the firm and its shareholders. If a director were to receive a side payment to influence his vote on a matter, it would constitute a clear conflict between the director's personal interests and the welfare of the firm, and it is unlikely that such a side payment would be deemed fair to the corporation. See generally DEL. CODE ANN. tit. 8, § 144(a) (2001) (stating that transactions that benefit directors or officers are not void or voidable if (1) the material facts of the conflict are known by the board and authorized by a majority of disinterested directors, (2) the material facts of the conflict are known to shareholders and approved by the shareholders, or (3) the transaction is proven to be entirely fair to the corporation); *Bayer v. Beran*, 49 N.Y.S.2d 2, 6–11 (N.Y. Sup. Ct. 1944) ("Such personal transactions of directors with their corporations, such transactions as may tend to produce a conflict between self-interest and fiduciary obligation, are, when challenged, examined with the most scrupulous care, and if there is any evidence of improvidence or oppression, any indication of unfairness or undue advantage, the transactions will be voided.").

¹²³ Interestingly, strong reputational ties to the independent director can help constrain the behavior of the primary parties, even if the independent director does not hold a tie-breaking seat on the board. As described above, the relational tie between the primary parties may be insufficient to support an effective reputational sanction, and it may be difficult to communicate the underlying conduct to third parties. Having an independent director sitting on the board effectively creates a third-party observer, who is in an ideal position to observe misconduct. Furthermore, if the independent director has an ongoing

These reputational results may be more pronounced in Silicon Valley. In Silicon Valley it may be easier to find an independent director with an ongoing relationship with both of the primary parties. Silicon Valley has a high concentration of entrepreneurial activity and reputational ties are particularly important.¹²⁴ To the extent that reputational bonds are less effective in other locations, it may be harder to prevent collusion and harder to align the independent director's interests. The data from Kaplan and Strömberg (displayed in table 4), however, illustrate that independent directors are used with similar frequency outside Silicon Valley.

3. Industry Experience

In the follow-up surveys, I asked each entrepreneur about the background/prior experience of the independent directors sitting on Startup's board. Entrepreneurs were asked to rate, on a scale of one to five, each independent director's (1) prior experience in the relevant industry, and (2) prior experience with venture capital. The results are summarized in table 6. Significant industry experience is an important criterion in selecting an independent director, seemingly more important than having prior experience in venture capital.

Table 6: Independent Director Experience

	<i>No Prior Experience</i>		(3)	(4)	<i>Very Experienced</i>	Average Rating
	(1)	(2)			(5)	
Industry Experience (n=30)	0.0%	6.7%	13.3%	23.3%	56.7%	4.3
VC Experience (n=29)	6.9%	34.5%	24.1%	20.7%	13.8%	3.0

Industry experience is important for effective arbitration. Independent directors need sufficient experience in the relevant industry to identify the desired outcome. An inexperienced director is more likely to make errors, even if she is unbiased and has desirable incentives. The independent director needs to understand the consequences of different actions and predict the effect on the

relationship with both parties and is from the same community she may be able to sanction such instances of misconduct.

This paper focuses on arbitration-by-voting. Voting has the advantage that it creates a formal prohibition on the undesired conduct, since it would fail to achieve board authorization. By contrast, arbitration-by-reputation relies on the strength of relational ties to create an effective sanction and can apply to firm actions that do not require explicit board authorization. In this account, the independent director can help broker a trusting relationship between the two primary parties, similar to Uzzi's account of a third-party intermediary who could connect two unembedded parties. See Brian Uzzi, *Social Structure and Competition in Interfirm Networks: The Paradox of Embeddedness*, 42 ADMIN. SCI. Q. 35, 47-48 (1997). The ability of an independent director to help embed the relationship between the entrepreneur and the VC is similar to Suchman and Cahill's account of law firms in Silicon Valley. See Suchman & Cahill, *supra* note 99, at 683.

¹²⁴ See Suchman & Cahill, *supra* note 99, at 697-703.

entrepreneur and VC investor. The primary parties address this concern by appointing independent directors with significant experience in the relevant industry.

In sum, independent directors are typically selected by the mutual agreement of the entrepreneur and VC, have ongoing relational ties to both parties, and have significant experience in the relevant industry. Collectively, this paints a picture consistent with my theory of ID-arbitration.

VI. ALTERNATIVE THEORIES OF THE INDEPENDENT DIRECTOR

This Part considers alternative theories of the independent director. Other theories suggest that independent directors are necessary because they can serve as monitors, advisors, or mediators. Because these theories typically draw their assumptions from the experiences of publicly held firms, however, they are not sufficient to explain the presence of independent directors in privately held VC-backed firms. In particular, none of the existing theories explain the independent director's voting rights.

A. Monitoring Role

Independent directors are expected to monitor management on behalf of a firm's stockholders (the "monitoring" role). This explanation dominates most of the legal,¹²⁵ the economic,¹²⁶ and the business literature.¹²⁷ The independent director's role as monitor includes selecting the firm's CEO, providing incentives to management, and representing the interests of the stockholders in strategic decisions.

The monitoring role is based on a separation between ownership and control in publicly held firms, first recognized by Berle and Means.¹²⁸ In a publicly held firm, stockholders are diffuse and lack incentives to directly monitor management.¹²⁹ As a consequence, the owners are extremely weak compared to

¹²⁵ See FRANK H. EASTERBROOK & DANIEL R. FISCHER, *THE ECONOMIC STRUCTURE OF CORPORATE LAW* 104 (1991); Ronald J. Gilson & Reinier Kraakman, *Reinventing the Outside Director: An Agenda for Institutional Investors*, 43 STAN. L. REV. 863, 872-76 (1991); Oliver Williamson, *Corporate Governance*, 93 YALE L.J. 1197, 1219 (1984).

¹²⁶ See Baysinger & Butler, *supra* note 4, at 103, 107-08; Hermalin & Weisbach, *supra* note 11, at 96-99.

¹²⁷ See Jay W. Lorsch, *Empowering the Board*, in HARVARD BUSINESS REVIEW OF CORPORATE GOVERNANCE 25, 31-38 (2000).

¹²⁸ See ADOLF A. BERLE, JR. & GARDINER C. MEANS, *THE MODERN CORPORATION AND PRIVATE PROPERTY* 1-9 (1933); see generally Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305 (1976).

¹²⁹ This level of shareholder dispersion is limited to large publicly traded firms in the United States and the United Kingdom. Outside of these countries, even publicly traded

management. In this setting, independent directors are supposed to mitigate the agency problem by acting as representatives of the common equity holders.

By contrast, in private startup firms, investors are not separated from control (or at least much less so). Investments in a startup firm are concentrated among a relatively small number of parties and such investors often demand board seats and other governance rights in connection with their investment.¹³⁰ VCs can sometimes use this power to replace the CEO and other key executives.¹³¹ Since the investors in startup firms monitor management directly, under the dominant theory there is no need for independent directors. The monitoring function, performed by independent directors in publicly held firms, is performed directly by the VCs in startup firms.

Even the definition of an independent director is different in these two settings.¹³² An independent director in a publicly traded firm needs to be independent of management, but not necessarily independent of the firm's shareholders. It may even be desirable to compensate a public company independent director with large amounts of common stock, as this may further align her interests with the group she is supposed to represent.¹³³ By contrast, in a VC-backed startup, an independent director should not be directly affiliated with either the entrepreneurs or the VCs. Independent directors for a startup firm are typically selected by the mutual agreement of the firm's entrepreneurs and VCs. This distinction further emphasizes that the same theory cannot apply to

firms have relatively concentrated ownership. See Andrei Shleifer & Robert W. Vishny, *A Survey of Corporate Governance*, 52 J. FIN. 737, 754–55 (1997).

¹³⁰ See Sahlman, *supra* note 17, at 506.

¹³¹ See Michael T. Hannan, M. Diane Burton & James N. Baron, *Inertia and Change in the Early Years: Employment Relations in Young, High Technology Firms*, 5 INDUS. & CORP. CHANGE 503, 526 (1996) (showing that approximately 40% of founder CEOs of VC-backed firms are replaced within 40 months of formation); Thomas F. Hellmann & Manju Puri, *Venture Capital and the Professionalization of Start-up Firms: Empirical Evidence*, 57 J. FIN. 169, 182 (2002) (showing that firms financed by venture capital are twice as likely to replace the CEO as non-VC-backed firms).

¹³² There are several distinct conceptualizations and legal standards for the “independent” or “outside” director. For example, the SOX legal standard is based on the individual's *status* with respect to the firm and its senior management, while Delaware's “disinterested” director standard is based on the particular *transaction* event. See Usha Rodrigues, *The Fetishization of Independence*, 33 J. CORP. L. 447, 450–51 (2008) (contrasting status-based conceptions of director independence with Delaware's notion of a disinterested director). Under Delaware law, an individual may count as “disinterested” for one transaction but not another. See *id.* Also, the individual's ties to non-management constituencies may be relevant for some conceptualizations of “independence” but not others. See *id.*; see generally Donald C. Clarke, *Three Concepts of the Independent Director*, 32 DEL. J. CORP. L. 73 (2007).

¹³³ See Jeffrey N. Gordon, *The Rise of Independent Directors in the United States, 1950–2005: Of Shareholder Value and Stock Market Prices*, 59 STAN. L. REV. 1465, 1487 (2007).

independent directors in both settings. The monitoring role cannot explain the use of independent directors in private startup firms.

B. Advisory Role

In addition to monitoring, directors are sometimes said to provide strategic advice to management (the “advisory” role).¹³⁴ This explanation receives less attention in the economic literature; however, it may be fairly important in startup firms, given that the top executives in startup firms generally have less experience than their counterparts in publicly held firms. To the extent that the business literature provides an explanation for independent directors in private firms, it generally emphasizes the advisory role.¹³⁵

The advisory role cannot explain the independent director’s voting rights. Providing advice is not unique to the position of director. If a firm wants advice from a particular individual it could hire her as a consultant or employee rather than appointing her to the board; or the firm could even create a separate advisory board without voting rights, a practice sometimes used in startup firms. What the advisory role cannot explain is why the individual needs to be given a stake in the firm’s governance arrangements. Why does she need to have *voting rights*, and more particularly, why are independent directors typically given the tie-breaking vote on the firm’s board? If the advisory role were the only explanation for the use of independent directors we would not expect independent directors to hold the tie-breaking vote so frequently. My point is not to argue against the advisory role or other non-governance explanations,¹³⁶ but rather to emphasize the need for an alternative governance-based theory.

¹³⁴ See MYLES L. MACE, DIRECTORS: MYTH AND REALITY 13–22 (1971).

¹³⁵ See, e.g., Bart Clarysse, Mirjam Knockaert & Andy Lockett, *Outside Board Members in High Tech Start-ups*, 29 SMALL BUS. ECON. 243, 244–45 (2007) (discussing ways an outside director can add value to a startup firm); Roger H. Ford, *Outside Directors and the Privately-Owned Firm: Are They Necessary?*, 13 ENTREPRENEURSHIP THEORY AND PRAC. 49, 51–54 (1988) (comparing private firms with and without outside directors); see generally Vance H. Fried, Garry D. Bruton, & Robert D. Hisrich, *Strategy and the Board of Directors in Venture Capital-Backed Firms*, 13 J. BUS. VENTURING 493 (1998) (noting that boards of privately held startup firms are more involved in strategy-making).

¹³⁶ Closely related to the advisory role, independent directors can also bring status to the firm and serve as a link to external resources. See Clarysse, Knockaert & Lockett, *supra* note 135, at 244–45. If prominent individuals serve as independent directors of a firm, they may signal to other market participants that the firm is a high quality business, helping the firm attract key employees, new investments, and so forth; see generally David H. Hsu, *What Do Entrepreneurs Pay for Venture Capital Affiliation?*, 59 J. Fin. 1805 (2004); Toby E. Stuart, Ha Hoang & Ralph C. Hybels, *Interorganizational Endorsements and the Performance of Entrepreneurial Ventures*, 44 ADMIN. SCI. Q. 315 (1999). This status-based explanation, however, is not unique to the position of director. If a firm wants an individual to serve as a link to external resources, it does not need to appoint her to the board or give her voting rights. This explanation, similar to the advisory role, does not address the director’s voting rights. While non-governance explanations like this may help explain the

C. Directors as Mediators

Blair and Stout propose an alternative theory of board-level mediation. They argue that the board of directors for a publicly held firm functions as a “mediating hierarchy,” balancing the interests of different corporate constituencies (i.e. employees, creditors, shareholders, etc.).¹³⁷ The board essentially mediates disputes among competing interests within the firm. However, under the mediating hierarchy, the firm’s competing interests are not represented directly on the board. Directors do not serve any particular constituency, but rather the interest of the firm as a whole. The “mediating hierarchy” explains why the board as a whole should have decision-making authority, but it cannot explain why independent directors often hold a tie-breaking board seat in startup firms.

The mediating hierarchy theory is not intended to explain governance practices in startup firms. Blair and Stout’s theory of board mediation is expressly limited to publicly held firms:

[D]irectors of public corporations with widely dispersed share ownership are remarkably free from the direct control of any of the groups that make up the corporate “team,” including shareholders, executives, and employees. . . . In contrast, in a closely held firm, stock ownership is usually concentrated in the hands of a small number of investors who not only select and exercise tight control over the board, but also are themselves involved in managing the firm as officers and directors.¹³⁸

While this may be an accurate characterization for many small businesses, it hides potential conflicts that can occur within closely held firms when the owner and manager are not the same party or when there is heterogeneity among the group of owners (both of which occur in venture capital). In these cases the various corporate constituencies may wish to share control with a third-party independent director. Blair and Stout do not address private contractual devices that can be used to select a director who is *independent* of the firm’s other constituents.¹³⁹ My

benefits that independent directors provide to a firm, they cannot explain the director’s role in governance and, as a result, are outside the focus of this paper.

¹³⁷ See generally Blair & Stout, *supra* note 8.

¹³⁸ See *id.* at 281.

¹³⁹ Blair and Stout argue that the parties within a firm may decide to go public in order to have an independent board mediate their conflicts. See *id.* at 281–82. In this sense, the mediating hierarchy can be seen as part of the corporate contract (a necessary part for public held firms). My analysis shows that firms do not need to go public to take advantage of independent director arbitration. In fact, independent directors in a publicly traded firm may be *less* independent than their counterparts in private startups, due to the enormous influence that public company CEOs have over board composition and director nomination. See, e.g., BEBCHUK & FRIED, *supra* note 87, at 23–44, 61–79.

analysis, while similar to Blair and Stout in some respects, shows that firms do not need to go public to find an independent director as arbitrator.

While the mediating hierarchy theory does not address privately held firms, it can help explain the balancing of competing interests that a startup's independent directors must consider. In this respect, my theory of ID-arbitration is a partial extension of Blair and Stout's theory to VC-backed firms. The resulting analysis when applied to startup firms must account for the board representation of entrepreneurs and VCs. My theory accounts for these non-independent directors by modeling the *ex ante* financing contract, in which the entrepreneur and VC compete for board representation.

VII. ALTERNATIVE SOLUTIONS:¹⁴⁰ CORPORATE LAW

Fiduciary obligations under corporate law could, at least in theory, function as an alternative solution to the problem of intra-firm opportunism. Preventing such abuses is one of the conceptual justifications for imposing fiduciary obligations on the board.¹⁴¹ In the analysis above, I assumed that none of the three strategies would constitute a breach of the board's fiduciary duties, and consequently, directors would vote their self-interest even if this harms other parties. It is a positive legal question, however, whether such behavior is actually consistent with the director's fiduciary obligations.

Fiduciary obligations require the director to serve the best interests of the corporation, potentially reducing the scope for opportunistic behavior.¹⁴² To illustrate, a board under VC-control may wish to sell the firm immediately to benefit preferred stock. Yet, this action may be deemed a violation of the board's fiduciary obligations, since it may reduce the expected value realized by common stockholders. Similarly, entrepreneurs in control may be prohibited from taking certain actions that harm preferred stockholders. In the extreme, all *ex post* inefficient outcomes could be deemed a violation of the board's fiduciary obligations. Under this (unrealistic) characterization, fiduciary obligations would accomplish what contract could not—effectively prohibiting opportunistic conduct

¹⁴⁰ In addition to legal obligations, some writers argue that reputational considerations may help constrain opportunistic conduct in VC-backed firms: even though the party with control of the board has the ability to act opportunistically, it may refrain from doing so if there is a sufficient reputational sanction attached to such conduct. *See generally* D. Gordon Smith, *Venture Capital Contracting in the Information Age*, 2 J. SMALL & EMERGING BUS. L. 133 (1998); Vladimir A. Atanasov, Vladimir I. Ivanov, & Kate Litvak, *The Effect of Litigation on Venture Capitalist Reputation* (EFA 2009 Bergen Meetings Paper, 2008), available at <http://ssrn.com/abstract=1343981> (arguing that shareholder litigation can damage a VC's reputation even if the VC ultimately wins the lawsuit).

¹⁴¹ For an economist's rationale for fiduciary obligation, see Oliver Hart, *An Economist's View of Fiduciary Duty*, 43 U. TORONTO L.J. 299 (1993).

¹⁴² *See id.*

that cannot be specified *ex ante*.¹⁴³ This Part considers two questions: (1) does corporate law actually behave in this way; and (2) given limited information, do we even want judges to attempt this role?

A. Positive Analysis: Fiduciary Conflicts Between Preferred and Common

In practice, there are several reasons why fiduciary obligations are not an effective constraint on opportunistic conduct between entrepreneurs and VCs.¹⁴⁴

First, most of the disputes that may arise between entrepreneurs and VCs are protected from judicial review by the business judgment rule, a presumption in favor of a corporation's board of directors.¹⁴⁵ The business judgment rule effectively prevents courts from reviewing business decisions unless the board engaged in self-dealing.¹⁴⁶ While technically there is a "conflict" between preferred and common, this is unlikely to be treated as self-dealing by a court, since the controlling party is merely acting in the interests of its equity position in the startup firm. Most of the conflicts described in this paper—such as the decision of how much to invest in research and development—would presumably be protected by the business judgment rule. While it is possible for a plaintiff to overcome the business judgment rule, the standard of review makes it extremely difficult for plaintiffs to succeed.¹⁴⁷

Second, assuming plaintiffs can overcome (or avoid) the business judgment rule, it is unclear whether the board even owes a fiduciary obligation to non-controlling classes of equity. Fiduciary obligations generally require directors to serve the best interests of the corporation. This requirement is often interpreted to mean that directors should attempt to maximize shareholder value, equating the "interests of the corporation" with the interests of its equity claimants.¹⁴⁸ In VC-

¹⁴³ Fiduciary law is often premised on the inability of the parties to bargain at arms' length. See generally EASTERBROOK & FISCHER, *supra* note 125, at 90; Victor Brudney, *Contract and Fiduciary Duty in Corporate Law*, 38 B.C. L. REV. 595 (1997).

¹⁴⁴ But see generally Atanasov, Ivanov & Litvak, *supra* note 140 (documenting litigation involving VCs). While entrepreneurs rarely win fiduciary suits against VC directors, the authors suggest these lawsuits provide some disciplinary effect on VCs. *Id.* at 33. In particular, they find that VCs involved in litigation suffer a reputational penalty in future years of operation. See *id.*

¹⁴⁵ *Smith v. Van Gorkom*, 488 A.2d 858, 872 (Del. 1985).

¹⁴⁶ See Stephen M. Bainbridge, *The Business Judgment Rule as Abstention Doctrine*, 57 VAND. L. REV. 83, 90 (2004).

¹⁴⁷ If the business judgment rule applies, the plaintiff would need to show that there was no rational basis for the board's decision. See, e.g., *Shlensky v. Wrigley*, 237 N.E.2d 776, 780–81 (Ill. App. Ct. 1968) (suggesting that almost any plausible benefit to shareholders, even with little evidence supporting the claim, is sufficient to justify a board's action).

¹⁴⁸ For arguments explaining why corporate fiduciary protections are not extended to other stakeholders, see generally Jonathan R. Macey, *An Economic Analysis of the Various Rationales for Making Shareholders the Exclusive Beneficiaries of Corporate Fiduciary*

backed firms, where there are multiple classes of equity, however, it is unclear what this obligation entails.¹⁴⁹ Do fiduciary obligations require the board to maximize the aggregate value of all classes of equity, or can the board favor the interests of one class of shareholders over another?

The conflict between the entrepreneur and the VC described above is essentially a conflict between common stock and preferred stock. There are two basic scenarios where this conflict arises in VC-backed firms: (1) a board controlled by common stockholders takes actions which allegedly harm preferred stockholders, and (2) a board controlled by preferred stockholders takes actions which allegedly harm common stockholders. In both settings, Delaware law generally allows the controlling party to cause the firm to take actions which benefit it at the expense of non-controlling classes of equity.¹⁵⁰ Fried and Ganor refer to this as a "control-contingent approach to fiduciary duties."¹⁵¹ Their interpretation is illustrated by two Delaware decisions authored by Chancellor Allen.

The first case—*Equity-Linked Investors, L.P. v. Adams*¹⁵²—involved a firm, Genta Corporation, managed by a common-controlled board. Genta faced a choice between liquidating and continuing to operate as an independent entity.¹⁵³ Liquidation would yield a payoff less than the preferred shareholders' liquidation preferences, meaning common stockholders would receive nothing.¹⁵⁴ Remaining independent offered common shareholders the possibility of upside gain, but it would put the preferred shareholders' investment at greater risk.¹⁵⁵ The board, seeking to benefit common shareholders, obtained debt financing to enable Genta to continue operating.¹⁵⁶ The preferred sought to block the deal in court.¹⁵⁷ The court rejected the preferred shareholders' claim:

While the facts out of which this dispute arises indisputably entail the imposition by the board of (or continuation of) economic risks upon the

Duties, 21 STETSON L. REV. 23 (1992); William J. Carney, *Does Defining Constituencies Matter?*, 59 U. CIN. L. REV. 385 (1990).

¹⁴⁹ See, e.g., Macey, *supra* note 148, at 33 (noting that a dual-class capital structure involving preferred and common stock complicates fiduciary analysis).

¹⁵⁰ See Fried & Ganor, *supra* note 14, at 990.

¹⁵¹ *Id.*

¹⁵² 705 A.2d 1040 (Del. Ch. 1997).

¹⁵³ See *id.* at 1041.

¹⁵⁴ See *id.*

¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ The preferred stockholders argued that the deal constituted a sale of control, and was therefore subject to *Revlon* duties, which require the board to put the company up for auction. *Id.* at 1042. The court noted that had the company been put up for auction, the preferred shareholders' underwater liquidation preferences would have allowed them to outbid any competitors, seize control, liquidate the company, and wipe out the common. *Id.* at 1057.

preferred stock. . . and while this board action was taken for the benefit largely of the common stock, those facts do not constitute a breach of duty. . . . The special protections offered to the preferred are contractual in nature. . . . [G]enerally it will be the duty of the board, where discretionary judgment is to be exercised, to prefer the interests of common stock—as the good faith judgment of the board sees them to be—to the interests created by the special rights, preferences, etc., of preferred stock, where there is a conflict.¹⁵⁸

Equity-Linked is consistent with other Delaware cases allowing boards to favor the interests of common stockholders over preferred stock, as long as they respect the contractual protections bargained for by the preferred shareholders.¹⁵⁹ VCs holding preferred stock cannot expect fiduciary protection if they lose control of the board.

Interestingly, common stockholders do not receive much more judicial protection when the tables are turned. The second case—*Orban v. Field*—involved Office Mart, a firm managed by a preferred-controlled board.¹⁶⁰ Office Mart's board arranged for the sale of the firm to Staples for a price less than the VC's preferred stock liquidation preferences, and consequently, provided no payout to common stock.¹⁶¹ Common stockholders sued Office Mart's board for breach of the duty of loyalty owed to common stockholders.¹⁶² The court recognized that this transaction potentially harmed common stockholders, but nonetheless ruled for the preferred-controlled board.¹⁶³ The court found no breach of duty, noting that "the common stockholders had no legal right to a portion of the merger consideration under Delaware law or the corporate charter."¹⁶⁴ The court also noted, however, that the plaintiff failed to claim that the merger was not in the "best interests of the corporation,"¹⁶⁵ implicitly suggesting that a common shareholder might be able to prevail by showing that the board's action was not in the firm's best interest.¹⁶⁶ Due to the relative infrequency of litigation involving firms under preferred-

¹⁵⁸ *Id.* at 1042.

¹⁵⁹ See D. Gordon Smith, *The Critical Resource Theory of Fiduciary Duty*, 55 VAND. L. REV. 1399, 1471 (2002) (noting that the preferred stock relationship is not fiduciary in nature); see also *Jedwab v. MGM Grand Hotels, Inc.*, 509 A.2d 584, 594 (Del. Ch. 1986) ("[W]ith respect to matters relating to preferences or limitations that distinguish preferred stock from common, the duty of the corporation and its directors is essentially contractual and the scope of the duty is appropriately defined by reference to the specific words evidencing that contract . . .").

¹⁶⁰ No. 12820, 1997 Del. Ch. LEXIS 48, at *2 (Del. Ch. Apr. 1, 1997).

¹⁶¹ See *id.*

¹⁶² See *id.* at *2–3.

¹⁶³ See *id.* at *4.

¹⁶⁴ See *id.* at *32.

¹⁶⁵ See *id.* at *26 n.23.

¹⁶⁶ Fried & Ganor, *supra* note 14, at 992.

control,¹⁶⁷ the law is not fully settled in this area.¹⁶⁸ Nonetheless, *Orban* shows that a preferred-controlled board does “not owe a fiduciary duty specifically to the common shareholders and that it has wide discretion to benefit the preferred shareholders instead.”¹⁶⁹ The court’s “control-contingent” approach to fiduciary duties, illustrated by *Equity Linked* and *Orban*, makes it difficult for an injured party, lacking board control, to claim fiduciary protection.

Third, fiduciary claims may need to be brought as derivative lawsuits as opposed to direct lawsuits.¹⁷⁰ Under derivative litigation any judgment would go to the entire firm.¹⁷¹ This can be a significant problem for entrepreneurs suing VCs, since the entire judgment may go to the preferred shareholders when the firm is worth less than the liquidation preferences. Even though the entrepreneur may have been harmed by losing the option value of her common stock, the derivative form of fiduciary litigation will not recognize this damage.

B. Normative Analysis: Judges as Arbitrators

Though corporate law in Delaware and other United States’ jurisdictions does not constrain opportunistic conduct, it is a separate issue whether we think it should or even can perform this role effectively. Recognizing the risk of opportunistic conduct, some writers argue for stronger legal protections.¹⁷² Fried and Ganor, for example, propose that the contracting parties be able to opt into a heightened fiduciary obligation:

[D]irectors would violate their fiduciary duty to the corporation and its shareholders if they take steps that favor one (or more) classes of shares over one or more other classes of shares, and the cost they impose on the

¹⁶⁷ Preferred-control is unusual outside of venture capital. See *id.* And litigation involving such firms is very rare. See Atanasov, Ivanov & Litvak, *supra* note 140, at 3 n.2.

¹⁶⁸ For an alternative interpretation, see generally *Dilillo v. Ustman Tech. Inc.*, No. B148198, 2001 Cal. App. Unpub. LEXIS 1527 (Cal. Ct. App. Nov. 19, 2001) (finding that minority shareholder plaintiffs had properly stated an individual, direct claim for relief where an asset purchase was allegedly negotiated and agreed upon without adequate procedural protections for minority shareholders).

¹⁶⁹ See Fried & Ganor, *supra* note 14, at 992.

¹⁷⁰ See generally *Kennedy v. Venrock Assoc.*, 348 F.3d 584 (7th Cir. 2003) (illustrating the problem derivative litigation creates for plaintiffs).

¹⁷¹ Jonathan R. Macey & Geoffrey P. Miller, *The Plaintiffs’ Attorney’s Role in Class Action and Derivative Litigation: Economic Analysis and Recommendations for Reform*, 58 U. CHI. L. REV. 1, 10–11 (1991).

¹⁷² Bratton also recognizes the problem with the current state of legal protections offered in startup firms, noting the vulnerability of preferred stockholders. See Bratton, *supra* note 14, at 894. His proposed remedy is stronger enforcement of the contractual duty to act in good faith and does not involve any change in fiduciary standards. See *id.* at 895. Such contractual standards, however, could reduce some forms of opportunism.

adversely affected class(es) exceeds the benefit to the favored class(es).¹⁷³

This standard basically asks the directors to maximize the aggregate value of all classes of equity. If judges are able to adjudicate this standard, it would certainly reduce opportunistic conduct, since the controlling party would be required to pursue the ex post efficient outcome.

One limitation of this remedy is the informational demands that it places on judges. The types of disputes likely to be heard under a heightened fiduciary obligation include several business decisions: which investment to pursue, whether to sell the firm, or whether to receive a new round of financing. Courts are not well suited to adjudicate such matters.¹⁷⁴ Unlike the hypothetical conflict described above, the various alternatives available to a startup firm do not come with assigned probabilities and payoffs. Rather, there are likely to be legitimate disagreements about the best course of action. Determining the best strategy requires experience with startup firms and familiarity with the relevant industry; none of which are traits possessed by most judges.

By contrast, independent directors are well suited for this role. Unlike judges, independent directors typically have significant industry experience and familiarity with the relevant business issues.¹⁷⁵ When disagreements between the entrepreneur and the VC arise, the independent director as tiebreaker is likely to be playing a role very similar to the balancing approach advocated by Fried and Ganor. This essentially becomes a question of whether judges or independent directors are more qualified to adjudicate such disputes. Due to their business experience, independent directors have certain advantages over judges in adjudicating disputes between entrepreneurs and VCs.

A second limitation of a more robust fiduciary obligation is it may frustrate the parties' ex ante interests. The threat of judicially imposed fiduciary obligations may violate the VC's or the entrepreneur's ex ante participation constraint. In some instances this could prevent investment from occurring ex ante. The VC, for example, may require board control to ensure a sufficient monetary return; however, if the VC's decisions are subject to increased judicial scrutiny through fiduciary obligations, the VC's monetary returns could be compromised. Ex post efficiency does not necessarily ensure ex ante participation. This problem is even worse if the court is likely to make adjudicative errors, potentially making it even harder to ensure ex ante participation. Fried and Ganor avoid this problem, since

¹⁷³ See Fried & Ganor, *supra* note 14, at 1023.

¹⁷⁴ Other than weighing costs and benefits to several parties, which is a difficult task, there is no clear legal standard to apply. In Lon Fuller's terminology, a heightened fiduciary obligation creates a "polycentric problem," which is poorly suited for judicial adjudication. See Lon L. Fuller, *The Forms and Limits of Adjudication*, 92 HARV. L. REV. 353, 394-404 (1978).

¹⁷⁵ See *supra* Part V.

their proposal only calls for heightened fiduciary obligations if the parties opt into this arrangement.¹⁷⁶

Finally, a stronger fiduciary obligation could undermine the benefits of ID-arbitration by replacing the independent director's decision with the decision of a state-appointed judge. An action reached under ID-arbitration could still be challenged as a breach of fiduciary obligation. This is particularly troubling. The court would not simply be reviewing controlling-party opportunism, but rather, second-guessing the vote of the independent director. Corporate law in Delaware and other states recognizes this concern. Conflict of interest transactions ratified by a majority of independent directors are subject to less judicial scrutiny.¹⁷⁷

VIII. CONCLUSION

In this paper, I propose a new theory to explain the governance role of independent directors in startup firms financed by venture capital. Independent directors are frequently used in VC-backed firms, and typically occupy a tie-breaking seat on the board. This practice cannot be explained by the existing theory of independent directors. The current corporate governance literature, which relies on diffuse ownership and passive investment to explain the presence of independent directors on public boards, cannot explain their presence on private startup boards. Indeed, unlike public companies, private startup firms have concentrated ownership structures, and their investors actively participate in managing the company.

To develop an alternative theory, I model a financing contract between an entrepreneur and a VC investor. The contract is inherently incomplete and cannot fully align the interests of the entrepreneur and VC. As a result, the allocation of board seats becomes particularly important. If either party controls the board, it can use this position opportunistically, causing the firm to pursue actions that benefit it at the expense of the firm's aggregate welfare. By contrast, sharing board control with an unbiased independent director can prevent this form of opportunistic behavior. The independent director effectively becomes an arbitrator, settling disputes that arise between the primary parties. Arbitration by an independent director replaces controlling party opportunism with arbitrator discretion, and is beneficial to the extent that the parties can find an unbiased director.

Data from my study of fifty-four Silicon Valley firms are consistent with this prediction and illustrate several mechanisms that the entrepreneur and VC use to ensure the selection of an unbiased independent director. These practices not only

¹⁷⁶ See Fried & Ganor, *supra* note 14, at 1020–21.

¹⁷⁷ See, e.g., DEL. CODE ANN. tit. 8, § 144(a)(1) (2001); *In re Wheelabrator Tech., Inc. S'holders Litig.*, 663 A.2d 1194, 1203 (Del. Ch. 1995); *Puma v. Marriott*, 283 A.2d 693, 696 (Del. Ch. 1971); MODEL BUS. CORP. ACT § 8.61(b) (2003).

support my theory, they suggest that the parties do not need additional legal protections against opportunistic conduct. Indeed, heightened fiduciary protections against opportunism may interfere with ID-arbitration and frustrate the will of the parties.

APPENDIX: DISCRETE ACTION SPACE

I model the incentives for three types of independent directors—(1) VC-Bias, (2) E-Bias, and (3) Unbiased—corresponding respectively to whether the independent director is selected by the VC, by the entrepreneur, or by their mutual agreement. The following table illustrates the independent director's preference ordering for each type of director (the independent director's preferences determine the outcome of the structured bargaining game).

Table A1: Independent Director Preference Ordering

Independent Director Bias	First Choice	Second Choice	Third Choice
VC-Bias	No-risk	Low-risk	High-risk
Unbiased	Low-risk	No-risk	High-risk
E-Bias	High-risk	Low-risk	No-risk

I assume the entrepreneur and VC can observe the independent director's type. Consequently, they can predict how the independent director will vote for any pair of strategy proposals. Thus, they can calculate each party's expected payoff for each strategy pair, and solve for Nash equilibrium.

The boxes in table A2 show the strategy endorsed by an unbiased independent director. This game includes two sets of Nash equilibrium: (VC=Low-risk; E=Low-risk) and (VC = No-risk, E = Low-risk). The VC is indifferent between proposing the Low-risk and No-risk strategies because it knows that the entrepreneur will propose the Low-risk strategy in either case. Neither party has an incentive to change their proposal given the other party's action. In either case the firm will pursue the Low-risk strategy. This result is the efficient outcome.

Table A2: Bargaining Game (Unbiased ID)

		VC Proposal		
		No-Risk	Low-Risk	High-Risk
E proposal	No-Risk	N (40, 120)	L (60, 110)	N (40, 120)
	Low-Risk	L (60, 110)	L (60, 110)	L (60, 110)
	High-Risk	N (40, 120)	L (60, 110)	H (75, 75)

Under ID-arbitration, the entrepreneur and VC give up the right to unilaterally select the course of action, and, in so doing, they effectively commit to an outcome determined by the independent director's preferences. When the independent director is unbiased, the parties converge directly upon the efficient result.

If the independent director is biased in favor of either the entrepreneur or the VC, the benefits of ID-arbitration disappear. The independent director effectively gives the favored party an additional board seat, collapsing ID-arbitration into either VC-control (if the VC is the favored party), or E-control (if the entrepreneur is the favored party).