VCs and the Expropriation of Entrepreneurs*

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January 2007

Warning: this paper will change substantially before May 15, 2007, so if you can only read one draft, please wait until we post a new draft

* We would like to thank the Kaufmann Foundation and the Center for Research in Entrepreneurial Activity at the University of Kansas for their generous financial support for this project and Bernard Black, Vladimir Gachev, Thomas Hellman, Craig Lewis, Ronald Masulis, Diana Pop, Scott Stern, and participants at the NBER Entrepreneurship Conference, the Annual Meetings of the Canadian Law and Economics Association, and seminars at Toulouse Business School and the University of Kansas for helpful comments and suggestions.

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Abstract: We explore the potential for abuse of startup founders and other common stock shareholders by venture capitalists. We first analyze a set of 26 lawsuits involving venture capitalists and entrepreneurs. Our analysis of lawsuits reveals that VC-related litigation is almost always initiated by founders, and most common allegations are dilution and freezeout of founders, followed by expropriation of company assets via related-party transactions. We document that most of the lawsuits that were not promptly settled end up dismissed by judges on procedural grounds, and yet, after winning, the involved VCs have raised significantly less capital than their peers and have syndicated deals with less reputable partners. We next analyze the founder ownership at the going-public stage in a sample of 390 VC-backed IPOs. We find that founders are less likely to be involved in firm governance and have lower ownership in startups backed by less reputable VCs and where VC investment rounds have been insider dominated. The results suggest that the potential for expropriation of equity holders in venture-backed startups has important implications for entrepreneurial activity.

1. Introduction

Venture capitalists are an important part of capital markets and a significant driver of economy growth. As opposed to other providers of capital like public equity investors or banks, venture capitalists (VCs) contribute to the companies they invest in not only capital, but also know-how, business contacts, and other added value that makes them integral for the success of startup companies. The finance literature has mostly stressed these benefits of venture capitalists, but has largely ignored the potential costs associated with them.

The main goal of our study is to investigate one source of potential costs associated with venture capitalists – the possibility of some venture capitalists expropriating the wealth of entrepreneurs and other seed equity investors of startup companies. Such potential for expropriation may be important for entrepreneurs or angel investors, for public authorities intending to stimulate entrepreneurship in the economy, and for the venture capitalists themselves.

Why is expropriation of founders and other early-stage investors possible? Much of it arises from powerful contractual rights routinely granted to VCs, such as control over the company's board, strong anti-dilution and redemption rights, liquidation preferences, and control over the sources of future financings. Such contractual rights are often necessary to curb well-known incentive problems of early-stage investing, but they create significant expropriation risks. The VC, for example, may be contractually allowed to fire the founder for the sole purpose of repurchasing founder's stock at a symbolic price, to dilute founder's ownership stake, or to sell the company on terms disadvantageous to founders. When the VC chooses to exercise his contractual option to expropriate, founders often have no legal

recourse, and when they do, the value of such recourse is significantly reduced by the complexity and expense of litigation.

Another opportunity for expropriation arises from the common practice of VCs' investing in and controlling more than one company. This allows for a variety of related-party transactions between companies within a VC's portfolio.

VCs' control rights provide opportunities to expropriate (tunnel) the wealth of common stock holders through two broad types of techniques: financial tunneling and operational tunneling. Financial tunneling is defined as structuring financial transactions that expropriate the ownership stakes of equity holders. Examples of financial tunneling include equity dilution by issuing shares below fair value in future financing rounds, firing founders and repurchasing their unvested shares and options at cost (freeze-out), or selling the company to a third party at preferential terms for VCs which are not shared with equity holders.

In contrast, operational tunneling is defined as transactions that transfer firm cash flows or assets to related parties. Possible operational tunneling transactions in VC-backed startups include: cannibalizing firm tangible assets and transferring them to another firm; transferring non-tangible assets or human resources to another firm; denying access to a business opportunity and giving this opportunity to another firm.

The VCs may have the ability to expropriate common stock holders, but do they have the incentives to do? In general, transferring wealth via financial or operational tunneling can directly improve VC portfolio returns and reduce risk at the expense of common stock holders. In particular, financial tunneling techniques like equity dilution and freeze-out reduce the ownership of equity holders and allow the VC to capture a larger part of the

proceeds from a successful exit (IPO or acquisition). Tunneling transactions are more likely if there is a downturn in the economy and provide a natural risk reduction for the VC.

Identifying the true incidence of tunneling and its wealth effects is difficult because most of the tunneling transactions are (a) private and covered in secrecy; (b) involve accusations that are notoriously hard to verify (e.g., whether the fired founder was in fact a bad employee or whether the VC simply wanted to expropriate the founder's growing share of company stock); and (c) often, involve entrepreneurs who are not sophisticated enough to understand procedures through which their wealth is expropriated, so the tunneling goes unnoticed.

For these reasons, we turn to indirect tests of tunneling behavior. Instead of asking how often financial tunneling occurs, we first ask whether, once it occurs in some objectively identifiable manner, it affects VC reputation, future capital raising, and deal flow. One decent indicator of tunneling is lawsuits brought by common stock holders against VCs, and alleging fraud, oppression, or expropriation.

Currently, we focus on the small number of lawsuits that have been reported in Lexis-Nexis. These are lawsuits on which a judicial decision has been issued, which is a very small percentage of all filed lawsuits (roughly 5%). We intend to collect a much larger sample of the filed lawsuits that have been settled.

We document that when VCs are involved in litigation, they are almost always defendants; apparently, litigation isn't the best use of their time. If a case against a VC is not promptly settled, it is almost certain to be dismissed by a judge without ever reaching the jury. However, litigation success doesn't carry the day: although VCs win the vast majority of non-settled cases, they seem to suffer some reputational consequences of being sued. We

find that VCs who have been involved in shareholder oppression lawsuits raise significantly smaller funds after the lawsuits and form syndicates with lower-reputation partners.

Our second set of tests attempts to detect indirectly the wealth effects of financial tunneling for startup founders. We focus on financial tunneling, which is arguably the more effective method of expropriation (Gilson and Gordon, 2003; Atanasov, et al., 2006). We leave operational tunneling for future work. To document financial tunneling, we analyze founder ownership and involvement at the IPO stage for VC-backed companies and relate them to proxies for likelihood of past financial tunneling transactions like insider or delayed financing rounds and VC reputation.

We find that founders retain less ownership and are less likely to be involved in the company at the IPO stage if the company has been backed by less reputable VCs, the investment rounds have been insider-dominated and abnormally delayed. Our results suggest that financial tunneling may reduce the expected payoffs of founders from even the most profitable exit strategy.

Our findings provide another interpretation of the results in Hsu (2004) that entrepreneurs opt for highly-reputable VCs. They may do so not only because higher reputation VCs increase the likelihood of venture success, but also because founder have lower risk of being expropriated before being able to capture the success of their venture.

Our results have implications about possible measures to stimulate entrepreneurial activity and angel investing and for the design of optimal VC contracts. In particular, anti-dilution provisions like full ratchets may lead to a deadweight loss for the economy due to the high possibility for financial tunneling, which may not only generate protective efforts by founders, but also reduce founders' performance incentives. A possible mechanism that may

avoid the expropriation of entrepreneurs is to create a VC litigation index that measures the likelihood of a particular VC to be involved in a meritorious oppression lawsuit. This litigation index can be widely disseminated among entrepreneurs and be used to effectively discipline rogue VCs.

The remainder of the paper is structured as follows. Section 2 discusses previous research on venture capital and tunneling. Section 3 outlines the legal and other mechanism that may protect entrepreneurs and other early-stage investors from VC expropriation. We develop our hypotheses in Section 4. We analyze our sample of lawsuits and the effects of VC reputation in Section 5 and the sample of venture-backed IPOs and founder ownership in Section 6. Section 7 concludes.

2. Background of Tunneling Methods

Venture capitalists usually enjoy significant power and control within their portfolio firms. They sit on the board of directors, hold the majority of voting rights, have substantial liquidation rights, and frequently use anti-dilution clauses and vesting provisions when contracting with entrepreneurs. These contractual features allow VCs to mitigate the risks and informational asymmetries associated with investing in startup firms.

Kaplan and Stromberg (2003) study actual VC contracts and find that VCs use a wide variety of control rights. Generally, when a firm does well, control is shared (not equally, but significantly) among VCs, founders, and other parties. When the firm's performance deteriorates, control shifts to VCs. Formal control rights include voting rights, board representation, and the rights to veto certain transactions. Informal control rights involve rights attached to VCs' participation in future financing rounds. One example is the right of first refusal, which effectively gives current VCs control over the identity of the firm's future

investors, the size of their stake in the company, and the timing and terms of future investments. VCs also retain a variety of anti-dilution provisions (ratchets) that are triggered when a company value decreases from one financing round to another; the party most negatively affected by anti-dilution provisions is founders.

Furthermore, VCs have the power to hire and fire CEOs and replace founders. For example, Hellmann and Puri (2002) find that VC backed firms are more likely and faster to replace the founder with an outside CEO. In many cases, founder compensation contracts provide that when founder is fired, her stock options evaporate and even her vested stock may become subject to repurchase by VCs at cost (or even at zero).

Finally, the structure of the VC investment in preferred shares with significant liquidation preferences and redemption rights puts them in a superior position to common stockholders in acquisitions or liquidations.

Differences between VCs' control rights and cash flow rights are typically presented as essential for resolving information asymmetry and moral hazard problems. What is not discussed is how these same features may lead to opportunistic behavior on the part of VCs. The preferred equity holdings and other contract features generate conflicts of interests between the VC and common stockholders (Fried and Ganor, 2005), while the control rights attached to preferred equity give VCs an opportunity to advance their interests at the expense of founders. Contractual rights also allow VCs to directly expropriate the common equity holders using financial transactions.

There are two major types of financial transactions that can be used to expropriate founders and other shareholders: equity dilution and freeze-out. Equity dilution transactions reduce the founder's stake in a company through the disproportionate issuance of shares to

VCs. A freeze-out typically involves an opportunistic removal of founders and a direct expropriation of founders' shares.

2.1. Financial Tunneling via Founder Equity Dilution

In equity dilution transactions, a new financing round is initiated at a reduced price. Common stockholders are excluded from participation, while VCs absorb all newly-issued shares. The extent of founder dilution depends on the anti-dilution provisions in the contract. Full ratchets lead to the strongest dilution, full ratchets with pay-to-play provision come next, while weighted-average ratchets lead to least amount of dilution.

Founder dilution also depends on whether a new investment round involves any participants who are not yet invested into the firm. The interests of outside investors partially coincide with those of common stockholders: (1) the new investors would want the founder to continue being involved, which requires giving her a meaningful stake in the company; (2) full ratchets granted to existing VCs limit the ownership stake of new investors. There is anecdotal evidence that new investors have insisted on waivers of full ratchet rights as a condition of investment. As a result, outside VCs might serve (often unwittingly) as protectors of founders.

In contrast, in an inside round, the founders have no powerful parties to bargain on their behalf. Without the urgency of responding to outside investors, the VC can delay the financing until the firm is almost insolvent and then provide capital at depressed valuations. Common shareholders have little chance to prove their case in court because they would have to prove a speculative counter-factual in the environment where there is very little good evidence admissible in court. While the correct question is "where would the firm be today if VCs did not opportunistically delay financing?", the question the courts are most equipped to

ask is “where would the firm be today if VC did not provide the financing at the last minute?” The answer to the latter question is often “in bankruptcy,” which leaves founders without damages. This is an illustration of the “exigency defense” that VCs have successfully used to dismiss founder lawsuits in the past. Most such transactions can be conducted by VCs with little risk of being successfully challenged in court (Bartlett 1995).

Other transactions that can lead to dilution and are enabled by contractual provisions are hiring professional executives whose incentive-based compensation in the form of shares or options come out of the founder stock. This was used in the Alantec case. Legal disputes over dilutive transactions are usually resolved in favor of VCs (Padilla 2001).

2.2. Financial Tunneling via Freeze-Outs

When VCs control the company board, they have the opportunity to fire the founder from her executive position at the company. The structure of VC employment contracts allows VCs to remove founders legally, and the current employment law (except in Montana) does not offer any additional protections. Gorman and Sahlman (1989) and Hellman and Puri (2002) both argue that VCs often replace founders with outside executives. In many cases the contracts provide a right for the VC after replacing a founder to repurchase all unvested founder shares and options at cost and largely eradicate the founder ownership in the company. A freeze-out can be especially effective when combined with previous dilution, or done early when most of the founder shares have not vested yet.

2.3. Financial Tunneling via Sale of Control in Acquisitions

Another financial tunneling method that VCs can use to expropriate founders is to initiate an acquisition of the company by another corporation at terms that favorable to VCs and disadvantageous to common stockholders. VC may prefer a premature exit for their

investment even though it is detrimental to the overall company value (Fried and Ganor, 2006). Or, VCs may use their control to negotiate differential payment terms, which afford them a large premium for their stake and a smaller payment for equity holders.

2.4. Operational Tunneling via Sale of Assets

The last method we discuss is operational tunneling via sale of assets to related parties. Operational tunneling is likely when the VC holds different ownership stakes in the firms in the portfolio. In such cases, the VC has incentives to transfer assets from the firms with low ownership to the firms with high ownership. These incentives are very similar to those of the controlling shareholder of a business group (pyramid).

Operational tunneling might be profitable even when the VC has the same ownership in all firms. First, the VC's payoff from an investment in a company may be non-linear in firm value because of the option features of their ownership (e.g. convertible preferred shares). The optionality generates convexity of the VC payoff in firm value (the VC is better off having one super-performing firm and one poor-performing firm than having two mediocre performing firms in her portfolio). Second, combining assets from several portfolio firms might produce the entity that's more valuable than the sum of parts. Unless VCs are meticulous in fully compensating founders of each contributing firm for such asset transfers, operational tunneling is likely to result in expropriation of some of the founders.

3. Legal and Other Protections from Tunneling

After discussing the potential transactions that VCs can initiate to expropriate founder wealth in the previous section, we now turn to an analysis of the existing legal and other mechanism that may prevent or punish such behavior.

3.1. Legal Protections

The US federal and state law does not provide strong protections against expropriation in private companies. Procedural rules tend to benefit large sophisticated parties, who are clever enough to retain lawyers early and keep paper trails. Substantive laws are mostly designed to avoid state interference with private commercial dealings.

3.1.1 Contract Law

Rules of Contract Interpretation. Venture capital contracts are normally enforced as written, which disadvantages founders, whose legal representation (let alone experience with legal documents) is typically inferior to that of the VCs.

Defenses Against Contract Enforcement. The usual doctrines protecting unsophisticated parties from contractual exploitation (unconscionability, duress, undue influence, etc.) normally do not apply to competent parties in complex financial contracts. Even if founders can conclusively prove that they accepted dilution only because VCs intentionally caused funding delays and left founders no other choice, contract law gives founders no protection (a very rare judge might depart in extreme circumstances).

Parol Evidence Rule. Under the parol evidence rule, all oral and even written promises and "understandings" made before the signing of VC-founder agreements become legally unenforceable the minute a written contract is signed. This disadvantages founders because even a very strong evidence of VCs' broken promises and manipulation cannot be introduced to the jury.

Damages Proven with "Reasonable Certainty." Under contract law, all damages must be proven with "reasonable certainty." This is a very hard standard for an early-stage

company, where future profits are almost always speculative. Thus, even if the founder can conclusively prove that VCs breached a contract, he may receive no damages because of the "reasonable certainty" barrier.

3.1.2. Corporate Law

Sale of Substantially All Assets. Regardless of contractual arrangements to the contrary, Delaware corporate law provides some mandatory protections. Under DE law, a sale of substantially all assets requires shareholder approval. The difficult question is what constitutes a "sale of substantially all assets." Formally, a sale will be deemed sale of substantially all assets if "the sale is of assets quantitatively vital to the operation of the corporation and is out of the ordinary and substantially affects the existence and purpose of the corporation." As an example, a sale of 51% of total assets that generated 45% of a company's net sales was once found to be a sale of substantially all assets. This rule, however, is vague and imposes very high evidentiary barriers in early-stage companies.

If a transaction is deemed a sale of substantially all assets, the founder has a right to vote. If such transaction also involves operational tunneling, a VC will likely be deemed "interested" and excluded from the vote, thus leaving founders (and disinterested VCs) with a veto power over the transaction.

Sale of Control.

VC contracts typically give founders no protection against such sales of control (though they often give protections to other VCs). The law does not protect founders, either. Under Delaware law, a controlling shareholder is allowed to sell at a premium without allowing other shareholders to participate. Unless a controlling shareholder sells to a known

looter, sells the office, or fails to disclose the offer to a non-controlling party, the law provides no restrictions on such sale.

Sale of Office. Even if the sale is treated merely as a sale of control, the courts might impose liability on the selling party if the premium is received for the sale of office rather than the sale of control. The current rule of thumb is that a shareholder who controls the board, but owns less than 28% of voting stock, is suspect. Such situation is likely in the venture setting, where the VCs commonly have different voting and board rights.

Fiduciary Duties. One common mechanism of expropriation is to fire founders and repurchase their stock at a low price. Another, related, mechanism is to fire founders and expropriate their managerial quasi-rents (enjoyment of running the company, social status, reputation, etc.). Corporate law provides no protection to founders here. Neither a controlling shareholder (VC) nor the board (dominated by VCs) has a fiduciary duty to maximize the benefit to an employee. Absent an employment agreement restricting entrepreneur's termination (which rarely exist because of the moral hazard problem), the VC is legally entitled to sell vital assets, control, or company to third parties, at the suboptimal price, for the sole purpose of expropriating managerial quasi-rents.

Business Judgment Rule. An important protection against expropriation is the threat of ex post litigation. However, under the DE law, VCs' liability in litigation is limited by the business judgment rule. The business judgment rule "preclude[s] a court from imposing itself unreasonably on the business and affairs of a corporation." This does not entirely prevent litigation against VC representatives on boards of directors, but it places a burden on founders to show that "directors, in reaching their challenged decision, breached any one of the triads of their fiduciary duty—good faith, loyalty or due care." Such proofs are very

complicated in practice, especially for early-stage companies with highly speculative future profits and short track records of performance.

Definition of Independent Directors. Delaware law has no structural safeguards ensuring that independent directors are in fact independent. Although a typical startup has a large number of independent directors (Kaplan and Stromberg), it is not yet known how many of those directors are truly independent from VCs. Anecdotally, some of them are retired founders of successful companies that current VCs helped to launch; others are attorneys, consultants, and accountants with close ties to the VC community; still others serve on multiple boards of directors of the same VC. Founders have no legal protection against non-independence of formally independent directors, and the business judgment rule substantially protects all directors from litigation.

3.1.3. Employment Law

In all states except Montana, "at will" employment is a default rule. Unless an employment contract provides otherwise, a founder can be fired at any time and for any reason (subject to the compliance with anti-discrimination laws). Most employment contracts in the VC industry are "at will."

3.1.4. State and Federal Securities Laws and the PSLRA

To win a securities fraud claim, the plaintiff must show that the defendant made a materially false statement/omission, with requisite state of mind, and that the plaintiff's reliance on the defendant's action caused injury to the plaintiff. In public company litigation, the causation is typically proven by relying on the movement of market prices. In private

companies, market movements are not available and thus causation must be proven directly. This severely disadvantages founder litigation as compared to other types of shareholder litigation.

The Public Securities Litigation Reform Act of 1995 (PSLRA) further complicates founder litigation under securities law based theories. Although PSLRA was intended to curb frivolous litigation in public companies, it fully applies to litigation in private companies as well. PSLRA impedes founder litigation by imposing more stringent pleading standards. This is particularly burdensome in early-stage private companies because (1) those companies are run less formally, with less attention to paper trails, and (2) plaintiffs cannot rely on periodic public disclosures and stock price changes to show fraud and causation. As a result of PSLRA, a significant portion of founder-VC litigation has been removed from federal courts, and often from any court, because of the difficulty in proving breach and damages in state-law contracts case.

3.2. VC Reputation as a Mechanism to Prevent Expropriation

The law is not the only mechanism that can protect entrepreneurs from expropriation by venture capitalists. Even if a VC has the opportunity to expropriate founders due to weak laws, she may choose not to do so in order to build or retain a reputation for treating entrepreneurs and other seed investors fairly. Such reputation may be a valuable asset that can generate future high-quality deal flow or better financing terms. For example, Hsu (2004) shows that entrepreneurs are willing to accept lower valuations in order to secure financing from reputable VCs. Another effect of VC reputation is proposed by Bachmann and Schindele (2006). When VCs have higher reputation for not stealing entrepreneurs' ideas the

entrepreneurs will be willing to expend more effort on developing these ideas which results in better startup performance.

Conversely, when a VC expropriates founders via financial or operational tunneling methods, information about such behavior may be conveyed to other entrepreneurs and lead them to avoid the VC in the future. Other VCs may also decline participation in the rogue VC's syndication deals because their reputation may be tarnished by association. Last, limited partners anticipating a drop in order flow may refrain from investing in the future funds of a VC that has expropriated founders in the past.

The overall disciplining effect of reputation is most effective when there is free information flow about the outcome of past VC investments. Founders may learn about past VC behavior from their lawyers or other intermediaries like accountants or venture lenders. Or, founders may infer past questionable VC behavior by accessing public court records about lawsuits that VCs have been involved in even though these lawsuits have been dismissed or settled.

4. Hypotheses

After discussing the incentives of VCs to expropriate founders, the transactions that can be used to tunnel entrepreneurs wealth, and the mechanisms that may limit such behavior, we now develop our testable hypotheses. We test the existence and impact of tunneling by VCs using two main approaches. The first approach is based on the idea that if some VCs have expropriated founders, then at least in some cases founders would have subsequently filed lawsuits against the VCs. The existence of lawsuits against VCs per se is not evidence of tunneling, because founders may have filed frivolous lawsuits. But, evidence that these lawsuits have led to a reduction in VC reputation would rule out the possibility that

all lawsuits are frivolous and would support the existence of expropriation. Based on the above arguments we formulate our first testable hypothesis.

Hypothesis 1. Lawsuits against VCs

There are cases where VCs have expropriated entrepreneurs which have resulted in lawsuits against the VCs. If lawsuits have merit, the reputation of involved VCs will decline.

Hypothesis 1 can be tested by identifying a sample of lawsuits filed against VCs and then comparing the future capital raising, deal flow, and syndicate partners of VCs that have been involved in these lawsuits to a matched sample of VCs.

Our second approach to detect expropriation focuses on the outcome of financial tunneling transactions. After equity dilution founder stakes have been excessively reduced due to the issuance of a large number of new equity at depressed prices. After freeze-outs founders have both been fired from the company and their shares and options repurchased by the VCs. Overall, financial tunneling transactions reduce founder ownership stakes and their involvement in company management. The reduction in ownership and founder involvement will be more significant when VCs have full ratchet anti-dilution provisions and when they have all bargaining power by controlling all sources of financing.

We do not have access to actual VC contracts and cannot include the type of anti-dilution provisions in our empirical analysis. But, we can indirectly measure the bargaining power of VCs by separating financing rounds into rounds that are financed only by existing VCs (insider rounds) and rounds financed by at least one new VC (outsider rounds). The bargaining power of VCs will be stronger in insider rounds and they can use this power to extract worse financing terms for the entrepreneurs and dilute their ownership stakes more.

The effect of insider rounds on entrepreneur ownership will be especially negative in rounds that have been intentionally delayed by the VCs up to the point where the startup is facing insolvency and the VC can provide financing at any terms without facing any legal obligation to treat the founder fairly (the "exigency" defense). In contrast, in outside rounds the new VCs have interests that are more strongly aligned with founders. There is anecdotal evidence that outside VCs have requested existing VCs to waive their anti-dilution provisions as a requirement for investing in the new round. Outside VCs may also request that the founder stake is not diminished to a point where the founder has no incentives to expend further effort.

Another force besides outside investors which may limit excessive founder dilution and freeze-out is VC reputation. As we argued in Section 2.4 above, more reputable VCs will prefer to treat founders well and retain their standing in the entrepreneur community. Thus highly reputable VCs will tend to leave more equity for founders and are less likely to fire them from their management positions.

Based on the identified effects of insider rounds, delayed rounds, and VC reputation discussed above we formulate our second hypothesis.

Hypothesis 2. Founder ownership and involvement in startup management

Founder ownership and involvement are reduced in startups that have been financed by predominantly insider rounds, delayed rounds, and less reputable VCs.

Ideally, in order to test Hypothesis 2 we need startup ownership data after each investment round. Such data is not currently available. There are a couple of events in the startup life where such ownership is disclosed. We focus on one of these events – when a startup goes public in an IPO. The IPO prospectus contains detailed ownership and management data and

specifically the equity stake of firm founders and their current position with the firm. As a result, we can test Hypothesis 2 using a sample of VC-backed IPOs and regress founder ownership and involvement in management on variables capturing insider rounds, delayed rounds, and VC reputation.

5. Analysis of Lawsuits involving VCs

5.1. Data

To test for the effect of tunneling on VC reputation, we use a sample of 26 lawsuit cases involving VCs and entrepreneurs over the period 1976-2005. We hand collect the data from Nexis-Lexis using key search variables such as venture capital, dilution, freeze out, etc. These cases involve 38 venture firms. Only two of these, Accel Partners and Charles River Ventures, are involved in two cases. After we select the sample startup firms and VCs, we match those with data from VentureXpert. From VentureXpert, we collect data on VC age, investment and industry focus, number of funds, fund size, portfolio firms, and syndication partners.

A potential concern with the sample is the fact that Nexis-Lexis usually lists cases that have reached some level of judicial resolution. Most cases involving VCs either do not get formally filed (i.e., settle at the treat of litigation), or settle shortly after the filing, before judicial opinions are issued. This means that we might be picking up only a small portion of all VC lawsuits. It is not clear whether our sample suffers from a systematic selection bias, since it is not clear whether non-settled cases systematically involve more or less expropriation. Most egregious cases might get settled more promptly, since they involve little genuine dispute of facts; on the other hand, they might be settled less promptly because they

might have more in stake and thus involve more disagreement about the value of the case, which complicates settlement negotiations.

Even if selection biases are possible, it is worth examining reported cases because they could shed more light on the issue of whether venture firms that engage in opportunistic behavior experience changes in reputation.

Table 1 lists the startups involved and the corresponding VCs. As we can see, even some very reputable firms, such as Kleiner Perkins, Charles River Ventures, Sevin Rosen Associates, and New Enterprise Ventures are involved in different litigation cases with some of their portfolio firms. In some cases it is VC firms that sue other VCs. This is the case with Juniper Financial Corporation, where one of the early stage investors, Benchmark Capital, sues a later stage VC investor, Canadian Imperial Bank of Commerce. Also, there are different types of VCs in our sample: traditional VCs (like Kleiner Perkins and Charles Rive Ventures), corporate VCs (E*Trade and Heizer Corporation), and venture arms of financial companies (Prudential Ventures and Canadian Imperial Bank of Commerce). The cases involve startups from various industries and geographical locations. Most of our cases are concentrated in the late 1990s and particularly the early 2000s.

Table 2 outlines the main ways in which VCs allegedly expropriate entrepreneurs or early investors for each of the cases in our sample and the outcomes of the particular lawsuits. We outline some interesting regularities in the analysis below.

Parties. When VCs are involved in litigation, they are usually defendants. Only three cases in our sample (11.5%) involve VC plaintiffs; in all those cases, defendants are other investors, rather than founders. When founders are involved in litigation, they are almost always plaintiffs. Only one case in our sample involves a defendant founder; that founder

was closely affiliated with VCs and was sued together with VCs by another founder. Overall, VCs sue very rarely, and when they sue, the defendants are usually other VCs or institutional investors.

Allegations. When founders sue VCs, most typical allegations are freezout and dilution (about 40% each); followed by the sale of the company on terms advantageous to VCs, but bad for founders (about 35% of cases). Operational tunneling is the least popular allegation (13%). The total is above 100% because many cases list multiple allegations of VC misconduct.

Litigation. There is ample evidence of forum shopping. Overall, most cases are brought in federal courts (62.5), but in some states, plaintiffs are substantially more likely to seek federal courts than in other states. All NY cases in our sample were brought in federal courts, likely because New York federal courts are known for their high quality, while state courts are slow and inefficient. Similarly, all of our IL cases are brought in federal courts, again likely because federal courts in IL are significantly better than state courts. In contrast, almost all our DE cases (5 out of 6) were brought in state courts; DE chancery court is substantially better for business litigants than federal court.

Bodies of Law. Most law suits involve multiple claims. For each case, we code one or two of the most important bodies of law. Corporate law is involved in 42%, followed by securities (35%), contracts (23%), and torts (15%). The total is above 100% because we allowed for multiple claims.

The Effect of PSLRA. The Public Securities Litigation Reform Act of 1995 (PSLRA) appears to have a considerable impact on VC-related litigation. Ten cases in our sample were brought in federal courts after the adoption of PSLRA. Three of them were dismissed for the

failure to satisfy the heightened pleading requirements. This, of course, does not account for cases that were not brought in federal courts because plaintiffs expected to lose under the new PSLRA standard.

Outcomes. Our sample contains 22 cases that reached judicial resolution. Only one involved a jury trial; another one more involved a bench trial. The vast majority of our cases (82%) ended in summary judgment; most cases (77%) results in summary judgments for defendants and only one case for plaintiffs. This is consistent with outcomes of other commercial litigation. Trials are exceedingly rare, and most cases are disposed of relatively early by judges. The fact that the vast majority of summary judgments are granted to VCs may mean either that (1) VCs are eager to settle every case that might have merits; or (2) trial court judges are disposed against founders; or (3) this pattern merely reflects the fact that in most litigation, VCs are defendants. Almost all dismissed cases were dismissed on procedural, rather than substantive, grounds – that is, a dismissal tells little about the merits of a plaintiff's claim.

5.2. Reputational effects of litigation

We next examine the impact of litigation on the reputation of the involved VCs by comparing changes in reputation proxies after the litigation. Our Hypothesis 1 predicts that VCs involved in expropriation would suffer reputational consequences. We use three proxies for VC reputation in our analysis – the size of funds raised, the number of companies in which each VC invests, and the quality of syndication partners. Each of these we measure before and after the litigation. For the number of companies financed we use a five-year window around the year of litigation, e.g., we compare the number of startups financed in the

five years before the year in which litigation commenced to that financed in the five-year period following the year of litigation. For the other proxies we use all available years. We perform a cross-sectional analysis using matching firms to test for changes in the reputational proxies. Each proxy is adjusted by the value of the corresponding reputational measure of the control firm.

In order to select matching firms, we use the universe of VC firms from VentureXpert. For each VC firm in our sample, we find a comparable VC firm that has similar reputation (measured by the age of the firm) and industry focus. We select the firm with closest age and investing in the same industry as the respective sample firm. We rely on the industry classification in VentureXpert to identify industry focus. Once we select the control firms, we calculate the adjusted proxies for reputation. We then examine whether there is a change in reputation of our sample of VCs after they have been involved in litigation.

The results of these tests are presented in Table 3. First, we analyze how the dollar amount of finds raised by each of the VCs in our sample changes following the litigation. If the lawsuits have a negative impact on reputation, we expect that VCs will raise smaller funds in the years after the legal action compared with the pre-litigation years. To account for time-series variations in the VC industry, which are well documented in the literature (for example, see Gompers and Lerner (2000)), we scale the size of VC funds by the total amount of committed VC capital in the year in which a particular fund was raised. For each firm we average the scaled fund size in the pre-litigation and post-litigation periods and subtract the corresponding average scaled size of the matching firm. The results in the table do provide support for the negative reputation effect of lawsuits. On average, VCs involved in lawsuits

experience a decrease in the size of funds raised after the year of the lawsuit. The result is significant at the 1% level (p-value of the Wilcoxon test is 0.02).

Next, we investigate the impact of litigation on the number of companies that VCs in our sample finance. We conjecture that as a consequence of the negative publicity associated with lawsuits fewer startups will be willing to accept financing from VCs involved in litigation. Thus, VCs might lose valuable dealflow. We study the number of companies that receive financing from each VC in our sample in a window of (-5, +5) years around the year of litigation. Again, we scale the number by the total number of companies financed by all VCs during each five-year period. The results in Table 3 again show significant differences before and after litigation (p-value of the Wilcoxon test is 0.04). VCs involved in lawsuits seem to lose dealflow afterwards.

Lastly, we examine changes in the quality of syndication partners (other VCs) prior to and after the year of litigation. Again, we expect that if the lawsuits have a negative effect on reputation, VCs involved in these lawsuits will syndicate with less reputable partners after the lawsuit. The results of the syndication analysis are presented in the last two rows in Table 3. We again document a negative relationship between lawsuits and quality of syndication partners prior to and after the litigation, although the differences are marginally significant. The average quality of syndication partners seems to decline after the involvement in an expropriation type of lawsuit.

By and large, the results in this section support the hypothesis that litigation has a negative impact on VC reputation (Hypothesis 1). VCs involved in litigation experience significant decline in the control firm-adjusted fund size. They also appear to syndicate with less reputable VCs and lose dealflow after the lawsuit. The changes are significant at

conventional statistical levels. We also perform firm-by-firm time series analysis without a matching sample (for the sake of brevity we do not present the results here) and find similar results.

6. Analysis of Founder Ownership in VC-backed IPOs

To perform tests of financial tunneling on the part of VCs, we use a sample of 390 venture backed IPOs from VenrtureXpert. The sample covers the period 1992-1999. For each of these firms, we collect data on founder ownership and participation in the board and the management of the firm, ownership and control rights of VCs, and board composition from IPO prospectuses. We use data from VentureXpert to construct two proxies for financial tunneling transactions – fraction of inside rounds and the time between rounds. We define an inside round as a round of financing in which only current investors in the firm participate. For each firm we calculate the fraction of inside rounds to total number of rounds. Time between rounds is measured as the number of days between subsequent financing rounds scaled by the number of days between the first and last rounds.

For each of these IPOs we know whether the founder(s) is present at the time around the IPO, and whether she participates in the management and control of the firm (i.e., whether she is also a CEO or a board member). Table 4 presents summary statistics for the IPO sample. It is worth noting that the firms in our sample are backed by prestigious underwriters (median Carter-Manaster rank of 8.1) and have a high fraction of independent directors on their boards (the median fraction of outsider is 0.71). The CEO tenure is rather short (an average of 4.1 years), which reflects the fact that VCs often have the power to replace CEOs. Another interesting result is that founders are present in 307 out of the 390 firms in the sample (almost 80%). This is much higher than what Hellmann and Puri report

(2002), but our sample includes only startups that make it to an IPO. Presumably these firms are good performers and in such situations there is no need to replace the founders. In addition, founders appear to participate in the management of the firms and their boards of directors.

In the formulation of Hypothesis 2, we argued that reputation concerns may preclude VCs to dilute or freeze-out entrepreneurs and that significant dilution may occur in rounds in which only current investors provide financing (inside rounds). Dilution is also likely to be larger, the longer the time between such inside rounds. Hence we use measures for VC reputation, the proportion of inside financing rounds and the time between such rounds as proxies for potential VC financial tunneling.

The first test examines the mean and median of founder ownership as percentage of IPO firm shares, and wealth measured both at the IPO offer and closing price. We tabulate these three measures of founder wealth for below and above-median reputation VCs (measured as the age of the lead VC) and report the results in Table 5. The effect of VC reputation on founder wealth is significant. Above median reputation VCs are associated with a median founder wealth increase of almost 50%. These results complement Hsu (2004) – not only founders ex ante are willing to accept lower valuations from reputable VCs, they also receive much higher ex post wealth in IPO firms that are backed by more reputable VCs.

We further explore the determinants of founder ownership in multivariate tests. In addition to VC reputation we also look at the effect of inside rounds and time between rounds on the pre-IPO ownership of founders. To measure inside rounds, we use a dummy variable equal to one if the fraction of inside rounds for a particular company is in the top quartile for the sample. The proxy for time between inside rounds is a dummy equal to one if the time

between inside rounds for a particular firm, measured as the number of days between consequent rounds divided by the total number of days between the first and last round, is in the top quartile for the sample.

The results from the regression of founder ownership stake on VC reputation, insider and delayed rounds dummies and other controls are presented in Table 6. One of the main results is that more reputable VCs are associated with higher founder ownership. The coefficients on the reputation variable are positive and significant in all of the models.[1] The other important result is that the proportion of insider rounds has a negative impact on founder ownership. This provides support for Hypothesis2, since this variable is a proxy for potential expropriation. Similarly, the time between rounds variable also has a negative coefficient, but it is insignificant.

The signs on the control variables are intuitive. More outsiders on the board are associated with lower founder ownership. The same holds true for VC control rights. Stronger VC control rights, as measured by the number of VCs on the board of directors, have a negative impact on founder ownership. CVC presence also results in lower founder ownership. Only when management has stronger control, as proxied by how often the CEO is also the chairman of the board, do we observe higher founder ownership. We also include a measure of lead underwriter prestige and total assets to control for firm quality and size. These variables do not change the results.

The regressions in Table 6 speak more about dilution. We next turn to founder freeze-out. When a founder is fired by a VC often her ownership stake is repurchased by the VCs and the founder is left with zero ownership in the firm. Our second test examines the

[1] We also estimate regressions with other VC reputation proxies suggested by Krishnan, Masulis, and Singh (2006) and obtain similar results.

likelihood that the founder has no ownership at the time of IPO. We run a probit model with dependent variable being equal to one if the founder has some ownership at the IPO and zero otherwise. On the right-hand side we include the same variables as the regression models in Table 6.

The probit model estimates are presented in Table 7. The results are consistent with the ownership stake regressions in Table 6. Again, VC reputation significantly increases the probability of founder presence at the IPO, or in other words higher-reputation VCs are less likely to freeze-out founders. This finding provides additional support to the argument of Hsu (2004), that entrepreneurs are willing to pay more to reputable VCs. Our evidence suggests that they have a greater chance to stay with the company if it is financed by reputable VCs. In contrast, insider and delayed rounds are negatively associated with founder involvement at the IPO, but the coefficients are not statistically significant.

7. Conclusion

Often in the popular press venture capitalists have been called "vulture capitalists," possibly because they have a reputation as investors who have the ability and incentive to expropriate firm founders and other common equity holders. In this paper, we set to study the merits of such allegation. We identify the weaknesses of the legal remedies of such expropriation and show in an analysis of lawsuits alleging expropriation that founder have rarely received any compensation, usually losing on procedural grounds.

Our analysis of the effects of lawsuits suggests that even though the legal system provides entrepreneurs with limited protections from VC expropriation, there are still reputational concerns that may discipline VCs. We show that VCs that are involved in lawsuits raise less capital in future funds and syndicate with less reputable partners. Such

effects may provide incentives for VCs to build and preserve a reputation for treating entrepreneurs fairly.

We also show that less-reputable VC are more likely to freeze out and dilute a founder before an IPO and that insider-dominated investment rounds lead to lower wealth for common stockholders. Overall, we find support for some expropriation in VC-backed startup firms.

The implications of our findings are wide-ranging. First, potential VC expropriation may reduce the ex ante investments in research and innovation by potential entrepreneurs (Bachmann and Schindele, 2006). Entrepreneurial activity is an important engine for economy growth and limiting expropriation may be of interest to policy makers. For example, our analysis of lawsuits identifies at least several cases where the PSLRA, which was originally intended to solve class-action lawsuit problems in public corporations, has the undesired effect of reducing the legal protections for common stock shareholders that exist in federal securities law.

Wide-spread tunneling hurts not only entrepreneurs and the economy, but also reputable VCs. The likelihood of VC tunneling may result in large adverse selection costs and smaller deal flow for all VCs, because entrepreneurs, who may not be able to differentiate between reputable and expropriating VCs, may rationally switch to other sources of financing like bank debt (Ueda, 2004). It is important to follow the principle of "sunshine is the best disinfectant" and disseminate widely information about lawsuits or other mistreatment of founders by less-reputable VCs. Currently such information is hard to find and rogue VCs may expropriate without facing damaging consequences for their reputation.

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Table 1. Startups and VCs Involved in Lawsuits

Startup involved in lawsuit	**VCs involved in lawsuit**	**Lawsuit year**
Agile Networks	ABS Ventures, Accel Ventures Charles River Ventures Institutional Venture Partners Oak Investment Partners	1998
Ajaxo	E*Trade	2000
Alantec	Accel Ventures, TA Associates (Advent) Dougery & Wilder	1994
Albers Air Conditioning	Edelson Technology Partners	2001
Amplica	New Enterprise Associates	1986
Answerthink	Interprise Technology Partners	2003
Arbinet Exchange	Coin Ventures	2002
Cadant Corp.	Venrock Associates	2003
Ciena Corp.	InterWest Investors, Charles River Ventures Sevin Rosen Investors Weiss, Peck & Greer	1998
Consolidated Auto Recyclers	Allied Capital Corporation	1991
Eagle Capital Mortgage	Black Diamond Advisors	1999
Eliance Corp.	Insight Capital Partners	1999
Epinions	Benchmark Capital August Capital, BV Capital Management	2005
International Digisonics Corp.	Heizer Corporation	1976
Juniper Financial	Canadian Imperial Bank of Commerce, Benchmark Ventures	2002
Medical Reimbursements of America	Clayton Associates	2004
Momentix	Masthead Venture Partners YankeeTek Ventures	2001
Office Mart	Prudential Venture Partners, Security Pacific Capital Corp.	1992
Outsourcing Solutions	McCown de Leeuw & Co.	1999
Pogo.com	Kleiner Perkins Caufield & Byers Vertex Management	2000
Unisource Network Services	Polestar Capital	2001
US Petroleum	Southwest Venture Partners WSGP Partners	1997
Ventana Medical	Marquette Venture Partners	1998
Watchmark	Argo Partnership	2004
Wine.com	Baker Capital	2005

Table 2. Characteristics of Lawsuits Filed against VCs

We collect lawsuits by keyword searches in Lexis-Nexis Law, West Law, and business media. The total number of lawsuits in our sample is 26.

Characteristic		**Number of lawsuits**
Defendant/Plaintiffs Composition:	VCs Among Defendants	15
	Founders Among Defendants	1
	VCs Among Plaintiffs	3
	Founders Among Plaintiffs	23
Alleged Tunneling Method:	Freezout	9
	Dilution	9
	Acquisition on Unfavorable Terms	8
	Operational Tunneling	3
Where Case Brought: (State / Federal):	All States	10/16
	CA	1/1
	NY	0/5
	DE	5/1
	MA	3/0
	IL	0/3
Lawsuit Outcome:	Jury trial	1
	Bench trial	1
	Summary Judgments Granted for Defendants	17
	Summary Judgments Granted for Plaintiffs	1
	Other motions	6
Causes of Action:	Corporate	11
	Contracts	6
	Securities	9
	Torts	4
PSLRA:	Total Number of Federal Cases Brought After 1995	10
	Number of Cases Dismissed for Failure to Satisfy PSLRA	3

Table 3. Changes in Reputation and Financing of VCs Involved in Litigation

The table presents the changes in the reputation of the VCs involved in the litigation cases. Reputation is measured as changes in post-litigation fund size, number of startups financed, and the reputation of syndication partners. Fund size is the average size of the funds raised by VCs before and after litigation. Each fund size is scaled by the amount of total VC commitments in the year the fund is raised. From the average scaled pre- and post-fund size we subtract the average scaled pre- and post-litigation fund size of the matching firm, which gives us the adjusted fund size. The number of startups is the number of companies financed by VCs in our sample for a period of five years prior and to and after the year of litigation, scaled by the total number of startups financed by all VCs in each period. From this scaled number we subtract the scaled number of startups financed by the matching firm for the same period. Syndication partners' reputation is measured as the average age of the coinvesting VCs. Again, the average age of the matching firms is subtracted to calculate the adjusted pre- and post-litigation reputation. Matching firms are venture capital firms that have similar pre-litigation reputation (measured as VC firm age) and invest in the same industry as the VCs involved in litigation.

Test	Adjusted pre-litigation	Adjusted post-litigation	Wilcoxon test (p-value)
Fund size			
mean	0.0500	0.0004	
median	0.0034	-0.0006	0.01
Number of startups financed			
mean	0.0010	0.0004	
median	0.0005	0.0002	0.04
Reputation of syndication partners			
mean	-0.16	-0.15	
median	-0.16	-0.37	0.09

Table 4. Venture backed IPOs – summary statistics

The sample consists of 390 venture backed IPOs for the period 1992-1999. All of the variables but Underpricing and Underwriter Rank are calculated before the offering. VC reputation is the age of the leading VC, which is the VC to invest in the first round of financing. If there are several VCs in the first round, the one with the largest investment in the company is selected as the leading one. VC ownership is the cumulative ownership of all VC firms investing in a particular company. Underwriter rank is calculated using the approach in Carter and Manaster (1990). Founder ownership is the cumulative ownership of all founders of a particular company.

Variables	Mean	Median
Sales (mill.)	21.8	12.0
Underpricing (%)	51.8	17.6
Underwriter rank	7.9	8.1
CEO ownership (%) – pre-IPO	11.2	6.5
CEO tenure (years)	4.1	3.0
CEO is a COB	0.45	0
Board size	6.4	6.0
Outside directors	0.68	0.71
VC ownership (%) – pre-IPO	35.8	33.6
VC reputation (years)	15.8	14.0
VC directors	0.31	0.28
VC is a COB	0.11	0
Founder is present	0.80	1.0
Founder ownership (%) – pre-IPO	15.5	11.1
Founder directors	0.18	0.17
Founder is a CEO	0.46	0
Founder is a COB	0.48	0

Table 5. Mean and Median Founder Wealth by VC Reputation

The table presents the mean and median ownership stake and dollar wealth of founders of 390 Venture-Backed firms that go public between 1992 and 1999. Founder ownership stake is the percentage of firm shares owned by founder listed in the IPO prospectus. Founder wealth computed at IPO offer price equals the ownership stake of the founder multiplied by the IPO offer price and the number of firm shares at IPO. Founder wealth computed at IPO closing price is computed using the first-day closing price of the IPO firm. We define Low-reputation VCs as VCs below median age, while High-reputation VCs are the VCs with above median age. The last column of the table reports the P-values of the t-test for means and Rank test for medians that the founder wealth measures are equal between the low and high reputation VC groups.

	Low Reputation VCs	High Reputation VC	P-value of difference
Mean (median) founder ownership stake	0.138 (0.093)	0.167 (0.115)	0.094 (0.143)
Mean (median) founder wealth computed at IPO offer price ($Million)	33.854 (10.657)	44.085 (15.405)	0.198 (0.061)
Mean (median) founder wealth computed at IPO closing price ($Million)	77.715 (13.076)	93.531 (17.987)	0.508 (0.023)

Table 6. Effect of VC reputation and number of insider rounds on founder ownership prior to IPO

The table presents the estimates of regression models of a sample of 390 VC-backed firms which went public in the 1992-1999 period. The dependent variable is the ownership stake of founder(s) at the time of a IPO. CEO is COB is a dummy equal to one if the CEO is also a chairman of the board. Outside Directors is the percentage of outsiders on the board. VC Directors is the percentage of VC directors on the board. VC_COB is a dummy equal to one if the VC is also a chairman of the board. CVC is a dummy equal to one if the firm is backed by CVCs. VC reputation is the log of the age of the leading VC (the VC with the earliest investment in the company). Insider Round is a dummy equal to one if the fraction of rounds in which only current investors in the company participate is in the top quartile for the sample. Delayed Round is a dummy equal to one if the average time between rounds is in the top quartile for the sample. Insider x Delayed is the product of the Insider Round and Delayed Round dummy. Underwriter rank is a dummy variable equal to one if the rank of the lead underwriter, based on the Carter and Manaster (1990) ranking, is greater than 8. Log(Assets) is the log of pre-IPO assets. Heteroscedasticity-corrected t-statistics are reported in parenthesis.

	Model1	Model2	Model3	Model4
CEO is COB	0.050	0.050	0.051	0.051
	(2.916)	(2.871)	(2.910)	(2.869)
Outside Directors	-0.487	-0.488	-0.484	-0.486
	(-5.926)	(-5.913)	(-5.873)	(-5.780)
VC Directors	-0.148	-0.145	-0.137	-0.142
	(-3.259)	(-3.186)	(-3.025)	(-3.067)
VC is COB	0.005	0.004	0.007	0.007
	(0.223)	(0.173)	(0.335)	(0.318)
CVC	-0.031	-0.034	-0.033	-0.034
	(-1.953)	(-2.127)	(-2.056)	(-2.176)
VC Reputation	0.021	0.021	0.021	0.021
	(2.040)	(2.101)	(2.070)	(2.060)
Insider Round		-0.021	-0.049	-0.050
		(-1.096)	(-2.292)	(-2.283)
Insider x Delayed			0.057	0.058
			(1.835)	(1.842)
Delayed Round			-0.025	-0.024
			(-1.341)	(-1.333)
Underwriter rank				0.015
				(0.588)
Log(Assets)				-0.001
				(-0.144)
Constant	0.533	0.536	0.533	0.531
	(6.696)	(6.734)	(6.636)	(6.713)
Industry dummies	Included	Included	Included	Included
Time dummies	Included	Included	Included	Included
Adj. R-squared	0.22	0.22	0.22	0.22
N	390	390	390	390

Table 7. Effect of VC reputation and number of insider rounds on the presence of a founder prior to IPO – evidence from VC backed IPOs

The table presents the estimates of a probit model of a sample of 390 VC-backed firms which went public in the 1992-1999 period of. The dependent variable is the probability that a founder(s) is present before the company goes public ownership (the ownership stake of the founder(s) is greater than zero). CEO is COB is a dummy equal to one if the CEO is also a chairman of the board. Outside Directors is the percentage of outsiders on the board. VC Directors is the percentage of VC directors on the board. VC_COB is a dummy equal to one if the VC is also a chairman of the board. CVC is a dummy equal to one if the firm is backed by CVCs. VC reputation is the log of the age of the leading VC (the VC with the earliest investment in the company). Insider Round is a dummy equal to one if the fraction of rounds in which only current investors in the company participate is in the top quartile for the sample. Delayed Round is a dummy equal to one if the average time between rounds is in the top quartile for the sample. Insider x Delayed is the product of the Insider Round and Delayed Round dummy. Underwriter rank is a dummy variable equal to one if the rank of the lead underwriter, based on the Carter and Manaster (1990) ranking, is greater than 8. Log(Assets) is the log of pre-IPO assets. Heteroscedasticity-corrected t-statistics are reported in parenthesis.

	Model1	Model2	Model3	Model4
CEO is COB	0.303	0.298	0.312	0.299
	(1.861)	(1.828)	(1.898)	(1.782)
Outside Directors	-2.827	-2.890	-2.898	-2.995
	(-3.378)	(-3.344)	(-3.339)	(-3.235)
VC Directors	-0.056	-0.024	-0.035	-0.158
	(-0.114)	(-0.049)	(-0.072)	(-0.318)
VC is COB	-0.007	-0.032	-0.022	-0.032
	(-0.026)	(-0.123)	(-0.086)	(-0.124)
CVC	0.231	0.178	0.190	0.133
	(1.422)	(1.080)	(1.146)	(0.795)
VC Reputation	0.160	0.175	0.173	0.172
	(1.780)	(1.930)	(1.893)	(1.892)
Insider Round		-0.353	-0.187	-0.186
		(-1.946)	(-0.648)	(-0.643)
Delayed Round			-0.126	-0.101
			(-0.603)	(-0.489)
Insider x Delayed			-0.140	-0.160
			(-0.379)	(-0.432)
Underwriter rank				0.416
				(2.123)
Log(Assets)				0.023
				(0.271)
Constant	2.322	2.121	2.469	2.469
	(2.986)	(2.669)	(3.112)	(3.112)
Pseudo R-squared	0.09	0.10	0.10	0.12
N	390	390	390	390