

# Geography and Financial Contracts

by

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## Abstract

This paper shows that geographical elements can form an essential component of contract design in addition to more traditional ingredients such as information problems, moral hazard and legal institutions. We analyze how investor-friendly cash flow contingencies are included in 1,804 contracts between U.S. venture capitalists (VCs) and U.S. startup companies. These contingencies affect both the pricing of the VC investment and the entrepreneur's monetary incentives. Our main finding is that contracts include considerably fewer such contingencies if the startup is located in California, and in particular in Silicon Valley. Indeed, this "California effect" has a greater impact on contract design than any other observable company, VC or founder characteristic. The effect also carries over between markets. Contracts are less investor-friendly if a VC is located in California or if a non-California VC has had large exposure to investments in California. We further show that contracts are also less investor-friendly if the startup is located in a region with a larger VC market, or if the geographical distance between the VC and the company is shorter. This latter finding supports the view that parties who are geographically close can contract more efficiently due to lower monitoring costs and better soft information. However, the "California effect" remains large and significant even after we control for these other factors. Finally, we present evidence that the effect cannot be explained by a substitution between control rights and cash flow contingencies. In fact, California contracts are less investor-friendly on both counts. We discuss how our findings are consistent with arguments on how regional culture can affect the nature of local VC markets.

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*“Maybe we can start again, in the new rich land - in California, where the fruit grows.”*

(Grapes of Wrath, by John Steinbeck)

## **I. Introduction**

Financial contracts are central building blocks of modern corporate finance. A large theoretical literature provides various explanations for observed variations in contract design.<sup>10</sup> Much of the literature argues that the magnitude of agency or information problems is a crucial reason for the assignment of certain cash flow and control rights. In this paper, we analyze a sample of 1,804 venture capital (VC) contracts, and show that geography is an equally important determinant of contract design.

Our study focuses on six key investor-friendly cash flow contingencies which affect the entrepreneur’s incentives as well as the pricing of VC investments (Kaplan and Stromberg, 2003; Broughman and Friend, 2009). We analyze these contract terms and document a statistically and economically significant “California effect” in VC contracting. Companies which are headquartered in California, and particularly in Silicon Valley, receive less harsh contracts (i.e. include fewer investor-friendly contract terms). The magnitude of this effect is very large. Forty seven percent of non-California contracts allow VCs to receive cumulative dividends whereas only eleven percent of California contracts include such provisions. Seventy two percent of non-California contracts give VCs the right to redeem shares in the contract whereas only thirty two percent of California contracts include a redemption rights clause. This geographical pattern remains significant even after we control for contract theoretical variables such as company industry and age, founder experience, investment size, and VC experience. Indeed, it is much larger than the effect of any other variable. The “California effect” cannot be explained by differences in corporate law, taxation or other formal institutions, because all sample contracts come from companies and VCs located in the U.S.<sup>11 12</sup>

Examining the data further, we find that the “California effect” is a widespread phenomenon in VC contracting. It holds for four of the six cash flow contingencies that we include to measure overall contract harshness, and also for the contractual allocation of control rights. California contracts include a smaller number of investor-friendly covenants and are less likely to give the VC a majority of the board seats. This result is inconsistent with the idea that VCs simply trade off less harsh cash flow contingencies for stronger control rights when they invest in California.

We show that the “California effect” exists not only for company locations but also for VC locations. VCs whose main office is in California write less harsh contracts, regardless of whether they invest in

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<sup>10</sup> There are too many papers to be listed here, however, in the specific context of finance security design papers we can include Townsend (1979) Allen and Gale (1988), Harris and Raviv (1989, 1995), Madan and Soubra (1991), Boot and Thakor (1993), Fluck (1998), Zender (1991) and in the specific context of venture capital or start up firms also Admati and Pfleiderer (1994) and Ravid and Spiegel (1997).

<sup>11</sup> Lerner and Schoar (2005), Kaplan, Martel and Stromberg (2007) and Bottazzi, DaRin and Hellmann (2008) show that legal and institutional differences can explain cross-country differences in VC contracts.

<sup>12</sup> The only potentially relevant inter-state legal difference is the enforcement of non-compete employment agreements. As discussed in Section 4, it is very difficult to attribute our results to this type of argument.

companies headquartered in California or whether the headquarters are located in other states. In fact, differences in contract harshness are of similar magnitude for VCs located in California and for company California location. In addition to these two effects, we find that VCs located outside California write less harsh contracts if they have had more exposure to the California VC market in their prior investments. We interpret this as evidence of spillover effects or learning about how to design and negotiate financial contracts.

The “California effect” is unlikely to reflect differences in company quality or bargaining power of the entrepreneur. The effect survives a battery of VC, company, founder and round characteristics. It also holds after controlling for the prior experience and success of the company’s founding team which has been shown to proxy for company quality (Gompers et al, 2009). It also holds after controlling for concentration of the regional VC market. We use different proxies for the concentration of VCs and venture-backed companies and show that more concentrated markets do indeed have contracts that include fewer investor-friendly cash flow contingencies. This result is similar to the finding of Degryse and Ongena (2005) who show that bank interest rates are lower when a borrowing firm has access to more competing lenders located nearby.

Much of the geography literature is focused on the distance between the parties and we next check whether or not the “California effect” is related to or explained by geographical proximity. A greater distance is likely to impede the VC’s ability to monitor and obtain soft information about the entrepreneur (Lerner, 1995). Because investor-friendly cash flow contingencies enhance the entrepreneur’s monetary incentive to take value-enhancing actions, such contract features can, in addition to a staged capital infusion (Tian, 2009), serve as a substitute for monitoring. We present results consistent with this thesis. Contracts signed between two more distant transaction parties are harsher than contracts signed by two closer parties. A closer distance is, however, much less important than obtaining the “California effect”. To illustrate, consider a startup company located in Illinois who must choose between financing offers from VCs in different locations. Our results show that the financial contract would be less harsh if the entrepreneur chooses a VC located in Illinois, unless the out-of-state VC is headquartered in California. Overall, the economic significance of the distance effect is about a third of the “California effect”.

Finally, even though we are unable to analyze company outcomes for our sample (We study a very recent time period, 2005-2008), an examination of historical VC investments reveals that Silicon Valley companies are more likely to have a successful exit whereas other California companies are not. Under the assumption that the distribution of company quality across geographical areas has not changed in recent years, we can infer that the pronounced “California effect” that exists also for companies outside Silicon Valley cannot be explained by geographical differences in company quality.

The rest of the paper is organized as follows—the next section provides a literature review where we relate our results to existing studies. The third section describes our data and the coding of VC contract terms. The fourth section discusses results pertaining to the “California effect” and the fifth section our distance results. The sixth and last section contains discussion and conclusions.

## **2. Literature review- Our Contribution in Perspective**

Our first, and in our view most important, contribution is to present evidence that challenges the view that differences across real-world financial contracts can be explained with optimal contracting arguments alone. The main finding of our analysis is that geographical locations affect the harshness of the VC contract. This “California effect” is surprising especially since the VC setting likely represents a good testing ground for contract theory (Hart, 2001). VCs are sophisticated investors, well versed in incentive contracts, who provide financing to young, high growth companies for which agency and information problems are severe. The contracts that VCs receive in exchange for their investments are complex and non-standardized, and have been shown to share many of the features predicted by contract theory (Sahlman, 1990; Kaplan and Stromberg 2003).

At the same time, the VC setting can be susceptible to regional contracting styles since there is a large degree of geographical fragmentation in the U.S. VC market. VCs often invest locally (Gupta and Sapienza, 1992; Norton and Tenenbaum, 1993; Stuart and Sorensen, 2001; Bengtsson, 2008; Chen et al, 2009) and also form strong syndication networks with other local VCs (Hochberg, Ljungqvist and Lu, 2007). Geographical factors may arise from the presence of formal and informal networks between venture-backed companies. Gompers, Lerner and Scharfstein (2005), show that many new venture-backed companies are spawned from local public companies that were once venture-backed. Tian (2009) shows that shorter distances between the VCs and the funded firms can lead to better outcomes, supporting the monitoring hypothesis. Lindsey (2008) presents evidence that strategic alliances between venture-backed companies are commonplace, especially for companies that share a VC investor. The fact that many venture investors were themselves previously active as entrepreneurs (Zarutskie, 2008) may be another channel through which geographical factors can survive in the VC industry. As for theoretical arguments, Landier (2001) presents a model which shows the existence of multiple equilibria can explain differences in how VCs evaluate and contract with entrepreneurs.

The prospect that a regional contracting style can survive in the VC setting does not explain how it arises in the first place. Deriving the precise causes of the “California effect” is difficult. In a general sense, our results on VC contracting are consistent with behavioral studies that emphasize that Silicon Valley has a less formal culture as compared with other entrepreneurial regions in the U.S. Saxenian (1996) provides a rich analysis of the cultures in Silicon Valley and Route 128 in Massachusetts. Both regions were home to major high-tech companies at the start of the recent computer age. In fact, the high technology employment in the two regions was roughly similar in the mid 70’s. Yet, in the 1990s and beyond Silicon Valley has become vastly more successful (figure 1, p. 3 *ibid*). Saxenian’s conclusion is that the Silicon Valley VC market offered more partner-like relationships with entrepreneurs, whereas the VC markets elsewhere took a more banker-like approach to investing. Anecdotes from lawyers who specialize in VC transactions indicate that cultural differences partly explain why the contracting style of the California VC market is friendlier to the entrepreneur. The findings presented in this paper are in line with reasoning.

Our second contribution is to enhance recent work on the importance of geography. Grinblatt and Keloharju (2001) find that portfolios of retail investors are biased towards local companies. Huberman (2001) finds that this higher fraction of local stocks in investor portfolios is primarily due to familiarity with these stocks. In contrast, Ivkovich and Weisbenner (2005) show that retail investors are better informed about local investments and these local investments are associated with higher returns. Coval and Moskowitz (2001) document a similar local bias in the portfolios of mutual fund investors and also show that geographically proximate institutions have information advantages. If both retail and institutional investors bias their portfolios towards local stocks, then a large fraction of the trading volume is likely to originate locally. Kedia and Zhou (2007) show that a large presence of local market makers significantly reduces both quoted as well as effective spreads. Similarly, Malloy (2005) documents how geographically proximate analysts have lower forecast errors and Uysal, Kedia, and Panchapagesan (2008) show that local acquirers have higher returns in mergers and acquisitions. Schultz (2003) shows that geography provides an information advantage in the context of an IPO syndicate. We add to existing studies of geography by relating the harshness of a VC contract is related to the distance between VC and company.

Our third contribution is to present new evidence on the structure of the financial contracts used in VC investments. Venture-backed companies are important promoters of entrepreneurship, innovation and economic growth.<sup>14</sup> Despite the fact that VCs infused about \$360 billion to the economy in 42,000 deals between 1999 and 2008, few studies have examined the contractual features of such investments (Sahlman, 1990; Gompers, 1988; Kaplan and Stromberg 2003, 2004; Bengtsson and Sensoy, 2009; Cumming, 2008). Our findings have important implications for the empirical testing of models of VC contract design, which explain why different types of convertible preferred equity are used in VC investments (See Berglof, 1994; Hellman; 1998, 2006; Cornelli and Yosha, 2002; Casamatta, 2003; Schmidt, 2003; Repullo and Suarez, 2004). Our results suggest that geographical factors should be included as controls in any analysis of VC cash flow and control rights, and when distance is studied it is important to separate California from other locations.

Our paper also contributes to the small literature that attempts to empirically test the validity of different contract design theories. In addition to VC studies, contract design theory has been tested in two other broad areas, namely, bio-technology and movie studies. Bio-technology papers focus on the distribution of various rights between the contracting firms (see for example, Lerner and Merces, 1998). The film industry is characterized by interesting and complex contracting. There is generally less data available on contract design than for VC or bio-technology contracts, however, outcomes are much more well-known. Chisholm (1997) analyzes several dozen actor contracts and shows that more experienced actors are more likely to receive a share contract, supporting some life cycle compensation theories. Palia et al. (2008) focus on co-financing

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<sup>14</sup> Some basic statistics illustrates the importance of VC industry: 344 venture-backed companies went public in the period 2002-2007, and venture-backed companies provided 10.4 million jobs and \$2.3 in revenues in 2006. Many of today's high profile companies received VC financing, including Microsoft, Amgen, Intel, FedEx and Google.

agreements and test theories of the boundaries of the firm, whereas Goetzmann et al. (2008) discuss screenplay sales contracts, focusing on soft information. In other industries there is sparse empirical work on contract design due to data limitations. Banerjee and Duflo (2000), for example, show that better reputation (in Indian software companies) leads to a lower prevalence of fixed payment contracts, which provides more incentives to firms than “contingent” contracts. While each industry is characterized by different institutions, most studies find support for some of the major features predicted by the theory. Our study is the first to augment these findings by showing that contracting choices can also be influenced by geographical factors.

### **3. The Data**

#### ***Sample***

A major challenge for empirical research on VC investments is to obtain reliable data on privately-held firms. We overcome this data limitation and collect detailed information about VC contracts from mandatory legal filings. An overview of our sample is presented in table 1. Our contract data is collected and coded with the help of *VCExperts*, and covers 1,804 investment rounds in 1,501 unique companies (this type of classification of VC contracts is common in the literature, see for example Kaplan, Martel and Stromberg, 2007). Importantly, we restrict our sample to one VC per round because all VCs in that round get the same contract terms. Our sample is the largest sample of VC contracts studied by researchers to date, and is about 10 times as large as the sample used by Kaplan and Stromberg (2003, 2004) or Cumming (2008). Our deals are recent, with 83% of investment rounds being closed in 2006 and 2007. The representativeness of our sample is illustrated by the fact that we have contracts from all U.S. regions and industry segments which are typically targeted by VCs.

Summary statistics are presented in table 2. We match each contract with an investment round in *VentureEconomics* and obtain the headquarter locations of the startup company and the lead VC. We identify the lead VC as the investor making the largest investment in the round. By virtue of being the largest investor, the lead VC is likely to be the most active investor during the contract negotiations with the entrepreneur.

We use zip-code data to map the exact location of VC and company in our sample. The data exhibits, as expected, a strong “California” element—California houses about 35% of the sample companies and 35% of the VCs that were lead investors in the round. In California, the Silicon Valley is the largest single cluster with about 13% of companies and 24% of VCs, many of them well known, including New Enterprise Associates, Sequoia Capital, U.S. Venture Partners and Kleiner, Perkins, Caufield and Byers all headquartered along Sand Hill Road. Consistent with earlier studies, we find that VCs prefer to invest in companies that are located close

to their headquarters. One in five companies is located no more than 5 miles from their lead VC and 46% of companies are located no more than 50 miles apart.<sup>15</sup>

We obtain other company and lead VC variables from *VentureEconomics*, and supplement with hand collected data on the characteristics of the founding team. In addition we use data from *VentureEconomics* create various measures of the aggregate size of the VC market in a particular geographical area. For about half of our sample, we obtain data from *VCExperts* and *VentureEconomics* on the pre-money valuation of the company. The average sample company raised \$11 million dollars at a pre-money valuation was \$48 million. For a subset of our sample we also have data on the contractual allocation of board seats and protective covenants which give VCs the veto rights over important business decisions. We use these data in the analysis later.

### ***Contract Terms and Contract Harshness***

Each of the 1,804 unique contracts is coded along six important contractual dimensions, namely, cumulative dividends, liquidation preference, participation, anti-dilution rights, redemption, and pay-to-play. The six contract terms jointly define the cash flow contingencies that are attached to the preferred stock that VCs receive in exchange for their investment. In other words, the contract terms determine the additional cash flow contingencies provided to the holder of one share of preferred stock. As shown by Kaplan and Stromberg (2003) most terms that are included in VC contracts are favorable to the VC and especially favorable if company performance is bad.<sup>16</sup> As these terms become harsher, VCs get stronger downside protections which gives the entrepreneur stronger monetary incentives to improve the company's performance. Inclusion of these terms implies that VCs capture in expectation a higher fraction of the company's exit proceeds than is implied by their fractional equity ownership. As a result, the price that VCs pay for their investment is relatively lower if the contract includes more of the cash flow contingencies that we study. Broughman and Fried (2009) show that these contingencies are important determinants of how exit proceeds are split, even though they sometimes are subject to minor renegotiations.

Although VC contracts include also other contractual rights, the six cash flow contingencies we study are among the most important for determining the payoff distribution between preferred and common shareholders. Also, unlike some contractual rights which are included in all contracts, the rights we study have considerable cross-sectional variation. Our interviews with VCs and lawyers who specialize on VC contracts lend support to the view that these cash flow contingencies are critical and often subject to negotiation. Indeed, a number of notable law firms (e.g. Fenwick and West and Wilson Sonsini) in their quarterly summaries of VC contract terms list summary statistics on precisely the terms we study.

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<sup>15</sup> A rule-of-thumb in VC investing is the "20 minute rule", according to which a VC should be no further away than a 20 minute drive from a portfolio company (which motivates our 5 mile and 10 mile cutoffs). Our data shows that this rule is generally obeyed, but also frequently violated.

<sup>16</sup> The exception is pay-to-play which when included does not favor the VC. We code pay-to-play inversely to maintain consistency with our coding of the other contingencies.

The exact meaning and economic importance of each cash flow term is described below. Table 2A provides an overview of the contract terms and reports their frequency in our sample. We code each contract term as 0 or 1, 2 based on how favorable it is to the VC, where a value of 2 means that the contract is “harshesht” for the existing owners of the company, or alternatively more favorable for the VC who invests in a round. While the six contract terms we study are functionally similar, they may be included or excluded in the contract independently of each other. We aggregate the six binary variables to an index labeled Downside Protection Index (DPI). DPI can take the values 0-11 where 0 is a contract that includes a minimum of investor-friendly cash flow contingencies and 11 is a contract that includes all possible investor-friendly cash flow contingencies<sup>17</sup>. As reported in table 2A, the average value of DPI is 4.96. Since we are interested in the joint contractual allocation of cash flow contingencies, our primary variable of study is DPI. We also study each cash flow right in separate empirical tests.

### ***Detailed Description of Cash flow Contingencies in VC Contracts***

Table 2B describes the individual cash flow contingencies and their incidence in our sample.

### **Cumulative Dividends**

When the cumulative dividends provision is in force, the VC receives dividends every year until the company is sold or liquidated. Cumulative dividends accumulate and are not paid out in cash to the VC until the company has a liquidation event.<sup>18</sup> The dividends are expressed in percentage terms and are typically compounding, which means that investors also earn dividend on accumulated unpaid dividends. Cumulative dividends are senior to common stock, and the seniority to other classes of preferred stock is specified in the contract. To illustrate how cumulative dividends work, consider the following example: suppose that the VC invests \$2 million and receives 8% in compounding cumulative dividends. If the company is sold after 5 years for \$10 million, then the VC receives  $(1.08^5 - 1) \times \$2 \text{ million} = \$0.94 \text{ million}$  in dividends.

As shown in Table 2, 66% of all contracts include no cumulative dividends (harshness=0). When cumulative dividends are included, the most common dividend rate is 8%. We coded 8% or below as 1 and above 8% (6% of the sample) as 2. Our statistics are similar to those found in the Kaplan and Stromberg (2003) sample, where 44% of all financing rounds have cumulative dividends and the median dividend rate is the same as in our paper, 8%.

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<sup>17</sup> The construction of the index is similar to the construction of indices such as Gompers Ishii Metrick (2003) or Bebchuk, Cohen and Ferrell (2009). Similar to these studies, our index relies on the relatively naïve aggregation method of counting functionally distinct features.

<sup>18</sup> A liquidation event could be a merger, acquisition, bankruptcy or other dissolution of the company. Almost all VC contracts include “auto-conversion rights” which if the company goes public forces an automatic conversion of the VC’s preferred stock to common stock (thus annulling all special contract terms).

### Liquidation Preference

Liquidation preference is the multiple of the investment amount a VC receives when the company has a liquidation event. Liquidation preference is senior to common stock, and the seniority to other classes of preferred stock is specified in the contract. Thus, for an investment of \$2 million, a liquidation preference of 2X means that the VC gets  $2 \times \$2 \text{ million} = \$4 \text{ million}$  in liquidation preference. Unlike cumulative dividends, the amount that the VC receives in liquidation preference does not increase over the time.

The majority of all contracts, 93%, have a 1X liquidation preference (harshness=0) and only 6% have above 1X. We coded 17 contracts (1%) that had a liquidation preference greater than 2 as 2 (the harshest). The liquidation preference is not reported by Kaplan and Stromberg (2003).

### Participation

Almost all VC investors receive convertible preferred stock. If the preferred stock is not participating, the VC effectively holds a convertible and has the option, at the time of the liquidation event, of receiving either the liquidation preference or converting the preferred stock to common stock. The fraction of common stock that the VC receives is determined by dividing the VC's investment amount by the post-money valuation of the round.

To illustrate how (non-participating) convertible preferred stock works, suppose the VC invests \$2 million at \$4 million post-money valuation with a 1X liquidation preference. When the company is sold, the VC can either claim \$2 million in liquidation preference or 50% ( $2/4$ ) of the common stock. The VC would choose to convert if and only if the proceeds from the company are above \$4 million. If the preferred stock is participating, the VC does not have to choose between the liquidation preference and between converting the preferred stock to common stock but instead receives both. Building on the example, participating preferred stock would give the VC both \$2 million and 50% of the common equity. If the company is sold for \$3 million then the VC receives \$2 million in liquidation preference and \$0.5million in common stock (50% of the remaining \$1 million).

Participation can either be unconditional, as described above, or conditional on the amount of VC cash flows. If the participating preferred stock is "capped" the VC always gets the common stock but receives the liquidation preference only if the VC's cash flows are below a specified multiple or return hurdle, calculated with the VC's investment as base. To illustrate the effects of capped participation, suppose that the participation is capped at a 3X gross investment multiple. If the company is sold for \$4 million the VC would receive with participation \$3 million. Because the gross multiple is 1.5 ( $3/2$ ) the VC also gets the liquidation preference. However if the company is sold for \$18 million the VC would receive with participation \$2 million in liquidation preference and \$8 million in common stock (50% of \$16 million), i.e. a total of \$10 million. Because this would correspond to a gross return of 5X ( $10/2$ ), which is above the specified 3X, the VC does not receive the liquidation preference. The total cash flows to the VC are instead \$9 million (50% of \$18 million).

In our sample, 32% of contracts have (non-participating) convertible preferred stock (harshness=0) and 24% have capped participating preferred stock (harshness=1) and for 44% of the contracts the participation is not capped (harshness=2). Participation is less common in the Kaplan and Stromberg sample with 39% of all contracts having capped or uncapped participating preferred stock.

### Anti-Dilution

If anti-dilution is included in the contract, the VC is issued more preferred stock if and only if the share price of a follow-up financing round is below the share price that the VC paid in the earlier financing round. Hence, anti-dilution only comes into effect when the company raises a follow-up round at a lower valuation. Anti-dilution comes in two forms, weighted average and full ratchet. Compared with weighted average anti-dilution, full ratchet is more generous to the VC by issuing more preferred stock, especially if the new financing round is small relative to the previous round.

Anti-dilution seems to be almost a boiler-plate provision in VC contracts with only 2% of all contracts having no anti-dilution (harshness=0). Weighted average is most common and found in 89% of all contracts (harshness=1), while only 9% of contracts have full ratchet anti-dilution (harshness=2). The Kaplan and Stromberg sample has a somewhat wider distribution of anti-dilution with 5% of contracts having no anti-dilution, 73% weighted average and 21% full ratchet.

### Redemption

Redemption gives the VC the right to sell back his preferred stock to the company after a specified number of years. The redemption follows a specified schedule where for example 1/3 of the stock is sold 5 years after the investment, 1/3 after 6 years and the remaining 1/3 after 7 years. In practice, the redemption option is only exercised by the VC if the company is not close to a liquidation event. In this situation the company is unlikely to repay the VC the investment amount so redemption effectively forces the company into bankruptcy.

Redemption is not included in 42% of the sample contracts (harshness=0) and included in 58% (harshness=1). Redemption is more common in the Kaplan and Stromberg sample and found for 79% of the contracts that they study.

### Pay-To-Play

The final contract term that we code is pay-to-play, which unlike the other terms is not favorable to the VC. When pay-to-play is included in the contract, a VC that chooses to not invest in follow-up financing rounds of the company is forced to give up some or all of the control and cash flow contingencies that are attached to the preferred stock. Thus, pay-to-play only matters when the VC does not invest in a follow-up round.

It could be argued that pay-to-play should not be included in DPI because this contract term only affects how cash flows are split if the VC does not invest in follow-up rounds. VCs typically continue as investors, so that pay-to-play may have limited implications in practice. Our empirical analysis of separate cash flow contingencies show that our main result – that California contracts are less investor-friendly – would actually be stronger if we did not include pay-to-play in DPI.

Pay-to-play is not included in 83% of the sample contracts. Because the VC benefits from not including pay-to-play in the contract, these contracts are coded as most “harsh” (harshness=2). Pay-to-play either involves the VC losing some contractual rights, typically anti-dilution, and converting to preferred (harshness=1) or all contractual rights forcing her to convert to common stock (harshness=0). Pay-to-play is not reported by Kaplan and Stromberg (2003).<sup>19</sup>

### ***Control Rights***

Although the focus of our study is on cash flow contingencies, we also have data on control rights for a significant fraction of the 1,804 contracts in our sample. These control rights are board seats, which give the VCs residual decision rights, and covenants, which similar to debt contracts give VCs the right to veto specific decisions. Because the power associated with control rights is more complex than the payoff implications from cash flow contingencies, we limit our attention to first round contracts only.<sup>20</sup> The legal documents which are the basis for our study outline do not always list the allocation of board seats. For 285 contracts we have data on how many board seats were given to VCs (preferred shareholders) and 182 have complete board data, which allows us to identify cases for which the VCs held a majority of the board seats. Similarly, the allocation of covenants is mentioned for 285 contracts.

## **4. Contract Terms and “California Effect”**

We now proceed to an analysis of geography and contract terms. We first study the relationship between contract harshness and geographical location, and then proceed in section 5 to include study the relationship between contract harshness and geographical distance.

### ***Downside Protection Index, Preliminary Analysis***

Table 3 provides the first data classification which documents the strong geography component which we call the “California effect”. In panel A we present univariate comparisons of our downside protection index, showing that both VC and company location matters for contract design. VCs in California tend to offer much better terms for entrepreneurs, and companies based in California also tend to receive better terms. Kaplan and

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<sup>19</sup> We should note that we also tried a binary code, i.e. where contracts were coded as either “harsh” or not harsh. This yielded a 0-6 scale. The results were very similar. These tables are available upon request from the authors.

<sup>20</sup> In a follow-up VC contracts, the allocation of decision rights depend on how many board seats and covenants are given to VCs investing in the current round *and* to those investing in earlier rounds.

Stromberg (2003) also find that a California location of the VC affects contract terms. In their case, California contracts use less explicit performance benchmarks and also have lower claims for the VC and less redemption rights, consistent with our findings.

The “California effect” on contract design is economically large, and particularly so if the company and VC are both located in the Silicon Valley—such contracts are more than one DPI unit less investor-friendly than a contract between a company and VC that are both located outside the Silicon Valley. This geographical difference represents about two thirds of one standard deviation of the cross-sectional variation of DPI. The “California effect” in VC contract design is notably larger than any difference based on plausible proxies for agency and information problems (which conceptually should matter for contract design). As shown in Panel B, differences in company age, founder background, round amount and VC experience (number of investments) each amount to only about a half DPI unit. Although these proxies are all significant in the direction predicted by theory, their magnitude is about half of the “California effect”.

We further explore whether the uniqueness of California effect reflects a difference with a few other states or reflect a broader empirical pattern. As shown in Appendix Table A, the difference exists for 40 out of the 43 U.S. states that are represented in our sample (not counting California). Also, Appendix Table B shows that the difference holds across all major industry groups and across sorts based on company age.

Panel C in table 3 shows that the differences between contracts are not due to one specific term but hold for four of the six cash flow contingencies that make up DPI. The VC attorney David K. Levine (of Snell and Wilmer LLP) confirms one of these finding: “[i]t may be a bit more common for VCs based on the East Coast to require dividends that accrue (or cumulate) but such cumulative dividends provisions are quite rare in West Coast based deals.”<sup>21</sup> We observe no differences for liquidation preference, which is not surprising given that this contingency exhibits a low degree of cross-sectional variation.

Interestingly, we find that the inclusion of pay-to-play is exactly opposite to the “California effect”. Because pay-to-play is coded inversely, this result translates into California contracts being *more* likely to include entrepreneur-friendly pay-to-play provisions. This is evidence of substitution between contract terms in VC contracts. On the one hand, VCs and companies in California are less likely to include cumulative dividends, participation, anti-dilution and redemption. On the other hand, VCs are entitled to these investor-friendly cash flow contingencies regardless of whether they continue to fund the company or not (because of no pay-to-play). Thus, whereas the “California effect” reflects strong differences in contract design, it does not reflect unambiguously less investor-friendly contracts. While it is beyond the scope of our study to compare the real-world importance of different cash flow contingencies, the California difference for pay-to-play is relatively small compared to the difference for other contingencies. Also, our interviews with VCs and lawyers

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<sup>21</sup> “Analyzing VC Deal Terms. Leading Lawyers on Structuring Term Sheets, Developing Negotiation Strategies, and Assessing Risks” (Aspatore Books, 2008) p.129.

suggest that pay-to-play is less important than the other contingencies because it only matters if VCs do not invest in follow-up rounds (which they typically do). We infer that even though California contracts have more investor-friendly pay-to-play provisions, the overall “California effect” is that VC contracts are less investor-friendly (and more entrepreneur friendly).

### ***Downside Protection Index, Multivariate Analysis***

Table 4 is a first multivariate exploration of the harshness of contract design and it focuses on the “California effect”. We run OLS regressions with DPI as the dependent variable and include all commonly used contract-theoretical variables as well as variables relating to the location of the company and the VC. All regression models also include industry and year fixed effects. The analysis confirms the results of the univariate comparison with a strong “California effect” on contract design. As shown in regression model 6, this effect seems to be larger for Silicon Valley—in other words, among California companies, Silicon Valley location provides an extra boost to the leniency of the contract.

In un-tabulated regressions we check the robustness of the “California effect”. Our results on company and VC location are robust to limiting the sample to one observation per company and VC respectively, including the pre-money valuation (which may be endogenously related to DPI), and including law firm fixed effects. Also, our results on company California location hold after including VC fixed effects. The result of these fixed effect regressions shows that the “California effect” cannot be explained by law firms or VCs using standardized contract templates.

While the “California effect” is also noted in Kaplan and Stromberg (2003) we try to further explore the question of whether it reflects only a California location or a broader pattern of regional contracting style. As shown in regression model 8, contracts become more investor-friendly as the VC is located further away from the Silicon Valley. We also consider the previous California exposure of the VCs in our sample which are headquartered outside California. For this purpose we use data from *VentureEconomics* to construct two new explanatory variables. The first variable is “VC California Investment Experience”, which measures how many times the VC has previously invested in companies located in California (model 9). The second variable is “VC California Syndication Experience”, which measures how many times the VC has previously invested in a round that was syndicated with a VC headquartered in California (model 10). We find that any California connection significantly improves contract terms for the entrepreneur. This is perhaps the most convincing piece of evidence which favors the explanation of a different contracting style in California as described by Kaplan and Stromberg (2003, p.299). This type of framework is also consistent with the management styles idea (see Bertrand and Schoar, 2003, and Schoar 2007).

We finally note that several contract theoretical variables are also significant in table 4, with results similar to other studies. Companies which raise larger round amounts and older companies are associated with less investor-friendly contracts, possibly because of their more valuable assets (Kaplan and Stromberg, 2003).

Contracts are also less harsh for more experienced VCs. This finding can be explained by such VCs optimally substituting contractual harshness with their better ability to impose other governance mechanisms (Bengtsson and Sensoy, 2009).

### ***Separate Cash Flow Contingencies***

Table 5 adds probit regressions where each separate cash flow contingencies in turn is the dependent variable. In addition to “Company in California”, our independent variables include the full set of contract-theoretical control variables. We confirm the univariate results that contracts for California contracts are less likely to include cumulative dividends, participation, anti-dilution and redemption but more likely to include an investor-friendly version of pay-to-play provisions (i.e. no pay-to-play). Again, common contract theoretical variables, such as VC experience (number of investments), company age and round number matter as well.

California companies also raise larger amounts and receive financing from a greater number of VCs (models 7 and 8). These differences cannot explain our results on DPI because our regressions in table 4 control for round amount and number of VCs. Importantly, regression model 10 shows that the pre-money valuation is not higher for companies in California. This results indicates that the “California effect” in contract harshness is not explained by differences in company quality across geographical areas. We discuss this idea in more detail in section 6.

### ***Downside Protection Index and VC Market Concentration***

Our results thus far have demonstrated a significant cultural effect in VC contracts. However, it may be that the “California effect” can be attributed either to the concentration of VCs in California. Both of these issues have been explored in earlier work, but we are the first to study the role of market concentration on VC contract designs.<sup>28</sup>

We create a variable that measures the number of active VCs in the state where the company is located. Figure 1 illustrates the number of active VCs in each state, where a darker area represents a larger concentration. Figure 2 illustrates the DPI of the average contract, with a darker area representing a more investor-friendly contract. A comparison between figures 1 and 2 clearly illustrates a negative relationship between DPI and the number of active VCs in a state. We confirm this idea in multivariate regressions shown in table 6. We regress DPI on company, VC and round variables and also include a measure of VC concentration. VC concentration is positively correlated to DPI, regardless of whether it is measured by the number of active VCs in a state, the number of active VCs in a region (using the Census 9-region classification of the U.S. states), the number of venture-backed companies in a state-industry segment or the total dollar amount raised by venture-backed companies in a state-industry segment.

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<sup>28</sup> This is consistent with the idea of clustering- see Chen et al (2009), or Delgado et al. (2009) among others.

The result holds even after we control for whether the company or VC was located in California (models 3-6). Importantly, the coefficients on the California dummies remain negative and significant. Companies that are located in California include fewer investor-friendly contract terms partly because there are more active VCs or more VC funding in this state, but other regional or cultural differences still seem to affect contract design. Put differently, the “California effect” can only partly be explained by a greater concentration of VCs in that state.<sup>29</sup>

### ***Control Rights***

As noted, for a subset of our sample we also have data on the contractual allocation of board seats and protective covenants which give VCs the veto rights over important business decisions<sup>30</sup>. This sample is restricted to first round VC investments. Table 7 presents regressions with different measures of number of control rights as dependent variables. We include, but do not report, the same battery of control variables in these regression models as in our previous tests.

Regression model 1 shows that contracts for California companies are less like to include investor-friendly covenants, which give the VC veto rights over important financial and operational decisions. We also test for each covenant separately and note that the California dummy was negative throughout and several of the most important cases show statistical significance. In particular, they include the right to issue more debt, the right to sell assets, change the company’s business model and to engage in an inside transaction. The only covenant that is more likely for California companies is the right to issue junior preferred equity. In regression models 14-16 we relate the VC’s control over the board of directors to the company’s California location. We find that California contracts are less likely to receive a board majority (although this result is only weakly significant).

These results on control rights are important because they demonstrate that the “California effect” does not reflect a substitution between cash flow and control rights. VCs who finance California companies do not agree to fewer investor-friendly cash flow contingencies in order to compensate for more investor-friendly control rights. This is further evidence that the “California effect” reflect a broad pattern of less investor-friendly contract design.

## **5. Contract Terms and Distance between Company and VC**

Our final set of tests considers another aspect of the location effect on contract design, namely, whether the relative distance between company and VC also influences how contracts are written. Papers on soft

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<sup>29</sup> In untabulated regressions, we include square measures of our variables that capture VC and company concentration. The coefficients on the California dummies remain significant after controlling for such potential non-linearity between DPI and VC/company concentration.

<sup>30</sup> The importance of board provisions for firm control has been discussed extensively. See for example, Bebchuk et al. (2002) or Chhaochharia and Grinstein (2009).

information (see Stein, 2002, Petersen and Rajan, 2002, or Berger et al. 2005, Petersen, 2004 or Uzzi, 1999) suggest that in the presence of soft information and monitoring costs, smaller local banks may be better suited to serve local customers. In our setting, if the VC and the entrepreneur are on close personal terms, they may only need the proverbial handshake rather than a complicated contract with harsh cash flow contingencies. The evidence in Lerner (1995) is consistent with the idea that distance affects how the VC interacts with their portfolio companies.

We first use a zip-code database to look up the longitude and latitude of the main office for each sample-company and VC, and then calculate distance in miles using the Haversine formula, which takes into account the curvature of the Earth.

Comparisons of average DPIs for different distances are found in table 8. As shown in panel A, DPI is lowest for companies that are at closer distance to the VC. The differences based on distance seem somewhat small, however, when we consider the “California effect”, the picture becomes much clearer. In panel B we restrict our analysis to California companies. The average DPI is 4.55 if the VC is located outside California but only 4.25 if the VC is located in California. This result can be interpreted either as a distance result or as part of the “California effect” that we document. In panel C we restrict our analysis to non-California companies. Without any California connections, and if the company and the VC are from different states, contracts feature a harshness index of 5.48. If the company and the VC are in the same state, DPI drops to 5.29. However, if out-of-state VC is located in California then DPI is 4.75, thus lower than for a same state VC. These magnitudes imply that the “California effect” dominates the distance effect on VC contracting.

Table 9 confirms the distance results in a multivariate setting. Regression models 1-5 include sample companies located in California and models 6-10 to companies located in other states. The regressions are similar to those presented in table 4 and include all controls used previously, but for space considerations we only show the distance variables and the company California location dummy. The “California effect” is as significant as it is in table 8. However, distance seems to be important as well.

## **6. Discussion about “California Effect”**

### ***Differences in Legal Institutions***

Unlike studies that compare contracts across countries, all companies and VCs in our sample are located in the U.S. This means that our results cannot be explained by differences in tax code, bankruptcy procedures, legal infrastructure and enforcement of financial contracts. Interviews with legal scholars and practicing VC lawyers confirm the view that there is no institutional factor which suggests the design of VC contracts should vary between US states. A substantial part of contract enforcement depends on which U.S. state the company has chosen for its legal incorporation. Most venture-backed companies are incorporated in Delaware. In untabulated robustness tests we include the state of incorporation in our regressions of DPI on locations. We find that our results pertaining to California locations remain unchanged in such regression models, and that DPI

does not vary with the incorporation state. This strengthens our belief that legal differences (or differences in how contract terms are reported in the mandatory legal filings we study) cannot explain the large “California effect” that we document.

To the best of our knowledge, the only potentially relevant institutional difference between U.S. states is the ability to enforce non-compete clauses in employment contracts. Such contracts are notably more difficult to enforce in California courts. Although there is no direct relationship between non-competes and the contract terms we study, it is theoretically possible that there could exist some substitution between these features. This difference in non-competes is, however, very unlikely to explain our results because we also find that contracts are less harsh in Silicon Valley, for which state laws are identical to other California locations. Also, between-state differences in the enforcement of non-competes cannot explain why after controlling for company location, we observe a differences based on VC location and VC exposure to the California market.

### ***Differences in Company Quality***

Another possible explanation for the “California effect” is that this particular geographical area attracts the best entrepreneurs and the best ideas, which could be associated with less harsh VC contracts. This reason is behaviorally equivalent to a “California effect”. However, it is not likely to explain our findings. Firstly, all our multivariate tests include a number of important control variables, such as company industry and age, founder experience, investment size, and VC experience. All these variables, and in particular the last two controls are likely to absorb various aspects of company quality—better companies raise more VC financing and match with more experienced VCs. As discussed above, the “California effect” is larger than any observable company, founder or VC characteristic. Secondly, our analysis of other deal dimensions in table 5 shows that companies in California do not have higher pre-money valuations in a multivariate regression with controls. Thirdly, a comparison of company outcomes for historical VC investments shows that whereas companies located in Silicon Valley have higher likelihood of IPO or acquisition, however, there is no difference between other California locations and other U.S. states (see Appendix Table C for details). This contrasts our results on contract design that contracts in California is considerably less investor-friendly than other U.S. states, with a much smaller difference between Silicon Valley and rest of California.

### ***Differences in Regional Style***

Conversations with VCs and attorneys specializing on VC contracts trying to gauge the source of the “California effect” seem to point to a geographical dispersion of opinions which is not tied to specific legal institutions or differences in company quality. Quotes from two reputable VC attorneys illustrate the industry perception that there are important regional differences in contract design. Eduardo C. LeFevre (of Foley and Lardner LLP) says: “There is also a growing awareness of the differences between “East Coast” and “West Coast” financings, primarily with respect to regional differences in valuation, liquidation preference, and

number of later stage financings”. Alan Bickerstaff (of Andrews Kurth LLP) adds: “The terms of VC financings are fairly customary, with nuances unique to each deal and geographic region. For example, East Coast VCs tend to require founders personally to make certain representations and warranties whereas this practice is virtually nonexistent in West Coast deals.”<sup>36</sup> In fact, a VC attorney told us that when the National Venture Capital Association tried to come up with a common template for VC contract provisions, “Western” VCs thought that what “Eastern” VCs were proposing was way too harsh. These practitioner explanations agree with the thrust of Saxenian’s (1996) argument that regional norms and culture play an important role in how local VC markets operate.

### ***Pricing and Incentives***

Before concluding our discussion about what explains the “California effect”, we need to make a few remarks about the precise contractual implications of this effect. As discussed in section 3, the cash flow contingencies we study affect the entrepreneur’s monetary incentives. The lower DPI for California contracts mean that the VC’s preferred equity is more similar to the entrepreneur’s equity. The higher DPI for non-California contracts means that the VC’s preferred equity has more downside protections, which decreases the entrepreneur’s payoffs if company performance is bad. The cash flow contingencies we study can be counterbalanced, but not replicated by increasing the entrepreneur’s performance-based cash or equity compensation.

The inclusion of investor-friendly cash flow contingencies also affects the implied pricing of VC investments. A higher DPI leads to a higher cost of capital for the company because the VC will be entitled to payoffs above and beyond the payoff from its fractional ownership. The “California effect” means that if the VC would pay the same price for a California investment as for a non-California investment, then the cost of capital would be higher in California. Importantly, we do not make this claim in this paper because it is prohibitively difficult to measure the pricing of VC investments.<sup>37</sup>

## **7. Conclusions**

This paper shows that geographical elements can form an essential component of contract design in addition to more traditional ingredients such as clauses designed to address information and agency problems, and to provisions reflecting legal and other formal institutions.

We document an economically and statistically significant “California effect” in VC contract designs. Contracts involving California companies or California VCs include considerably fewer investor-friendly cash flow contingencies. This “California effect” cannot be explained by previously studied concentration and distance effects. The VCs we study are sophisticated investors, and yet, geography seem to significantly affect

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<sup>36</sup> “Analyzing VC Deal Terms. Leading Lawyers on Structuring Term Sheets, Developing Negotiation Strategies, and Assessing Risks” (Aspatore Books, 2008), p.90 and p.101.

<sup>37</sup> VC investments are priced by the pre-money valuation, which determines the VC’s ownership fraction. However, pre-money valuation is by itself a bad proxy for the cost of capital since this metric captures both pricing and company size.

their decisions. Importantly, unlike international studies of geographical differences in VC contracts (See Lerner and Schoar, 2005; Kaplan, Martel and Stromberg, 2007; Bottazzi, DaRin, and Hellmann, 2008), our paper focuses on companies that are located in the U.S. Therefore, our results cannot be attributed to differences in the legal system, rule-of-law, accounting transparency, bankruptcy procedures, taxation, etc. We study and reject the idea that the reason for the relative friendliness of California contracts is that cash flow contingencies and control rights are traded off. In fact, we find that California contracts provide weaker control rights to VCs.

Finally, we consider other geographical factors and find evidence supporting previous work in different industries and in the VC context. Silicon Valley is the home of a large number of VCs and venture-backed companies, and our results show that such higher concentration is associated with more entrepreneur-friendly contracts. Also, shorter distance between lender and borrower which facilitates soft information and lowers monitoring costs seems to result in friendlier contracts. This latter finding is consistent with studies which show that local banks can better serve small businesses. However, even when all these factors are accounted for, the “California effect” remains a persistent factor in VC contracting.

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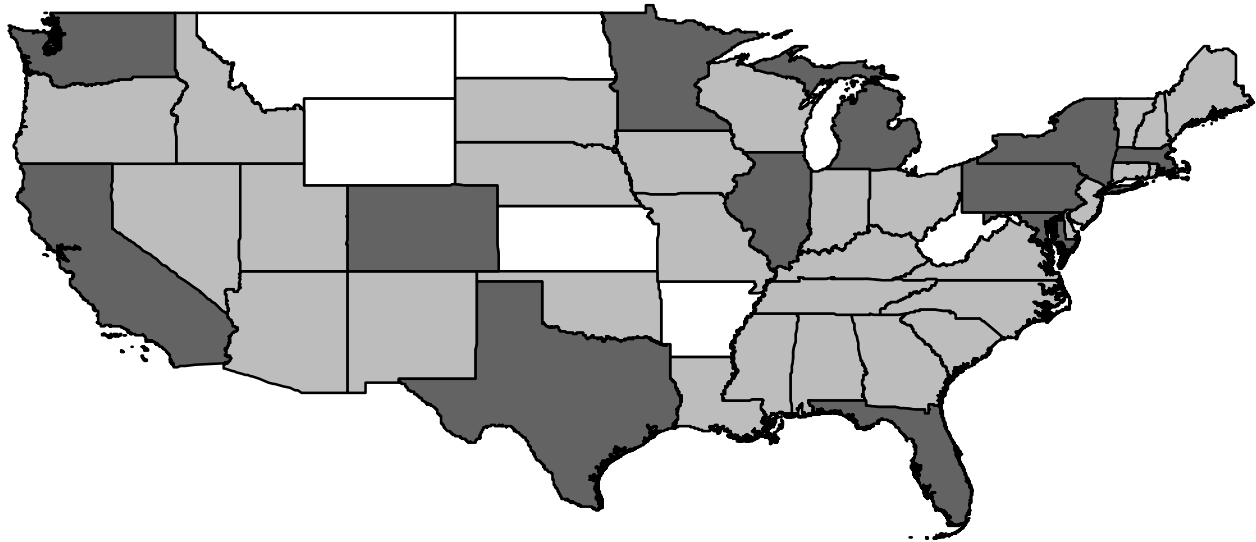
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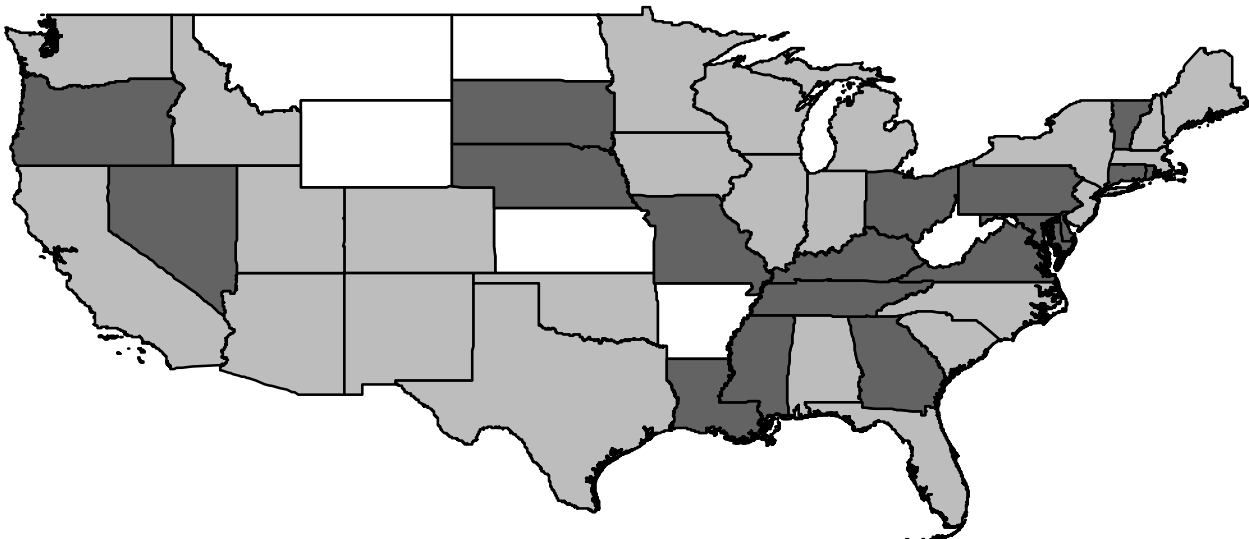
**Figure 1 – VC Concentration by U.S. State (Based on Headquarter Location)**

*Dark Grey = Above Median VC Concentration (20 or more active VCs)*  
*Light Grey = Below Median VC Concentration (Less than 20 active VCs)*  
*White = State not in sample*



**Figure 2 – Contract Harshness by U.S. State (Average Downside Protection Index)**

*Dark Grey = Above Median Downside Protection Index*  
*Light Grey = Below Median Downside Protection Index*  
*White = State not in sample*



## Table 1 - Sample Overview

The sample comprises venture capital (VC) financing contracts from U.S. companies for which the lead VC had its main office in the U.S. Each contract is matched by company name and round date with an investment round listed in VentureEconomics. Industry classification is based on VentureEconomics 10 industry groups. Company locations refer to headquarters and are here reported based on the Census 9-region division.

### Number of Unique

Contracts	1,804
Companies	1,501
Lead VCs	626

<u>Industry</u>	<u>Number of Contracts</u>	<u>Fraction</u>
Biotechnology	233	13%
Communications and Media	155	9%
Computer Hardware	43	2%
Computer Software and Services	388	22%
Consumer Related	31	2%
Industrial/Energy	70	4%
Internet Specific	382	21%
Medical/Health	275	15%
Other Products	62	3%
Semiconductors/Other Elect.	165	9%

### Year of Round

2005	218	12%
2006	670	37%
2007	851	47%
2008	65	4%

### Company Location

East North Central	69	4%
East South Central	10	1%
Mid Atlantic	219	12%
Mountain	55	3%
North East	330	18%
Pacific	694	38%
South Atlantic	256	14%
West North Central	40	2%
West South Central	131	7%

## Table 2A - Summary Statistics

See table 1 for overview of sample. Downside Protection Index (DPI) is the sum of contract terms discussed in Table 2B and has a range 0-11. Higher DPI means that the contract is more friendly to the VC investing in the round, and especially so if company performance is poor. Distance calculations reflect geographical distance between company headquarters and VC main office. All company, VC and deal variables, except DPI, are constructed using VentureEconomics data. Number of VCs in State/Region is a count of all VCs that made an investment in the same year as the contract. Number of VC-backed companies and Amount VC financing are calculated based on companies that received financing in the same year as the contract. Founder characteristics are handcollected by the authors. Serial Founder takes the value 1 if any of the company's founder has previously started a venture-backed company. Serial Founder with IPO takes the value 1 if any of the company's founder has previously started a venture-backed company which had IPO. Serial Founder with Merger takes the value 1 if any of the company's founder has previously started a venture-backed company which had a merger. Variables with only reported mean are dummies.

<u>Deal Conditions</u>	<u>Mean</u>	<u>St.Dev</u>	<u>Min</u>	<u>Max</u>	<u>Median</u>
Downside Protection Index (DPI)	4.96	1.63	0.00	10.00	5.00
Total Round Amount (\$ million)	10.82	12.40	0.01	110.00	7.00
Round Number	2.80	1.55	1.00	5.00	3.00
Number of VCs in Round	4.10	2.62	1.00	24.00	3.00
Pre-Money Valuation (\$ million)	48.74	63.37	0.13	573.94	28.47
Fraction of Shares of VCs	22.5%	11.1%	0.0%	91.9%	22.4%
<u>Company and VC Location</u>					
Company in California	34.6%				
VC in California	34.5%				
Number of Other VCs in California	0.98	1.22	0.00	8.00	1.00
Company in Silicon Valley	12.7%				
VC in Silicon Valley	23.6%				
Distance from Silicon Valley (miles) for non-California VC	42.27	11.75	7.15	59.26	47.61
VC California Investment Experience for non-California VC	20.7%	19.6%	0.0%	100.0%	15.4%
VC California Syndication Experience for non-California VC	31.8%	20.5%	0.0%	100.0%	29.2%
<u>Distance Between VC and Company</u>					
VC and Company Within 5 Miles	21.3%				
VC and Company Within 10 Miles	42.3%				
VC and Company Within 50 Miles	45.2%				
VC and Company in Same State	48.7%				
Distance (1,000 miles)	0.71	0.94	0.00	2.70	0.18
<u>Aggregate Size of VC Market</u>					
Number of VCs in State	375.11	421.02	0.00	950.00	113.00
Number of VCs in Region	475.31	441.63	0.00	1237.00	205.00
Number of VC-backed companies in Industry X State	177.52	194.50	1.00	615.00	119.00
Amount of VC financing in Industry X State (\$ millions)	1780.00	1680.00	0.00	7030.00	1090.00
<u>Company and Founder Characteristics</u>					
Company Age	4.13	2.74	0.00	10.00	4.00
Serial Founder	22.3%				
Serial Founder with IPO	5.9%				
Serial Founder with Merger	8.1%				

## Table 2B - Contract Terms

See Table 1 for sample overview. Each contract term contributes with 0, 1 or 2 to the Downside Protection Index, where 2 is the harshest to the entrepreneur / most favorable to the VC.

**Cumulative Dividends:** Dividends that the investor earns annually until the company is sold or liquidated. Cumulative means that the dividends are not paid out annually but when the company is sold or liquidated. Cumulative dividends are senior to common stock.

	<u>Above 8% = 2</u>	<u>8% or Below = 1</u>	<u>Not Included = 0</u>
Number of Contracts	112	509	1,183
Fraction of Sample	6%	28%	66%

**Liquidation Preference:** The multiple of the investor's investment that is paid back to the investor when the company is sold or liquidated. Liquidation preference is senior to common stock.

	<u>Above 2X = 2</u>	<u>Between 1X-2X = 1</u>	<u>1X = 0</u>
Number of Contracts	17	106	1,681
Fraction of Sample	1%	6%	93%

**Participation:** With participation the investor receives both a liquidation preference and a fraction of common stock when the company is sold or liquidated. With "Capped" participation the investor only receives the liquidation preference if his investment IRR is below a certain hurdle. With no participation the investor holds convertible preferred stock.

	<u>Not Capped = 2</u>	<u>Capped = 1</u>	<u>Not Included = 0</u>
Number of Contracts	799	426	579
Fraction of Sample	44%	24%	32%

**Anti-Dilution:** The investor is issued additional shares if the company raises a new financing round at a lower valuation than what the investor paid (down round). "Full Ratchet" gives the investor more additional shares than "Weighted Average", especially if the new financing round is small.

	<u>Full Ratchet = 2</u>	<u>Weighted Average = 1</u>	<u>Not Included = 0</u>
Number of Contracts	157	1613	34
Fraction of Sample	9%	89%	2%

**Redemption:** The investor has the right to sell his shares back to the company after a specified time period. A typical redemption right provision gives the investor the right to sell back 1/3 of his shares after 5 years, 1/3 after 6 years and the remaining 1/3 after 7 years.

	<u>Included = 1</u>	<u>Not Included = 0</u>
VC Contract Round	1,051	753
Contract Round	58%	42%

**Pay-To-Play:** Specifies what contractual rights that the investor loses if he does not invest in a follow-up financing round of the company. With "Convert to Preferred" the investor loses some contractual rights (typically anti-dilution rights) that are attached to his preferred stock. With "Convert to Common" the investor loses all contractual rights that are attached to his preferred stock.

	<u>Not Included = 2</u>	<u>Convert to Preferred=1</u>	<u>Convert to Common=0</u>
VC Contract Round	1,502	65	237
Contract Round	83%	4%	13%

**Table 3 - Univariate Analysis of Downside Protection and Separate Contract Terms, California Effect**

See table 1 for sample description. Panels A and B show average Downside Protection Index (DPI), which is the sum of contract terms discussed in Table 2B and has a range 0-11. Higher DPI means that the contract is more friendly to the VC investing in the round, and especially so if company performance is poor. Panel C shows frequency of separate contract terms. Dividend means that VC gets cumulative dividends. Liquidation Preference means that VC gets more than 1X liquidation preference. Participation means that VC gets participating preferred (and not convertible preferred). Redemption means that VC has right to sell back shares to company. Anti-Dilution means that VC gets full-ratchet anti-dilution. In order to allow for a consistent interpretation of contract harshness, Pay-To-Play which is unfavorable to the VC, is coded inversely so a higher frequency captures a harsher contract term. Rank test of equality of populations. Significance at 10% marked with \*, 5% \*\*, and 1% \*\*\*.

**Panel A: Average Downside Protection Index**

				<u>Difference</u>	<u>Test</u>
Company not in California	5.28	Company in California	4.35	0.93	***
Company not in Sil. Valley	5.06	Company in Silicon Valley	4.23	0.84	***
VC not in California	5.24	VC in California	4.41	0.83	***
VC not in Silicon Valley	5.16	VC in Silicon Valley	4.29	0.88	***
VC and Company not in Silicon Valley	5.22	VC and Company in Silicon Valley	4.07	1.14	***

**Panel B: Average Downside Protection Index**

				<u>Difference</u>	<u>Test</u>
> Median Company Age	5.15	< Median Company Age	4.73	0.42	***
Other Founder	4.99	Serial Founder with IPO	4.40	0.59	***
< Median Round Amount	5.21	> Median Round Amount	4.69	0.52	***
< Median VC # of Inv.	5.21	> Median VC # of Inv.	4.70	0.51	***

**Panel C: Frequency of Separate Contract Terms**

	<u>Cumulative Dividends</u>	<u>Liquidation Preference</u>	<u>Participation</u>	<u>Anti-Dilution</u>	<u>Redemption</u>	<u>Pay-To-Play</u>
Company not in California	47%	7%	70%	10%	72%	81%
Company in California	11%	7%	64%	6%	32%	87%
Difference	36%***	0%	5%**	4%***	40%***	-6%***
VC not in California	45%	7%	70%	10%	68%	82%
VC in California	14%	6%	64%	5%	39%	86%
Difference	31%***	1%	6%**	5%***	30%***	-4%**

**Table 4 - Regression Analysis of Downside Protection Index, California Effect**

See table 1 for sample description. OLS regressions where the dependent variable is Downside Protection Index (DPI), which is the sum of contract terms discussed in Table 2B and has a range 0-11. Higher DPI means that the contract is more friendly to the VC investing in the round, and especially so if company performance is poor. Sample in specifications 6-7 includes only companies in California, and in specifications 8-11 only VCs in California. All specifications include industry controls (10 groups based on VentureEconomics classification) and contract year. Residuals are clustered by company. Significance at 10% marked with \*, 5% \*\*, and 1% \*\*\*.

Specification	1	2	3	4	5	6	7	8	9	10
Dependent Variable:	DPI	DPI	DPI	DPI	DPI	DPI	DPI	DPI	DPI	DPI
Company in California	-0.896*** [0.082]	-0.688*** [0.092]	-0.747*** [0.126]	-0.813*** [0.099]	-0.636*** [0.099]			-0.742*** [0.129]	-0.493*** [0.155]	-0.576*** [0.134]
VC in California		-0.426*** [0.090]	-0.485*** [0.123]	-0.497*** [0.098]	-0.416*** [0.089]	-0.380*** [0.134]	-0.166 [0.165]			
VC and Company in California			0.131 [0.177]							
Company in Massachusetts				-0.319** [0.147]						
VC in Massachusetts				-0.211 [0.132]						
Company in Texas				-0.407** [0.165]						
Number of Other VCs in California					-0.075 [0.048]					
Company in Silicon Valley						-0.225* [0.124]	-0.176 [0.124]			
VC in Silicon Valley							-0.334** [0.148]			
Distance from Silicon Valley (miles)								0.445*** [0.104]		
VC California Investment Experience									-1.011*** [0.295]	
VC California Syndication Experience										-1.064*** [0.268]

**Table 4 continued [control variables]**

Specification	1	2	3	4	5	6	7	8	10	11
(log) Company Age	0.364*** [0.077]	0.358*** [0.076]	0.358*** [0.076]	0.339*** [0.076]	0.355*** [0.076]	0.242* [0.138]	0.242* [0.138]	0.394*** [0.093]	0.379*** [0.093]	0.361*** [0.093]
Round Number	0.031 [0.034]	0.033 [0.033]	0.034 [0.033]	0.034 [0.033]	0.037 [0.033]	0.047 [0.050]	0.046 [0.050]	0.034 [0.042]	0.039 [0.042]	0.047 [0.042]
Serial Founder	-0.105 [0.128]	-0.105 [0.125]	-0.104 [0.125]	-0.075 [0.123]	-0.107 [0.125]	0.05 [0.198]	0.026 [0.195]	-0.047 [0.163]	-0.052 [0.161]	-0.041 [0.161]
Serial Founder with IPO	-0.193 [0.186]	-0.24 [0.189]	-0.239 [0.189]	-0.222 [0.185]	-0.242 [0.188]	-0.279 [0.247]	-0.252 [0.244]	-0.611** [0.239]	-0.574** [0.236]	-0.572** [0.235]
Serial Founder with Merger	0.031 [0.162]	0.035 [0.159]	0.036 [0.158]	0.062 [0.157]	0.04 [0.159]	-0.09 [0.226]	-0.066 [0.221]	0.107 [0.215]	0.122 [0.214]	0.13 [0.214]
Number of VCs in Round	0.000 [0.018]	0.001 [0.018]	0.001 [0.018]	0.003 [0.018]	0.014 [0.020]	0.007 [0.025]	0.007 [0.025]	-0.016 [0.024]	-0.017 [0.024]	-0.014 [0.024]
(log) Total Round Amount (\$ m)	-0.285*** [0.051]	-0.283*** [0.051]	-0.280*** [0.051]	-0.265*** [0.050]	-0.274*** [0.051]	-0.198*** [0.075]	-0.197*** [0.075]	-0.333*** [0.066]	-0.282*** [0.065]	-0.267*** [0.068]
(log) VC Number of Investments	-0.180*** [0.029]	-0.165*** [0.030]	-0.164*** [0.030]	-0.146*** [0.030]	-0.166*** [0.030]	-0.119*** [0.042]	-0.098** [0.043]	-0.203*** [0.038]	-0.170*** [0.039]	-0.164*** [0.038]
VC Partnership	0.097 [0.100]	0.084 [0.099]	0.08 [0.099]	0.086 [0.098]	0.083 [0.099]	-0.068 [0.156]	-0.056 [0.155]	0.218* [0.129]	0.194 [0.128]	0.187 [0.129]
Observations	1804	1804	1804	1804	1804	625	625	1182	1182	1182
Sample	Full	Full	Full	Full	Full	Company California		VC not in California		
R-squared	0.16	0.17	0.17	0.18	0.18	0.13	0.13	0.16	0.16	0.16
Year and Industry Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

**Table 5 - Regression Analysis of Separate Contract Terms and Other Deal Characteristics, California Effect**

See table 1 for sample description. Specifications 1-6 are logit regressions where the dependent variables are separate deal terms that take the value 1 if present and 0 if not present. In order to allow for a consistent interpretation of contract harshness, we code Pay-To-Play (specification 6), which is unfavorable to the VC, as 1 when excluded and 0 when included. Specification 7 is an OLS regression where the logged total dollar amount of the round is the dependent variable, specification 8 is a negative binominal regression where the dependent variable is the number of VCs in the round, specification 9 is a logit regression where the dependent variable takes the value 1 if the round was syndicated (and 0 otherwise), specification 10 is an OLS regression where the dependent variable is the logged pre-money valuation of the round, and specification 11 is a tobit regression where the dependent variable is the total stake given VCs in the round. Residuals are clustered by company. Significance at 10% marked with \*, 5% \*\*, and 1% \*\*\*. Sample in specification 10-11 includes only rounds where valuation data is disclosed.

Specification	1	2	3	4	5	6	7	8	9	10	11
Dependent Variable:	Cum.Div.	Liq.Pref.	Particip.	Anti-Dil	Redemp.	Pay-Play	Amount	# of VCs	Syndic.	Valuat.	Stake
Company in California	-1.955*** [0.168]	-0.031 [0.213]	-0.262** [0.127]	-0.608*** [0.233]	-1.714*** [0.130]	0.551*** [0.169]	0.128*** [0.047]	-0.065** [0.032]	0.072 [0.178]	0.049 [0.069]	0.004 [0.007]
(log) Company Age	0.212* [0.117]	0.867*** [0.280]	0.185* [0.109]	0.597*** [0.214]	0.178 [0.113]	0.448*** [0.147]	0.127*** [0.040]	-0.002 [0.028]	-0.043 [0.146]	0.248*** [0.069]	-0.029*** [0.007]
Round Number	-0.028 [0.052]	0.167* [0.091]	0.065 [0.049]	0.105 [0.077]	0.013 [0.050]	-0.231*** [0.063]	0.091*** [0.017]	0.174*** [0.011]	0.347*** [0.071]	0.261*** [0.029]	-0.021*** [0.003]
Serial Founder	-0.267 [0.211]	0.4 [0.294]	-0.122 [0.193]	-0.461 [0.304]	-0.089 [0.191]	0.346 [0.256]	0.071 [0.072]	0.039 [0.048]	0.196 [0.293]	0.044 [0.104]	-0.016 [0.011]
Serial Founder with IPO	-0.33 [0.335]	-0.081 [0.451]	-0.095 [0.284]	0.866* [0.451]	0.23 [0.274]	-0.612* [0.359]	0.216* [0.119]	0.109 [0.076]	0.549 [0.545]	0.352** [0.156]	-0.005 [0.015]
Serial Founder with Merger	0.05 [0.293]	-0.398 [0.441]	0.35 [0.274]	0.055 [0.467]	0.254 [0.258]	-0.256 [0.343]	0.199** [0.100]	0.034 [0.059]	0.192 [0.453]	0.276** [0.136]	0.012 [0.014]
(log) VC Number of Investments	-0.211*** [0.044]	-0.213*** [0.078]	-0.094** [0.042]	-0.043 [0.069]	-0.089** [0.043]	-0.142** [0.059]	0.082*** [0.016]	0.004 [0.010]	-0.037 [0.060]	0.108*** [0.024]	0.001 [0.002]
VC Partnership	0.13 [0.156]	-0.061 [0.253]	0.038 [0.145]	0.268 [0.246]	0.087 [0.151]	0.131 [0.184]	0.039 [0.058]	-0.014 [0.034]	-0.253 [0.234]	-0.004 [0.077]	-0.008 [0.008]
Observations	1804	1804	1804	1804	1804	1804	1804	1804	1804	894	894
Sample	Full	Full	Full	Full	Full	Full	Full	Full	Full	Valuation Data	
R-squared / Pseudo R-squared	0.14	0.1	0.04	0.07	0.14	0.08	0.14		0.07	0.33	
Year and Industry Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Round Amount, Number of VCs	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No

**Table 6 - Regression Analysis of Downside Protection Index, Market Concentration**

See table 1 for sample description. OLS regressions where the dependent variable is Downside Protection Index (DPI), which is the sum of contract terms discussed in Table 2B and has a range 0-11. Higher DPI means that the contract is more friendly to the VC investing in the round, and especially so if company performance is poor. Number of VCs in State/Region is a count of all VCs that made an investment in the same year as the contract. Number of VC-backed companies and Amount VC financing are calculated based on companies that received financing in the same year as the contract. Control variables are (log) Round Amount, Number of VCs in Round, (log) Company Age, Serial Founder, Serial Founder with IPO, Serial Founder with Merger, VC Partnership, (log) VC Number of Investment, and 10 industry dummies (VentureEconomics classifications) and year dummies. Residuals are clustered by company. Significance at 10% marked with \*, 5% \*\*, and 1% \*\*\*.

Specification	1	2	3	4	5	6
Dependent Variable:	DPI	DPI	DPI	DPI	DPI	DPI
Company in California			-0.385*** [0.148]	-0.484*** [0.143]	-0.309** [0.139]	-0.422*** [0.120]
VC in California			-0.430*** [0.090]	-0.424*** [0.090]	-0.440*** [0.090]	-0.442*** [0.090]
(log) Number of VCs in State	-0.203*** [0.020]	-0.094** [0.037]	-0.092*** [0.034]			
(log) Number of VCs in Region				-0.092* [0.047]		
(log) Number of VC-backed companies in Industry X State					-0.167*** [0.045]	
(log) Amount of VC financing in Industry X State						-0.116*** [0.032]
Observations	1804	1804	1804	1804	1804	1804
Sample	Full	Full	Full	Full	Full	Full
R-squared	0.05	0.07	0.07	0.07	0.07	0.07
Year and Industry Controls	Yes	Yes	Yes	Yes	Yes	Yes
Company, Founder, VC Variables	Yes	Yes	Yes	Yes	Yes	Yes
Region Controls	No	Yes	No	No	No	No

**Table 7 - Regressions Analysis of Control Rights (Covenants and Board Seats), California Effect**

*Subsample that includes 285 contracts from first VC financing rounds. Specification 1 is a negative binominal regression where the number of covenants is the dependent variable. Specifications 2-13 are logit regressions where each dependent variable takes the value of 1 if a certain covenant is included, and 0 otherwise. Specification 14 is an negative binominal regression where the number of preferred board seats is the dependent variable. Specification 15 is a logit regression where the dependent variable takes the value 1 if the VC has a majority of the board seats if outside board members support the VCs. Specification 16 is a logit regression where the dependent variable takes the value 1 if the VC has a majority of the board seats regardless of whether the outside board members support the VCs. The sample in specification 16 is limited to 182 contracts with complete board information in the Certification of Incorporation. Control variables are (log) Round Amount, Number of VCs in Round, (log) Company Age, Serial Founder, Serial Founder with IPO, Serial Founder with Merger, VC Partnership, (log) VC Number of Investment, and 10 industry dummies (VentureEconomics classifications) and year dummies. Significance at 10% marked with \*, 5% \*\*, and 1% \*\*\*.*

Specification	Dependent Variable	Company in California	Company, Round and VC Variables	Location and Year Controls	Observations	Pseudo R-squared
<u>Covenants</u>						
1	Number of Covenants	-0.300*** [0.106]	Yes	Yes	285	0.02
2	Issue Debt	-1.021*** [0.284]	Yes	Yes	285	0.06
3	Issue Junior Security	0.550* [0.289]	Yes	Yes	285	0.07
4	Sell Assets	-0.839*** [0.314]	Yes	Yes	285	0.06
5	Buy Assets	-0.371 [0.321]	Yes	Yes	285	0.04
6	Investment	-0.679 [0.742]	Yes	Yes	285	0.31
7	Change Business	-0.614* [0.359]	Yes	Yes	285	0.05
8	Change Competitive Ability	-0.923 [0.813]	Yes	Yes	285	0.16
9	Hire Management	-0.298 [0.518]	Yes	Yes	285	0.13
10	Change Compensation	-0.599 [0.385]	Yes	Yes	285	0.07
11	Inside Transaction	-1.013** [0.459]	Yes	Yes	285	0.11
12	Monitoring	-0.526 [0.848]	Yes	Yes	285	0.13
13	Company Exit	-0.06 [0.860]	Yes	Yes	285	0.08
<u>Board Seats</u>						
14	# of Preferred Board Seats	-0.059 [0.097]	Yes	Yes	285	0.04
15	VC Board Majority With Outsiders	-0.552* [0.317]	Yes	Yes	285	0.14
16	VC Board Majority	-0.131 [0.522]	Yes	Yes	182	0.13

## Table 8 - Univariate Analysis of Downside Protection, Distance between Company and VC

See table 1 for sample description. Panel A shows average Downside Protection Index (DPI), which is the sum of contract terms discussed in Table 2B and has a range 0-11. Higher DPI means that the contract is more friendly to the VC investing in the round, and especially so if company performance is poor. Panel A shows frequency of separate contract terms. Dividend means that VC gets cumulative dividends. Liquidation Preference means that VC gets more than 1X liquidation preference. Participation means that VC gets participating preferred (and not convertible preferred). Redemption means that VC has right to sell back shares to company. Anti-Dilution means that VC gets full-ratchet anti-dilution. In order to allow for a consistent interpretation of contract harshness, Pay-To-Play which is unfavorable to the VC, is coded inversely so a higher frequency captures a harsher contract term. Rank test of equality of populations. Significance at 10% marked with \*, 5% \*\*, and 1% \*\*\*.

<b><u>Panel A: Average Downside Protection Index. All Contracts</u></b>				<u>Difference</u>	<u>Test</u>
Distance >10 Miles	4.99	Distance ≤ 10 Miles	4.83	0.16	*
Distance > 50 Miles	5.02	Distance ≤ 50 Miles	4.88	0.14	*
Distance > 100 Miles	4.97	Distance ≤ 100 Miles	4.94	0.03	
Different State	5.11	Same State	4.80	0.32	***
<b><u>Panel B: Average Downside Protection Index, Contracts From California Companies</u></b>				<u>Difference</u>	<u>Test</u>
Different State	4.55	Same State = California VC	4.25	0.29	**
<b><u>Panel C: Average Downside Protection Index, Contracts From non-California Companies</u></b>				<u>Difference</u>	<u>Test</u>
Different State	5.48	Same State	5.29	0.19	*
California VC	4.75			-0.54	***

**Table 9 - Regression Analysis of Downside Protection Index, Distance between Company and VC**

See table 1 for sample description. OLS regressions where the dependent variable is Downside Protection Index (DPI), which is the sum of contract terms discussed in Table 2B and has a range 0-11. Higher DPI means that the contract is more friendly to the VC investing in the round, and especially so if company performance is poor. Sample in specification 1-5 includes only company in California, and in specifications 6-10 includes only company in other states. Control variables are (log) Round Amount, Number of VCs in Round, (log) Company Age, Serial Founder, Serial Founder with IPO, Serial Founder with Merger, VC Partnership, (log) VC Number of Investment, and 10 industry dummies (VentureEconomics classifications) and year dummies. Residuals are clustered by company. Significance at 10% marked with \*, 5% \*\*, and 1% \*\*\*.

Specification	1	2	3	4	5	6	7	8	9	10
Dependent Variable:	DPI	DPI	DPI	DPI	DPI	DPI	DPI	DPI	DPI	DPI
VC in California						-0.467***	-0.526***	-0.506***	-0.540***	-0.448**
						[0.129]	[0.131]	[0.139]	[0.138]	[0.184]
VC and Company Within 5 Miles	-0.196					-0.068				
	[0.192]					[0.141]				
VC and Company Within 10 Miles		-0.238*					-0.265**			
		[0.142]					[0.120]			
VC and Company Within 50 Miles			-0.422***					-0.107		
			[0.120]					[0.113]		
VC and Company in Same State				-0.403***					-0.186*	
				[0.133]					[0.111]	
Distance (miles)					0.395***					-0.011
					[0.122]					[0.157]
Observations	625	625	625	625	625	1179	1179	1179	1179	1179
Sample	Company California					Company non-California				
Pseudo R-squared	0.10	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Year and Industry Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Company, Founder, VC Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

## Appendix Table A - Downside Protection Index, Difference with California

See table 1 for sample description. Downside Protection Index (DPI), which is the sum of contract terms discussed in Table 2B and has a range 0-11. Higher DPI means that the contract is more friendly to the VC investing in the round, and especially so if company performance is poor.

Company State	DPI	DPIstate - DPI[California]
Alabama	6.00	<b>1.65</b>
Arizona	4.81	<b>0.46</b>
California	4.35	<b>na</b>
Colorado	4.64	<b>0.29</b>
Connecticut	5.74	<b>1.39</b>
Washington DC Area	6.50	<b>2.15</b>
Delaware	7.00	<b>2.65</b>
Florida	5.42	<b>1.07</b>
Georgia	5.56	<b>1.21</b>
Hawaii	5.00	<b>0.65</b>
Iowa	3.00	<b>-1.35</b>
Idaho	5.50	<b>1.15</b>
Illinois	5.42	<b>1.07</b>
Indiana	4.75	<b>0.40</b>
Kentucky	7.00	<b>2.65</b>
Louisiana	6.00	<b>1.65</b>
Massachusetts	4.93	<b>0.58</b>
Maryland	5.57	<b>1.22</b>
Maine	5.50	<b>1.15</b>
Michigan	5.21	<b>0.86</b>
Minnesota	4.88	<b>0.53</b>
Montana	6.00	<b>1.65</b>
Mississippi	7.75	<b>3.40</b>
North Carolina	5.13	<b>0.78</b>
Nebraska	7.00	<b>2.65</b>
New Hampshire	4.11	<b>-0.24</b>
New Jersey	5.48	<b>1.13</b>
New Mexico	5.23	<b>0.88</b>
Nevada	7.00	<b>2.65</b>
New York	5.44	<b>1.09</b>
Ohio	5.44	<b>1.09</b>
Oklahoma	5.00	<b>0.65</b>
Oregon	6.00	<b>1.65</b>
Pennsylvania	5.82	<b>1.47</b>
Rhode Island	6.00	<b>1.65</b>
South Carolina	4.00	<b>-0.35</b>
South Dakota	7.00	<b>2.65</b>
Tennessee	6.33	<b>1.98</b>
Texas	4.99	<b>0.64</b>
Utah	5.11	<b>0.76</b>
Virginia	6.25	<b>1.90</b>
Vermont	7.00	<b>2.65</b>
Washington	4.69	<b>0.34</b>
Wisconsin	4.89	<b>0.54</b>

## Appendix Table B - Downside Protection Index, California Effect, By Industry and Company Age

See table 1 for sample description. Downside Protection Index (DPI), which is the sum of contract terms discussed in Table 2B and has a range 0-11. Higher DPI means that the contract is more friendly to the VC investing in the round, and especially so if company exit valuation is low. VC Investment Focus in California reflects below or above sample median "VC California Investment Experience" for non-California VCs.

Sample	Full	Company Location			VC Location			VC Investment Focus in Calif.		
		Non-Calif	Calif.	Difference	Non-Calif	Calif.	Difference	Low	High	Difference
<u>Industry</u>										
Biotechnology	4.79	5.25	4.06	<b>1.20</b>	5.11	4.03	<b>1.08</b>	5.54	4.81	<b>0.72</b>
Communications and Media	4.75	5.01	4.36	<b>0.65</b>	4.86	4.61	<b>0.25</b>	5.15	4.63	<b>0.52</b>
Computer Hardware	5.37	5.83	4.85	<b>0.98</b>	5.76	4.57	<b>1.19</b>	5.94	5.45	<b>0.49</b>
Computer Software/Services	5.03	5.31	4.35	<b>0.96</b>	5.36	4.37	<b>0.99</b>	5.54	5.08	<b>0.46</b>
Consumer Related	5.55	5.68	5.00	<b>0.68</b>	5.84	4.33	<b>1.51</b>	5.94	5.67	<b>0.27</b>
Industrial/Energy	4.90	5.11	4.50	<b>0.61</b>	5.30	4.37	<b>0.93</b>	5.88	4.92	<b>0.96</b>
Internet Specific	4.94	5.22	4.37	<b>0.86</b>	5.23	4.38	<b>0.85</b>	5.51	4.90	<b>0.61</b>
Medical/Health	4.91	5.35	4.07	<b>1.27</b>	5.16	4.31	<b>0.85</b>	5.71	4.87	<b>0.84</b>
Other Products	5.10	5.40	4.42	<b>0.97</b>	5.35	4.53	<b>0.82</b>	5.58	5.05	<b>0.53</b>
Semiconductors/Other Elect.	5.10	5.33	4.80	<b>0.53</b>	5.36	4.81	<b>0.56</b>	5.73	4.90	<b>0.84</b>
<u>Company Age (years)</u>										
0	4.86	5.12	3.86	<b>1.26</b>	5.13	4.06	<b>1.07</b>	4.56	5.46	<b>0.90</b>
1	4.64	4.89	4.06	<b>0.83</b>	4.92	4.01	<b>0.90</b>	4.76	5.13	<b>0.36</b>
2	4.74	5.02	4.31	<b>0.72</b>	5.04	4.23	<b>0.81</b>	5.00	5.07	<b>0.07</b>
3	4.73	5.08	4.09	<b>0.99</b>	5.02	4.23	<b>0.79</b>	4.58	5.43	<b>0.85</b>
4	4.91	5.20	4.42	<b>0.78</b>	5.12	4.57	<b>0.55</b>	4.82	5.47	<b>0.66</b>
5	5.19	5.51	4.57	<b>0.94</b>	5.40	4.83	<b>0.58</b>	4.91	5.89	<b>0.98</b>
6	5.30	5.72	4.53	<b>1.19</b>	5.64	4.69	<b>0.95</b>	5.32	5.87	<b>0.55</b>
7	5.28	5.70	4.64	<b>1.05</b>	5.52	4.89	<b>0.62</b>	5.34	5.66	<b>0.32</b>
8	5.07	5.32	4.47	<b>0.85</b>	5.43	4.15	<b>1.28</b>	4.96	6.11	<b>1.15</b>
9	5.13	5.62	4.44	<b>1.18</b>	5.65	4.37	<b>1.28</b>	4.88	6.95	<b>2.07</b>
10 or above	5.43	5.94	4.56	<b>1.38</b>	5.74	4.36	<b>1.37</b>	5.33	6.24	<b>0.90</b>

**Appendix Table C - Company Outcome by California and Silicon Valley Location**

*Data from VentureEconomics. Sample includes all U.S. based venture-backed companies which received their first round of VC financing before 1980 and 2002. Significance from Wilcoxon tests at 10% marked with \*, 5% \*\*, and 1% \*\*\*.*

	Outcome Probabilities			Test of Differences in Outcome Probabilities		
	Non-California	California		Non-CA vs. Non-SV	Non-CA vs. SV	Non-SV vs. SV
		Non-Silicon Valley	Silicon Valley			
IPO	13.7%	13.6%	14.8%			
Merger	33.2%	33.3%	36.3%		***	**
Other Outcome	53.0%	53.1%	49.0%		***	***
Observations	12,242	3,141	3,072			