ecgi

Top-tier Law Firm Expertise and Venture Capital Investments: Global Evidence

Finance Working Paper N° 934/2023
September 2023

Douglas J. Cumming
Florida Atlantic University, University of Birmingham and ECGI

Giang Nguyen
Emlyon Business School

Anh Viet Pham
University of Newcastle

Cameron Truong
Monash University

ECGI Working Paper Series in Finance

Top-tier Law Firm Expertise and Venture Capital Investments: Global Evidence

Working Paper N° 934/2023

September 2023

Douglas J. Cumming
Giang Nguyen
Anh Viet Pham
Cameron Truong

We are grateful for comments David Dowling, Elise Gourier, Benjamin Wache, and participants at the 2023 "The Law and Finance of Private Equity and Venture Capital" conference and 2023 Entrepreneurial Finance Association (ENTFIN) conference. All errors are ours.

Abstract

Using a comprehensive sample of global venture capital (VC) deals over the period 2005–2020, we document that VC deals involving top-market-share law firms correlate with a range of auspicious economic outcomes. First, the involvement of top law firms is associated with a substantially reduced probability of failure or cancellation of VC deals. Second, we document that when VC deals involve top law firms, either on the buy-side or sell-side, prompt venture capitalists (VCs) to allocate greater investment capital to these transactions. Third, top law firms are associated with a higher valuation of portfolio, alongside higher returns generated from the current financing round to subsequent rounds. Finally, portfolio companies that secure investments involving top law firms exhibit a heightened likelihood of successful exits through initial public offerings (IPOs) or mergers and acquisitions (M&A). The associations documented in this study are significant after controlling for selection bias and other pertinent factors such as characteristics of investee, VC entities, and broader macro and legal environments. We interpret that top law firms offer a specialized acumen that facilitates the seamless execution of transactions and contributes to the generation of value within VC investments. The alignment with the objectives of both VCs and investees highlights the critical role of legal advisors' expertise in shaping the success of VC investments.

Keywords: law firms; venture capital; deal completion; capital allocation; transaction valuation

JEL Classifications: K10; G23; G24; G32

Douglas J. Cumming*
DeSantis Distinguished Professor of Finance and Entrepreneurship
Florida Atlantic University
777 Glades Road
Boca Raton, Florida 33431, USA
phone: (561) 297-3225
e-mail: cummingd@fau.edu

Giang Nguyen
Associate Professor
Emlyon Business School
23Av.GuydeCollongue
69130´Ecully, France
e-mail: gnguyen@em-lyon.com

Anh Viet Pham
Lecturer
University of Newcastle
462 Hunter St
Newcastle NSW 2300, Australia
e-mail: anh.pham@newcastle.edu.au

Cameron Truong
Professor
Monash University
23 Innovation Walk
Clayton, Victoria 3800, Australia
e-mail: Cameron.Truong@monash.edu

*Corresponding Author

Top-tier Law Firm Expertise and Venture Capital Investments: Global Evidence*

Douglas Cumming
College of Business
Florida Atlantic University, USA

Giang Nguyen
Department of Accounting and Corporate Finance
emlyon business school, France

Anh Viet Pham
Newcastle Business School
University of Newcastle

Cameron Truong
Monash Business School
Monash University

Abstract

Using a comprehensive sample of global venture capital (VC) deals over the period 2005–2020, we document that VC deals involving top-market-share law firms correlate with a range of auspicious economic outcomes. First, the involvement of top law firms is associated with a substantially reduced probability of failure or cancellation of VC deals. Second, we document that when VC deals involve top law firms, either on the buy-side or sell-side, prompt venture capitalists (VCs) to allocate greater investment capital to these transactions. Third, top law firms are associated with a higher valuation of portfolio, alongside higher returns generated from the current financing round to subsequent rounds. Finally, portfolio companies that secure investments involving top law firms exhibit a heightened likelihood of successful exits through initial public offerings (IPOs) or mergers and acquisitions (M&A). The associations documented in this study are significant after controlling for selection bias and other pertinent factors such as characteristics of investee, VC entities, and broader macro and legal environments. We interpret that top law firms

*Corresponding author: Douglas Cumming, College of Business, Florida Atlantic University, USA. Email: cummingd@fau.edu

We are grateful for comments David Dowling, Elise Gourier, Benjamin Wache, and participants at the 2023 "*The Law and Finance of Private Equity and Venture Capital"* conference and 2023 Entrepreneurial Finance Association (ENTFIN) conference. All errors are ours.

offer a specialized acumen that facilitates the seamless execution of transactions and contributes to the generation of value within VC investments. The alignment with the objectives of both VCs and investees highlights the critical role of legal advisors' expertise in shaping the success of VC investments.
Keywords: *law firms; venture capital; deal completion; capital allocation; transaction valuation*
JEL Classification: K10; G23; G24; G32

Top-tier Law Firm and Venture Capital Investments: Global Evidence

Abstract

Using a comprehensive sample of global venture capital (VC) deals over the period 2005–2020, we document that VC deals involving top-market-share law firms correlate with a range of auspicious economic outcomes. First, the involvement of top law firms is associated with a substantially reduced probability of failure or cancellation of VC deals. Second, we document that when VC deals involve top law firms, either on the buy-side or sell-side, prompt venture capitalists (VCs) to allocate greater investment capital to these transactions. Third, top law firms are associated with a higher valuation of portfolio, alongside higher returns generated from the current financing round to subsequent rounds. Finally, portfolio companies that secure investments involving top law firms exhibit a heightened likelihood of successful exits through initial public offerings (IPOs) or mergers and acquisitions (M&A). The associations documented in this study are significant after controlling for selection bias and other pertinent factors such as characteristics of investee, VC entities, and broader macro and legal environments. We interpret that top law firms offer a specialized acumen that facilitates the seamless execution of transactions and contributes to the generation of value within VC investments. The alignment with the objectives of both VCs and investees highlights the critical role of legal advisors' expertise in shaping the success of VC investments.

Keywords: *law firms; venture capital; deal completion; capital allocation; transaction valuation*

JEL Classification: K10; G23; G24; G32

Executive Summary

Information asymmetry often hampers capital provision transactions, yielding suboptimal outcomes. In the context of private equity transactions, involving venture capital (VC), overcoming this issue is critical. This study investigates how top law firms, critical in providing legal advice and contract design for VC deals, impact communication and coordination between VCs and portfolio companies. The study explores whether top law firms' participation leads to enhanced outcomes in terms of completion rates, investment returns, and exit results.

The research in this study builds on existing studies that examine various ways to improve private equity performance. It probes how formal legal services impact VC transactions by mitigating information frictions. The study contends that such engagement could either hinder collaboration due to excessive formality or bolster outcomes through reduced information asymmetry and improved trust. The focus is on the empirical assessment of this influence.

Drawing insights from an extensive dataset comprising nearly 182,000 global VC deals spanning 2005 to 2020, the research underscores the multifaceted impact of top-tier law firms on deal success and performance. Top-tier law firms, while diverse in their roles, control a significant portion of the VC legal advisory market. The study documents the prevalence of top-tier law firms' involvement in VC deals, with increasing participation over time.

The empirical results unfold several noteworthy insights. First, the presence of top-tier law firms correlates with a lower likelihood of deal failure. Second, VC deals with top-tier law firms witness larger investments by VCs in portfolio companies, enhancing acquired ownership. In addition, cross-sectional tests show that the influence of top-tier law firms in varying legal system attributes. Countries with stronger civil justice, court structure, and property rights experience a less pronounced impact.

Our study further investigates the relation between top-tier law firms' involvement and subsequent VC deal performance. We identify a positive link between successful exits or further financing and the engagement of top-tier law firms. Interestingly, a longer time to exit deals involving top-tier law firms indicates strategic value creation. Moreover, these deals generate higher cross-round returns, substantiating their positive impact on post-deal financial performance. In addressing endogeneity challenges, our study employs rigorous econometric strategies to isolate the influence of top-tier law firms. These approaches consistently document that top-tier law firms contribute to better VC deal outcomes post deal completion.

In conclusion, this study advances the understanding of the role of legal advisors in capital provision transactions. The study highlights the positive impact of top-tier law firms on VC deal completion, investment returns, and exits, regardless of the party they represent. In addition, the study also documents the significance of legal institutions in the VC industry, indicating the critical role of top-tier law firms in countries with less developed legal systems. This research enriches our insights into the complex dynamics of VC deals and the valuable contribution of top-tier law firms to their success.

1. Introduction

The provision of capital in transactions is often hindered by significant information asymmetry between parties, resulting insuboptimal economic outcomes (Leland and Pyle, 1977; Stiglitz and Weiss, 1981). Previous research has explored diverse methods to enhance the performance of private equity transactions. These methods include leveraging informal networks and prior business experience (Hochberg, Ljungqvist, and Lu, 2007; Bottazzi, Rin, and Hellman, 2008), employing social connections (Hedge and Tumlinson, 2014), and nurturing mutual trust (Bottazzi, Rin, and Hellman, 2016) to alleviate information challenges and promote collaboration. In this study, we contribute to this body of literature by investigating how top-tier law firms, engaged in providing legal counsel and designing contracts for venture capital (VC) transactions, can facilitate communication and coordination between VCs and portfolio companies both pre and post deal completion. Specifically, we assess whether the involvement of top law firms on either side of a VC deal contributes to superior outcomes in terms of completion rates, investment returns, and exit results.[1]

That participation of top law firms in VC deals should produce superior economic outcomes is neither certain nor obvious, however. Two prominent explanations offer divergent predictions on the economic value of such alignment between VC deals and high-quality legal services. On the one hand, if the engagement of top-tier law firms in VC deals stems from a party's desire to safeguard oneself and pre-empt any opportunistic behaviour by the county party, this might result in excessive formality, tension, and, ultimately undermine the economic success of

[1] Legal advisers play a crucial role in the private equity industry by providing legal expertise and guidance to both investors and portfolio companies. They are responsible for drafting and reviewing legal documents, such as term sheets and purchase agreements, and ensuring compliance with regulatory requirements. Legal advisers also help identify and mitigate legal risks, which can significantly impact the success of the investments. Given the complex nature of private equity deals, the involvement of a skilled and experienced legal adviser is critical to ensuring the transaction runs smoothly and the investor's interests are protected. Despite the importance of legal advisers in private equity investments, there has been relatively little research on their specific role and impact on transaction outcomes.

the collaborative relationships between VC firms and portfolio companies. Alternatively, if the engagement of top-tier laws firm helps mitigate asymmetric information in private transactions by, for example, providing sound legal advice on clients' fiduciary responsibilities, reducing communication costs, fostering greater trust through thorough due diligence, crafting effective contract terms, and acting as key negotiators between VC firms and portfolio companies, then these legal services could indeed lead to more favourable outcomes for VC deals. As such, whether the presence of top-tier law firms enhances economic outcomes in an environment of inherent information asymmetry between VC firms and portfolio companies is an empirical question central to our study.[2]

Our analysis utilizes a dataset encompassing nearly all global venture capital deals (181,944 deals) spanning from 2005 to 2020, allowing us to investigate the role of top-tier law firms in the context of business partnerships between VC firms and portfolio companies. Despite a diverse array of law firms serving as legal advisors for both VC firms and portfolio companies in our sample, the legal advisory landscape is notably concentrated, with the top 10 law firms exerting considerable control (around 20.5%) over the VC legal advisory market throughout our sample period. Consequently, our initial observation demonstrates a pervasive practice of engaging top-tier law firms in VC deals, particularly in countries like the U.S., Spain, Brazil, and Canada. Notably, the trend shows a steady rise in the involvement of top law firms in VC deals over the years, with the top 10 law firms' representation increasing from 19% in 2005 to 20.3% in 2020. This trend highlights the evolving role of top law firms in VC deals over time.

[2] Prior studies that have investigated the importance of legal advisors in M&A transactions. For example, Subramanian (2007) explores the impact of law firm experience in freeze-out mergers, while Krishnan and Masulis (2013) study top law firms in determining bid outcomes and deal characteristics. While both VC and M&A involve buying and selling companies, they differ in their objectives, the types of companies they target, the level of control investors have, and the strategies used to create value. In addition, VC investments are often subject to a unique set of regulations, such as securities laws and anti-trust regulations, which further emphasizes the need for legal expertise and service.

Our approach to classifying a top-tier law firm involves assessing their relative market share within the VC landscape. We identify the top 10 law firms in each jurisdiction based on their rolling 5-year market share, offering a relevant and objective gauge of their expertise in this domain. By using a rolling 5-year average market share, our classification considers recent performance and popularity in the VC market, ensuring up-to-date alignment with current market dynamics. Confining the top-tier law firms to the top 10 percentile in each jurisdiction maintains manageability while offering a useful benchmark for identifying leading players in each market. This strategy ensures a robust and reliable criterion for classifying top law firms, forming a solid foundation for evaluating their impact on VC outcomes. We also bolster our main findings through additional analysis, exploring the effects of alternative top law firm indicators defined by different thresholds and their distinct impacts on VC deal outcomes.

Subsequent analysis demonstrates that the engagement of top-tier law firms is correlated with significantly lower odds of deal failures or cancellations, a pattern consistently observed when we consider top 10 law firms assisting VC firms (buy-side law firms) or top 10 law firms assisting portfolio companies (sell-side law firms). The results are also robust after for country fixed effects, deal type fixed effect, and investment round fixed effects. Second, we demonstrate that the involvement of top-tier law firms correlates with larger investments from VC firms in portfolio companies. In particular, VC deals involving the top-10 law firms are associated with a 2.4% increase in acquired ownership, on average. Importantly, this effect persists whether we consider top 10 law firms representing VC firms (buy-side) or those representing portfolio companies (sell-side). Notably, the presence of top-tier law firms on the buy-side is associated with a 2.9% increase in acquired ownership, while their involvement on the sell-side leads to a 1.3% increase in acquired ownership. We also employ cross-sectional tests to explore the impact of top-tier law firms on the

likelihood of VC deals being completed. These tests examine how this impact varies across different attributes of the country-level legal system. We assess factors like civil justice effectiveness, court structure, property rights strength, democratic governance, judicial effectiveness, and dispute resolution mechanisms. The hypothesis is that the effect of high-quality legal services would be less pronounced in countries with strong civil justice. Empirical evidence supports this conjecture. Second, we analyze court structure based on the court structure and proceedings index of the World Bank, which measures the sophistication and efficiency of court systems. Similarly, we find that the effect of top-10 law firms is less prevalent in countries with strong court structures. Third, we document that the effect of top-10 law firms is less pronounced in countries with strong property rights, in democratic countries, in countries with high judicial effectiveness, and in countries with strong dispute resolution mechanisms. These findings underscore the interplay between the influence of top-tier law firms and the legal environment of each country.[3]

We next investigate the relationship between top-tier law firms and transaction valuation, utilizing the logarithm of the round's pre-money valuation. Our hypothesis is that deals involving top10 law firms should be associated with higher valuations. Empirical evidence supports this notion. Importantly, when accounting for both top-tier law firms representing VC firms and those representing portfolio companies simultaneously, we discover that pre-money valuation is positively associated with both variables. In essence, the effect of top-tier law firms on the buy-side does not overshadow their influence on the sell-side, and vice versa. Moreover, we calculate annualized returns from the current round to the next financing round as an indicator of value

[3] We also find generally consistent results in cross-sectional tests that examine the effect of top-10 law firms on VC deals' acquired ownership. The effect is less pronounced among countries of strong court structure, countries of strong rule of law, democratic countries, countries of strong judicial effectiveness, countries of high judicial quality, and countries of strong dispute resolution.

addition. Remarkably, deals involving top-tier law firms consistently yield significantly higher cross-round returns, even after accounting for their already elevated valuation pre-deal completion. This result suggests that the involvement of top-tier law firms not only enhances success rates and ownership acquisition but also contributes positively to post-deal financial performance.

In our next line of inquiry, we investigate the relationship between the involvement of top-tier law firms and the subsequent performance of VC deal. We construct the "*Survival*" variable, indicating success when a portfolio company exits via an IPO, M&A, or receives subsequent financing. The analysis reveals a strong positive connection between *Survival* and the presence of top-tier law firms.. Thus, our analysis shows that investments involving top law firms are more likely to result in successful M&A and IPO exits or subsequent financing. Similarly, we find a positive relationship between the "*Success*" variable, indicating VC exits through M&A and IPOs, and the involvement of top 10 law firms.

We proceed to quantify the exit timeline by computing the natural logarithm of one plus the duration, measured in years, between the exit date and the initial round date. In light of our preceding findings indicating a heightened prevalence of financing rounds in the presence of top 10 law firms,, it is reasonable to expect a prolonged timeframe for venture capitalists (VCs) to exit a deal when a prominent legal advisor is engaged.. In VC investing, an extended exit horizon often bears positive connotations. This prolonged timeframe fosters increased value generation as VCs and portfolio companies concentrate on nurturing long-term value. By stretching the investment horizon, both VCs and portfolio entities gain an extended runway to enact strategic initiatives and operational enhancements aimed at augmenting the company's value over time. The outcome is a more appealing exit prospect, yielding augmented returns for investors. In addition, both parties can exercise patience and seize opportune moments for exit within a favourable environment, such

as a strong IPO market or high levels of M&A activity.[4] Such deliberation enables investors to potentially secure an elevated exit valuation. Our empirical analysis substantiates that the involvement of top 10 law firms is associated with protracted exit periods for VC investments, indicating a heightened synergy between VCs and portfolio companies.

Our exploration extends further to consider several non-price attributes intrinsic to venture capital, often indicative of enhanced investment performance. Our empirical findings attest that the participation of top 10 law firms is positively correlated with two key attributes: the number of investors in the VC transaction and the syndication status of the deal (involving multiple investors). A greater number of investors confers augmented financial reservoirs upon the portfolio entity, a crucial impetus for expansion and growth. A profusion of investors unlocks access to a broader spectrum of expertise, connections, and resources, thereby fortifying the pursuit of organizational objectives. Moreover, a larger investor cohort serves to distribute risk, a particularly advantageous facet for smaller VC investors. A larger number of investors concurrently enhances the network of prospective acquirers or collaborators for the portfolio company, enhancing the prospects of a successful exit.

We document a positive association between the involvement of top 10 law firms and the probability of multiple rounds of financing facilitating a VC investment deal. This multifaceted funding approach endows the portfolio entity with heightened financial resources, a critical driver of expansion and growth. At the same time, multi-round financing bequeaths greater elasticity to the deal structure, conferring benefits to both the portfolio company and the VC. This approach

[4] Exiting too early can result in leaving potential returns on the table. By taking a more patient approach, VCs can mitigate some of the risks associated with timing the exit. Holding private equity investments for a longer period can also provide tax benefits, such as long-term capital gains treatment, which can result in lower tax rates and improved after-tax returns. Overall, while a longer time to exit may mean less liquidity and longer holding periods, it can often result in higher returns and a more successful investment outcome for both VCs and their portfolio companies.

also permits the portfolio entity to spread out financing obligations over time, as opposed to relying on a solitary extensive funding round. Finally, beyond financial advantages, multiple-round financing affords more opportunities for interwoven collaboration and interaction between the VC and the portfolio company. This interaction fosters a more harmonious and unified relationship, a cornerstone for the attainment of shared objectives among all involved stakeholders.

The results documented in our study are predominantly based on correlations obtained after controlling for the observable characteristics of VCs and portfolio companies. However, these results do not disentangle the dual effects inherent in the engagement of top-law firms. This duality includes both the selective aspect, where top-law firms choose to partake in high-quality investments, and the consequential impact on deal performance, facilitated through heightened coordination and the formulation of superior contracts between investors and entrepreneurs. Thus, a major empirical challenge emerges, stemming from the potential non-randomness of top-law firms' presence among high quality VC deals. In other words, latent attributes intrinsic to VCs and portfolio entities, or the harmonization between the two, could contribute to an elevated likelihood of top-law firms being involved in the deal in the first place. For example, larger and more seasoned VCs or better-endowed start-up firms might gravitate towards established law firms of larger stature to further their missions, thereby accentuating the occurrence of top-law firms in deals that bear greater prospects of success.In our analysis, we take special care to address the underlying issue of endogeneity, which has the potential to obscure the relationship between top 10 law firms and the outcomes of VC deals. To disentangle the influence of top-law firms in econometric parlance, we deploy three distinct strategies. First, we agument VC × year fixed effects to our baseline regressions. This permits a comparison of start-up investment outcomes, uncovering disparities between deals involving top-law firms and those engaging alternative law

firms within the same VC, at a specific stage. This rectifies the concern of congruence between VCs' investment strategies and portfolio entities. Leveraging VC × year fixed effects in our regression analyses, we ascertain that even within the confines of a given VC's portfolio, deals entailing top-law firms exhibit enhanced performance.. Second, we adopt various econometric methodologies, including propensity score matching, entropy balanced regression, and inverse-probability-weighted regression adjustment, to simultaneously control for a collection of attributes linked to VCs and start-up entities.. Third, we adopt an instrumental variable approach that addresses omitted variables, such as unobserved quality of VC and investees that affect the matching and performance. This allows us to also employ a two-stage Heckman model that corrects for a broader set of factors that affect selection, including unobserved quality that could affect performance. These three methodological avenues yield consistent result that estimates of top-law firms influence on VC deals are much larger than OLS estimates. This corroborates the notion that the involvement of top-law firms enriches performance metrics through their active engagement post deal completion.

This study provides three important contributions to the academic literature surrounding the role of legal advisors in forging connections within the landscape of capital provision transactions across international markets. First, we derive new evidence that both the dynamics of business partnerships between venture capitalists (VCs) and portfolio companies, and the overall performance of VC deals, are influenced by the caliber of legal advisory firms. Our findings add to research that shows the material effect of top-law firms on yielding higher quality M&A transactions (Subramanian, 2007; Krishnan and Laux, 2008; Krishnan and Masulis, 2013), steering the success of IPOs (Beatty and Welch, 1996; Daines, 2002; Moran and Pandes, 2019), and ensuring adherence to mandatory disclosure norms through efficacious legal counsel (Choudhary,

Schloetzer, and Sturgess, 2013). Nonetheless, our study diverges from literature that portrays law firms' contrasting roles contingent on the parties they represent. Instead, we show that the presence of top-law firms, be it in the advocacy of VCs or portfolio companies, consistently yields tangible effects across the spectrum of VC outcomes.[5]

Second, our study contributes to the VC literature on the assessment of outcomes and performance. Predominantly, this literature has fixated on investment returns as a key performance metric for VC transactions (Acharya, Gottschalg, Hahn, and Kehoe, 2013; Ang, Papanikolaou, Westerfiled, 2014; Ang, Chen, Goetzman, and Phalipou, 2018). To the best of our knowledge, our study marks the first instance of comprehensive documentation, encapsulating evaluations spanning deal investment, deal fruition, investment returns, and eventual exits across a large sample of international VC deals. We show that the participation of law firm effectively aids in private equity deals across different ways to measure outcomes and performance. The identified influence of top-tier law firms on fostering successful collaboration between VCs and portfolio entities serves as a potential mechanism explaining the concentration of legal service provision within the echelons of top-tier law firms in the VC market. Third, our insights shed light on the nuanced interplay between the effect of top-tier law firms and varying attributes of country-level legal systems within VC deals. The presence of top law firms may be more important in countries with weaker civil justice systems, less sophisticated court structures, weaker property rights, less effective dispute resolution mechanisms, and lower levels of judicial effectiveness. This indicates that within jurisdictions where legal systems are less mature, the involvement of top-tier law firms

[5] For example, Krishnan and Masuslis (2013) show that legal advisors for acquiring firms have greater ability and stronger incentives to facilitate successful completions of their clients' M&A bids, while top legal advisers for target firms have greater ability and stronger incentives to maximize expected returns for their clients. The finding in our study that the presence of top law firms adds consistent effects across all private equity outcomes, regardless of whether they represent VCs or start-up firms, emphasizes the importance of the legal service in the private equity industry. The quality and expertise of the law firm involved can be more important than which party they represent, and thus both VCs and start-up firms may benefit from engaging top law firms.

assumes a criticalrole in ensuring the successful culmination of private equity transactions. Collectively, these findings add to our understanding of the role of legal institutions within the VC arena, and emphsize the role played by country-level legal factors in driving private equity analysis and decision-making.[6]

2. Hypotheses development and related literature

Venture capital constitutes a distinctive form of private equity investment entailing the infusion of capital into nascent or early-stage firms demonstrating promising growth potential. The primary objective of VC investments revolves around expediting the rapid expansion of these enterprises and steering them toward profitability. Traditionally, a venture capitalist (VC) commits capital in exchange for an equity stake in the target company, thereby positioning themselves to partake in the company's prosperity upon its eventual acquisition or initial public offering (IPO).[7] In environments marked by limited information, VCs fulfil a critical role by aiding in the evaluation and support of start-ups, monitoring project advancement, and orchestrating resource allocation to foster triumphant outcomes. Extensive scholarly attention has been directed towards scrutinizing the VC landscape, particularly investigating the dynamic between VCs and portfolio companies, and the determinants of their collaborative efficacy (Gorman and Sahlman, 1989; Bygrave and Timmons, 1992; Fiet et al., 1997; Boeker and Wiltbank, 2005; Jain and Tabak, 2008; Chemmanur et al., 2021).

[6] These results have important implications for VCs operating in different countries. For VCs situated within jurisdictions characterized by less robust legal frameworks, prioritizing collaboration with top-tier law firms becomes imperative to safeguard the triumph of their investments. Conversely, in jurisdictions exhibiting more robust legal infrastructures, VCs could pivot towards a heightened grasp of the complex legal landscape. In addition to financial and market factors, the efficacy of legal institutions emerges as an important determinant influencing the outcomes of VC transactions.

[7] VC investment is commonly defined as investing in the early stages of a company's development, from seed funding to expansion. On the other hand, private equity (PE) covers VC investments and also includes investments in more mature firms, such as buyouts, turnarounds, and mezzanine investments that may soon be ready for public listing. Our study examines studies VC as a key pillar of PE investments in the international market.

Earlier studies have shed light on facets such as the selection criteria VCs employ when winnowing down investment prospects and the attributes influencing their decision-making processes (see, for example, MacMillan, Siegel, and Narasimha 1985; Zarcharakis and Myer 1998). Contemporary literature is oriented toward the dyadic relationship between investors and entrepreneurs, probing factors that foster and fortify this symbiotic relationship. Hedge and Tumlison (2014), for example, document that that US-based VCs are more inclined to finance start-ups helmed by executives from similar ethnic backgrounds, especially when the odds of the start-up's success appear unfavorable. Moreover, they document a positive correlation between start-up performance and the ethnic proximity between VCs and start-ups.[8] The exploration of global VC investments has assumed significant prominence in recent years, particularly with an emphasis on the legal framework governing the contracts struck between VCs and portfolio companies.[9] These contracts attain particular significance owing to the inherent information asymmetry that plagues VC investments, potentially leading to misaligned incentives between the stakeholders.[10] For example, Groh et al., (2010) have demonstrated that the legal framework of a country exerts an influence on its attractiveness for VC investments. In jurisdictions characterized by less effective legal systems, VCs are more likely to enter into suboptimal contracts with

[8] This is measured by a higher likelihood of a successful exit through M&As and IPOs which is the result of better communication and coordination between coethnic VCs and start-up executives after the investment.

[9] Kaplan and Strömberg (2003) offer a thorough description of the governance mechanisms present in typical VC contracts. These mechanisms encompass control rights, voting rights, liquidation rights, conversion rights, anti-dilution rights, and vesting. These contractual provisions are dependent on the state of the company and are intended to discourage low-quality entrepreneurs from entering ex ante, while also motivating the entrepreneur to put in effort ex post to enhance company performance. Research, however, indicates that corporate governance and contracts are not enough to fully offset a deficient legal framework in a country where investment is concerned. Such a framework raises the probability of contract violations and leads to holdups in the selection, investment, and exit procedures.

[10] Studies have investigated the agency issues that arise between VCs and entrepreneurs. The VCs must grapple with an adverse selection problem, which arises from the opacity and lack of established history in entrepreneurial ventures, making it challenging to assess their quality before investing. Furthermore, a moral hazard problem emerges from the entrepreneur's behavior, which can be challenging to monitor after an investment. To mitigate the potential agency problems between VCs and entrepreneurs, complex contracts are often used to align their incentives, and therefore, the legal framework should be of key importance.

entrepreneurs, as highlighted by Lerner and Schoar (2005) and Balcarcel, Hertzel, and Lindsey (2010). Nahata, Hazarika, and Tandon (2014) document that VC investments in countries with weaker legal frameworks tend to be less successful in contrast to those executed in countries exhibiting robust legal systems. Cumming, Fleming, and Schwienbacher (2006) further document that stronger legal institutions are linked to a greater chance of VC investments going through an initial public offering (IPO). Tykvová (2018) document that while the quality of the legal framework bears relevance to the success of VC investments, the effect varies based on the type of deal, with domestic deals being more affected than international ones. A common notion among these studies is the critical role played by the quality of the legal framework underpinning a contract between VCs and portfolio companies in shaping the investment's ultimate outcome.[11]

Despite the wealth of research on the interplay between legal systems and the VC-portfolio company nexus, research has largely lain dormant when it comes to exploring the role of a third party that wields substantial influence in shaping these transactions: legal advisors specializing in facilitating VC funding for portfolio companies and scouting high-quality investment prospects for investors. This study endeavours to ascertain whether enlisting the services of a top-tier law firm can yield more favorable outcomes in VC deals through the amelioration of asymmetric information. This could manifest through various mechanisms, such as furnishing sound legal counsel pertaining to fiduciary obligations, enabling enhanced communication, and structuring more equitable and enforceable contractual terms. Top-tier law firms can also function as key negotiators mediating between VCs and portfolio companies, thereby fostering trust and mitigating

[11] There has been a significant amount of research examining the connection between legal institutions and finance. A large body of literature indicates that differences in legal origins, rules, and enforcement at the national level have an effect on investor protection, capital structure, payout decisions, and company performance (La Porta, Lopez-de-Silanes, and Vishny, 1997; 1998; 2000; Klapper and Love, 2004). Researchers generally agree that laws and regulations that reduce bureaucratic costs, protect property rights, enhance investor protection, and strengthen the power of courts have a positive impact on the investment climate and foster competitiveness among enterprises.

information asymmetry. Given the inherent information asymmetry in the VC industry, uncovering the impact of top-law firms on economic outcomes is an empirical question that this study seeks to answer.[12]

2.1 The relationship between top-law firms in VC deals and deal outcomes

Our study focuses on various VC deal outcomes, which include the likelihood of cancellation, size of capital investment allocation, pre-money valuation of investment, returns generated from the current financing round to subsequent rounds, and the likelihood of successful exits through initial public offerings (IPOs) or mergers and acquisitions.

A primary reason for exploring the role of top law firms in VC deals is their potential to mitigate risks associated with deal outcomes. The complex nature of venture capital transactions, often marked by intricate negotiations and the need for secure contractual agreements, can lead to uncertainties that might prompt different deal outcomes. However, given their expertise in structuring meticulous contracts, providing invaluable legal guidance, and enhancing communication between parties, top law firms have the ability to minimize misunderstandings, increase transparency, and foster trust. We, therefore, focus on establishing an association between the involvement of top law firms and various VC deal outcomes. Thus, our first hypothesis is as follows:

H1: VC deals involving top-tier law firms will yield better deal outcomes compared to other VC deals.

[12] Previous studies have adopted various methods to investigate the correlation between legal frameworks and VC investments. Some studies, like Balcarcel, Hertzel, and Lindsey (2010) and Lerner and Schoar (2005), utilized individual factors or dummy variables associated with legal frameworks. Meanwhile, Cumming, Fleming, and Schwienbacher (2006) and Dai, Jo, and Kassicieh (2012) employed an index that aggregates several factors from La Porta et al., (1997; 1998; 2000)'s research. Recently, Nahata, Hazarika, and Tandon (2014) devised their own index by utilizing 12 variables from La Porta et al.'s work. Unlike these studies, our research investigates the engagement of top-law firm at the deal level and hence offers more granular analysis of the role of law in VC investments. In addition, our dataset is unique in that it provides specific transaction details and covers 22 countries, including information on valuations of investments from pre-money round to exits.

2.2 The relationship between top-law firms in VC deals and legal framework

As the legal environment varies significantly across countries, this can influence the effectiveness of legal services in facilitating VC deal outcomes. Our research also aims to explore the interplay between the involvement of top-tier law firms and various country-specific legal system attributes in affecting VC deal outcomes. It is important to understand this relationship as it helps in assessing the significance of collaborating with top law firms in different legal environments and provides insights into optimizing the legal support structure for VC deals.

Our hypotheses are developed based on the premise that the effectiveness of top-tier law firms in enhancing VC deal completion likelihood may vary across different legal environments. Our hypotheses are grounded on the rationale that in countries with strong legal systems, the additional value provided by top-tier law firms may be relatively less impactful, as the existing legal infrastructure already facilitates a favourable environment for deal success. Conversely, in countries with weaker legal systems, the expertise of top-tier law firms may play a more critical role in ensuring successful deals. To shed light on the nuanced relationship between top-tier law firm involvement and the legal environment of each country in influencing VC deal outcomes, we establish our hypotheses as follows.

H2a: The effect of top-tier law firms on the likelihood of VC deal completion will be less pronounced in countries with strong civil justice systems.

H2b: The effect of top-tier law firms on the likelihood of VC deal completion will be less prevalent in countries with sophisticated and efficient court structures.

H2c: The effect of top-tier law firms on the likelihood of VC deal completion will be less pronounced in countries with strong property rights.

H2d: The effect of top-tier law firms on the likelihood of VC deal completion will be less pronounced in democratic countries.

H2e: The effect of top-tier law firms on the likelihood of VC deal completion will be less pronounced in countries with high judicial effectiveness.

H2f: The effect of top-tier law firms on the likelihood of VC deal completion will be less pronounced in countries with strong dispute resolution mechanisms.

3 Data Collection and Methodology

3.1 Data collection

We collect global round-by-round VC deals from the comprehensive Pitchbook database which satisfy the following conditions: (i) the deal date is between 2005 and 2020; (ii) the deal class is "venture capital"; (iii) the deal stages are seed, early, or later stage; (iv) the round number is disclosed, and (v) the deal is labelled either "failed" or "completed".

Previous studies frequently utilize data from VentureXpert and Venture Source to gather round-by-round VC deals. However, these datasets have limited and inconsistent coverage of portfolio company valuations, a crucial aspect for empirical analysis (Kaplan and Lerner, 2017). To address this issue, more recent studies in the US and globally have employed Pitchbook data (e.g., Cumming & Zhang, 2019; Howell, Lerner, Nanda, and Townsend, 2020; Metrick & Yasuda, 2021; Pham, Turner, and Zein, 2021; Smith, Smith, and Smith, 2022) to investigate research questions in private equity investments.

We collect data for our analysis from VC deals that include information on the portfolio company's country and primary industry. To ensure the validity of our results, we only consider deals from country-year groups that have at least one top 10 law firm on either the buy-side or the

sell-side. Our final sample includes 181,944 deals made by 75,640 investors to 92,774 portfolio companies in 22 countries.

3.2 Methodology

To identify the law firms for the buy-side and sell-side in each VC deal, we merge the Pitchbook deals data with the deal service provider relation file. This dataset includes information on the law firms that provided legal services to VCs and/or portfolio companies. We calculate annual rankings of the law firms based on their relative involvement in VC deals in the past five years. Specifically, we determine the ranking by calculating the ratio between the total value of the transactions a law firm participated in and the overall value of all VC deals in the last five years.[13,14] We define top 10 law firms as those that belong in the top 10 percentile of the annual ranking.

To examine the impact of a top 10 law firm's service on VC deal outcomes, we estimate the following linear probability model:

$$Failed_{i,t} = \alpha + \beta \times Top\ 10\ Law\ Firm_{i,t} + Round, Year, Country, Deal\ type, Industry\ FEs + \varepsilon_{i,t} \quad (1)$$

In this equation, $Failed$, is a dummy variable equal to 1 if the VC deal is cancelled, and 0 otherwise. We use 3 measures of $Top\ 10\ Law\ Firm$: *Top 10 Law Firm* is a dummy variable equal to one if the deal is serviced by at least one top 10 law firm, either on buy-side or sell-side, and

[13] Our approach to identify top law firms follows the study of Krishnan and Masulis (2013) on the role of legal advisors in the M&A context. We create dummy variables indicating whether the VC's and portfolio company's law firms appear in the top 10 annual league table rankings: *Top 10 Buy-side Law Firm* and *Top 10 Sell-side Law Firm*. We also construct a more general indicator, *Top 10 Law Firm*, which equals to one if the deal is serviced by at least one top 10 law firm, either on buy-side or sell-side, and zero otherwise.

[14] Alternatively, rankings of law firms can be sourced from reputable publications such as Chambers and Partners and Legal500. However, these rankings primarily relate to various legal practice areas with a specific focus on private equity rather than venture capital. As such, the categories within these rankings do not consistently cover the nuances of the venture capital domain. Most importantly, a significant number of law firms across in our study are not evaluated or ranked by Chambers and Partners and Legal500. Given this limitation, we have chosen to use the total value of the transactions to determine law firms' rankings.

zero otherwise; *Top 10 Buy-side Law Firm*(*Top 10 Sell-side Law Firm*) is a dummy variable equal to one if the deal is serviced by one top 10 law firm on the buy(sell) side, and zero otherwise. We also control for round, year, country, deal type, and company industry fixed effects in Equation (1). The standard errors are clustered at investment years.

Appendix Tables IA1 and IA2 show the distribution of VC deals by year and industry. In particular, Appendix Table IA1 sheds light on the global trajectory of VC investments, revealing a steady growth pattern. The recorded number of deals escalates from 3,121 in 2005 to a substantial 23,862 in 2020. Within the extensive pool of 181,944 deals, 20.5% have at least one top legal advisor on the buy-side or sell-side. The proportion of deals with a top-10 law firm on the sell-side is 18.1%, while it is only 5.4% on the buy-side. This difference suggests a more prevalent utilization of services from top-10 law firms by portfolio companies. On average, the proportion of deals utilizing top-10 law firm services is highest in 2012 at 30%, while the lowest ratio of 15.5% is observed in 2016.

In Appendix Table IA2 a conspicuous observation emerges as the U.S. venture capital landscape takes centre stage., This market segment commands a substantial 33.4% share of the entire sample, exhibiting a tally of over 100,000 VC deals documented throughout the study period. China and the U.K. follow with 33,916 and 16,911 deals, respectively, underlining their significance in the global VC arena. The data also covers a wide range of countries and reveals significant variation in the use of top law firms across different regions. Strikingly, the U.S. market not only claims the lion's share but also exhibits the highest proportion of deals enjoying the services of top-10 law firms, accounting for 33.4%. In sharp contrast, China records a notably modest proportion of 0.8%, while the U.K. similarly marks a relatively lower figure of 7.2%.

Appendix Table IA3 presents a summary of key variables for the full sample and the subsamples of completed and failed VC deals. The table provides several insights into venture capital (VC) deals. First, it shows that 0.8% of VC deals are cancelled. For completed deals with disclosed round valuation, the average proportion of ownership acquired by VCs is 25.0%. The table also highlights that the use of services from a top 10 law firm is more prevalent in completed deals compared to failed deals. Specifically, 20.6% of completed deals uses services from a top law firm on either the buy-side or sell-side, a figure that narrows to 9.2% for failed deals. Furthermore, the proportion of completed deals aligning with the expertise of top 10 buy-side law firms or top 10 sell-side law firms exceeds that of their failed counterparts, standing at 5.5% and 18.1%, respectively. In contrast, a mere 0.2% and 9.2% of failed deals enlisted services from top 10 buy-side and sell-side law firms, respectively.

4 Main Findings

4.2 Main empirical findings

The estimation results of Equation (1) are presented in Table 1. Column (1) of Table 1 shows that there is a negative and statistically significant coefficient for *Top 10 law firm*, indicating that receiving legal services from a top 10 law firm on either the buy-side or the sell-side decreases the likelihood of a VC investment failing. Specifically, the act of securing services from a top-10 law firm translates to a 0.9% reduction in the risk of a failed fund-raising endeavour, holding all other factors constant (ceteris paribus). This finding is consistent in Columns (2) to (4), wherein we distinctively identify top-10 law firms associated with the sell-side and buy-side. The coefficients for *Top 10 buy-side law firm* and *Top 10 sell-side law firm* are both statistically significant at the 1% level, whether they are controlled separately in the regression (Columns (3)-(4)) or they are placed together in the same regression (Colum (2)). In summary, the evidence supports our

prediction that there is a negative relationship between services from a top-10 law firm and the likelihood of a VC investment failure.

{INSERT TABLE 1}

Table 2 presents the results where we consider the percentage of ownership as the outcome variable. Specifically, *Percentage acquired* is the percentage of stake acquired in the round of financing. In Column (1), the coefficient estimate on *Top 10 law firm* is 0.024 and statistically significant at the 1% level. Thus, if a VC deal receives services from a top-10 law firm, average ownership acquired in this specific round of financing is 2.4% higher, ceteris paribus. The result remains unchanged in Columns (2) to (4), where we analyze top-10 law firms from the buy-side and the sell-side separately. We observe that the coefficients for both *Top 10 buy-side law firm* and *Top 10 sell-side law firm* are statistically significant at the 1% level, whether they are examined independently in the regression analysis (Columns (2)-(3)) or they are combined in the same regression (Column (4)). When VCs receive legal services from top-10 law firms acting on the buy-side, there is a 2.9% increase in acquired ownership, whereas when portfolio companies receive legal services from top-10 law firms acting on the sell-side, there is a 1.3% increase in acquired ownership.

{INSERT TABLE 2}

Overall, the results from Tables 1 and 2 support our main hypothesis that there is higher competition likelihood for VC investments when there is an engagement of top-10 law firms. Interestingly, the effects come from both the buy-side and sell-side legal services.

4.3 Cross-sectional analysis

We reinforce the main inference from Tables 1 and 2 with eight cross-sectional analyses to examine the effect of top-law firms on VC deals' completion likelihood. To be more specific, we

permit the impact of leading law firms on the likelihood of VC deals being incomplete to fluctuate across various legal system characteristics specific to each country. Panel A of Table 3 presents the results of this analysis.

Initially, we examined civil justice by utilizing the civil justice index from the World Justice Project, which assesses how effectively common individuals can resolve their disputes through the civil justice system. We hypothesize that the impact of top-notch legal services would be less significant in nations with a robust civil justice system. Our findings Column (2) provide empirical support for this conjecture. The interaction coefficient *Top 10 law firm* × *Civil justice* is positive and statistically significant at the 5% level. Thus, the effect of *Top 10 law firm* on deal completion is smaller among countries of high civil justice system. Interestingly, we also find that the coefficient on *Civil justice* is negative and statistically significant at the 5% level, indicating that *Civil justice* itself reduces the fail rate of VC investments.

Second, we analyze court structure based on the court structure and proceedings index of the World Bank, which measures the sophistication and efficiency of court systems. While we do not find that the effect of top-10 law firms varies in the strength of court structure, it is interesting that court structure itself is important to deal completion. Specifically, the coefficient estimate on *Court structure* in column (2) is -0.008 and significant at the 5% level. This means that deal fail rate is lower when VC investments are conducted in countries with strong court structure. In column (3), we investigate the cross-sectional variation in *Rule of law* defined by the Worldwide Governance Indicators' rule of law index. We, however, do not find that *Rule of law* matters to deal fail rate. In column (4), when we use *Properties rights* defined by the heritage's properties rights index, we find that the effect of top-10 law firms on deal fail rate is weaker among countries of strong properties rights. The coefficient on *Top 10 law firm* × *Properties rights* is positive and

statistically significant at the 1% level. In column (5), we use the Polity V Project (2018)'s democracy index to study cross-country variation. The coefficient estimate on *Top 10 law firm* × *Democracy* is 0.003 and statistically significant at the 1%level. Thus, the effect of top-10 law firms on deal fail rate is lower among democratic counties. We also find that the coefficient estimate on *Democracy* is 0.004 and statistically significant at the 1% level. Thus, deal fail rate is also lower for VC investments in democratic countries.

Column (6) presents the result based on *Judicial effectiveness (D)* which is a dummy variable that is equal to one if the quality of judicial effectiveness index of a country is greater than its median, and zero otherwise. We do not find that the effect of top-10 law firms varies in *Judicial effectiveness*. In column (7), we employ *Judicial quality (D) which* is a dummy variable equal to one if the quality of judicial processes index is greater than its median, and zero otherwise. The coefficient estimate on *Top 10 law firm* × *Judicial quality (D)* is positive and statistically significant at the 1% level. Thus the effect of top-10 law firms on deal fail rate is weaker among countries of higher judicial quality. The coefficient estimate on *Judicial quality (D)* is also negative and statistically significant at the 5% level, indicating that deal fail rate is generally lower for private investments in those countries of higher judicial quality. Finally, in column (7), we assess cross-country variation in *Dispute resolution (D)* which is a dummy variable equal to one if the alternative dispute resolution index of a country is greater than its median, and zero otherwise. The coefficient estimate on *Top 10 law firm* × *Dispute resolution (D)* is 0.011 and statistically significant at the 1% level. Thus, the effect of top-10 law firms is weaker among countries of strong dispute resolution. The coefficient on *Dispute resolution (D)* itself is -0.011 and statistically significant at the 1% level, suggesting that deal fail rate is generally lower among countries with strong dispute resolution.

Overall, the results in Table 3 Panel A based on cross-sectional tests to analyze the cross-sectional effect of top-10 law firms on deal fail rate that may vary in the effectiveness of court systems, rule of law, properties rights, democracy, judicial effectiveness, judicial quality, dispute resolution, and the impact of top-10 law firms on VC deal completion rates. The results showed that strong court structures were important in dealing with completion, and that the effect of top-10 law firms on deal fail rate was weaker among countries with strong properties rights, higher judicial quality, and strong dispute resolution. Additionally, deal fail rates were generally lower for VC investments in democratic countries and those with higher judicial quality and strong dispute resolution.

{INSERT TABLE 3}

Table 3 Panel B presents similar analysis to that in Table 3 Panel A where we use the percentage acquired as the outcome variable. Overall, the findings are in agreement with those in Table 3 Panel A. There is evidence that the effect of top-10 law firms on the percentage acquired is weaker among countries of strong court structure, democratic countries, countries of strong judicial effectiveness or judicial quality, and countries of strong dispute resolution.

4.4 Top law firms and transaction valuation

In this section, we examine the potential correlation between the presence of a top legal advisor and pre-money valuation in the context of venture capital investment. Pre-money valuation refers to a company's value before any new funding rounds. Since the involvement of top legal advisors can help alleviate information asymmetry and reduce information risk in private deal transactions, it is plausible to hypothesize that having a top legal advisor is associated with a higher deal valuation. To test this hypothesis, we adjust the baseline regression and introduce *Log(Pre-money valuation)*, a measure of pre-money valuation, as the dependent variable.

{INSERT TABLE 4}

The results from Table 4 demonstrate a significant and positive relationship between pre-money valuation (*Log(Pre-money valuation)*) and the presence of top legal advisors in private deal transactions. Column (1) shows that having a top legal advisor on either the investor or target side increases deal valuation by 58.1%. Column (2) further supports this finding by showing that investors advised by top law firms are willing to place a higher deal valuation. Similarly, column (3) indicates that the participation of a top legal advisor on the sell-side also facilitates a significantly higher deal valuation. In column (4), when both *Top10 buy-side law firm* and *Top10 sell-side law firm* are included, the results are consistent with higher valuation in the presence of top legal advisors on both sides. In summary, these findings suggest that the involvement of top law firms is associated with a higher pre-money valuation in private deal transactions.

4.5 Top law firms and annualized returns between VC financing rounds

Moving forward, we investigate the relationship between hiring top legal advisors and cross-round returns. We hypothesize that the involvement of top legal advisors in reducing information asymmetry can result in improved investment performance, as reflected in cross-round returns. To test this hypothesis empirically, we modify the baseline model and add a measure of cross-round returns (*Annualized Returns*) as the dependent variable.

{INSERT TABLE 5}

Table 5 presents the results of our analysis on the relationship between hiring top law firms and cross-round returns. Column (1) shows a significant and positive correlation between having top law firms on either side of the deal (*Top10 law firm*) and *Annualized returns*, indicating that the involvement of top law firms in private deal transactions is associated with higher cross-round

returns. The coefficient is 0.119 and statistically significant at the 1% level. Thus, cross-round returns are 11.9% higher when there is an engagement of top-10 law firms.

In column (2), we find that appointing a top law firm on the buy-side is positively associated with higher cross-round returns. Similarly, in column (3), we observe that having a top legal advisor on the sell-side is also linked to a higher cross-round return. When we consider both *Top10 buy-side law firm* and *Top10 sell-side law firm* in the regression model (column 4), we find that cross-round returns are positively associated with the involvement of top law firms on both the buy and sell-side. The coefficient estimates are 0.096 and 0.139, respectively, indicating that the engagement of buy-side law firms is associated with 9.6% higher return while the engagement of sell-side law firms is associated with 13.9% higher return. These results suggest that the participation of top law firms in private deal transactions is associated with better investment performance in terms of cross-round returns.

Overall, in Table 5, we consistently document evidence showing the role of top law firms in generating additional cross-round returns.

4.6 Top law firms and likelihood of survival and success

Next, we examine the relationship between the involvement of top law firms and the survival of portfolio companies. In the context of VC investments, the likelihood of survival refers to the possibility that in the next round, the VC firm will continue to finance the company, or the company will exit successfully through an IPO or a merger and acquisition. We expect that the engagement of top law firms can mitigate information asymmetry between the VC and the portfolio company, leading to an improvement in the company's likelihood of survival for deals involving top law firms. To test this conjecture, we modify the baseline model by including a

dummy variable for survival (*Survival*) as the dependent variable and report the regression results in Table 6.

{INSERT TABLE 6}

Column (1) of Table 6 shows a significant positive relationship between *Survival* and *Top 10 law firm*, indicating that the involvement of a top law firm on either side results in a higher likelihood of deal survival. In column (2) of Table 6, we find that having a top legal advisor on the buy-side is also positively associated with a greater likelihood of deal survival. Similarly, results from column (3) suggest that the likelihood of survival is significantly greater when the portfolio company hires a top law firm. We further investigate whether the appointment of a top law firm from the other side of the deal would have any impact on the likelihood of survival when one side already has a top legal advisor. In column (4) of Table 6, we find that the influence of buy-side and sell-side top law firms on the likelihood of deal survival is largely independent of each other.

The results from Table 6 show that having a top legal advisor on either the buy or sell-side of the deal is associated with a higher likelihood of deal survival, from the current round to the next financing round. Moreover, the appointment of a top law firm on one side is found to have a positive impact on the likelihood of deal survival, independent of whether the other side also hires a top legal advisor.

In a similar line of inquiry, we investigate the relationship between the portfolio company's exit likelihood and the involvement of a top legal advisor. VCs typically seek exit strategies to take their portfolio companies public or selling them to other companies in the M&A market. As top law firms can facilitate information flows between VCs and investment targets, we hypothesize that the likelihood of a successful exit via an IPO or a merger and acquisition is positively associated with the engagement of a top legal advisor.

To test this hypothesis, we use the sample of first round investments (to avoid repeated transactions from subsequent financing rounds) and regress the exit outcome on the appearance of top law firms. Table 7 presents our regression results. As shown in column (1), we find a significant positive relationship between the presence of a top law firm (*Top10 law firm*) and the likelihood of a successful exit (*Success*). This provides support for the notion that the engagement of top law firms can facilitate information flows and improve the chances of a successful exit via an IPO or M&A.

To further test this conjecture, we include additional control variables in column (2) and find similar evidence on the positive association between the involvement of top law firms and the probability of a successful exit. We also conduct additional tests on the association between the likelihood of a successful exit and the engagement of top law firms for periods on or before 2015 in column (3) and control for additional variables in column (4). It is important to note that a portfolio company require years realize its outcome, and for deals made after 2015, the outcomes may not have been observed fully in our sample. Therefore, we include only first-round deals conducted on or before 2015 to avoid potential estimation biases. Our results consistently show a positive relationship between the participation of top law firms and the likelihood of successful exits, supporting the argument that top law firms play a crucial role in helping portfolio companies achieve successful exits.

{INSERT TABLE 7}

The results from Table 7 provide strong evidence for a positive association between the involvement of a top law firm and the likelihood of a successful exit. This finding supports the hypothesis that top law firms can effectively facilitate information exchange between VCs and their portfolio companies, leading to better outcomes for both parties.

4.7 Top law firms and time to exit

In this analysis, we investigate the relationship between the involvement of a top legal advisor and the length of time it takes for venture capital firms to exit a deal. As we observe in Table 8, the presence of a top law firm is positively associated with more financing rounds, which may lead to a longer time period for VCs to exit a deal. To examine this further, we measure the length of time it takes for a VC firm to exit a deal (*Log(Time to exit)*) by taking the natural logarithm of one plus the number of years until a successful exit via an IPO or a merger or acquisition. We use the sample of first-round deals in that portfolio companies exit successfully (12,301 observations), and present the regression results in Table 8.

{INSERT TABLE 8}

Column (1) reveals a significant and positive relationship between *Log(Time to exit)* and *Top 10 law firm*, indicating that it takes longer for VCs to exit a deal when a top legal advisor is involved in either side of the transaction. Furthermore, the findings are robust to additional controls, as shown in column (2), where we control for the total number of investors (*Log(Investors)*), the total number of investment rounds (*Log(Rounds)*), and company age (*Log(Company age)*). In columns (3) and (4) of Table 8, we find consistent evidence of a positive relationship between the involvement of a top legal advisor and deal exit time for the first-round deals conducted on or before 2015, indicating that VCs take longer to exit deals when a top legal advisor is involved.

Overall, results in Table 8 are consistent with our conjecture and lend support to the notion regarding the greater time length for VCs to exit a deal in the presence of a top legal advisor.

4.8 Other non-price attributes and top law firms

Next, we investigate how VCs' risk management behavior changes when they hire top law firms. The expertise of top law firms can help mitigate information asymmetry, reducing the overall riskiness of VC deals. This could lead VCs to rely less on active risk management approaches. However, it's also possible that top law firms have a strong interest in protecting their reputation and therefore advise their clients to undertake more risk management strategies. Both arguments suggest that the involvement of top law firms is likely to affect VCs' risk management. VCs can limit their risk exposure to a deal through risk sharing in a syndication (Lerner, 1994; Wright and Lockett, 2003; Dai and Nahata, 2016; Khursed, Mohamed, Schwienbacher, and Wang, 2020) and/or staged financing (Barry,1994; Gompers, 1995; Kaplan and Strömberg, 2004; Wang and Zhou, 2004).

To test this hypothesis, we construct several measures for VC risk management strategies, including the natural logarithm of the number of investors involved in a deal (*Log(Investors)*), syndication (*Syndication (D)*), the number of financing rounds (*Log(Rounds)*), and staging (*Staging (D)*).[15] We then modify the baseline regression model and include these risk management variables as dependent variables.

{INSERT TABLE 9}

Table 9 reveals that the involvement of a top legal advisor is positively associated with various risk management measures used by VCs. In column (1), we find a positive relationship between the number of investors participating in a deal and the appointment of a top legal advisor, suggesting that VCs may seek the expertise of top law firms to manage the complexity of deals

[15] *Log(Investors)* is the natural logarithm of the total number of investors in the transaction. *Log(Rounds)* is the natural logarithm of the company's number of financing rounds. *Syndication (D)* is a dummy variable equal to one if the total number of investors in the transaction is greater than zero, and zero otherwise. *Staging (D)* is a dummy variable equal to one if the number of financing rounds is greater than one, and zero otherwise.

involving multiple investors. Similarly, column (2) shows that VC deals with multiple investors are more likely to be advised by top law firms.

In column (3), we find that the number of financing rounds is positively related to the involvement of a top legal advisor, indicating that VCs may rely on top law firms to manage the risk associated with multiple financing rounds. Furthermore, column (4) shows that VC deals involving top law firms are more likely to have multiple financing rounds.

Overall, these results suggest that VCs may use the expertise of top law firms to implement more active risk management approaches.

5 Robustness Checks

5.1 Alternative measurements of top law firms

In previous sections, we create annual league table rankings manually based on the relative values of VC deals in which a legal advisor participated in the last five years. We use the top 10% threshold as a benchmark to define a top advisor. However, one concern is that changes in the strictness of this threshold could lead to large variations in the ratio of transactions with a top legal advisor in our sample, which may affect the robustness of our results. To address this concern, we compute alternative measurements indicating top advisors. We adopt a similar approach and change the threshold from top 10% to 5%, 15%, and 20%, and aggregate them at the transactional level. We define *Top 5 (15, 20) Law Firm* as a dummy variable that equals one if the deal is serviced by at least one top 5(15, 20) law firm, either on the buy-side or sell-side, and zero otherwise.

The results of our baseline regressions with these new independent variables are presented in Appendix Table IA4. As shown, the coefficients of *Top 5 Law Firm, Top 15 Law Firm,* and Top

20 Law Firm are all statistically significant at the 1% level, and their signs are consistent with the evidence in the main Tables 1 and 2.

5.2 Controls for country macro and political factors

One may be concerned that macro and political factors, which affect all investors and portfolio companies, could simultaneously impact investment outcomes and the use of top legal advisor services. For example, during favorable economic conditions such as high economic growth, investment transactions can be completed more easily due to reduced uncertainty about their future success. At the same time, investors may want to employ top law firms to quickly close deals and take advantage of the positive economic situation. This simultaneity could lead to a biased estimate of the impact of top-10 law firms on the transaction outcomes in our regression analysis.

To address this concern, we include a number of macro factors, including *GDP growth*, Economic Policy Uncertainty (*EPU*), *Democracy*, *Investment Freedom*, and Public Market Access Returns (*Market return*) in our analysis. We re-estimate our baseline regressions by controlling for these new macro variables, and the results are presented in Appendix Table IA5. As shown, the coefficients of *Top 10 Law Firm* in Column (1) and (3) are both statistically significant and show consistent signs as in Table 4 (our baseline table), suggesting that the appearance of macro factors does not affect our conclusion.

We also account for additional investor and company characteristics that may influence the use of top law firms and the outcomes of the transactions. Specifically, we consider the age and asset under management (AUM) of the lead VC, as well as the age of the target company. Older and larger investors with higher AUM may have a better reputation and more negotiating power, making it easier for them to attract reputable law firms and complete a deal successfully. Failure to control for these variables could bias our estimates of the effect of Top 10 Law Firm. To address

this, we calculate *Log(VC Age)*, the natural logarithm of the lead VC's age (i.e., the difference between the transaction year and the VC's founding year), *Log(VC AUM)*, the natural logarithm of the lead VC's AUM, and *Log(Company Age)*, the natural logarithm of the target company's age (i.e., the difference between the transaction year and the company's founding year). For transactions with two or more lead VCs, we take the average of these measurements.We then include these variables in our regression models as additional controls.

The results, presented in column (2) and (4) of Appendix Table IA5, indicate that the coefficient of *Top 10 law firm* is negative in column (2) and positive in column (4), with statistical significance at the 10% and 1% levels, respectively. These findings are consistent with our earlier results, supporting the robustness of our main findings.

5.3 Addressing endogeneity

5.3.1 Additional fixed effects

To account for the possibility that the time-series changes in VC firms' investment strategies may happen to be correlated with the development of law firms over time, we further include VC × year fixed effects to our baseline regression model. Doing so allows us compare the start-up investment outcomes between deals involving top-law firms and other law firms by the same VC at a given point in time. Results from Table IA6 suggest that at any given point in time, a particular VC firm is willing to proceed and allocate more funding toward a deal that is advised by a top law firm, compared to the one without the involvement of a top legal advisor.

5.3.2 Sample matching

In previous analysis, we demonstrate that the group of transactions that received guidance from top law firms (treatment group) and the group that did not receive any advice, either from top law firms or otherwise (control group), may not have been assigned randomly. Specifically, the

characteristics of the portfolio companies, such as age and industry, and the details of the transactions, such as transaction types and financing round number, in the treatment group may inherently differ from those in the control group. To address this issue, we employed the propensity score matching (PSM) method, using a 1:5 matching ratio with replacement. We chose this ratio due to the small number of failed transactions. The PSM method computes propensity scores based on the fitted probability of receiving advice from a top legal advisor, and then matches each observation in the treatment group with five observations in the control group with the closest scores.

Appendix Table IA7 presents the regression results obtained from the propensity-matched sample. As seen in column (1), the coefficient of *Top 10 law firm* is positive and statistically significant at the 1% level, indicating that having a top legal advisor reduces the probability of a failed transaction. Similarly, in Column (2), we observe a significant relationship between *Top 10 law firm* and the investors' ownership in the portfolio company.

Overall, our PSM analysis effectively controls for differences in company and transaction characteristics between the two groups. Therefore, we can conclude that the presence of a top legal advisor is negatively associated with the likelihood of a failed transaction and positively associated with the investors' acquired ownership in portfolio companies.

5.3.3 Sample selection bias

In this section, we utilize Heckman's (1979) two-step procedure to address selection bias concerns related to the appointment of top law firms. In the first stage, we estimate a probit model that predicts the probability of appointing a top 10 buy-side/sell-side law firm in a VC transaction. As per standard practice, we include all fixed effects in the second-step regression and use instrumental variables in the first-step regression. In the second-step regression, we incorporate

the inverse Mills ratio, generated from the first-step estimation results, and include additional control variables to control for potential confounding factors.

We use adopt two approaches to generate instrument variables (IVs) for the first-step regression. To serve as a valid instrument, the IVs must be highly predictive of the appointment of a top legal advisor and unrelated to the dependent variables in the baseline regressions, transaction outcome, or acquired ownership. Furthermore, as companies may appoint both law firms and other types of advisors, we require that the IVs are unrelated to the appointment of a general advisor (which is the second most popular type of advisor).

First, we follow the approach of Krishnan and Masulis (2013). To identify the IVs, we examine a prior 3-year rolling window of VC investments for each calendar year. We focus on investments that involve the appointment of a top buy-side or sell-side legal advisor but no top 10 general advisor. We then identify the top 10 industries for the buy-side and the sell-side based on the number of such occurrences. We assume that these industries have a high demand for top legal advice but do not have a critical need for other general advice. Furthermore, we find no compelling reason to believe that past industry associations with top law firms are related to transaction outcomes.

Appendix Table IA8, Panel A, presents the regression results. In Column (1), we find a positive and statistically significant coefficient for *Top 10 buy-side industry legal advice* at the 1% level, indicating that investors who invest in industries with strong demand for top-tier legal advice are more likely to appoint a top 10 law firm. In Columns (2) and (3), the coefficients of *Top 10 buy-side law firm* remain robust after controlling for the inverse Mills ratio from the first-step estimation.

To further address selection concerns, we employ *Top 10 industry legal advice sell-side* as an instrument in Column (4) and find it to be positive and statistically significant at the 1% level. The results in Columns (5) and (6) remain consistent with earlier results even after incorporating the inverse Mills ratio, indicating that our findings are robust against selection bias.

Second, we use Huang, Hui, and Li (2019)'s judge ideology measurement, *Liberal Court*, as an instrument for the first-step regression. This measurement reflects judge ideology in a circuit by capturing the political affiliation of the appointing president.

We calculate *Liberal Court* as the probability that Democratic presidents' appointees dominate a panel of three judges randomly selected from the circuit. It is defined as follows:

$$Liberal\ Court = \frac{[L(a,3) + L(a,2) \times L(b-a,1)]}{L(b,3)},$$

where $L(n,r)$ is a binomial coefficient indicating the number of possible combinations of r objects from a set of distinct objects. a is the number of Democratic appointees, while b is the total number of judges in the circuit. *Liberal Court* value of 0.655 means that a 65.5% probability that a three-judge panel randomly drawn from the n^{th} Circuit is dominated by liberal judges. We measure *Liberal Court* for all transactions in which portfolio companies are located in the U.S.

According to Huang, Hui, and Li (2019)'s finding that there is a strong positive relationship between judge ideology and lawsuit occurrence, we expect a significant demand for top legal advisors in states with a high level of judge ideology. We, therefore, predict a positive impact of *Liberal Court* on the likelihood of employing a top 10 law firm in the first-step regression. Note that we include circuit fixed effects in both stages of the Heckman procedure in addition to other fixed effects controlled in our baseline regressions.

Results from Table IA8 Panel B Column (1) indicate a positive coefficient of *Liberal Court* at 0.566, statistically significant at the 1% level, consistent with our prediction. In Column (2) and

(3), we include Inverse Mills ratio generated in Column (1) as additional control variables. The evidence implies that our baseline conclusions are robust after addressing the sample selection problem. The coefficient of *Top 10 Law Firm* is negative at 0.009 in Column (2), and positive at 0.024 in Column (3), both statistically significant at the 1% level means that employing a top law firm leads to a lower likelihood of an incomplete VC transaction and a higher percentage of acquired ownership. Overall, the results suggest that demand for top-tier legal advice is a key determinant of the appointment of top law firms in VC deals. Most importantly, the main results of an effect of top-10 law firm, either from the buy-side or sell-side, on deal fail rate and percentage acquired are robust in this Heckman two-step regressions.

5.5 VC reputation, top legal advice, and deal outcomes

It is possible that more reputable VCs have higher ability recruit top law firms, or they have better chance to match with them. If this is the case, VC reputation can affect deal outcomes and the occurrence of having a top 10 law firm in a VC deal simultaneously, causing an endogeneity concern. To address this, we quantify VC reputation and control for it in our baseline regressions.

We use three alternative measurements for VC reputations. First, we define *Log(IPO exits)* is the mean of the natural logarithm of the number of past IPO exits by VCs in a VC deal. Second, *Log(Exits)* is the mean of the natural logarithm of the number of past exits through IPO and M&A by VCs in a VC deal. Third, *VC reputation* is the mean of VC reputation by VCs in a VC deal. We use Nahata (2008)'s approach and define VC reputation as the ratio between the VC's aggregate IPO proceeds and the cumulative IPO proceeds by all VCs. Consistent with existing studies, we document a positive impact of VC reputation and VC investment outcomes (Nahata, 2008; Krishnan, Ivanov, and Masulis, 2011; Amor and Kooli, 2020). Results from Table IA9 show

that the coefficient of *Top 10 Law Firm* remains significant, emphasizing that our baseline results are not driven by reputation of VCs.

6 Discussion

Using a comprehensive sample of private equity deals in 22 countries over the period 2005-2020, our study provides robust evidence of the role that top law firms play in the success of private equity deals. The study finds that private equity deals involving top law firms on either the buy or sell-side are associated with larger investment amounts by venture capitalists (VCs), a lower likelihood of deal failure or cancellation, higher valuations of deals, and higher returns generated from the current round of financing to the next round of financing. In addition, investments in private equity deals involving top law firms are more likely to exit via mergers and acquisitions (M&A) or initial public offerings (IPOs). These findings remain significant even after controlling for selection bias and other confounding factors, underlining the expertise of legal advisors in facilitating deal completions and generating value for these investments. The study provides important insights for private equity firms, VCs, and other market participants, emphasizing the importance of collaborating with top law firms in the successful execution of private equity deals.

6.1. Implications for theory

Our study generates insights on how top law firms play in the successful execution and outcomes of private equity deals, providing novel theoretical implications that can guide future research in the areas of private equity, legal advisory, and financial intermediation. The study provides also paves the way for a more refined understanding of the role of legal advisory in the complex landscape of private equity investments.

First, by demonstrating that the involvement of top law firms is associated with larger investment amounts by VCs, lower likelihood of deal failure or cancellation, higher deal valuations, and higher

returns generated from one financing round to the next, we highlight the critical role that legal expertise plays in shaping the financial structure and success of private equity deals. This finding challenges existing theories that primarily focus on the financial and strategic aspects of deal-making, pointing legal advisory as a key determinant of deal success.

Second, our findings that investments in private equity deals involving top law firms are more likely to exit via M&A or IPOs, even after controlling for selection bias and other confounding factors, suggests that legal advisory quality may also play an important role in shaping the exit strategies of private equity investments. This finding has important implications for research on the determinants of exit strategies in private equity, suggesting that the quality of legal advisory may be a critical, yet underexplored, factor that influences the choice of exit route.

Finally, we show that the institutional legal framework and the involvement of top law firms are complements in affecting outcomes of VC deals, thus shedding new light on the success of VC investments for firms that collaborate with top legal advisors. This finding shows the interplay between the legal environment and the quality of legal advisory in shaping VC investments, providing a fresh perspective on the importance of considering both the broader institutional context and the specific legal advisors involved in the VC investment process.

6.1. Limitations and future research

Our study also has certain limitations. First, data limitations do not allow us to establish a causal relationship between the involvement of top law firms and the outcomes of VC deals. Thus, we are only able to demonstrate a positive association between the above two variables at various stages of the VC investment. Future research should continue this line of inquiry and investigate how legal service from top-law firms may facilitate parties from the supply-side of capital such as

investment banks and acquirers in M&A, venture capital funds in private equity investments, or institutions holding ownership of the same firm.

Another intriguing aspect is that the production of value is typically created in distinct foci of legal service provision. While our study demonstrates the positive impact of top law firms' involvement on the success of VC deals, it also raises important questions about the underlying mechanisms through which legal advisory quality affects deal outcomes. For instance, do top law firms facilitate better deal structuring, negotiation, or due diligence processes? Do they help in reducing information asymmetry or in navigating complex regulatory environments? Researchers could explore the process through which top law firms facilitate collaboration between VCs and portfolio companies during the investment period, and how this contributes to investment success and returns. Understanding these mechanisms can help market participants to better leverage the expertise of legal advisors and to develop more effective strategies for private equity deal-making. Therefore, an important area for future practical application of our research is to investigate deeper into the specific ways in which top law firms add value to private equity deals and to develop best practices for collaboration between legal advisors, private equity firms, and venture capitalists.

7 Conclusion

In this study, we demonstrate that the involvement of top law firms is a critial variable influencing the success of private equity deals. Specifically, we document a positive association between the involvement of top law firms and larger investment amounts by venture capitalists (VCs), lower likelihood of deal failure or cancellation, higher deal valuations, and higher returns generated from one financing round to the next, in a comprehensive sample of private equity deals across 22 countries. In addition, we find that investments in private equity deals involving top law firms are more likely to exit via mergers and acquisitions (M&A) or initial public offerings (IPOs),

even after controlling for selection bias and other confounding factors. Ultimately, we illustrate that, on average, the involvement of top law firms and country-level legal framework act as complements in affecting the successful execution and outcomes of private equity deals.

References

Acharya, V.V., Gottschalg, O.F., Hahn, M., & Kehoe, C., 2013. Corporate governance and value creation: Evidence from private equity. *Review of Financial Studies*, *26*(2), 368–402.

Amor, S.B. and Kooli, M., 2020. Do M&A exits have the same effect on venture capital reputation than IPO exits?. *Journal of Banking & Finance*, *111*.

Ang, A., Chen, B., Goetzmann, W.N., & Phalippou, L., 2018. Estimating private equity returns from limited partner cash flows. *Journal of Finance*, *73*(4), 1751–1783.

Ang, A., Papanikolaou, D., Westerfield, M.M., 2014. Portfolio choice with illiquid assets. *Management Science*, *60*(11), 2737–2761.

Balcarcel, A., Hertzel, M.G., & Lindsey, L.A., 2010. Contracting frictions and cross–border capital flows: Evidence from venture capital. *Working Paper*.

Baker, S.R., Bloom, N., & Davis, S.J., 2016. Measuring economic policy uncertainty. *Quarterly Journal of Economics*, *131*(4), 1593–1636.

Barry, C.B., 1994. New directions in research on venture capital finance. *Financial Management*, *23*(3), 3–15.

Beatty, R.P., & Ivo W., 1996. Issuer Expenses and Legal Liability in Initial Public Offerings. *Journal of Law and Economics*, *39*(2),545–602.

Bottazzi L., Da Rin M., & Hellmann T., 2008. Who are the active investors? Evidence from venture capital. *Journal of Financial Economics*, *89*(3), 488–512.

Bottazzi, L., Da Rin, M., & Hellmann, T., 2016. The importance of trust for investment: Evidence from venture capital. *Review of Financial Studies*, *29*(9), 2283–2318.

Choudhary, P., Schloetzer, J.D. and Sturgess, J.D., 2013. Boards, auditors, attorneys and compliance with mandatory SEC disclosure rules. *Managerial and Decision Economics*, *34*(7–8), 471–487.

Cumming, D., Fleming, G., & Schwienbacher, A., 2006. Legality and venture capital exits. *Journal of Corporate Finance*, *12*(2), 214–245.

Cumming, D., & Zhang, M. (2019). Angel investors around the world. *Journal of International Business Studies*, *50*(5), 692–719.

Dai, N., & Nahata, R., 2016. Cultural differences and cross–border venture capital syndication. *Journal of International Business Studies*, *47*, 140–169.

Daines, R., 2002. The incorporation choices of IPO firms. *New York University Law Review*, *77*(6), 1559–1559.

Gompers, P.A., 1995. Optimal investment, monitoring, and the staging of Venture Capital. *Journal of Finance*, *50*(5), 1461–1489.

Kaplan, S., & Josh L., 2017, Venture capital data: Opportunities and challenges, in John Haltiwanger, Erik Hurst, Javier Miranda, and Antoinette Schoar, eds., Measuring Entrepreneurial Business: Current Knowledge and Challenges, 413–431 (National Bureau of Economic Research).

Kaplan, S.N., & Strömberg, P.E., 2003. Financial contracting theory meets the real world: An empirical analysis of venture capital contracts. *Review of Economic Studies*, *70*(2), 281–315.

Kaplan, S.N., & Strömberg, P.E., 2004. Characteristics, contracts, and actions: Evidence from venture capitalist analyses. *Journal of Finance*, *59*(5), 2177–2210.

Khurshed, A., Mohamed, A., Schwienbacher, A., & Wang, F., 2020. Do venture capital firms benefit from international syndicates? *Journal of International Business Studies*, *51*, 986–1007.

Klapper, L.F., & Love, I., 2004. Corporate governance, investor protection, and performance in emerging markets. *Journal of Corporate Finance*, *10*(5), 703–728.

Krishnan, C.N.V., Ivanov, V.I., Masulis, R.W. and Singh, A.K., 2011. Venture capital reputation, post-IPO performance, and corporate governance. *Journal of Financial and Quantitative Analysis*, *46*(5), 1295-1333.

Krishnan, C.N.V., & Laux, P. A. (2008). Legal advisors: Popularity versus economic performance in acquisitions. *Corporate Ownership & Control, 6(2–4)*, 475–499.

Krishnan, C.N.V., & Masulis, R.W. (2013). Law firm expertise and merger and acquisition Outcomes. *Journal of Law and Economics, 56*(1), 189–226.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R.W., 1997. Legal determinants of external finance. *Journal of Finance*, *52*(3), 1131–1150.

Porta, R.L., Lopez–de–Silanes, F., Shleifer, A., & Vishny, R.W., 1998. Law and finance. *Journal of Political Economy*, *106*(6), 1113–1155.

La Porta, R., Lopez–de–Silanes, F., Shleifer, A., & Vishny, R., 2000. Investor protection and corporate governance. *Journal of Financial Economics*, *58*(1–2), 3–27.

Leland, H.E., & Pyle, D.H., 1977. Informational asymmetries, financial structure, and financial intermediation. *Journal of Finance, 32*(2), 371–387.

Lerner, J., 1994. The syndication of venture capital investments. *Financial Management, 23*(3), 16–27.

Lerner, J. and Schoar, A., 2005. Does legal enforcement affect financial transactions? The contractual channel in private equity. *Quarterly Journal of Economics*, *120*(1), 223–246.

Heckman, J. 1979. Sample selection bias as a specification error. *Econometrics*, *47*(1), 153–161.

Hedge D., and Tumlinson J. 2018. Does social proximity enhance business partnerships? Theory and evidence from ethnicity's role in U.S. venture capital. *Management Science*, *60*(9): 2355–2380.

Hochberg Y., Ljungqvist A., & Lu Y., 2007. Whom you know matters: Venture capital networks and investment performance. *Journal of Finance, 62*(1), 266–301.

Howell, S. T., Lerner, J., Nanda, R., & Townsend, R. R. 2020. Financial distancing: How venture capital follows the economy down and curtails innovation. Working paper.

Huang, A., Hui, K.W. and Li, R.Z., 2019. Federal judge ideology: A new measure of ex ante litigation risk. *Journal of Accounting Research*, *57*(2), 431-489.

MacMillan, I.C., Siegel, R., & Narasimha, P.S., 1985. Criteria used by venture capitalists to evaluate new venture proposals. *Journal of Business Venturing*, *1*(1), 119–128.

Dai, N., Jo, H., & Kassicieh, S., 2012. Cross–border venture capital investments in Asia: Selection and exit performance. *Journal of Business Venturing*, *27*(6), 666–684.

Metrick, A, & Ayako Y.. 2021. Venture capital and the finance of innovation (3rd), John Wiley & Sons, Hoboken, NJ.

Moran, P., & Pandes, J.A., 2019. Elite law firms in the IPO market. *Journal of Banking & Finance*, *107*, 105612.

Nahata, R., 2008. Venture capital reputation and investment performance. *Journal of Financial Economics*, *90*(2), 127-151.

Nahata, R., Hazarika, S., & Tandon, K., 2014. Success in global venture capital investing: do institutional and cultural differences matter? *Journal of Financial and Quantitative Analysis*, *49*(4), 1039–1070.

Pham, P.K., N. Turner, & J. Zein, 2021. Rush to raise: Does fundraising pressure incentivize strategic venture capital deal pricing? Working paper.

Smith, E. E., Smith, J. K., & Smith, R. L. (2022). Bias in the reporting of venture capital performance: The disciplinary role of FOIA. *Review of Corporate Finance*, *2*, forthcoming.

Stiglitz, J.E., & Weiss, A., 1981. Credit rationing in markets with imperfect information. *American Economic Review*, *71*(3), 393–410.

Subramanian, Guhan. 2007. Post–siliconix freezeouts: Theory and evidence. *Journal of Legal Studies*, 36(1), 1–26.

Wang, S., & Zhou, H., 2004. Staged financing in venture capital: moral hazard and risks. *Journal of Corporate Finance*, *10*(1), 131–155.

Wright, M. and Lockett, A., 2003. The structure and management of alliances: Syndication in the venture capital industry. *Journal of Management Studies*, *40*(8), 2073–2102.

Zacharakis, A.L., & Meyer, G.D., 1998. A lack of insight: Do venture capitalists really understand their own decision process? *Journal of Business Venturing*, *13*(1), 57–76.

Appendix A1: Definitions of variables

Variable names	Descriptions	Sources
Incomplete	A dummy variable equal to one if the VC investment transaction is incomplete, and zero otherwise.	Pitchbook
Percentage Acquired	The percentage of stake acquired in the round of financing.	Pitchbook
Log(Pre-money valuation)	The natural logarithm of the round's pre-money valuation.	Pitchbook
Annualized returns	The annualized return from the current round to the next round. We define Cumulative Returns = (Pre-money Valuation (lead)-Post-money Valuation(current))/Post-money Valuation (current), and Round Gap = the number of days between the current round to the next round. We calculate Annualized Returns as $(1 + \text{Cumulative Returns})^{\frac{365}{\text{Round Gap}}} - 1$.	Pitchbook
Survival	A dummy variable equal to one if the company exits through an IPO or a merger and acquisition, or it receives financing in the next round, and zero otherwise.	Pitchbook
Success	A dummy variable equal to one if a portfolio company exits through an IPO or a merger and acquisition, and zero otherwise.	Pitchbook
Top 10 law firm	A dummy variable equal to one if the deal is serviced by at least one top 10 law firm, either on the buy-side or the sell-side, and zero otherwise.	Pitchbook
Top 10 buy-side law firm	A dummy variable equal to one if the VC's law firm appears in the top 10 annual league table rankings.	Pitchbook
Top 10 sell-side law firm	A dummy variable equal to one if the portfolio company's law firm appears in the top 10 annual league table rankings.	Pitchbook
Log(Company age)	The natural logarithm of one plus the difference between the transaction year and the company's founding year.	Pitchbook
Log(Investors)	The natural logarithm of the total number of investors in the transaction.	Pitchbook
Log(Rounds)	The natural logarithm of the company's number of financing rounds.	Pitchbook
Log(Time to exit)	The natural logarithm of one plus time to exit which is measured as the number of years between the exit date and the first-round date.	Pitchbook
Syndication (D)	A dummy variable equal to one if the total number of investors in the transaction is greater than zero, and zero otherwise.	Pitchbook
Staging (D)	A dummy variable equal to one if the number of financing rounds is greater than one, and zero otherwise.	Pitchbook
Civil justice	The World Justice Project's civil justice index. The index ranges between 0 to 1, reflecting how ordinary people can resolve their grievances peacefully and effectively through the civil justice system.	The World Justice Project
Court structure	The World Bank's court structure and proceedings index. The index ranges from -1 to 5, reflecting how sophisticated and streamlined the court structure is.	The World Bank Doing Business Report
Rule of law	The Worldwide Governance Indicators' rule of law index. The index captures agents' confidence in the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. The measurement is in units of a standard normal distribution.	The World Governance Indicators project
Properties rights	The Heritage's properties rights index. The index is the average scores of three sub-factors: (i) risk of expropriation, (2) respect for intellectual property rights, and (iii) quality of contract enforcement, property rights, and law enforcement.	The Heritage Foundation

Democracy	The Polity V Project (2018)'s democracy index. The index ranges from 0 to 10. The higher values indicate a higher level of institutional democracy.	Polity V Project (2018)
Judicial effectiveness (D)	A dummy variable equal to one if the judicial effectiveness is greater than its median, and zero otherwise. The judicial effectiveness is the average scores of three sub-factors: (i) judicial independence, (ii) quality of the judicial process, and (iii) perceptions of the quality of public services and the independence of the civil service. The higher values suggest that laws are fully respected.	The Heritage Foundation
Judicial quality (D)	A dummy variable equal to one if the quality of judicial processes index is greater than its median, and zero otherwise. The index ranges from 0 to 18, with higher values indicating better and more efficient judicial processes.	The World Bank Doing Business Report
Dispute resolution (D)	A dummy variable equal to one if the alternative dispute resolution index is greater than its median, and zero otherwise. The index ranges from 0 to 3, and higher values indicate greater availability of alternative dispute resolution mechanisms.	The World Bank Doing Business Report
Top 5 (15, 20) law firm	A dummy variable which equals to one if the deal is serviced by at least one top 5(15, 20) law firm, either on buy-side or sell-side, and zero otherwise.	Pitchbook
Log(VC age)	The natural logarithm of one plus the lead VC's age. VC's age is the difference between the transaction year and the VC's founding year plus one.	Pitchbook
Log(VC AUM)	The natural logarithm of the lead VC's asset undermanagement.	Pitchbook
Top 10 industry legal advice buy-side	A dummy variable indicating top 10 industries with legal advice on the buy-side. The ranking is based on the number of times a top buy-side legal advisor is appointed but no top 10 general advisor is hired within 3 years.	Pitchbook
Top 10 industry legal advice sell-side	A dummy variable indicating top 10 industries with legal advice on the sell-side. The ranking is based on the number of times a top sell-side legal advisor is appointed but no top 10 general advisor is hired within years.	Pitchbook
GDP Growth	The country's annual gross domestic product growth rate.	World Bank WDI
EPU	The country's average monthly economic policy uncertainty index in a given year.	Baker, Bloom, and Davis (2016)
Investment freedom	The Heritage's investment freedom index.	The Heritage Foundation
Market return	The country's average monthly market returns in a given year.	Datastream

Table 1: Top law firms and the likelihood of deal incompletion

This table presents the results for the linear regressions of the deal status on the appearance of the top law firms. *Incomplete* is a dummy variable equal to one if the VC investment transaction is incomplete, and zero otherwise. *Top 10 buy-side law firm* is a dummy variable equal to one if the portfolio company's law firm appears in the top 10 annual league table rankings. *Top 10 sell-side law firm* is a dummy variable equal to one if the portfolio company's law firm appears in the top 10 annual league table rankings. *Top 10 law firm* is a dummy variable equal to one if the deal is serviced by at least one top 10 law firm, either on the buy-side or the sell-side, and zero otherwise. Standard errors in parentheses are clustered at the year level (model (1) to (4)) or at the country×year level (model (5)). ***, **, * represent statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent variable	*Incomplete*				
	(1)	(2)	(3)	(4)	(5)
Top 10 buy-side law firm		-0.012***	-0.014***		
		(0.002)	(0.002)		
Top10 sell-side law firm		-0.007***		-0.008***	
		(0.002)		(0.002)	
Top10 law firm	-0.009***				-0.009***
	(0.002)				(0.001)
Constant	0.009***	0.009***	0.008***	0.009***	0.009***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	181,944	181,944	181,944	181,944	181,944
Round FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes
Deal type FE	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.014	0.014	0.013	0.013	0.014

Table 2: Top law firms and the percentage of ownership

This table presents the results of the linear regressions of the percentage of stake acquired on the appearance of the top law firms. *Percentage acquired* is the percentage of stake acquired in the round of financing. *Top 10 buy-side law firm* is a dummy variable equal to one if the portfolio company's law firm appears in the top 10 annual league table rankings. *Top 10 sell-side law firm* is a dummy variable equal to one if the portfolio company's law firm appears in the top 10 annual league table rankings. *Top 10 law firm* is a dummy variable equal to one if the deal is serviced by at least one top 10 law firm, either on the buy-side or the sell-side, and zero otherwise. Standard errors in parentheses are clustered at the year level (from model (1) to (4)) or at the country×year level (model (5)). ***, **, * represent statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent variable	*Percentage acquired*				
	(1)	(2)	(3)	(4)	(5)
Top 10 law firm	0.024***				0.024***
	(0.002)				(0.003)
Top 10 buy-side law firm		0.032***		0.029***	
		(0.002)		(0.002)	
Top 10 sell-side law firm			0.016***	0.013***	
			(0.001)	(0.001)	
Constant	0.241***	0.246***	0.244***	0.242***	0.241***
	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)
Observations	71,129	71,129	71,129	71,129	71,129
Round FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes
Deal type FE	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.138	0.137	0.135	0.138	0.138

Table 3: Cross-sectional analyses

Panel A: Top law firms, legal and political status, and the likelihood of deal completion

This table presents the results for the linear regressions of the deal status on the appearance of the top law firms, the legal and political environment for the location of the transaction, and their interaction terms. *Incomplete* is a dummy variable equal to one if the VC investment transaction is incomplete, and zero otherwise. *Top 10 law firm* is a dummy variable equal to one if the deal is serviced by at least one top 10 law firm, either on the buy-side or the sell-side, and zero otherwise. *Civil justice* is defined by the World Justice Project's civil justice index, which ranges between 0 to 1, reflecting how ordinary people can resolve their grievances peacefully and effectively through the civil justice system. *Court structure* is defined by the World Bank's court structure and proceedings index, which ranges from -1 to 5, reflecting how sophisticated and streamlined the court structure is. *Rule of law* is defined by the Worldwide Governance Indicators' rule of law index. *Properties rights* is defined by the heritage's properties rights index. *Democracy* is defined by the Polity V Project (2018)'s democracy index. *Judicial effectiveness (D)* is a dummy variable equal to one if the judicial effectiveness is greater than its median, and zero otherwise. *Judicial quality (D)* is a dummy variable equal to one if the quality of judicial processes index is greater than its median, and zero otherwise. *Dispute resolution (D)* is a dummy variable equal to one if the alternative dispute resolution index is greater than its median, and zero otherwise. We multiply the coefficient of *Properties rights* by 100. Standard errors in parentheses are clustered at the level of year. ***, **, * represent statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent variable	*Incomplete*							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Top 10 law firm	-0.017***	0.007	-0.014***	-0.044***	-0.035***	-0.012***	-0.014***	-0.015***
	(0.003)	(0.013)	(0.005)	(0.011)	(0.004)	(0.002)	(0.002)	(0.002)
Top 10 law firm × Civil justice	0.004**							
	(0.002)							
Civil justice	-0.073**							
	(0.025)							
Top 10 law firm × Court structure		-0.005						
		(0.002)						
Court structure		-0.008**						
		(0.003)						
Top 10 law firm × Rule of law			0.004					
			(0.003)					
Rule of law			-0.008					
			(0.007)					
Top 10 law firm × Properties rights				0.041***				
				(0.013)				
Properties rights				-0.023***				
				(0.006)				
Top 10 law firm × Democracy					0.003***			
					(0.000)			
Democracy					0.004***			
					(0.001)			
Top 10 law firm × Judicial effectiveness (D)						0.003		
						(0.002)		

Judicial effectiveness (D)						-0.000		
						(0.003)		
Top 10 law firm × Judicial quality (D)							0.009***	
							(0.002)	
Judicial quality (D)							-0.010***	
							(0.002)	
Top 10 law firm × Dispute resolution (D)								0.011***
								(0.002)
Dispute resolution (D)								-0.011***
								(0.003)
Constant	0.062**	0.050**	0.017*	0.027***	0.037***	0.010***	0.014***	0.016***
	(0.017)	(0.012)	(0.008)	(0.005)	(0.008)	(0.002)	(0.001)	(0.002)
Observations	133,274	105,318	158,131	181,944	155,318	181,944	181,944	181,944
Round FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Deal type FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.014	0.015	0.012	0.014	0.012	0.014	0.014	0.015

Panel B: Top law firms, judicial and democratic status, and ownership

This table presents the results for the linear regressions of the percentage of the stake acquired on the appearance of the top law firms, the legal and political environment for the location of the transaction, and their interaction terms. *Percentage acquired* is the percentage of stake acquired in the round of financing. *Top 10 law firm* is a dummy variable equal to one if the deal is serviced by at least one top 10 law firm, either on the buy-side or the sell-side, and zero otherwise. *Civil justice* is defined by the World Justice Project's civil justice index, which ranges between 0 to 1, reflecting how ordinary people can resolve their grievances peacefully and effectively through the civil justice system. *Court structure* is defined by the World Bank's court structure and proceedings index, which ranges from -1 to 5, reflecting how sophisticated and streamlined the court structure is. *Rule of law* is defined by the Worldwide Governance Indicators' rule of law index. *Properties rights* is defined by the heritage's properties rights index. *Democracy* is defined by the Polity V Project (2018)'s democracy index. *Judicial effectiveness (D)* is a dummy variable equal to one if the judicial effectiveness is greater than its median, and zero otherwise. *Judicial quality (D)* is a dummy variable equal to one if the quality of judicial processes index is greater than its median, and zero otherwise. *Dispute resolution (D)* is a dummy variable equal to one if the alternative dispute resolution index is greater than its median, and zero otherwise. We multiply the coefficient of *Properties rights* by 100. Standard errors in parentheses are clustered at the level of year. ***, **, * represent statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent variable	*Percentage acquired*							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Top 10 law firm	0.026***	0.140**	0.053***	0.039	0.042***	0.034***	0.032***	0.031***
	(0.005)	(0.044)	(0.012)	(0.029)	(0.007)	(0.007)	(0.002)	(0.002)
Top 10 law firm × Civil justice	0.003							
	(0.008)							
Civil justice	-0.112							
	(0.129)							
Top 10 law firm × Court structure		-0.023*						
		(0.009)						
Court structure		-0.000						
		(0.005)						
Top 10 law firm × Rule of law			-0.020**					
			(0.007)					
Rule of law			0.012					
			(0.034)					
Top 10 law firm × Properties rights				-0.019				
				(0.037)				
Properties rights				-0.077***				
				(0.023)				
Top 10 law firm × Democracy					-0.002**			
					(0.001)			
Democracy					-0.003			
					(0.003)			
Top 10 law firm × Judicial effectiveness (D)						-0.012*		
						(0.006)		
Judicial effectiveness (D)						0.004		
						(0.006)		
Top 10 law firm × Judicial quality (D)							-0.017***	
							(0.003)	
Judicial quality (D)							-0.012***	

							(0.004)	
Top 10 law firm × Dispute resolution (D)								-0.015***
								(0.003)
Dispute resolution (D)								-0.016***
								(0.003)
Constant	0.311**	0.235***	0.225***	0.304***	0.272***	0.238***	0.247***	0.249***
	(0.091)	(0.022)	(0.051)	(0.019)	(0.022)	(0.006)	(0.002)	(0.002)
Observations	49,352	38,582	62,863	71,129	63,793	71,129	71,129	71,129
Round FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Deal type FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.143	0.154	0.132	0.138	0.138	0.138	0.138	0.138

Table 4: Top law firms and transaction valuation

This table presents the results for the linear regressions of the transaction valuation on the appearance of the top law firms. *Log(Pre-money valuation)* is the natural logarithm of the round's pre-money valuation. *Top 10 buy-side law firm* is a dummy variable equal to one if the portfolio company's law firm appears in the top 10 annual league table rankings. *Top 10 sell-side law firm* is a dummy variable equal to one if the portfolio company's law firm appears in the top 10 annual league table rankings. *Top 10 law firm* is a dummy variable equal to one if the deal is serviced by at least one top 10 law firm, either on the buy-side or the sell-side, and zero otherwise. Standard errors in parentheses are clustered at the year level. ***, **, * represent statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent variable	*Log(Pre-money valuation)*			
	(1)	(2)	(3)	(4)
Top 10 law firm	0.581***			
	(0.045)			
Top 10 buy-side law firm		0.715***		0.621***
		(0.031)		(0.028)
Top 10 sell-side law firm			0.507***	0.443***
			(0.036)	(0.029)
Constant	2.429***	2.556***	2.476***	2.430***
	(0.016)	(0.003)	(0.011)	(0.009)
Observations	74,838	74,838	74,838	74,838
Round FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Deal type FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Adjusted R-squared	0.518	0.511	0.512	0.524

Table 5: Top law firms and annualized returns between VC financing rounds

This table presents the results for the linear regressions of the cross-round returns (annualized) on the appearance of the top law firms. *Annualized returns* is defined as the annualized return from the current round to the next round. *Top 10 buy-side law firm* is a dummy variable equal to one if the portfolio company's law firm appears in the top 10 annual league table rankings. *Top 10 sell-side law firm* is a dummy variable equal to one if the portfolio company's law firm appears in the top 10 annual league table rankings. *Top 10 law firm* is a dummy variable equal to one if the deal is serviced by at least one top 10 law firm, either on the buy-side or the sell-side, and zero otherwise. Standard errors in parentheses are clustered at the level of year. ***, **, * represent statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent variable	*Annualized returns*			
	(1)	(2)	(3)	(4)
Top 10 law firm	0.119***			
	(0.034)			
Top 10 buy-side law firm		0.123***		0.096**
		(0.036)		(0.038)
Top 10 sell-side law firm			0.147***	0.139***
			(0.038)	(0.039)
Constant	0.788***	0.822***	0.782***	0.775***
	(0.013)	(0.004)	(0.013)	(0.013)
Observations	34,251	34,251	34,251	34,251
Round FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Deal type FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Adjusted R-squared	0.081	0.090	0.091	0.091

Table 6: Top law firms and likelihood of survival

This table presents the results for the linear regressions of the status whether the company survives to the next round on the appearance of the top law firms. *Survival* is defined as a dummy variable equal to one if the company either exits through an IPO or a merger and acquisition, or it receives financing in the next round, and zero otherwise. *Top 10 law firm* is a dummy variable equal to one if the deal is serviced by at least one top 10 law firm, either on the buy-side or the sell-side, and zero otherwise. *Top 10 buy-side law firm* is a dummy variable equal to one if the portfolio company's law firm appears in the top 10 annual league table rankings. *Top 10 sell-side law firm* is a dummy variable equal to one if the portfolio company's law firm appears in the top 10 annual league table rankings. *Log(Company age)* is the natural logarithm of one plus the difference between the transaction year and the company's founding year. *Log(Investors)* is the natural logarithm of the total number of investors in the transaction. Standard errors in parentheses are clustered at the level of year. ***, **, * represent statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent variable	*Survival*			
	(1)	(2)	(3)	(4)
Top 10 law firm	0.092***			
	(0.014)			
Top 10 buy-side law firm		0.071***		0.049***
		(0.018)		(0.016)
Top 10 sell-side law firm			0.104***	0.099***
			(0.013)	(0.013)
Log(Company age)	-0.043***	-0.025***	-0.025***	-0.024***
	(0.008)	(0.007)	(0.007)	(0.007)
Log(Investors)	0.053***	0.073***	0.066***	0.064***
	(0.010)	(0.011)	(0.011)	(0.010)
Constant	0.555***	0.529***	0.519***	0.519***
	(0.007)	(0.004)	(0.005)	(0.005)
Observations	148,278	148,278	148,278	148,278
Round FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Deal Type FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Adjusted R-squared	0.240	0.229	0.233	0.233

Table 7: Top law firms and likelihood of success

This table presents the results for the linear regressions of the company's success on the appearance of the top law firms. *Success* is a dummy variable equal to one if a portfolio company exits through an IPO or a merger and acquisition, and zero otherwise. *Top 10 law firm* is a dummy variable equal to one if the deal is serviced by at least one top 10 law firm, either on the buy-side or the sell-side, and zero otherwise. *Log(Investors)* is the natural logarithm of the total number of investors in the transaction. *Log(Rounds)* is the natural logarithm of the company's number of financing rounds. *Log(Company age)* is the natural logarithm of one plus the difference between the transaction year and the company's founding year. Standard errors in parentheses are clustered at the level of year. ***, **, * represent statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent variable	*Success*			
	Full sample		*Year ≤ 2015*	
	(1)	(2)	(3)	(4)
Top 10 law firm	0.080***	0.056***	0.122***	0.085***
	(0.017)	(0.013)	(0.011)	(0.012)
Log(Investors)		0.039***		0.068***
		(0.008)		(0.008)
Log(Rounds)		0.009		0.014**
		(0.007)		(0.006)
Log(Company age)		0.007*		0.012*
		(0.004)		(0.006)
Constant	0.146***	0.117***	0.255***	0.208***
	(0.002)	(0.008)	(0.002)	(0.006)
Observations	79,124	67,036	34,536	28,580
Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Deal Type FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Adjusted R-squared	0.141	0.152	0.083	0.094

Table 8: Top law firms and time to exit

This table presents the results for the linear regressions of the time to exit. *Log(Time to exit)* is the natural logarithm of one plus time to exit which is measured as the number of years between the exit date and the first-round date. *Top 10 law firm* is a dummy variable equal to one if the deal is serviced by at least one top 10 law firm, either on the buy-side or the sell-side, and zero otherwise. *Log(Investors)* is the natural logarithm of the total number of investors in the transaction. *Log(Rounds)* is the natural logarithm of the company's number of financing rounds. *Log(Company age)* is the natural logarithm of one plus the difference between the transaction year and the company's founding year. Standard errors in parentheses are clustered at the level of year. ***, **, * represent statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent variable	*Log(Time to exit)*			
	Full sample		*Year ≤ 2015*	
	(1)	(2)	(3)	(4)
Top 10 law firm	0.179***	0.051***	0.205***	0.047**
	(0.028)	(0.013)	(0.032)	(0.015)
Log(Investors)		-0.023**		-0.035***
		(0.009)		(0.010)
Log(Rounds)		0.434***		0.461***
		(0.020)		(0.018)
Log(Company age)		0.011		0.011
		(0.010)		(0.011)
Constant	1.477***	1.212***	1.577***	1.273***
	(0.006)	(0.015)	(0.007)	(0.017)
Observations	12,301	10,821	9,419	8,222
Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Deal Type FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Adjusted R-squared	0.258	0.445	0.147	0.384

Table 9: Top law firms and VC investment strategies: Syndication vs staging

This table presents the results of the linear regressions of the syndication and staging on the appearance of top law firms. *Log(Investors)* is the natural logarithm of the total number of investors in the transaction. *Log(Rounds)* is the natural logarithm of the company's number of financing rounds. *Syndication (D)* is a dummy variable equal to one if the total number of investors in the transaction is greater than one, and zero otherwise. *Staging (D)* is a dummy variable equal to one if the number of financing rounds is greater than one, and zero otherwise. *Top 10 law firm* is a dummy variable equal to one if the deal is serviced by at least one top 10 law firm, either on the buy-side or the sell-side, and zero otherwise. *Log(Company age)* is the natural logarithm of one plus the difference between the transaction year and the company's founding year. Standard errors in parentheses are clustered at the level of year. ***, **, * represent statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent variables	*Log(Investors)*	*Syndication (D)*	*Log(Rounds)*	*Staging (D)*
	(1)	(2)	(3)	(4)
Top 10 law firm	0.442***	0.179***	0.246***	0.168***
	(0.028)	(0.011)	(0.051)	(0.029)
Log(Company age)	0.018*	0.006*	-0.073***	-0.052***
	(0.009)	(0.003)	(0.011)	(0.007)
Constant	0.588***	0.567***	0.532***	0.504***
	(0.011)	(0.004)	(0.008)	(0.006)
Observations	67,036	76,881	76,881	76,881
Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Deal type FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Adjusted R-squared	0.145	0.056	0.221	0.184

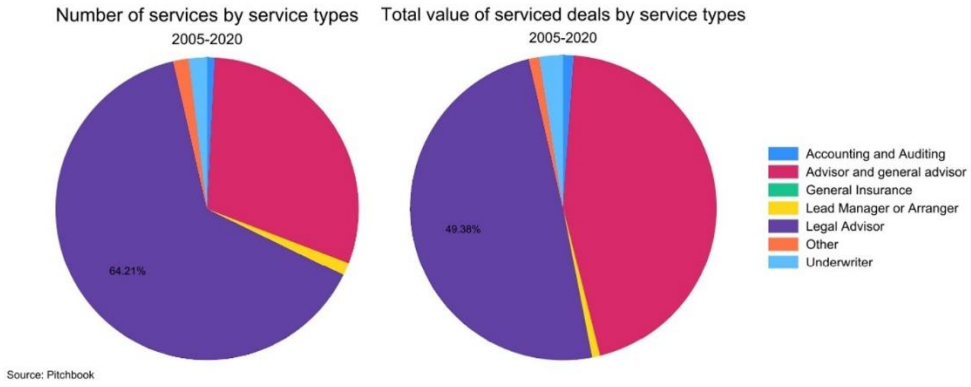
Law Firm Expertise and Global Venture Capital Investments

Internet Appendix

This appendix contains supplemental material to the paper. In numerous places, the paper refers to results reported in "Internet Appendix" numerous places. This appendix tabulates all such supplementary results.

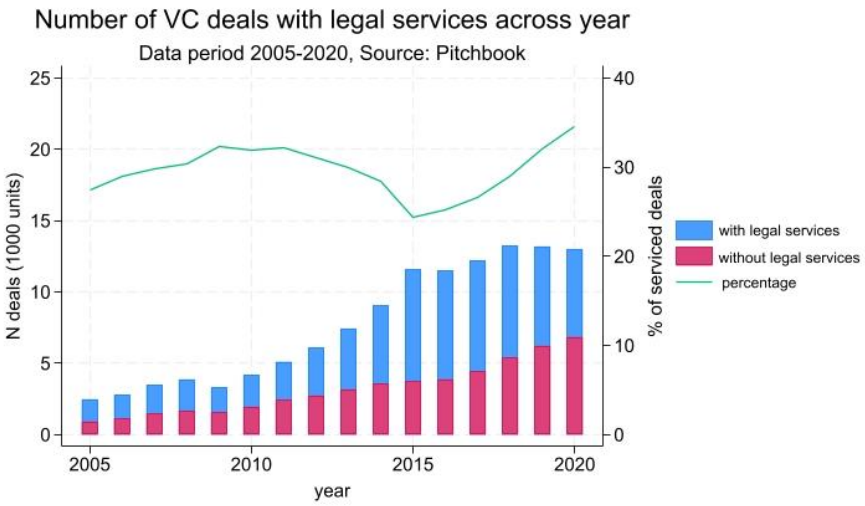
Appendix Figure 1: Advisory services by service types in VC industry

This pie chart provides the distribution of the number of services and the total value of serviced deals by service types, including accounting and auditing, advisor and general advisor, general insurance, lead manager and arranger, legal advisor, underwriter, and other for VC deals between 2005-2020.



Appendix Figure 2: The number and ratio of VC deals with legal services by year

This figure provides the distribution of the number VC deals with and without legal services by year for the period 2005-2020. The number of deals is displayed in 1000 units.



Appendix Figure 3: The ratio of VC deals covered with legal services by country

This figure presents the fraction of VC deals covered with legal services by country for the period 2005-2020. Only countries with equal or more than 1000 deals are shown.

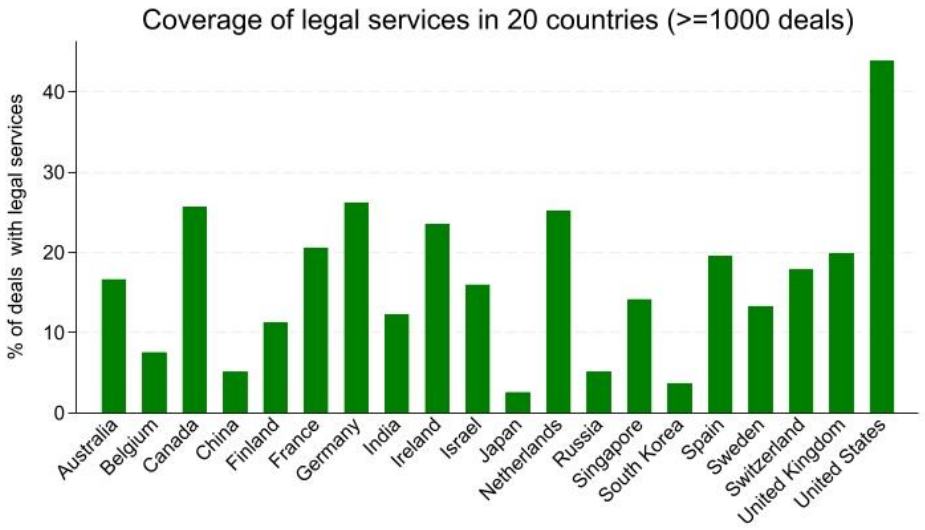


Table IA1: The distribution of VC deals and top law firms by year

This table provides the distribution of VC deals by year from 2005 to 2020 with the annual proportions of top 10 on the buy-side, the sell-side, and both sides.

Year	N	% Top 10 law firm	% Top 10 buy-side law firm	% Top 10 sell-side law firm
2005	3,121	0.190	0.004	0.189
2006	3,520	0.197	0.005	0.196
2007	4,229	0.237	0.007	0.234
2008	4,858	0.246	0.010	0.240
2009	4,319	0.260	0.019	0.250
2010	5,216	0.282	0.037	0.263
2011	6,511	0.288	0.038	0.266
2012	7,195	0.300	0.043	0.282
2013	9,176	0.269	0.039	0.252
2014	12,269	0.226	0.058	0.203
2015	15,687	0.177	0.045	0.158
2016	17,725	0.155	0.040	0.137
2017	19,347	0.163	0.053	0.140
2018	21,968	0.179	0.064	0.153
2019	23,015	0.193	0.078	0.159
2020	23,862	0.203	0.093	0.160
Total	181,944	0.205	0.054	0.181

Table IA2: The distribution of VC deals and top law firms by country

This table provides the distribution of VC deals by country with the annual proportions of top 10 law firms on the buy-side, the sell-side, and both sides.

Country	N	% Top 10 law firm	% Top 10 buy-side law firm	% Top 10 sell-side law firm
Australia	1,094	0.019	0.009	0.012
Belgium	444	0.016	0.007	0.009
Brazil	701	0.138	0.050	0.104
Canada	4,420	0.133	0.044	0.102
China	33,961	0.008	0.003	0.004
Denmark	165	0.030	0.006	0.024
Finland	389	0.018	0.010	0.010
France	7,020	0.090	0.037	0.063
Germany	4,184	0.048	0.024	0.026
India	4,206	0.043	0.023	0.024
Ireland	653	0.026	0.003	0.023
Israel	2,177	0.056	0.015	0.043
Italy	317	0.050	0.022	0.035
Mexico	108	0.120	0.046	0.093
Netherlands	1,284	0.068	0.013	0.058
Poland	161	0.012	0.006	0.012
Singapore	351	0.003	0.003	0.003
Spain	1,528	0.152	0.017	0.140
Sweden	983	0.022	0.009	0.016
Switzerland	531	0.070	0.024	0.053
United Kingdom	16,911	0.072	0.025	0.054
United States	100,356	0.334	0.085	0.300
Total	181,944	0.205	0.054	0.181

Table IA3: Summary statistics

This table provides summary statistics of main dependent and independent. *Incomplete* is a dummy variable equal to one if the VC investment transaction is incomplete, and zero otherwise. *Percentage acquired* is the percentage of stake acquired in the round of financing. *Top 10 law firm* is a dummy variable equal to one if the deal is serviced by at least one top 10 law firm, either on the buy-side or the sell-side, and zero otherwise. *Top 10 buy-side law firm* is a dummy variable equal to one if the portfolio company's law firm appears in the top 10 annual league table rankings. *Top 10 sell-side law firm* is a dummy variable equal to one if the portfolio company's law firm appears in the top 10 annual league table rankings.

	N	All	Complete transactions	Incomplete transactions
Incomplete	181,944	0.008	-	-
Percentage acquired	71,184	-	0.250	-
Top 10 law firm	181,944	0.205	0.206	0.092
Top 10 buy-side law firm	181,944	0.054	0.055	0.002
Top 10 sell-side law firm	181,944	0.181	0.181	0.092

Table IA4: Alternative measurements of top law firms

This table presents the results of the linear regressions of the deal status and the stake acquired on the appearance of top law firms defined by alternative thresholds. *Incomplete* is a dummy variable equal to one if the VC investment transaction is incomplete, and zero otherwise. *Percentage acquired* is the percentage of stake acquired in the round of financing. *Top 5 (15, 20) Law Firm* is defined as a dummy variable which equals one if the deal is serviced by at least one top 5(15, 20) law firm, either on buy-side or sell-side, and zero otherwise. Standard errors in parentheses are clustered at the year level. ***, **, * represent statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent variables	*Incomplete*			*Percentage acquired*		
	(1)	(2)	(3)	(4)	(5)	(6)
Top 5 law firm	-0.009***			0.021***		
	(0.002)			(0.002)		
Top 15 law firm		-0.010***			0.025***	
		(0.002)			(0.002)	
Top 20 law firm			-0.010***			0.026***
			(0.002)			(0.002)
Constant	0.009***	0.010***	0.010***	0.243***	0.240***	0.239***
	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Observations	181,944	181,944	181,944	71,129	71,129	71,129
Round FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Deal type FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.014	0.014	0.014	0.137	0.138	0.139

Table IA5: Additional control variables: Investor characteristics and macro/political factors

This table presents the results of linear regressions of the deal status and the stake acquired on the appearance of top law firms while controlling for macroeconomic and political variables (model (1) and (3)), as well as while controlling for investor and company characteristics (model (2) and (4)). *Incomplete* is a dummy variable equal to one if the VC investment transaction is incomplete, and zero otherwise. *Percentage acquired* is the percentage of stake acquired in the round of financing. *Top 10 law firm* is a dummy variable equal to one if the deal is serviced by at least one top 10 law firm, either on the buy-side or the sell-side, and zero otherwise. *GDP growth* is the country's gross domestic product growth rate. *EPU* is country's average monthly economic policy uncertainty index in a given year. *Democracy* is the Polity V Project (2018)'s democracy index. *Investment freedom* is the investment freedom index. *Market return* is the country's average monthly market returns in a given year. *Log(VC age)* is the natural logarithm of one plus the lead VC's age which is the difference between the transaction year and the VC's founding year. *Log(Company age)* is the natural logarithm of one plus the difference between the transaction year and the company's founding year. *Log(VC AUM)* is the natural logarithm of the lead VC's asset undermanagement. We multiply the coefficients of *Log(VC age)*, *Log(Company age)*, *Log(VC AUM)*, and *EPU* by 100. Standard errors in parentheses are clustered at the year level. ***, **, * represent statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent variables	*Incomplete*		*Percentage acquired*	
	(1)	(2)	(3)	(4)
Top 10 Law Firm	-0.009***	-0.001*	0.022***	0.014***
	(0.002)	(0.000)	(0.002)	(0.002)
GDP growth	0.001*		-0.001	
	(0.001)		(0.002)	
EPU	-0.002*		-0.004**	
	(0.001)		(0.002)	
Democracy	-0.003**		-0.002	
	(0.001)		(0.003)	
Investment freedom	-0.000		0.001***	
	(0.000)		(0.000)	
Market return	-0.117***		-0.193	
	(0.034)		(0.178)	
Log(VC age)		0.026		0.568***
		(0.016)		(0.161)
Log(Company age)		0.011		0.098
		(0.025)		(0.169)
Log(VC AUM)		-0.001		0.067
		(0.007)		(0.043)
Constant	0.029***	0.000	0.177***	0.241***
	(0.006)	(0.000)	(0.037)	(0.004)
Observations	154,144	92,325	63,333	40,198
Round FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Deal type FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Adjusted R-squared	0.012	0.002	0.137	0.185

Table IA6: Additional fixed effects

This table presents the results of the linear regressions of the deal status and the ownership percentage on the appearance of top law firms with additional VC x Year fixed effects to allow for comparison of start-up investment outcomes between deals involving top-law firms and other law firms by the same VC at a given point in time. *Incomplete* is a dummy variable equal to one if the VC investment transaction is incomplete, and zero otherwise. *Percentage acquired* is the percentage of stake acquired in the round of financing. *Top 10 law firm* is a dummy variable equal to one if the deal is serviced by at least one top 10 law firm, either on the buy-side or the sell-side, and zero otherwise. Standard errors in parentheses are clustered at the year level. ***, **, * represent statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent variables	*Incomplete*	*Percentage acquired*
	(1)	(2)
Top 10 Law Firm	-0.001***	0.11***
	(0.000)	(0.002)
Constant	0.001***	0.266***
	(0.000)	(0.001)
Observations	55,888	30,292
VC*Year FE	Yes	Yes
Round FE	Yes	Yes
Country FE	Yes	Yes
Deal type FE	Yes	Yes
Industry FE	Yes	Yes
Adjusted R-squared	0.121	0.313

Table IA7: Propensity scores matching

This table presents the results of the linear regressions of the deal status and the ownership on the appearance of top law firms using a new sample created by propensity scores matching. *Incomplete* is a dummy variable equal to one if the VC investment transaction is incomplete, and zero otherwise. *Percentage acquired* is the percentage of stake acquired in the round of financing. *Top 10 law firm* is a dummy variable equal to one if the deal is serviced by at least one top 10 law firm, either on the buy-side or the sell-side, and zero otherwise. Standard errors in parentheses are clustered at the year level. ***, **, * represent statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent variables	*Incomplete*	*Percentage acquired*
	(1)	(2)
Top 10 Law Firm	-0.013***	0.030***
	(0.004)	(0.004)
Constant	0.014***	0.227***
	(0.001)	(0.001)
Observations	15,139	5,625
Round FE	Yes	Yes
Year FE	Yes	Yes
Country FE	Yes	Yes
Deal type FE	Yes	Yes
Industry FE	Yes	Yes
Adjusted R-squared	0.017	0.098

Table IA8: Heckman two-step regressions

Panel A. Top 10 industry legal advice buy/sell side dummies served as instruments

This table presents the estimation results of Heckman (1979) two-step procedure to address selection concerns associated with top legal advisor appointments. *Incomplete* is a dummy variable equal to one if the VC investment transaction is incomplete, and zero otherwise. *Percentage acquired* is the percentage of stake acquired in the round of financing. *Top 10 buy-side law firm* is a dummy variable equal to one if the VC's law firm appears in the top 10 annual league table rankings. *Top 10 sell-side law firm* is a dummy variable equal to one if the portfolio company's law firm appears in the top 10 annual league table rankings. *Top 10 industry legal advice buy-side* is a dummy variable indicating top 10 industries with legal advice on the buy-side. *Top 10 industry legal advice sell-side* is a dummy variable indicating top 10 industries with legal advice on the sell-side. *Inverse Mills ratio* is generated from the first-step estimation. The standard errors are robust to heteroskedasticity. ***, **, * represent statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent variables	*Prob(Top 10 buy-side law firm)*	*Incomplete*	*Percentage acquired*	*Prob(Top 10 sell-side law firm)*	*Incomplete*	*Percentage acquired*
	(1)	(2)	(3)	(4)	(5)	(6)
Top 10 buy-side law firm		-0.014***	0.029***			
		(0.000)	(0.002)			
Top 10 sell-side law firm					-0.008***	0.015***
					(0.002)	(0.001)
Top 10 industry legal advice buy-side	0.150***					
	(0.014)					
Top 10 industry legal advice sell-side				0.107***		
				(0.010)		
Inverse Mills ratio		0.021***	-0.042***		0.021***	-0.041***
		(0.004)	(0.009)		(0.005)	(0.009)
Constant	-3.833***	-0.041***	0.334***	-1.950***	-0.039***	0.330***
	(0.191)	(0.009)	(0.020)	(0.138)	(0.012)	(0.020)
Observations	181,932	181,932	71,128	181,932	181,932	71,128
Round FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Deal type FE	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo/Adjusted R-squared	0.160	0.013	0.107	0.210	0.013	0.107

Panel B. Judge ideology as an instrument

This table presents the estimation results of Heckman (1979) two-step procedure to address selection concerns associated with top legal advisor appointments. *Incomplete* is a dummy variable equal to one if the VC investment transaction is incomplete, and zero otherwise. *Percentage acquired* is the percentage of stake acquired in the round of financing. *Liberal Court*, a measure of judge ideology in a circuit, is calculated as the probability that Democratic presidents' judicial appointees dominate a panel of three judges randomly selected from the circuit. The standard errors are robust to heteroskedasticity. ***, **, * represent statistical significance at the 1%, 5% and 10% levels, respectively.

	Prob(Top 10 sell-side law firm)	*Incomplete*	*Percentage acquired*
	(1)	(2)	(3)
Liberal Court	0.566***		
	(0.086)		
Top 10 Law Firm		-0.009***	0.024***
		(0.001)	(0.001)
Inverse Mills ratio		-0.011	-0.037*
		(0.008)	(0.020)
Constant	-0.722***	0.024***	0.286***
	(0.117)	(0.009)	(0.021)
Observations	100,255	100,255	49,639
Round FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
Deal type FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Circuit FE	Yes	Yes	Yes
Pseudo/Adjusted R-squared	0.114	0.011	0.149

Table IA9: Venture capital reputation, top legal advice, and deal outcomes

This table presents the results of linear regressions of the deal status and the stake acquired on the appearance of top law firms while controlling for alternative measurements of VC reputation. *Incomplete* is a dummy variable equal to one if the VC investment transaction is incomplete, and zero otherwise. *Percentage acquired* is the percentage of stake acquired in the round of financing. *Top 10 law firm* is a dummy variable equal to one if the deal is serviced by at least one top 10 law firm, either on the buy-side or the sell-side, and zero otherwise. *Log(IPO exits)* is the mean of the natural logarithm of the number of past IPO exits by VCs in a VC deal. *Log(Exits)* is the mean of the natural logarithm of the number of past exits through IPO and M&A by VCs in a VC deal. *VC reputation* is the average VC reputation of VCs in a VC deal. VC reputation is the ratio between the VC's aggregate IPO proceeds and the cumulative IPO proceeds by all VCs. We interact the coefficients of *Log(IPO exits)* and *Log(Exits)* by 100 . Standard errors in parentheses are clustered at the year level. ***, **, * represent statistical significance at the 1%, 5% and 10% levels, respectively.

	Incomplete			*Percentage acquired*		
	(1)	(2)	(3)	(4)	(5)	(6)
Top 10 Law Firm	-0.001***	-0.001**	-0.001***	0.015***	0.014***	0.017***
	(0.000)	(0.000)	(0.000)	(0.002)	(0.002)	(0.002)
Log(IPO)	-0.011*			0.816***		
	(0.006)			(0.084)		
Log(Exits)		-0.010*			0.699***	
		(0.005)			(0.073)	
VC reputation			-0.010			0.533***
			(0.011)			(0.176)
Constant	0.001***	0.001***	0.001***	0.247***	0.244***	0.252***
	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)
Observations	140,286	140,286	140,286	55,957	55,957	55,957
Round FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Deal type FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.001	0.001	0.001	0.165	0.166	0.162

about ECGI

The European Corporate Governance Institute has been established to improve *corporate governance through fostering independent scientific research and related activities.*

The ECGI will produce and disseminate high quality research while remaining close to the concerns and interests of corporate, financial and public policy makers. It will draw on the expertise of scholars from numerous countries and bring together a critical mass of expertise and interest to bear on this important subject.

The views expressed in this working paper are those of the authors, not those of the ECGI or its members.

ECGI Working Paper Series in Finance

www.ecgi.global/content/working-papers

Electronic Access to the Working Paper Series

The full set of ECGI working papers can be accessed through the Institute's Web-site (www.ecgi.global/content/working-papers) or SSRN:

Finance Paper Series	http://www.ssrn.com/link/ECGI-Fin.html
Law Paper Series	http://www.ssrn.com/link/ECGI-Law.html