Journal of Banking and Finance 172 (2025) 107391

Contents lists available at ScienceDirect

Journal of Banking and Finance

journal homepage: www.elsevier.com/locate/jbf

Family firms in entrepreneurial finance: The case of corporate venture capital☆

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ARTICLE INFO

JEL classification:
G24
G32
O32

Keywords:
Corporate venture capital
Family firms
Investment
Performance

ABSTRACT

We show that families are an engine of venturing activities: almost 30 percent of corporate venture capital (CVC) deals in the US from 2000 to 2017 originated from family firms. Family firms, primarily those led by family CEOs, orchestrate CVC activities differently than non-family firms: they syndicate more often and with more reputable investors, join larger syndicates, and make more proximate deals (geography- and industry-wise). This approach to corporate venturing maps into performance results: family CVC-backed ventures exhibit a higher likelihood of successful exit. Collectively, our results shed light on the important, and largely unexplored, role of family firms in CVC.

1. Introduction

Since the aftermath of the dot-com bubble, the venture capital (VC) industry has experienced stunning growth. Despite a recent decline due to more restrictive monetary policies and episodes like the collapse of the Silicon Valley Bank, the VC industry remains a key source of funding for new ventures. While independent VC has historically been the most important provider of such capital, corporations have been increasingly active through corporate venture capital (CVC) programs (CVCs) (Colombo and Murtinu, 2017). Ma (2020), for instance, shows that CVC investments account for 15% of the whole VC industry in the US. This importance has motivated a growing literature aimed at understanding CVCs' decision-making and their impact on portfolio firms.

CVC activities are typically structured as investment vehicles or business units of a parent organization. Different from independent VC firms, which maximize returns from capital gains within relatively short timeframes, CVCs often seek to spur parent organizations' performance through strategic synergies with portfolio companies (Hellmann, 2002; Riyanto and Schwienbacher, 2006; Tawiah and Keefe, 2022). That said, there is substantial heterogeneity in how CVCs operate. Scholars have traced this heterogeneity to the parent organizations' characteristics, which influence the CVCs' objectives, the resources made available to the CVC program, and the selection and management of investments (Da Rin et al., 2013; Gompers et al., 2009; Hellmann, 2002; Ivanov and Xie, 2010; Mohamed and Schwienbacher, 2016). We contribute to this literature by studying how a key attribute of parent organizations – i.e., their *ownership structure* – matters for CVC activities.

Using CVC data from Eikon and manually collected information on

☆ For useful comments and suggestions, we thank Sylvain Bourjade, Annamaria Conti, Guido Corbetta, Chris Florakis, Andrea Fosfuri, Alfonso Gambardella, Juanita Gonzalez-Uribe, Vikas Mehrotra, Pierre Mella-Barral, Pierluigi Murro, Megha Patnaik, Lars Persson, Fabiano Schivardi, Carlos Serrano, Xuan Tian, Giovanni Valentini, Ye Zhang, Rosemarie Ziedonis, and seminar participants at LUISS Business School, IFN Stockholm, University of Liverpool, Alliance Manchester Business School, Maastricht University, Toulouse Business School, ISG International Business School, CEPR Workshop on Entrepreneurship (Copenhagen), Bocconi-HEC Lausanne Workshop on Entrepreneurial Finance and Innovation (2021), SKEMA-KTO Paper Development Workshop (2021), AOM Entrepreneurship Division Doctoral Consortium (2021), SMS Annual Conference (2021), 18th Corporate Finance Day (2021), Entrepreneurial Finance Conference (2021), Asian Finance Annual Conference (2022), Financial Markets and Corporate Governance Conference (2022), 1st Workshop on Behavioral Perspectives on Venture Capital at Copenhagen Business School (2023), and Baltic Family Firm Institute/ECGI Annual Conference (2024). Amore acknowledges financial support through the MUSA (Multilayered Urban Sustainability Action) and the GRINS (Growing Resilient, INclusive and Sustainable) projects, funded by the European Union – NextGenerationEU, under the National Recovery and Resilience Plan (NRRP).

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https://doi.org/10.1016/j.jbankfin.2025.107391
Received 30 May 2023; Accepted 10 January 2025
Available online 12 January 2025

the ownership and governance of CVCs' parent organizations in the US from 2000 to 2017, we first show that family CVC is a prevalent phenomenon: almost 30% of all CVC deals in our sample (i.e., 2,392 out of 8,286) have a family firm behind. Family CVCs made investments totalling €12 billion, while non-family CVCs' deals amounted to €20.9 billion. These figures underscore the significant involvement of family firms in the CVC industry.

Second, we look beneath the surface of investment strategies and find that relative to non-family CVCs, family CVCs have a unique way of investing – primarily when the parent firm is led by a family CEO. In particular, these family CVCs are more likely to syndicate investments than non-family CVCs, and syndicate with more reputable investors. As we will argue, these findings are consistent with the view that family investors seek to minimize hazard in their CVC activities, and that they have better connections within the VC industry.[1] Relatedly, we focus on geographic proximity and industry relatedness. We find that family CVCs' portfolios are more likely to include ventures that operate in the parent organization's main industry and that are geographically closer to the parent organization. These findings point again to family owners' desire to minimize hazards and strengthen relationships with the local community.

Finally, we assess the performance implications of family CVC for portfolio companies. Our results indicate that family CVC-backed companies are more likely to experience a successful exit, even after controlling for an extensive set of characteristics at the level of ventures, CVC parents, and syndicate partners.

2. Theoretical background and contributions

Extensive research in economics, finance, and management has been devoted to family firms.[2] One of the early contributions in this domain is the one by Shleifer and Vishny (1986), who theorized on the benefits of ownership concentration relative to being a widely held firm *à la* Berle and Means. As their model elucidates, large shareholders have incentives to pursue value-increasing changes in corporate policies that would be otherwise too costly for minority investors. This work also initiated a long data collection process, which was fine-tuned and expanded over the years in multiple influential articles as those by La Porta et al. (1998, 1999), Claessens et al. (2000), Faccio and Lang (2002) and, more recently, Aminadav and Papaioannou (2020). The bulk of the evidence across these works shows that family ownership is the most diffuse form of ownership globally. Having established the importance of family firms in the business landscape, scholars have investigated how these organizations differ from their non-family counterparts. Multiple theoretical lenses help explain the uniqueness of family firms.

The first is rooted in the agency literature and sees family firms as a device to overcome the traditional problems arising from the separation between ownership and control. By owning large equity stakes in the firm, families have large incentives and power to monitor the management or even run the company themselves. In this way, they minimize problems of managerial opportunism. However, family ownership may lead to a different agency problem in terms of conflicts between large and small investors. That is, family owners may engage in actions aimed at extracting private benefits (e.g., wasteful nepotism, tunneling), thus harming minority, non-family investors. Villalonga and Amit (2006) provide a comprehensive discussion of agency problems in family firms (which they label as Agency Problems I and II) and study how they map into financial performance.

Being a large shareholder likely entails some degree of portfolio under-diversification which, in turn, can influence risk-taking in corporate policies (Faccio et al., 2011). This view has been used to enquire whether we should expect significant differences in family firms' capital structure, investment, and diversification decisions (e.g., Anderson and Reeb 2003; Anderson et al., 2012; Miller et al., 2010). Besides risk preferences, the literature has argued that family owners differ from non-family owners by having a longer time horizon in decision-making, which increases relational capital with multiple stakeholders (Bertrand and Schoar, 2006).

Another theoretical lens, which has emerged from the management literature, is labeled as the socio-emotional wealth perspective. The idea here is that family owners have a broader set of objectives encompassing financial and non-financial goals because of their social identification with the firm, high reputational concerns, and a strong desire to maintain control within the family (see Gomez-Mejia et al., 2011 for a review). Many papers have adopted this perspective to explain how family and non-family firms differ in terms of several strategic decisions such as M&As (Gomez-Mejia et al., 2018), IPO pricing (Leitterstorf and Rau, 2014; Kotlar et al., 2018), pollution (Berrone et al., 2010), alliances (Bettinazzi et al., 2023), divestment (Feldman et al., 2016), and risk-taking in business decisions (Gomez-Mejía et al., 2007).

Our work relates to the ongoing research on family firms and corporate outcomes by studying how family control shapes external venturing done through CVC. In particular, we study three dimensions of CVC that feature prominently in the literature: syndication (Lerner, 1994; Keil et al., 2010; Tian, 2012), and geographic and industry proximity between parent firms and ventures (Chen et al., 2010; Cumming and Dai, 2010; Gompers et al., 2005, 2009; Hochberg et al., 2015; Li et al., 2023). We conjecture that the family control of parent firms has an influence on the extent to which the parent's CVC deal-making will be syndicated, the reputation of syndicate partners, and the extent to which the CVC program will invest in the same geography or industry of the parent firm. In what follows, we articulate on the direction of these relationships, and then we discuss our contributions to existing research.

The literature has long suggested that syndication helps mitigate risk exposure (Gompers and Lerner, 2004; Lerner, 1994; Tykvová, 2018) by means of a 'second opinion' on the target ventures (Brander et al., 2002; Casamatta and Haritchabalet, 2007), resource complementarity across syndicate partners (Hochberg et al., 2007) and enhanced monitoring (Das et al., 2011; Tian, 2012). Given the higher risk aversion of family firms arising from the under-diversification of family owners, we expect syndication to be more common among family CVCs. Moreover, owing to the higher relational capital that commonly characterizes family firms, the reputation of syndicate partners may be higher for family CVCs with respect to non-family CVCs.

Asymmetric information arguments suggest that investing in more proximate ventures is subject to less hazard (Sorenson and Stuart, 2001). With specific regard to geographic proximity, it eases monitoring due to a reduction in travel costs and access to "local" information useful for screening and monitoring purposes (Bernstein et al., 2016), thus reducing moral hazard concerns. Moreover, we expect family CVCs to invest in closer ventures owing to their stronger commitment to the local community and more availability of local information, which typically makes family firms benefit more from local embeddedness (Baú et al., 2019). As regards industry-related proximity, it eases the understanding of a venture's business plan and a parent company's industry-specific knowledge allows a better judgment of a venture's needs as well as of its product novelty and market potential. This, in turn, reduces information asymmetries. Collectively, these arguments suggest that family firms would be more likely to invest in ventures that are geographically closer to the parent firm and in the same industry.

At a more descriptive level, we also analyze the performance implications of family CVC which, however, are less clear-cut. On the one hand, the higher likelihood of syndication and proximity between

[1] These findings (and all the subsequent ones) are derived by holding constant several factors at the level of the parent organizations, such as venturing experience, size, financial resources, internal investment, R&D intensity, capital structure, and performance. Also, our results are specific to *family* ownership, i.e., they do not stem from other types of blockholders.

[2] Providing a comprehensive review of this literature is beyond the scope of this article. Interested readers may refer to, e.g., Villalonga et al. (2015).

parent firms and ventures might be associated with higher performance due to better access to local information and effective monitoring. On the other hand, family CVCs might experience lower performance due to higher constraints in their selection of ventures, which might arise from local preferences or poorer knowledge of the VC ecosystem outside of their specific geographic and industry space. Descriptively, we also parse a number of alternative explanations and mechanisms, such as that the different performances of family and non-family CVCs might stem from differences in human capital.

Our focus on CVC expands the existing literature on the idiosyncratic preferences of family owners and their influence on investment and financial policies (e.g., Anderson et al., 2003, 2012; Palm et al., 2023; Liu et al., 2015). A recent work has also paid attention to the role of family control on the number and size of the deals undertaken by CVCs (Duran and Mingo, 2022). Our undertaking is a novel departure from the existing literature, which, as noted above, has mostly focused on family firms' internal innovation or acquisition activities. Studying the investment approach of family-related CVC and its performance implications, we document that families are distinct actors in the CVC industry in terms of strategies and performance. As such, our results provide an important complement to existing works on the role of families as investors in other contexts such as business groups (Masulis et al., 2011) or managers of independent VC funds (Pelucco, 2024). Moreover, we contribute to the entrepreneurial finance literature about how VC firms differ in terms of objectives and strategies (Ma, 2020; Hellman 2002), and about the effect of CVC on ventures' innovation (Chemmanur et al., 2014) and performance (Colombo and Murtinu, 2017; Dushnitsky and Lenox, 2006). Other works have explored how parent organizations' governance (Tian and Ye, 2020) and innovation trajectories (Ma, 2020) affect CVC investment decisions. We document that looking into the ownership structure of the parent firm is crucial to understanding how CVCs make decisions.

3. Data and variables

3.1. Sources

We gathered information on VC deals in the US from 2000 to 2017 from the Eikon dataset. Eikon (previously known as Thomson One, VentureXpert, or Venture Economics) is a popular data source in VC research. It includes detailed venture- and deal-level information such as age, industry, and location of portfolio companies, identity and location of all investors in each round, as well as their amount invested in each round.

For the analysis, we kept all the deals completed by CVC funds (i.e., those categorized in Eikon with "Corporate or PE/Venture Fund" as Fund Investor Type) based in the US.[3] As a second step, we identified the corporation behind the CVC arm that made these deals. Often, the name of the CVC arm overlaps with that of the parent organization or can be easily associated with it (e.g., "Google Ventures" or "Qualcomm Ventures"). In other cases, the name of the CVC arm does not recall the parent organization's name (e.g., "Steamboat Ventures", which is the CVC initiative of The Walt Disney Company). In these cases, we conducted a manual search using the CVC websites and Crunchbase to identify the parent organization.[4]

Once we identified the parent organization, we checked whether it was listed in the US at the time of the deal. If so, we used corporate proxy statements (drawn from Edgar) to gather data on its ownership structure. Scholars have wrestled over the definition of family firms (for a recent discussion, see Bennedsen et al., 2021 and Amore et al., 2024), and the literature still lacks consensus on how to identify them. Here, we used a comprehensive approach that accounts for differences in ownership, management, and corporate governance.

Regarding ownership, consistent with several US studies (e.g., Anderson et al., 2012), we used a classification based on the fraction of equity shares in the hands of a family. In particular, we defined a parent organization as a family firm if a family (i.e., the founders or their descendants) owns in a given year at least 5% (or, alternatively, 10%) of equity stakes. Following existing research (e.g., Kotlar et al., 2018), we examined the list of all shareholders reported in the SEC filings and checked whether the individuals sharing the same surname as the founders or founding family collectively owned at least 5% or 10% of the company shares. When the list included individuals with shareholdings above such thresholds, we checked whether they were in some way related to the founders or founding family even if they did not share the same surname.[5] Families may exert significant control over the firms even with a relatively low percentage of equity through control-enhancing mechanisms such as dual-class shares (Villalonga and Amit, 2006). Thus, for firms with multiple class shares, we followed Anderson et al. (2009) and computed the controlling shareholders' total voting power. In these cases, we considered a parent organization as family-owned if the family maintains at least 5% (or 10%) of voting rights.[6] Alternatively, we used a definition of family firms based on the continuous share of equity in the hands of a family.

If the parent organization was acquired by another firm (i.e., the parent organization became, for instance, a wholly owned subsidiary), we considered the CVC as the arm of the acquiring firm. After the acquisition, the acquiring firm supervises and coordinates the CVC operations, and thus we considered the CVC arm as controlled by a family firm if the acquirer was family-owned.[7] Instead, when two firms merge, we consider the merged entity as family-owned if a family controls at least 5% or 10% of equity shares in the merged firm.

The literature has shown a wide heterogeneity in family firms' behaviors and outcomes depending on whether the CEO is a family member or a "professional" non-family member (Bandiera et al., 2018; Bennedsen et al., 2007; Mullins and Schoar, 2016). We accounted for this heterogeneity by collecting data on whether the parent firm's CEO at the time of the deal was a family member or a non-family CEO. Information about family membership was retrieved using surname affinity and media sources on CEOs' biographies.

From the list of all deals, we dropped those involving ventures that were more than ten years old at the time of their first VC financing round (Cumming et al., 2017). In the last step of the data-gathering process, we used Compustat to obtain financial data for each (listed) parent organization in our sample.

[3] Even if family firms are slightly more diffused in Europe, we decided to focus on the US given that the VC industry is more developed in the US.

[4] Crunchbase is widely used in the VC industry and has also become popular among scholars as a source of information on ventures' activity and financing (e.g., Ewens and Townsend 2020).

[5] For example, the New York Times Company was founded by Adolf Ochs in 1896. His heirs still control the firm he founded. Yet, these heirs have different surnames (e.g., Ochs Sulzberg). Since we identified these individuals as Adolf Ochs' heirs, we were able to consider the New York Times Company as a family firm.

[6] An example is Comcast Corporation, i.e. the parent organization of Comcast Ventures. Comcast Corporation was founded in 1963 by Ralph J. Roberts with his two business partners, Daniel Aaron, and Julian A. Brodsky. In 2000 the founder, chairman, and CEO Ralph J. Roberts and his son Brian L. Roberts (vice-chairman) owned 3% of the shares but around 85% of the voting power. We consider Comcast Corporation as a family firm, and Comcast Ventures as a family CVC.

[7] For example, CNET Networks Inc. was founded by Shelby Bonnie and Halsey Minor. In 2007, Shelby Bonnie owned 7% shares of the firm; thus, we classified it as a family firm. However, in 2008 the firm was acquired by CBS Corp., a company founded as Viacom by Sumner Redstone in 1971 and still controlled by the Redstone family as of 2008. Thus, after the acquisition by CBS Corp, we considered the parent organization of the CVC arm of CNET Networks Inc. to be a family firm.

Table 1
Sample description.

Panel A:	Total	Family and Non-family Backed		Family Backed Only	Non-family Backed Only
Ventures	4,449	393 (8.8%)		1,227 (27.6%)	2,829 (63.6%)
Panel B:	Total	Non-family	Family	Family with Family CEO	Family with Professional CEO
Deals	8,286	5,894 (71.1%)	2,392 (28.9%)	1,518 (63.5%)	874 (36.5%)
Parent Firms	300	193 (64.3%)	107 (35.7%)	70 (65.4%)	37 (34.6%)

Panel A shows the total number of ventures (and relative percentages) that have received funding from both family and non-family CVC investors, from family CVC investors only, and from non-family CVC investors only. Panel B shows the deals joined by family and non-family CVC investors as well as the number of unique parent firms behind the CVC investors that made those deals. Parent firms in Panel B are defined as family firms when 5% or a larger share of the firm's equity is in the founder's and/or her heirs' hands; in the case of multiple class shares, when the family maintains 5% or greater voting power.

3.2. Summary statistics

Our final sample comprises 4,449 ventures involved in 8,286 CVC deals made by 300 US-listed parent firms from 2000 to 2017.[8] Panel A of Table 1 shows that 27.6% of the ventures in our sample received only family CVC funding and no funding from non-family CVCs. 8.8% received both family and non-family CVC funding. Panel B shows that family firms account for 28.9% of the deals, and 35.7% of the parent organizations were family-controlled at the time of their first CVC deal in our data. That is, almost one-third of the entire CVC activity in the US during our sample period involved family firms. Almost two-thirds of the family firms in our sample have a family CEO (either founder or family heir) whereas the remaining one-third have a professional, family-unrelated CEO. The distinction between family and non-family CEOs is useful to discern the role of leadership differences within family firms.

Fig. 1 illustrates how family and non-family CVC activity in terms of the number of deals has evolved during the sample period. CVC investment exhibited a marked decline in the aftermath of the dot-com bubble and then an increase from 2010 onward. Family CVC has become relatively more important over time: the proportion of deals involving family CVCs increased from less than 20% in 2005 to almost 40% in 2017.

Next, we explore the industry distribution of family and non-family CVC investments. As Fig. 2 shows, family CVC is less present in younger and perhaps more dynamic industries (such as life science and biotech), while it is more present in consolidated industries such as computers.

Table 2 presents summary statistics for the main variables used in the analysis. In Panel A, we provide information at the deal level. The data show that around 90% of deals are syndicated, and the average distance between the city of the parent organization and that of the venture is 2,947 kilometers (or 1,911 kilometers excluding non-US ventures). 28% of the deals involve ventures operating in the same industry (i.e., same 2-digit SIC code) as the one of the CVC's parent firm.

In Panel B, we show the parent firms' characteristics (at the year of the last investment). Including these variables as controls in our regressions removes several systematic differences between family and non-family CVCs, thus reducing omitted variables' concerns and ensuring that results are specific to family ownership. We compute the logarithm of the parent firm's revenues to account for differences in size. Then, we compute the ratio of cash and equivalent securities to total assets in order to capture differences in the availability of liquid holdings. Focusing on internal investment, we compute the ratio of capital expenditures to total assets, and R&D intensity measured as the ratio between R&D expenditures and sales (winsorized at 2.5% in each tail).[9] To account for differences in capital structure, we compute financial leverage as the ratio of the book value of total debt to total assets, whereas we measure operating profitability by means of the return on assets (ROA), i.e., the ratio of earnings before interest and taxes to total assets.[10] Finally, we control for the presence of (non-family) blockholders (i.e., entities owning at least 5% of the company shares) in the corporation. A research assistant compiled this data by leveraging information from Schwartz-Ziv and Volkova (2021) and extracting details from corporate proxy statements sourced from Edgar when information was missing in Schwartz-Ziv and Volkova (2021). Through this process, we computed the percentage of shares of the parent organization held by non-family blockholders. Finally, we compute a dummy that equals one if the parent organization was VC-backed using data from Pitchbook, and the logarithm of one plus the years since the first CVC deal was completed by the parent organization to control for experience in corporate venturing.

In Table 3, we report *t*-tests differences between family and non-family CVC deals and parent firms. Panel A shows that, when the parent firms are led by family CEOs, family CVC investors are significantly more likely than non-family CVC investors to syndicate and invest in geographically closer ventures. Moreover, family CVC investors are more likely to invest in ventures that operate in the same industry as the one of the parent firm, with this effect being larger when the family CVC's parent firm is led by a family CEO. Panel B shows that family parent organizations are smaller, have more cash holdings, and are less profitable than non-family parent firms. These results are largely driven by family parent organizations led by family CEOs.

4. Results

4.1. CVC investment strategies

Investing in new ventures is inherently risky, especially in the early phases of a venture's life-cycle; as a result, the allocation of VC funds is subject to moral hazard concerns (Bergemann and Hege, 1998). Existing works show that syndication helps to get an 'informative second opinion' on new ventures (Brander et al., 2002, Lerner, 1994) and access complementary assets, skills, and networks from syndicate partners (Hochberg et al., 2007). We start our empirical analysis by testing whether family CVC investors exhibit a different syndication behavior than non-family CVC investors.

To this end, in Columns (1)-(3) of Table 4 we use as a dependent variable a dummy that equals one if a deal was syndicated. The key explanatory variable is the dummy *Family Firm* that distinguishes family and non-family CVCs based on (i) a threshold equal to 5% of the equity held by the family (Column 1), (ii) a threshold equal to 10% of the equity held by the family (Column 2), or (iii) the equity share in the hands of

[8] The number of deals exceeds that of ventures because each venture typically receives multiple rounds of financing (i.e., it is involved in more than one deal).

[9] 34% of parent firms have missing R&D in Compustat. In these cases, we consider the latest available year. If the firm did not report R&D in the past either, we follow Koh and Reeb (2015) and use the 2-digit SIC industry average for the computation of R&D intensity considering firms with at least $10 million of annual revenues; furthermore, we compute a dummy equal to one if the firm has missing R&D. If no firms in the 2-digit SIC reported R&D expenditures, we consider R&D intensity equal to 0. Results hold when removing the R&D intensity from the control variables and assigning a null value to the R&D when the information on R&D was missing.

[10] When one of the control variables was missing, we imputed the last available value for that variable.

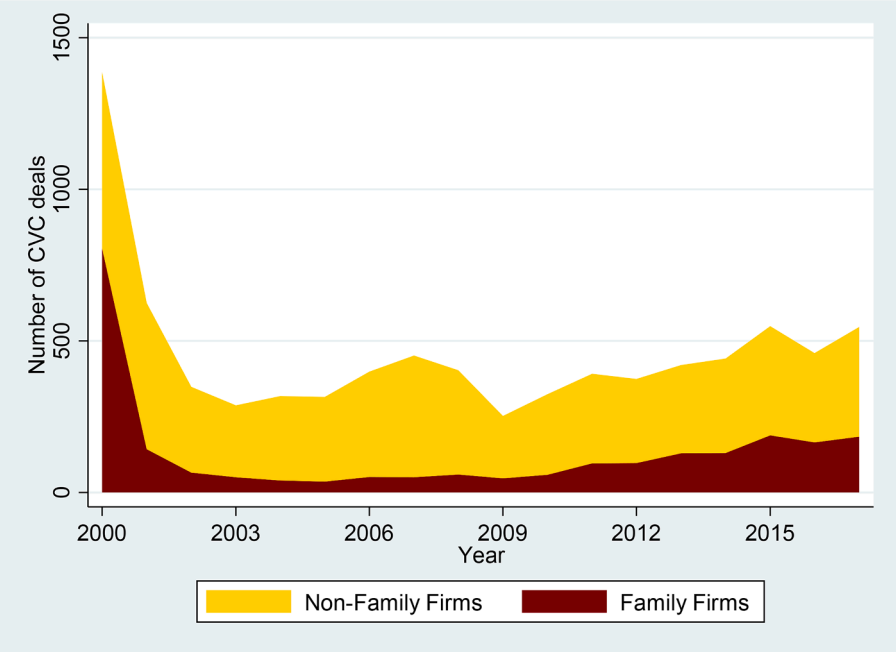

Fig. 1. CVC deals over time.

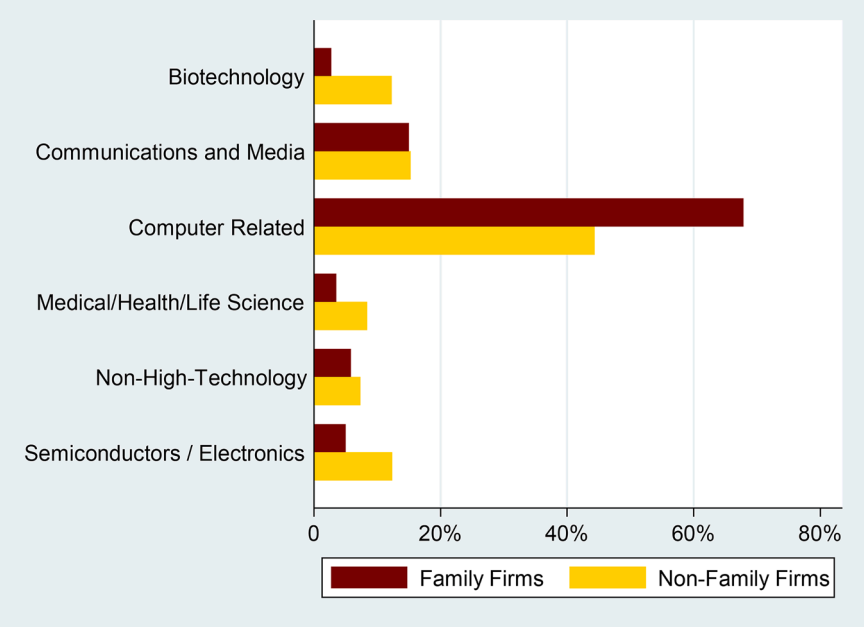

Fig. 2. Industry distribution of CVC deals.

the family (Column 3).[11] As anticipated, we control for parent firms' size, asset liquidity, capital expenditures, capital structure, ROA, R&D intensity, the percentage of shares owned by (non-family) blockholders, and a dummy that equals one if the parent firm was VC-backed. These controls are useful to account for differences in performance, corporate policies, and ownership structure across family and non-family CVC parents. Moreover, we control for venturing experience to remove potential differences between family and non-family CVCs in terms of networking and deal flow (Kaplan and Schoar, 2005; Hochberg et al., 2007; Lindsey, 2008), fundraising ability (Nahata, 2008), and the nature of interactions with portfolio companies (Bottazzi et al., 2008). Finally, we control for year fixed effects, which capture time trends in syndication patterns; industry fixed effects at the level of the venture (as defined in Fig. 2) to account for the fact that syndication may be more common in certain industries; and state fixed effects at the level of the parent headquarter to account for the fact that investors located in certain areas

[11] In unreported analyses (available upon request from the authors) we use alternative thresholds (i.e., 25% and 33%) and our results hold (notably, they are even stronger).

Table 2
Summary statistics.

Panel A: Deals	N	Mean	s.d.	Median	Min	Max
Syndication	8,286	0.896	0.305	1	0	1
Distance	8,286	6.666	2.408	7.749	0	9.741
Same Industry	6,522	0.283	0.451	0	0	1
Panel B: Parent firms	**N**	**Mean**	**s.d.**	**Median**	**Min**	**Max**
Ln (Sales)	299	7.868	2.379	7.954	0	12.199
Cash/Assets	298	0.136	0.131	0.104	0	.738
Capex/Assets	297	0.042	0.054	0.025	0	.472
R&D Intensity	300	0.108	0.096	0.085	0	.315
Unreported R&D	300	0.280	0.450	0	0	1
Debt/Assets	286	0.227	0.214	0.188	0	1.246
ROA	299	0.034	0.159	0.064	-1.096	.368
Blockholder Shares	300	0.257	0.171	0.226	0	1
Parent VC Backed	300	0.310	0.463	0	0	1
VC Experience	300	1.965	1.149	2.079	0	3.912

Panel A shows the summary statistics for CVC deals. *Syndication* is a dummy that equals one if the venture was funded on the same exact date by multiple investors. *Distance* is the natural logarithm of one plus the distance in kilometers between the city where the venture is located and the city where the CVC's parent firm is headquartered. *Same Industry* is a dummy that equals one if the venture operates in the same industry (2-digit SIC) as the CVC's parent firm.
Panel B shows the summary statistics for the CVCs' parent firms in the year of the last CVC deal. *Ln (Sales)* is the natural logarithm of one plus the sales value (in million US$). *Cash/Assets* is the ratio of cash holdings and equivalent securities to total assets. *Capex/Assets* is the ratio of capital expenditures and total assets. *R&D Intensity* is the ratio of R&D expenditures and sales value. If the information on R&D expenditures was missing, we imputed the last available value. If the firm did not report R&D expenditures in the previous years, *R&D Intensity* is the average of the (2-digit SIC) industry winsorized at 2.5% in each tail. To compute the average R&D intensity in the industry we considered only firms with at least $10 million of revenues. Additionally, firms with negative R&D expenditures were dropped to compute the average. If no firms in the 2-digit SIC reported R&D expenditures, *R&D intensity* equals zero. *Unreported R&D* is a dummy that equals one if the information on the R&D expenditures of the CVC's parent firm was missing. *Debt/Assets* is the ratio of total debt and total assets. *ROA* is the ratio of EBIT and assets. *Blockholder Shares* is the percentage of shares held by (non-family) blockholders. *Parent VC Backed* is a dummy that equals one if the CVC's parent firm received VC financing (this information was sourced from Pitchbook after performing a similarity match score based on the firm name). *VC Experience* is the natural logarithm of one plus the years since the first deal made by the CVC's parent firm. If a parent firm had two or more CVC units, we considered the years elapsed since the first investment of the oldest one. When any of the accounting variables were missing, we imputed the latest available value.

may syndicate more due to, for instance, geographic networks.[12] Standard errors are clustered at the level of the CVC's parent firm.

As shown in Column (1), family CVC is associated with a higher likelihood of syndication by 3.3 percentage points (significant at the 10% level). The point estimate is slightly higher when classifying family CVC parents based on a threshold of 10% equity shares held by the family (Column 2) and it is estimated more precisely when using the share of equity held by the family (Column 3). These results are robust to using a probit regression to account for the binary nature of the dependent variable (see Columns 1-3 of Table A1 in the Appendix).

Existing studies show that geographic proximity to portfolio companies reduces moral hazard by easing monitoring and enhancing information exchange (Bernstein et al., 2016; Sorenson and Stuart, 2001). Owing to their higher risk concerns, family firms are expected to make more proximate deals. Alternative to the risk perspective, the family business literature has argued that family firms tend to have strong connections with the local community (Baù et al., 2019), which may make them more likely to invest in local ventures. For the analysis, we use as a dependent variable the natural logarithm of one plus the distance in kilometers between the city where the CVC's parent firm is headquartered and the city where the venture is located. Results presented in Columns (4)-(6) show that family CVCs invest in ventures that are geographically closer only when using the continuous share of equity held by the family in the parent firm (Column 6).[13]

Like geographic proximity, investing in the same industry as the one of the parent firm offers another tool to reduce information asymmetries (Eckbo et al., 2018) since CVC investors can leverage the industry-specific knowledge and expertise of the parent firms to better assess the value of ventures. We use as a dependent variable a dummy that equals one if the venture operates in the same 2-digit SIC code as the one of the CVC's parent firm. The observations in Columns (7)-(9) shrink as the SIC code is not available for all ventures in Eikon and because the variable takes a missing value when the CVC's parent firm has a SIC code equal to 99 (i.e., non-classifiable establishments). As shown in Column (7), family CVC investors are 27.9 percentage points more likely to invest in ventures operating in the same industry as the one of the CVCs' parent firms based on a threshold of 5% equity shares held by the family (Column 7), and the result holds when using the alternative operationalizations of family CVC (as reported in Columns 8 and 9). Again, these results are robust to using a probit regression to account for the binary nature of the dependent variable (see Columns 4-6 of Table A1 in the Appendix).

Going beyond the binary comparison between family and non-family CVC investors, in Table 5 we replace the *Family Firm* dummy with two dummies: *Family Firm with Professional CEO*, and *Family Firm with Family CEO*, which equal one when the family parent firm (based on the threshold of 5% equity shares held by the family) is led by a non-family CEO or a family CEO, respectively. The reference category is represented by non-family firms. As shown in the table, our previous results on family CVCs hold only when the CEO at the helm of the parent firm is a family member. Moreover, the estimated coefficients are larger: these CVCs are 5.5 percentage points more likely to syndicate, they invest in ventures that are 73% closer, and are 38 percentage points more likely to invest in ventures operating in the same industry as the one of the CVCs' parent firms.

Next, we examine whether family CVCs' strategies are more visible when investing in ventures characterized by high information asymmetries. Drawing on insights from Barrot (2017), we recognize that information asymmetries are particularly pronounced in young firms, and then decline over time as entrepreneurs and financiers converge in their understanding and evaluation of the portfolio firm. In Table A2 in the Appendix, we augment the specification in Table 4 with an interaction term between the family CVC dummy and the natural logarithm of the venture's age at the time of the deal.[14] The results largely support the argument that as ventures mature, the tendency of family CVCs to invest in more proximate ventures (geography- and industry-wise) diminishes. Except for the analysis on syndication, the coefficients of the interaction term are statistically significant and their sign is opposite to that of the family CVC variable. Finally, in Table A3 in the Appendix, we test whether family CVCs are associated with other important decisions they have to make. In particular, in Columns (1) and (2) we checked whether they take part in larger rounds using as a dependent variable the natural logarithm of the size of the investment round. Results in Column (1) suggest that the investment rounds completed by family CVCs are as large as those completed by non-family CVCs, and this result does not change depending on whether the family CVC's parent firm is led by a

[12] A few deals were completed by CVCs based in the US and related to parent companies listed in the US but headquartered outside of the US. These parent companies are grouped in a foreign state variable. Results are robust to the exclusion of these deals.

[13] These results are robust (and have a higher statistical significance) when replacing the dependent variable with a dummy capturing foreign deals (i.e., a dummy that equals one when the target venture's location is outside of the US).

[14] When the age of the venture was missing or negative in Eikon we imputed a value equal to zero.

Table 3
Means comparison.

Panel A: Deals	Family CVC	Family CVC with Family CEO	Family CVC with Non-Family CEO	Non-Family CVC	Difference (1)-(4)	Difference (2)-(4)	Difference (3)-(4)	Difference (2)-(3)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Syndication	0.915	0.927	0.896	0.888	0.028***	0.039***	0.008	0.031***
					(0.000)	(0.000)	(0.236)	(0.009)
Distance	6.345	6.141	6.699	6.796	-0.452***	-0.655***	-0.098	-0.557***
					(0.000)	(0.000)	(0.254)	(0.000)
Same Industry	0.404	0.451	0.285	0.246	0.158***	0.206***	0.038*	0.167***
					(0.000)	(0.000)	(0.073)	(0.000)

Panel B: Parent firms	Family CVC	Family CVC with Family CEO	Family CVC with Non-Family CEO	Non-Family CVC	Difference (1)-(4)	Difference (2)-(4)	Difference (3)-(4)	Difference (2)-(3)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ln (Sales)	6.940	6.974	6.892	8.261	-1.321***	-1.286***	-1.369***	0.082
					(0.000)	(0.001)	(0.001)	(0.883)
Cash/Assets	0.164	0.170	0.156	0.123	0.041**	0.046**	0.033	0.014
					(0.015)	(0.018)	(0.149)	(0.682)
Capex/Assets	0.046	0.050	0.043	0.040	0.007	0.009	0.003	0.007
					(0.347)	(0.245)	(0.784)	(0.656)
R&D Intensity	0.119	0.140	0.089	0.104	0.015	0.036**	-0.015	0.051**
					(0.221)	(0.017)	(0.366)	(0.017)
Unreported R&D	0.371	0.385	0.352	0.241	0.129**	0.143**	0.110	0.034
					(0.023)	(0.037)	(0.161)	(0.752)
Debt/Assets	0.190	0.188	0.193	0.243	-0.053**	-0.056*	-0.051	-0.005
					(0.050)	(0.100)	(0.165)	(0.927)
ROA	-0.032	-0.044	-0.015	0.061	-0.093***	-0.106***	-0.076***	-0.030
					(0.000)	(0.000)	(0.002)	(0.548)
Blockholder Shares	0.237	0.237	0.237	0.266	-0.029	-0.029	-0.028	-0.001
					(0.190)	(0.289)	(0.365)	(0.992)
Parent VC Backed	0.337	0.423	0.216	0.298	0.038	0.124*	-0.083	0.207**
					(0.512)	(0.086)	(0.308)	(0.043)
VC Experience	1.618	1.320	2.038	2.111	-0.492***	-0.791	-0.073	-0.718***
					(0.001)	(0.000)	(0.715)	(0.003)

Panel A presents the results of t-test comparisons using the CVC deals as the unit of observation. Panel B presents the results of t-test comparisons between CVCs' parent firms in the year of the last CVC deal. For details on the construction of each variable please refer to the legends of Table 2. p-values in parentheses.
*** p<0.01,
** p<0.05,
* p<0.1.

family or non-family CEO (Column 2). ìIn Columns (3)-(6), we checked whether family CVCs tend to invest in younger or more established companies. As a dependent variable, we use the dummy *Early-Stage Venture* that equals one if the venture is 18 months old or younger at the time of the deal, and zero otherwise. When the age of the venture is missing in Eikon we consider the venture to be an early-stage one (results are similar when excluding such ventures). As shown in Column (3), family CVCs are more likely to target early-stage ventures, in particular in the presence of a family CEO (Column 4). However, family CVCs tend to invest in younger ventures only when these are (i) based in the same US state as the one of the parent company (Column 5), and (ii) geographically proximate (Column 6). In untabulated analyses, we tested whether family CVCs were more likely to invest in younger ventures also when these operate in the same industry as the one of the parent company, but we did not find statistically significant results. Importantly, results are similar not only when excluding investments in ventures with missing age, but also when using other dependent variables such as the natural logarithm of one plus the age of the venture at the time of the deal or a dummy that equals one if the venture is raising its first financing round in the focal investment round.[15]

4.2. Evidence on the reputation of syndicate partners

As noted earlier, family CVCs appear to syndicate more than their non-family counterparts. This might be attributable to the greater relational capital of family owners with other investors. Here, we explore whether family CVCs syndicate with more reputable (lead) investors. These investors wield a pivotal influence on both the investment in and oversight of portfolio companies, thereby significantly shaping the strategies and outcomes of VC investments (Plagmann and Lutz, 2019). As Eikon does not provide information on lead investors and the market value of the investment exits, we turn to Pitchbook data for this analysis. We used a fuzzy matching procedure based on name similarity between the corporate investors' names reported in Eikon and the investors' names reported in Pitchbook. Then we kept all those deals completed between the years 2000 and 2017 by corporations (i.e., entities classified by Pitchbook as "Corporation" or "PE(VC)-Backed Company") and by the CVC units reported in the original Eikon dataset (i.e., entities classified by Pitchbook as "Corporate Venture Capital").[16] Although we were not able to identify in Pitchbook all the investors reported in Eikon, the sample size is roughly similar to the one we had in Eikon suggesting

[15] Finally in Tables A4 and A5, we tested whether the main results presented so far are robust to the inclusion of the control for the deal size, obtaining very similar results. Deal size is missing in roughly 900 observations. This explains why sample size is lower than that one reported in Tables 4 and 5.

[16] It is worth noting that certain CVC investment units in our original Eikon dataset are labelled by Pitchbook as "Venture Capital". The deals completed by those units are not included in our sample. However, we tested the robustness of our findings by including these deals, and the results are consistent with those presented in the paper. These additional results are available upon request from the authors.

Table 4
Investment strategies and family firm control.

Dependent variable:	Syndication			Distance			Same Industry		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Family Firm	0.033*			-0.410			0.279***		
	(0.072)			(0.103)			(0.002)		
Family Firm (10%)		0.036*			-0.292			0.207*	
		(0.090)			(0.334)			(0.063)	
Family Firm (Cont.)			0.141***			-1.431***			0.638***
			(0.000)			(0.010)			(0.000)
Ln (Sales)	0.009**	0.008*	0.007*	0.079*	0.089**	0.096**	0.008	0.005	0.003
	(0.033)	(0.053)	(0.059)	(0.051)	(0.036)	(0.018)	(0.486)	(0.619)	(0.784)
Cash/Assets	0.011	0.001	0.003	0.193	0.197	0.240	-0.323	-0.317	-0.281
	(0.799)	(0.978)	(0.950)	(0.777)	(0.781)	(0.729)	(0.103)	(0.107)	(0.147)
Capex/Assets	-0.429***	-0.396***	-0.389***	0.019	-0.109	-0.314	-0.733	-0.959	-0.793
	(0.000)	(0.001)	(0.001)	(0.990)	(0.945)	(0.824)	(0.347)	(0.270)	(0.285)
R&D Intensity	-0.055	-0.070	-0.061	-0.661	-0.374	-0.516	0.666**	0.496	0.571*
	(0.515)	(0.421)	(0.468)	(0.552)	(0.747)	(0.652)	(0.047)	(0.170)	(0.096)
Unreported R&D	0.014	0.011	0.008	0.004	-0.024	0.038	-0.233***	-0.202**	-0.200**
	(0.476)	(0.529)	(0.653)	(0.984)	(0.919)	(0.863)	(0.008)	(0.020)	(0.012)
Debt/Assets	0.019	0.018	0.033	0.637	0.748	0.546	-0.227*	-0.323**	-0.242*
	(0.648)	(0.642)	(0.389)	(0.186)	(0.132)	(0.248)	(0.073)	(0.014)	(0.077)
ROA	-0.095*	-0.096*	-0.092*	-0.345	-0.229	-0.317	0.050	-0.034	-0.041
	(0.094)	(0.089)	(0.081)	(0.504)	(0.660)	(0.521)	(0.735)	(0.846)	(0.810)
Blockholder Shares	0.101**	0.101**	0.104**	-1.216**	-1.265***	-1.274***	0.153	0.219	0.206
	(0.026)	(0.026)	(0.022)	(0.011)	(0.010)	(0.007)	(0.268)	(0.137)	(0.150)
Parent VC Backed	0.009	0.014	0.009	0.280	0.205	0.263	0.079	0.120	0.092
	(0.640)	(0.477)	(0.639)	(0.114)	(0.258)	(0.135)	(0.320)	(0.145)	(0.254)
VC Experience	0.010	0.010	0.011	-0.013	-0.018	-0.023	-0.077**	-0.080*	-0.081**
	(0.211)	(0.232)	(0.187)	(0.874)	(0.847)	(0.796)	(0.019)	(0.054)	(0.048)
Observations	8,180	8,180	8,180	8,180	8,180	8,180	6,448	6,448	6,448
Adjusted R2	0.030	0.031	0.033	0.078	0.076	0.082	0.193	0.173	0.193
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Results are obtained by means of OLS regressions. *Family Firm* is a dummy variable that equals one when 5% or a larger share of the firm's equity is in the founder's and/or her heirs' hands; in the case of multiple class shares, when the family maintains 5% or greater voting power. *Family Firm (10%)* is a dummy variable that equals one when 10% or a larger share of the firm's equity is in the founder's and/or her heirs' hands; in the case of multiple class shares, when the family maintains 10% or greater voting power. *Family Firm (Cont.)* is the share of ownership or voting power in the case of dual-class shares retained by the founders and/or their heirs. For details on the construction of the other variables please refer to the legends of Table 2. Regressions include year fixed effects, venture-level industry fixed effects, and state fixed effects at the CVC's parent firm level. Robust standard errors are clustered at the parent firm level. p-values in parentheses.

*** p<0.01,
** p<0.05,
* p<0.1.

a similarity between the dataset used for the previous analyses and the one used for the following ones. Our Pitchbook sample includes 8,745 deals of which 28% were completed by family CVCs, suggesting a similar distribution of family and non-family CVCs between Eikon and Pitchbook. Consistent with Nahata (2008), we measure an investor's reputation by means of the cumulative value of its IPO exits (in million USD) up to the year preceding the focal investment, with the variable's skewness addressed through its logarithmic transformation. In Columns (1)-(2) of Table 6 we use this reputation measure as a dependent variable and focus on the most reputable partner in the syndicate (using the subsample of syndicated deals). As shown, family CVCs syndicate with investors that are, on average, 43 percent more reputable. This effect amplifies to 61 percent when the CVC's parent firm is led by a family CEO, whereas the association is insignificant if the CVC's parent firm is led by a non-family CEO.

In Columns (3)-(4), our attention shifts to the identity of the lead investor. To conduct these analyses, we kept only the syndicated deals where our sampled family and non-family CVCs were not the lead investors. The dependent variable is the reputation of the lead investor, calculated as above. When no investor was labeled as the leader in Pitchbook, we used as a dependent variable the reputation of the most reputable syndicate partner in the investment round (excluding the focal family or non-family CVC). As shown, family CVCs join deals led by investors that are on average 28.7 percent more reputable, and such percentage shifts to +33 percent when the family CVC's parent firm is led by a family CEO.

Finally, in Columns (5)-(6) we explore whether family CVCs tend to syndicate with independent VCs, which are arguably the most knowledgeable investors in the VC arena. The dependent variable in these columns is the count of independent VCs as syndicate partners (including deals that were not syndicated). To account for the count nature of this dependent variable, we use a Poisson regression. The findings show that family CVCs syndicate with more independent VCs, particularly when the CVC's parent firm is led by a family CEO.[17] To facilitate the interpretation of these findings, in Table A6 (Panel A) in the Appendix we provide the summary statistics for the dependent variables employed in Table 6.

4.3. Evidence on founders' characteristics

An important question for our analysis is whether family CVCs invest in ventures of a different quality than those backed by non-family CVCs.

[17] In Table 6, the sample size varies as we consider only syndicated deals in Columns (1) and (2). Results are robust when we consider all deals and impute a value of 0 to the dependent variable when the deal was not syndicated. In Columns (3) and (4), the sample size is different from the one in Columns (1) and (2) because we restrict the analysis to deals where the focal investor did not act as a lead investor. Conversely, the full sample was used to estimate regressions in Columns (5) and (6).

Table 5
Investment strategies and family leadership.

Dependent variable:	Syndication (1)	Distance (2)	Same Industry (3)
Family Firm with Family CEO	0.055**	-0.732**	0.382***
	(0.019)	(0.012)	(0.000)
Family Firm with Professional CEO	0.005	0.015	0.097
	(0.752)	(0.927)	(0.181)
Ln (Sales)	0.007*	0.104**	-0.003
	(0.070)	(0.013)	(0.729)
Cash/Assets	-0.008	0.484	-0.318
	(0.854)	(0.499)	(0.136)
Capex/Assets	-0.416***	-0.164	-0.625
	(0.000)	(0.908)	(0.388)
R&D Intensity	-0.061	-0.565	0.701**
	(0.487)	(0.618)	(0.041)
Unreported R&D	0.016	-0.032	-0.202**
	(0.388)	(0.879)	(0.011)
Debt/Assets	0.029	0.483	-0.156
	(0.465)	(0.302)	(0.218)
ROA	-0.072	-0.680	0.144
	(0.195)	(0.187)	(0.311)
Blockholder Shares	0.105**	-1.267***	0.132
	(0.020)	(0.008)	(0.324)
Parent VC Backed	0.007	0.311*	0.065
	(0.710)	(0.071)	(0.423)
VC Experience	0.014*	-0.077	-0.059**
	(0.070)	(0.341)	(0.042)
Observations	8,180	8,180	6,448
Adjusted R2	0.031	0.083	0.205
Year fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes

Results are obtained by means of OLS regressions. *Family Firm with Family CEO* is a dummy that equals one if the parent firm is family owned (i.e., if a 5% or larger share of the firm's equity is in the founder's and/or her heirs' hands; in the case of multiple class shares, if the family maintains 5% or greater voting power) and the CEO is a member of the controlling family. *Family Firm with Professional CEO* is a dummy that equals one if the parent firm is family owned (i.e., if a 5% or larger share of the firm's equity are in the founder's and/or her heirs' hands; in the case of multiple class shares, if the family maintains 5% or greater voting power) and the CEO is not a member of the controlling family. For details on the construction of each variable please refer to the legends of Table 2. Regressions include year fixed effects, venture-level industry fixed effects, and state fixed effects at the CVC's parent firm level. Robust standard errors are clustered at the parent firm level. p-values in parentheses.

*** p<0.01,
** p<0.05,
* p<0.1.

To address this question, in Table 7 we employ a set of characteristics at the founder level, with the founder being notoriously a key driver of ventures' quality. In particular, using Pitchbook data we identify the founders of the ventures that received VC financing from the corporate investors included in our dataset. Then, still using Pitchbook data we checked whether they attended an Ivy League institution, pursued an MBA, or had prior entrepreneurial experience. To conduct these analyses, we dropped all investments received by ventures with missing information on the founding team as well as those ventures with missing information on the founding date as we were unable to determine whether the founder's prior entrepreneurial experience occurred before or after founding the focal venture.

In Columns (1) and (2) the dependent variable is *Ivy League*, a dummy that equals one if at least one of the founders obtained a degree from an Ivy League institution. In Columns (3) and (4) the dependent variable is *MBA*, a dummy that equals one if at least one of the founders pursued an MBA. Given that the date when the individuals pursued an MBA or attended a certain institution is often missing, we assumed that they attended an Ivy League institution/obtained an MBA degree before founding the venture. In Columns (5) and (6) the dependent variable is *Entrepreneurial Experience*, a dummy that equals one if at least one of the founders had founded a company that received VC financing before founding the focal venture. The regressions include the same vector of control variables used in the previous analyses.

Results reported in Table 7 suggest that family firms led by family CEOs are more likely to invest in ventures founded by individuals who studied at prestigious institutions, while family CVCs do not seem to specifically target ventures founded by MBA holders. Moreover, family firms, and in particular those led by family CEOs, are more likely to invest in ventures founded by individuals who have prior entrepreneurial experience. The results presented in Table 7 provide evidence suggesting that family firms, and in particular those run by family CEOs, are more inclined to invest in better founding teams. To facilitate the interpretation of these findings, in Table A6 (Panel B) in the Appendix we provide the summary statistics for the dependent variables employed in Table 7.

Next, we also parsed the human capital characteristics of investors. To this end, we gathered individual data on all employees holding top management positions in CVC dedicated units (i.e., entities classified by Pitchbook as "Corporate Venture Capital"). After having performed the above-described fuzzy matching procedure based on string similarity between the investors' names reported in our original dataset and the investors' names reported in Pitchbook, we identified the individuals who worked in the CVC units of the investors included in our original dataset. In total, we identified 1,980 unique individuals, of which 1,652 held a top management position in CVC units.[18] We considered an individual as an employee of a family CVC unit if the parent firm was family-controlled at the time s/he joined the CVC unit. Information on the date when individuals joined the CVC units was not always available in Pitchbook; moreover, some individuals joined the CVC units during years for which we do not have information about the ownership structure of the parent firm (i.e., before 2000 or after 2017). We dropped these cases. Our final data include 840 unique employee-CVC unit pairs where employees started working in the CVC units between 2000 and 2017 (with 24% of employees working in a family CVC unit).

Results are shown in Table A7 in the Appendix. We control for the size of the parent firm, the (2-digit SIC) industry in which it operates, and the year when the employee joined the CVC unit to control for time trends. With regard to educational attainment (Columns 1-2), we find no statistically significant differences in the quality of the institutions attended by family and non-family CVC employees (as proxied by holding a degree from an Ivy League university). Moreover, we find no significant differences in the likelihood of having pursued an MBA (Columns 3-4). As done in Table 7, given that the date when the individuals pursued an MBA or attended a certain institution is often missing, we assumed that they attended an Ivy League institution/obtained an MBA degree before joining the CVC unit. As shown, results are insignificant regardless of the identity of the parent firm's CEO.

We also explore whether family CVC employees display less professional experience. In particular, we test whether family CVC employees are less likely to have experiences as venture capitalists (Columns 5-6) or successful founders of ventures that raised VC financing (Columns 7-8) before joining the CVC unit. Our results suggest that family CVC employees have similar professional backgrounds when compared to non-family CVC employees. Overall, these analyses suggest that the findings in the previous section are not merely driven by (observable) differences in the professional experience and education background of family and non-family CVC employees.

[18] To identify top management positions, we used the following titles: partner, GP, head, president, VP, V.P, founder, founding, principal, manager, director, executive, chief, chairman, chairwoman, CEO, C.E.O, and board member. When any of these keywords appeared in the title of the CVC employee, the employee was retained.

Table 6
Reputation of syndicate partners.

Dependent variable:	Reputation of the Most Reputable Syndicate Partner		Reputation of the Lead Investor		Number of Independent VC Syndicate Partners	
	(1)	(2)	(3)	(4)	(5)	(6)
Family Firm	0.430***		0.287**		0.193***	
	(0.003)		(0.012)		(0.004)	
Family Firm with Family CEO		0.607***		0.330***		0.316***
		(0.001)		(0.005)		(0.000)
Family Firm with Professional CEO		0.150		0.223		-0.008
		(0.378)		(0.257)		(0.879)
Ln (Sales)	0.195***	0.175***	0.083**	0.079*	0.030	0.015
	(0.000)	(0.000)	(0.049)	(0.066)	(0.124)	(0.407)
Cash/Assets	-0.308	-0.352	-0.509	-0.520	-0.057	-0.072
	(0.524)	(0.448)	(0.219)	(0.211)	(0.716)	(0.648)
Capex/Assets	-5.591***	-5.456***	-4.422***	-4.399***	-0.707	-0.591
	(0.000)	(0.000)	(0.000)	(0.000)	(0.202)	(0.190)
R&D Intensity	0.277	0.337	1.712**	1.728**	-0.602*	-0.535*
	(0.742)	(0.684)	(0.022)	(0.021)	(0.060)	(0.078)
Unreported R&D	0.030	0.108	0.091	0.110	0.055	0.114
	(0.895)	(0.631)	(0.565)	(0.490)	(0.508)	(0.145)
Debt/Assets	-0.357	-0.258	-0.021	0.001	-0.352**	-0.264**
	(0.352)	(0.477)	(0.944)	(0.998)	(0.014)	(0.042)
ROA	-0.367	-0.224	0.538	0.568	-0.262	-0.157
	(0.497)	(0.668)	(0.300)	(0.281)	(0.132)	(0.376)
Blockholder Shares	1.148***	1.073***	0.756*	0.739	0.391***	0.329**
	(0.007)	(0.007)	(0.095)	(0.103)	(0.006)	(0.019)
Parent VC Backed	-0.097	-0.131	-0.005	-0.012	0.009	-0.021
	(0.571)	(0.440)	(0.973)	(0.931)	(0.851)	(0.654)
VC Experience	-0.020	0.016	0.132**	0.141***	0.035	0.061**
	(0.752)	(0.797)	(0.016)	(0.008)	(0.201)	(0.035)
Observations	7,752	7,752	6,731	6,731	8,583	8,583
Adjusted R2	0.069	0.069	0.051	0.051	\	\
Pseudo R2	\	\	\	\	0.050	0.052
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

Results are obtained by means of OLS (Columns 1-4) and Poisson (Columns 5-6) regressions. In Columns 1 and 2, the dependent variable is the reputation of the most reputable syndicate partner in the deal (excluding the focal CVC investor), i.e., the natural logarithm of one plus the cumulative value of the IPO exits in million US$ up to the year preceding the focal investment year. In Columns 1 and 2 the sample has been restricted to syndicated deals. In Columns 3 and 4, the dependent variable is the reputation of the lead investor, i.e., the natural logarithm of one plus the cumulative value of the IPO exits in million US$ up to the year preceding the focal investment year. When the leader of the investment was not reported in Pitchbook, we considered the reputation of the most reputable syndicate partner in the deal (excluding the focal CVC investor). In Columns 3 and 4 the sample has been restricted to syndicated deals when the focal investor was not indicated as the lead investor. In Columns 5 and 6, the dependent variable is the count of independent venture capital firms in the syndicate. *Family Firm* is a dummy variable that equals one when 5% or a larger share of the firm's equity is in the founder's and/or her heirs' hands; in the case of multiple class shares, when the family maintains 5% or greater voting power. *Family Firm with Family CEO* is a dummy that equals one if the parent firm is family owned (i.e., if a 5% or larger share of the firm's equity are in the founder's and/or her heirs' hands; in the case of multiple class shares, if the family maintains 5% or greater voting power) and the CEO is a member of the controlling family. *Family Firm with Professional CEO* is a dummy that equals one if the parent firm is family owned (i.e., if a 5% or larger share of the firm's equity are in the founder's and/or her heirs' hands; in the case of multiple class shares, if the family maintains 5% or greater voting power) and the CEO is not a member of the controlling family. For details on the construction of the control variables, please refer to the legends of Table 2. Regressions include year fixed effects, venture-level industry fixed effects (from Pitchbook), and state fixed effects at the CVC's parent firm level. Robust standard errors are clustered at the parent firm level. p-values in parentheses.

*** $p<0.01$,
** $p<0.05$,
* $p<0.1$.

4.4. Evidence on corporate governance and organizational characteristics

Moving on, we investigate whether family CVCs differ from non-family CVCs in terms of corporate governance and organizational approaches to investing in new ventures. From Pitchbook we retrieved the following variables: (1) *Founder Active* is a dummy that equals one if a founder is still leading her venture at the time the data were accessed (this variable takes a missing value when no current employees are reported in Pitchbook); (2) *Lead Investor* is a dummy that equals one if the investor is classified by Pitchbook as the lead investor or if the investor was the sole investor in the investment round; (3) *Board Seat* is a dummy that equals one if the investor has a sit on the board of the venture; (4) *Dedicated CVC Fund* is a dummy that equals one if the deal was completed through a dedicated CVC unit.

Regressions in Table 8 include the same vector of control variables used in the previous analyses. For the sake of consistency, we use the same sample used in the regression analyses reported in Table 7 (i.e., we dropped ventures with missing information on the founding team and date). As shown in Columns (1)-(2), founders who were backed by family CVCs are as likely as those supported by non-family CVCs to remain active in their venture. Columns (3)-(6) of Table 8 show that family CVCs (and in particularly those with a family CEO at the helm of the parent company) have a lower proclivity to serve as lead investors and a lower likelihood of having a seat on the board of the ventures they invest in. These two findings underscore a strategic inclination to give autonomy to venture founders who can then steer the trajectory of their ventures with a greater degree of independence. It is worth noting here that we do not have fine-grained primary data on how the interaction between the venture and the CVC's parent firm materializes and on how such an interaction influences the management processes by which parent firms implement their strategies. To this extent, we refer to Chrisman et al. (2016) who developed a conceptual framework to understand how family and non-family firm decisions are made and the processes by which CVCs' parent firms plan and execute their strategies.

Table 7
Experience of venture founders.

Dependent variable:	Ivy League		MBA		Entrepreneurial Experience	
	(1)	(2)	(3)	(4)	(5)	(6)
Family Firm	0.047		0.022		0.068**	
	(0.102)		(0.174)		(0.033)	
Family Firm with Family CEO		0.078**		0.024		0.096**
		(0.011)		(0.219)		(0.015)
Family Firm with Professional CEO		-0.007		0.019		0.020
		(0.770)		(0.376)		(0.318)
Ln (Sales)	-0.012*	-0.017**	0.008	0.007	-0.011	-0.014*
	(0.088)	(0.021)	(0.241)	(0.283)	(0.253)	(0.094)
Cash/Assets	-0.058	-0.066	-0.009	-0.009	-0.036	-0.044
	(0.474)	(0.404)	(0.873)	(0.868)	(0.640)	(0.574)
Capex/Assets	-0.076	-0.057	-0.466***	-0.465***	-0.004	0.013
	(0.773)	(0.813)	(0.001)	(0.001)	(0.982)	(0.938)
R&D Intensity	-0.253**	-0.237**	-0.176	-0.175	-0.225	-0.210
	(0.039)	(0.045)	(0.124)	(0.126)	(0.138)	(0.158)
Unreported R&D	0.013	0.027	-0.008	-0.007	0.029	0.042
	(0.637)	(0.317)	(0.752)	(0.777)	(0.256)	(0.110)
Debt/Assets	-0.073	-0.052	-0.075	-0.074	-0.034	-0.014
	(0.213)	(0.360)	(0.127)	(0.129)	(0.623)	(0.821)
ROA	0.077	0.108	-0.092	-0.090	0.052	0.080
	(0.477)	(0.313)	(0.274)	(0.296)	(0.472)	(0.284)
Blockholder Shares	0.079	0.061	0.066	0.065	-0.071	-0.087
	(0.182)	(0.296)	(0.227)	(0.242)	(0.259)	(0.142)
Parent VC Backed	0.017	0.011	-0.004	-0.004	0.003	-0.003
	(0.479)	(0.652)	(0.840)	(0.824)	(0.888)	(0.870)
VC Experience	0.015	0.021**	0.014	0.014	0.011	0.016
	(0.143)	(0.034)	(0.149)	(0.143)	(0.420)	(0.240)
Observations	6,924	6,924	6,924	6,924	6,924	6,924
Adjusted R2	0.079	0.080	0.061	0.061	0.068	0.069
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

Results are obtained by means of OLS regressions. In this analysis, the sample is restricted to deals with available information on the identity of the founders and with known founding dates. In Columns 1 and 2 the dependent variable is *Ivy League*, a dummy that equals one if at least one of the founders obtained a degree from one of the Ivy League universities. In Columns 3 and 4 the dependent variable is *MBA,* a dummy that equals one if at least one of the founders pursued an MBA. Given that the date when the individuals obtained an MBA or attended a certain institution is often missing, we assumed that they attended an Ivy League institution/obtained an MBA before founding the venture. In Columns 5 and 6 the dependent variable is *Entrepreneurial Experience*, a dummy that equals one if at least one of the founders has founded a company that received VC financing before founding the venture. For details on the construction of the variables, please refer to the legends of Table 2 and Table 6. Regressions include year fixed effects, venture-level industry fixed effects (from Pitchbook), and state fixed effects at the CVC's parent firm level. Robust standard errors are clustered at the parent firm level. p-values in parentheses.

*** $p<0.01$,
** $p<0.05$,
* $p<0.1$.

Finally, as shown in Columns (7) and (8), family firms are as likely as non-family firms to complete investments through a dedicated CVC unit. Table A6 (Panel C) in the Appendix shows the summary statistics for the dependent variables employed in Table 8.

4.5. Family CVC and exit results

Several works have tried to establish the impact of CVC financing on ventures' performance (Chemmanur et al., 2014; Colombo and Murtinu, 2017). A tenet of this literature is that CVCs have access to parent firms' assets and resources, which in turn are critical for the success of ventures. In this section, we ask whether having a family behind the CVC arm is beneficial to the venture's performance. As Pitchbook reports how the investors exited their investments and the identity of the lead investors, we decided to assess the performance of family CVC investments using Pitchbook. As is common in the VC literature, we focus on successful exit as a measure of performance.

As we observe the exit of investors up to December 2022 and we have deals completed up to 2017, our research design ensures at least five years for investors to successfully exit their investments (namely, our research design gives investors a time window to experience a successful exit which is 6 months longer than the one by Nahata, 2008). Following the literature (e.g., Espenlaub et al., 2015; Gompers et al., 2009), we focus on the occurrence of an IPO, M&A, or buyout as a measure of successful exit. Hence, the dependent variable is a dummy that equals one if the investor successfully exited the investments in the venture. For the sake of consistency, we use the same sample used in the regression analyses reported in Tables 7 and 8 (i.e., we dropped ventures with missing information on the founding team and date). In descriptive terms, around 53% of the deals eventually led to a successful exit.[19] Of those successful exits, 83% were attained through a trade sale and 17% through an IPO.

The specifications in Columns (1)-(2) of Table 9 include the same set of controls used in the previous tables. From Column (3), we also control for the venture's age at the time of the deal, the number of syndicate partners, and whether the venture is operating outside of the US as these variables might affect the chances of a successful exit. Additionally, we control for the reputation of the most reputable partner in the syndicate (Columns 5-6), or the reputation of the lead investor (Columns 7-8, where we excluded deals completed by the focal corporate investors as lead investors). These are important controls since, as previously shown, family CVCs syndicate with more reputable investors, who are typically exposed to a better deal flow. Put simply, the potential

[19] This ure is similar to Koenig and Burghof (2022), which reports a total exit rate of 55%, and to Park and Steensma (2012) who document a 13% rate of IPOs and 34% rate of acquisitions, amounting to a total exit rate of 47%.

Table 8
Corporate governance and organizational characteristics.

Dependent variable:	Founder Active		Lead Investor		Board Seat		Dedicated CVC Unit	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Family Firm	0.012		-0.050***		-0.072*		0.004	0.012
	(0.586)		(0.004)		(0.059)		(0.940)	(0.586)
Family Firm with Family CEO		-0.002		-0.059***		-0.099**		0.065
		(0.937)		(0.007)		(0.038)		(0.293)
Family Firm with Professional CEO		0.036		-0.034		-0.027		-0.100
		(0.222)		(0.145)		(0.489)		(0.310)
Ln (Sales)	0.003	0.005	0.006	0.007	0.029***	0.032***	0.066***	0.058***
	(0.790)	(0.631)	(0.350)	(0.268)	(0.002)	(0.001)	(0.003)	(0.008)
Cash/Assets	0.009	0.010	-0.127**	-0.124**	0.033	0.040	-0.338*	-0.353*
	(0.927)	(0.918)	(0.033)	(0.034)	(0.789)	(0.746)	(0.075)	(0.069)
Capex/Assets	-0.680*	-0.676*	0.738***	0.732***	0.333	0.317	1.173*	1.211*
	(0.062)	(0.067)	(0.008)	(0.007)	(0.551)	(0.561)	(0.068)	(0.073)
R&D Intensity	-0.065	-0.079	0.475***	0.470***	-0.030	-0.044	-0.873**	-0.841**
	(0.672)	(0.610)	(0.000)	(0.000)	(0.883)	(0.828)	(0.042)	(0.044)
Unreported R&D	0.014	0.006	-0.039*	-0.043*	-0.059	-0.071	-0.145	-0.118
	(0.693)	(0.858)	(0.074)	(0.054)	(0.333)	(0.232)	(0.113)	(0.206)
Debt/Assets	-0.090	-0.101	0.134***	0.128***	0.055	0.037	-0.143	-0.101
	(0.211)	(0.180)	(0.004)	(0.005)	(0.559)	(0.709)	(0.266)	(0.423)
ROA	0.084	0.066	0.188**	0.179**	-0.027	-0.053	-0.397*	-0.336
	(0.546)	(0.642)	(0.022)	(0.026)	(0.857)	(0.711)	(0.062)	(0.116)
Blockholder Shares	-0.217*	-0.206*	-0.098	-0.093	-0.137	-0.123	-0.298**	-0.331**
	(0.051)	(0.063)	(0.133)	(0.156)	(0.180)	(0.219)	(0.035)	(0.019)
Parent VC Backed	0.021	0.025	0.037	0.039*	0.128**	0.134**	-0.062	-0.075
	(0.561)	(0.496)	(0.102)	(0.093)	(0.019)	(0.015)	(0.408)	(0.321)
VC Experience	-0.020	-0.023	-0.011	-0.013	0.018	0.012	-0.062**	-0.049*
	(0.170)	(0.125)	(0.285)	(0.221)	(0.429)	(0.559)	(0.016)	(0.059)
Observations	3,677	3,677	6,924	6,924	6,924	6,924	6,924	6,924
Adjusted R2	0.114	0.114	0.048	0.048	0.132	0.133	0.309	0.314
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Results are obtained by means of OLS regressions. In Columns 1 and 2 the dependent variable is *Founder Active*, a dummy that equals one if at least one of the founders is still active in the venture. This variable is missing when the venture is no longer active (i.e., if no current employee is reported in Pitchbook). In Columns 3 and 4 the dependent variable is *Lead Investor*, a dummy that equals one if the investor is classified by Pitchbook as the lead investor or if the investor was the sole investor in the investment round. In Columns 5 and 6 the dependent variable is *Board Seat*, a dummy that equals one if the CVC investor has a sit on the board of the venture. In Columns 7 and 8 the dependent variable is *Dedicated CVC Unit,* a dummy that equals one if the deal was completed through a CVC unit (rather than directly by the corporation). For details on the construction of the variables, please refer to the legends of Table 2 and Table 6. Regressions include year fixed effects, venture-level industry fixed effects (from Pitchbook), and state fixed effects at the CVC's parent firm level. Robust standard errors are clustered at the parent firm level. p-values in parentheses.
*** p<0.01,
** p<0.05,
* p<0.1.

difference in performance between family and non-family CVCs might be just due to better connections with reputable investors. Finally, in Columns (9)-(10), we control for venture founders' human capital as well as corporate governance and organizational attributes, which, as shown in Tables 7 and 8, exhibit some differences between family and non-family CVCs and might also correlate with exit results.

Results indicate that family CVCs exhibit a higher likelihood of successful exit (ranging from 60 to 67 percentage points). Importantly, family CVC pays off financially even controlling for a large set of confounding factors (including the reputation of syndicate partners). The effect becomes economically larger when focusing on family CVCs whose parent firm is led by a family CEO.

In Table A8 in the Appendix, we show that these results are robust to using a probit regression to account for the binary nature of the exit variable. Moreover, in Tables A9 and A10 in the Appendix, we use IPO and trade sale/buyout as separate dependent variables. As shown, the positive effect of family CVC is larger and more precisely estimated for IPOs. Finally, in Table A11 in the Appendix we show that the results are robust to the inclusion of deal size as an additional control.

5. Conclusion

CVC has become an increasingly important source of funding for entrepreneurial ventures, and this trend has drawn the attention of several scholars in corporate finance. Our key contribution has been to look beneath the surface of CVC. We argued that an important yet overlooked source of influence on CVC activity is the presence of families as controlling owners and CEOs of the parent organizations. Using data on CVC activities in the US from 2000 to 2017, we provided several novel results to the literature. First, we documented that families matter for CVC: around 30% of CVC deals have been made by firms controlled by families. Second, we showed that family CVC differs from non-family CVC in terms of investment strategies. Family CVC is associated with more syndication and more proximate deals in terms of both geography and industry, primarily when the parent organization is led by a family CEO. Third, we showed that family CVC is positively associated with the likelihood of a successful exit.

Before concluding, we shall acknowledge some limitations of our study, primarily related to the lack of a unanimous definition of family firms, the challenge of establishing causality and spelling out the mechanisms behind the performance results, the inability to measure the specific goals of family CVCs, and the crude way to measure CVC performance (which rely solely on the likelihood of IPO or trade sale). Future research opportunities lie in analyzing additional venture characteristics pertaining to quality and target selection and studying how value-adding activities (Cumming et al., 2005) and contractual and financial issues (Trester, 1998) differ between family and non-family CVCs. We must also acknowledge that obtaining reliable data on

Table 9
Investment exit.

Dependent variable: Successful Exit										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Family Firm	0.067***		0.062***		0.060***		0.065***		0.062***	
	(0.000)		(0.000)		(0.000)		(0.000)		(0.000)	
Family Firm with Family CEO		0.086***		0.070***		0.069***		0.074***		0.070***
		(0.000)		(0.000)		(0.000)		(0.001)		(0.000)
Family Firm with Professional CEO		0.035		0.048**		0.046*		0.052**		0.048**
		(0.152)		(0.039)		(0.050)		(0.041)		(0.040)
Ln (Sales)	0.013*	0.010	0.005	0.004	0.003	0.002	0.009	0.008	0.005	0.004
	(0.062)	(0.134)	(0.480)	(0.590)	(0.620)	(0.745)	(0.161)	(0.227)	(0.473)	(0.581)
Cash/Assets	0.065	0.060	0.092	0.090	0.101	0.099	0.072	0.070	0.093	0.090
	(0.497)	(0.531)	(0.330)	(0.344)	(0.278)	(0.292)	(0.446)	(0.459)	(0.328)	(0.343)
Capex/Assets	-0.122	-0.111	-0.331	-0.325	-0.283	-0.276	-0.313	-0.308	-0.327	-0.321
	(0.562)	(0.598)	(0.111)	(0.113)	(0.165)	(0.170)	(0.163)	(0.162)	(0.116)	(0.118)
R&D Intensity	-0.088	-0.078	0.013	0.016	0.002	0.004	0.105	0.108	0.015	0.018
	(0.498)	(0.538)	(0.919)	(0.900)	(0.990)	(0.971)	(0.406)	(0.392)	(0.903)	(0.885)
Unreported R&D	-0.023	-0.015	-0.015	-0.011	-0.015	-0.011	-0.031	-0.027	-0.015	-0.012
	(0.456)	(0.644)	(0.590)	(0.692)	(0.584)	(0.691)	(0.299)	(0.384)	(0.584)	(0.685)
Debt/Assets	-0.009	0.004	0.015	0.020	0.015	0.021	0.023	0.028	0.015	0.021
	(0.886)	(0.955)	(0.827)	(0.771)	(0.815)	(0.757)	(0.736)	(0.690)	(0.815)	(0.761)
ROA	-0.127	-0.108	-0.064	-0.056	-0.061	-0.053	-0.067	-0.060	-0.064	-0.056
	(0.167)	(0.237)	(0.461)	(0.519)	(0.482)	(0.544)	(0.504)	(0.548)	(0.461)	(0.518)
Blockholder Shares	0.079	0.069	0.060	0.056	0.057	0.052	0.047	0.043	0.060	0.055
	(0.245)	(0.314)	(0.383)	(0.422)	(0.414)	(0.456)	(0.519)	(0.558)	(0.383)	(0.422)
Parent VC Backed	0.004	-0.000	0.015	0.013	0.015	0.013	-0.004	-0.006	0.015	0.013
	(0.878)	(0.999)	(0.570)	(0.618)	(0.567)	(0.618)	(0.887)	(0.837)	(0.573)	(0.620)
VC Experience	-0.001	0.003	-0.004	-0.002	-0.003	-0.001	-0.008	-0.006	-0.004	-0.002
	(0.922)	(0.813)	(0.743)	(0.860)	(0.770)	(0.895)	(0.494)	(0.602)	(0.725)	(0.840)
Ln (Venture Age)			0.079***	0.080***	0.075***	0.076***	0.081***	0.082***	0.080***	0.081***
			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Ln (Syndicate Size)			0.066***	0.065***	0.042***	0.042***	0.056***	0.055***	0.065***	0.065***
			(0.000)	(0.000)	(0.003)	(0.004)	(0.000)	(0.000)	(0.000)	(0.000)
Foreign			-0.060***	-0.059***	-0.054***	-0.053***	-0.071**	-0.070**	-0.058***	-0.058***
			(0.002)	(0.002)	(0.004)	(0.004)	(0.016)	(0.016)	(0.004)	(0.004)
Reputation Most Reputable Partner					0.010**	0.010**				
					(0.013)	(0.013)				
Reputation Lead Investor							0.003	0.003		
							(0.286)	(0.285)		
Ivy League									0.005	0.005
									(0.774)	(0.786)
MBA									0.009	0.009
									(0.639)	(0.634)
Entrepreneurial Experience									0.004	0.004
									(0.775)	(0.784)
Lead Investor			0.034**	0.034**	0.038**	0.038**			0.034**	0.033**
			(0.037)	(0.039)	(0.023)	(0.024)			(0.039)	(0.041)
Board Seat			0.032	0.032	0.029	0.030	0.030	0.031	0.032	0.032
			(0.108)	(0.101)	(0.140)	(0.131)	(0.225)	(0.219)	(0.108)	(0.102)
Dedicated CVC Unit			0.088***	0.087***	0.086***	0.085***	0.076***	0.074***	0.088***	0.086***
			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	6,924	6,924	6,924	6,924	6,924	6,924	5,350	5,350	6,924	6,924
Adjusted R2	0.120	0.121	0.149	0.149	0.152	0.152	0.140	0.140	0.149	0.149
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Results are obtained by means of OLS regressions. The dependent variable is a dummy that equals one if the investor successfully exited the investment in the venture via IPO, M&A, or buyout. *Ln (Venture Age)* is the natural logarithm of one plus the age of the venture (in years) at the time of the deal. *Ln (Syndicate Size)* is the natural logarithm of one plus the number of syndicate partners. *Foreign* is a dummy that equals one if the venture is located outside the US. *Reputation Most Reputable Partner* is the reputation of the most reputable syndicate partner in the deal (excluding the focal CVC investor), i.e., the natural logarithm of one plus the cumulative value of the IPO exits in million US$ up to the year preceding the focal investment year. When the deal was not syndicated the variable equals zero. *Reputation Lead Investor* is the reputation of the lead investor, i.e., the natural logarithm of one plus the cumulative value of the IPO exits in million US$ up to the year preceding the focal investment year. When the leader of the investment was not reported in Pitchbook, we considered the reputation of the most reputable syndicate partner in the deal (excluding the focal CVC investor). In Columns 7 and 8 the sample has been restricted to syndicated deals when the focal investor was not indicated as the lead investor. *Ivy League* is a dummy that equals one if at least one of the founders of the venture obtained a degree from one of the Ivy League universities. *MBA* is a dummy that equals one if at least one of the founders of the venture pursued an MBA. Given that the date when the individuals obtained an MBA or attended a certain institution is often missing, we assumed that they attended an Ivy League institution/obtained an MBA before founding the venture. *Entrepreneurial Experience* is a dummy that equals one if at least one of the founders has founded a company that received VC financing before founding the venture. *Lead Investor* is a dummy that equals one if the investor is classified by Pitchbook as the lead investor or if the investor was the sole investor in the investment round. *Board Seat* is a dummy that equals one if the CVC investor has a sit on the board of the venture. *Dedicated CVC Unit is* a dummy that equals one if the deal was completed through a CVC unit (rather than directly by the corporation). For details on the construction of the other variables, please refer to the legends of Table 2 and Table 6. Regressions include year fixed effects, venture-level industry fixed effects (from Pitchbook), and state fixed effects at the CVC's parent firm level. Robust standard errors are clustered at the parent firm level. p-values in parentheses.

*** $p<0.01$,

** $p<0.05$,

* p<0.1.

human capital in our setting was difficult and the analysis, which focused on basic educational attributes and showed insignificant differences between family and non-family CVCs, might not provide the full picture.[20] Future studies could carry out a comprehensive analysis of human capital characteristics by employing more detailed data on the whole set of professionals within a CVC unit. Further looking into the organizational attributes of CVCs' parent organizations provides a promising approach to better understanding some of the critical questions in CVC research, such as what determines the pursuit of strategic versus financial objectives, how parent firms arrange CVC activities, and whether they help diversify risk. As regards this latter question, an analysis of diversification would provide a novel understanding of how family firms balance risk and return across different investments, thus shedding light on whether family-driven strategies primarily aim for control and familial alignment or if they also strategically seek to optimize financial outcomes through diversification. Finally, studying family governance in CVC offers a useful complement to research on the role of VC in the evolution of family firms' management and governance (Chemmanur et al., 2021).

CRediT authorship contribution statement

Mario Daniele Amore: Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Samuele Murtinu:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Valerio Pelucco:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

Appendix

Table A1
Investment strategies: probit regressions.

Dependent variable:	Syndication			Same Industry		
	(1)	(2)	(3)	(4)	(5)	(6)
Family Firm (5%)	0.186*			0.949***		
	(0.093)			(0.000)		
Family Firm (10%)		0.218*			0.682**	
		(0.090)			(0.031)	
Family Firm (Continuous)			0.888***			2.018***
			(0.000)			(0.000)
Ln (Sales)	0.049**	0.041**	0.039**	0.029	0.021	0.010
	(0.017)	(0.027)	(0.032)	(0.566)	(0.659)	(0.824)
Cash/Assets	0.111	0.046	-0.001	-0.933	-0.934	-0.834
	(0.692)	(0.873)	(0.997)	(0.152)	(0.144)	(0.196)
Capex/Assets	-2.218***	-2.032***	-1.994***	-2.096	-3.025	-2.509
	(0.000)	(0.001)	(0.001)	(0.428)	(0.301)	(0.318)
R&D Intensity	-0.508	-0.585	-0.539	2.801***	2.014*	2.175**
	(0.300)	(0.245)	(0.273)	(0.006)	(0.072)	(0.043)
Unreported R&D	0.094	0.079	0.056	-1.130***	-0.967***	-0.980***
	(0.368)	(0.431)	(0.564)	(0.001)	(0.002)	(0.001)
Debt/Assets	0.107	0.111	0.209	-0.702	-1.055**	-0.755
	(0.675)	(0.651)	(0.391)	(0.121)	(0.024)	(0.118)
ROA	-0.603*	-0.608*	-0.579*	0.390	0.036	0.018
	(0.085)	(0.082)	(0.077)	(0.394)	(0.947)	(0.972)
Blockholder Shares	0.607**	0.613**	0.643**	0.587	0.711	0.667
	(0.018)	(0.016)	(0.014)	(0.177)	(0.121)	(0.134)
Parent VC Backed	0.061	0.088	0.068	0.275	0.395	0.321
	(0.608)	(0.465)	(0.564)	(0.289)	(0.135)	(0.219)
VC Experience	0.061	0.062	0.066	-0.234**	-0.267*	-0.279**
	(0.152)	(0.156)	(0.126)	(0.032)	(0.053)	(0.044)
Observations	8,071	8,071	8,071	6,381	6,381	6,381
Pseudo R2	0.054	0.054	0.059	0.182	0.163	0.179
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

This table replicates the estimates in Columns 1, 2, 3, 7, 8, and 9 of Table 4 (i.e., those where the dependent variable is dichotomous) using probit regressions rather than OLS regressions. Robust standard errors are clustered at the parent firm level. p-values in parentheses.

*** p<0.01,

** p<0.05,

* p<0.1.

[20] Recent studies like Fuchs et al. (2022) provide a more fine-grained assessment of human capital by looking into the prestige of academic degrees and academic variety, among others. Unfortunately, we do not have the data to undertake a similar analysis.

Table A2
Investment strategies: moderation of venture age.

Dependent variable:	Syndication (1)	Distance (2)	Same Industry (3)
Family Firm	0.039	-0.814**	0.361***
	(0.380)	(0.015)	(0.002)
Ln (Venture Age)	0.012***	-0.035	0.007
	(0.001)	(0.239)	(0.256)
Family Firm * Ln (Venture Age)	-0.001	0.122**	-0.024*
	(0.898)	(0.041)	(0.096)
Ln (Sales)	0.009**	0.078*	0.008
	(0.036)	(0.057)	(0.482)
Cash/Assets	0.011	0.205	-0.324
	(0.798)	(0.764)	(0.105)
Capex/Assets	-0.427***	0.130	-0.744
	(0.001)	(0.931)	(0.335)
R&D Intensity	-0.049	-0.630	0.667**
	(0.563)	(0.572)	(0.047)
Unreported R&D	0.013	-0.007	-0.231***
	(0.481)	(0.976)	(0.008)
Debt/Assets	0.019	0.642	-0.228*
	(0.654)	(0.184)	(0.071)
ROA	-0.094*	-0.367	0.050
	(0.097)	(0.477)	(0.732)
Blockholder Shares	0.099**	-1.248***	0.154
	(0.031)	(0.009)	(0.267)
Parent VC Backed	0.009	0.277	0.080
	(0.667)	(0.119)	(0.319)
VC Experience	0.009	-0.013	-0.077**
	(0.290)	(0.882)	(0.020)
Observations	8,180	8,180	6,448
Adjusted R2	0.032	0.079	0.194
Year fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes

This table replicates the estimates in Columns 1, 4 and 7 of Table 4. In this table we interact *Family Firm* with the natural logarithm of one plus the age of the venture at the time of the investment round. When the age of the venture is missing or negative in Eikon we imputed a value equal to zero. Robust standard errors are clustered at the parent firm level. p-values in parentheses.
*** p<0.01,
** p<0.05,
* p<0.1.

Table A3
Deal size and venture stage.

Dependent variable:	Ln (Deal Size)		Early-Stage Venture			
	(1)	(2)	(3)	(4)	(5)	(6)
Family Firm	0.014		0.062**		0.028	0.177***
	(0.802)		(0.023)		(0.205)	(0.001)
Family Firm with Family CEO		0.006		0.111***		
		(0.907)		(0.000)		
Family Firm with Professional CEO		0.014		-0.003		
		(0.802)		(0.884)		
Same State					-0.024*	
					(0.074)	
Family Firm * Same State					0.095***	
					(0.003)	
Ln (Distance)						0.006**
						(0.016)
Family Firm * Ln (Distance)						-0.018***
						(0.003)
Ln (Sales)	0.107***	0.107***	-0.002	-0.006	-0.002	-0.002
	(0.004)	(0.004)	(0.539)	(0.109)	(0.578)	(0.555)
Cash/Assets	0.167	0.174	-0.010	-0.054	-0.008	-0.003
	(0.475)	(0.464)	(0.895)	(0.464)	(0.917)	(0.964)
Capex/Assets	-1.894***	-1.898***	0.128	0.156	0.139	0.121
	(0.001)	(0.001)	(0.449)	(0.232)	(0.408)	(0.470)
R&D Intensity	0.566	0.568	0.146	0.132	0.179	0.162
	(0.140)	(0.140)	(0.198)	(0.202)	(0.106)	(0.147)
Unreported R&D	0.012	0.011	-0.016	-0.010	-0.009	-0.013
	(0.900)	(0.906)	(0.482)	(0.629)	(0.688)	(0.547)
Debt/Assets	-0.014	-0.017	-0.030	-0.006	-0.021	-0.021
	(0.951)	(0.938)	(0.496)	(0.887)	(0.652)	(0.638)

(*continued on next page*)

Table A3 (*continued*)

Dependent variable:	Ln (Deal Size)		Early-Stage Venture			
	(1)	(2)	(3)	(4)	(5)	(6)
ROA	-0.181	-0.189	0.010	0.062	0.007	0.015
	(0.518)	(0.502)	(0.852)	(0.242)	(0.903)	(0.793)
Blockholder Shares	0.297	0.296	-0.041	-0.033	-0.048	-0.040
	(0.192)	(0.198)	(0.461)	(0.561)	(0.392)	(0.468)
Parent VC Backed	0.047	0.048	-0.022	-0.027*	-0.026*	-0.025
	(0.515)	(0.518)	(0.149)	(0.071)	(0.083)	(0.103)
VC Experience	-0.036	-0.038	-0.027**	-0.017	-0.027**	-0.026**
	(0.549)	(0.520)	(0.014)	(0.112)	(0.016)	(0.019)
Observations	7,261	7,261	8,180	8,180	8,180	8,180
Adjusted R2	0.206	0.206	0.052	0.056	0.054	0.054
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

Results are obtained by means of OLS regressions. The dependent variable is the natural logarithm of the size of the investment round (in Million Euros). For details on the construction of each variable, please refer to the legends of Table 2 and Table 6. Regressions include year fixed effects, venture-level industry fixed effects, and state fixed effects at the CVC's parent firm level. Robust standard errors are clustered at the parent firm level. p-values in parentheses.

*** p<0.01,
** p<0.05,
* p<0.1.

Table A4
Controlling for deal size (main analyses).

Dependent variable:	Syndication			Distance			Same Industry		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Family Firm	0.019*			-0.360			0.280***		
	(0.075)			(0.105)			(0.001)		
Family Firm (10%)		0.013			-0.205			0.211**	
		(0.253)			(0.447)			(0.050)	
Family Firm (Cont.)			0.061***			-1.243**			0.636***
			(0.003)			(0.011)			(0.000)
Ln (Sales)	0.008*	0.007*	0.007*	0.092**	0.098**	0.107**	0.005	0.002	-0.000
	(0.052)	(0.069)	(0.078)	(0.025)	(0.024)	(0.011)	(0.670)	(0.851)	(0.973)
Cash/Assets	0.072**	0.073**	0.072**	0.112	0.074	0.130	-0.296	-0.290	-0.247
	(0.022)	(0.024)	(0.022)	(0.877)	(0.920)	(0.859)	(0.109)	(0.118)	(0.173)
Capex/Assets	0.067	0.073	0.079	-0.976	-1.021	-1.249	-0.457	-0.649	-0.536
	(0.313)	(0.293)	(0.263)	(0.508)	(0.509)	(0.381)	(0.552)	(0.446)	(0.458)
R&D Intensity	-0.060	-0.073	-0.068	-0.755	-0.476	-0.617	0.749**	0.582	0.641*
	(0.370)	(0.284)	(0.311)	(0.495)	(0.679)	(0.589)	(0.023)	(0.102)	(0.060)
Unreported R&D	-0.004	-0.003	-0.005	-0.003	-0.046	0.024	-0.229***	-0.198**	-0.193**
	(0.766)	(0.845)	(0.703)	(0.990)	(0.841)	(0.909)	(0.008)	(0.020)	(0.013)
Debt/Assets	0.059**	0.054**	0.062**	0.681	0.818	0.613	-0.224*	-0.323**	-0.247*
	(0.028)	(0.049)	(0.022)	(0.161)	(0.101)	(0.208)	(0.062)	(0.010)	(0.063)
ROA	-0.063*	-0.069*	-0.066*	-0.476	-0.343	-0.439	0.042	-0.039	-0.051
	(0.082)	(0.062)	(0.060)	(0.361)	(0.517)	(0.391)	(0.770)	(0.817)	(0.758)
Blockholder Shares	0.071*	0.073*	0.073*	-1.063**	-1.123**	-1.103**	0.154	0.222	0.209
	(0.080)	(0.077)	(0.073)	(0.034)	(0.028)	(0.025)	(0.261)	(0.130)	(0.145)
Parent VC Backed	-0.003	0.000	-0.002	0.288	0.217	0.272	0.058	0.096	0.072
	(0.795)	(0.967)	(0.860)	(0.106)	(0.224)	(0.122)	(0.462)	(0.233)	(0.365)
VC Experience	0.010**	0.011*	0.011**	-0.029	-0.035	-0.040	-0.071**	-0.075*	-0.075*
	(0.049)	(0.052)	(0.046)	(0.744)	(0.709)	(0.675)	(0.038)	(0.082)	(0.081)
Ln (Deal Size)	0.035***	0.035***	0.035***	-0.015	-0.015	-0.015	-0.001	-0.001	-0.001
	(0.000)	(0.000)	(0.000)	(0.704)	(0.716)	(0.714)	(0.903)	(0.842)	(0.895)
Observations	7,261	7,261	7,261	7,261	7,261	7,261	5,642	5,642	5,642
Adjusted R2	0.050	0.049	0.050	0.083	0.081	0.086	0.192	0.173	0.192
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

This table replicates the estimates of Table 4. However, we are also controlling for the natural logarithm,of one plus the size of deal (in $ million). p-values in parentheses.

*** p<0.01,
** p<0.05,
* p<0.1.

Table A5
Controlling for deal size (family versus non-family CEOs).

Dependent variable:	Syndication	Distance	Same Industry
	(1)	(2)	(3)
Family Firm with Family CEO	0.026**	-0.647**	0.388***
	(0.012)	(0.013)	(0.000)
Family Firm with Professional CEO	0.010	0.012	0.087
	(0.573)	(0.944)	(0.222)
Ln (Sales)	0.007*	0.113***	-0.007
	(0.084)	(0.008)	(0.459)
Cash/Assets	0.066**	0.362	-0.285
	(0.045)	(0.630)	(0.152)
Capex/Assets	0.071	-1.132	-0.377
	(0.294)	(0.445)	(0.590)
R&D Intensity	-0.062	-0.683	0.785**
	(0.359)	(0.544)	(0.021)
Unreported R&D	-0.004	-0.037	-0.194**
	(0.816)	(0.860)	(0.012)
Debt/Assets	0.063**	0.550	-0.151
	(0.023)	(0.251)	(0.211)
ROA	-0.056	-0.751	0.137
	(0.130)	(0.156)	(0.334)
Blockholder Shares	0.072*	-1.114**	0.139
	(0.070)	(0.024)	(0.303)
Parent VC Backed	-0.004	0.317*	0.044
	(0.740)	(0.068)	(0.582)
VC Experience	0.012**	-0.087	-0.051*
	(0.031)	(0.308)	(0.093)
Ln (Deal Size)	0.035***	-0.016	0.000
	(0.000)	(0.698)	(0.961)
Observations	7,261	7,261	5,642
Adjusted R2	0.050	0.087	0.214
Year fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes

This table replicates the estimates of Table 5. However, we are also controlling for the natural logarithm,of one plus the size of deal (in $ million). p-values in parentheses.
*** p<0.01,
** p<0.05,
* p<0.1.

Table A6
Summary statistics on the dependent variables in Tables 6-8.

Panel A: Reputation of syndicate partners (Table 6)	N	Mean	s.d.	Median	Min	Max
Reputation of the Most Reputable Syndicate Partner	7,752	4.860	2.901	5.829	0	10.693
Reputation of the Lead Investor	6,731	2.807	3.124	0	0	10.693
Number of Independent VC Syndicate Partners	8,583	2.807	2.505	2	0	36
Panel B: Experience of Venture Founders (Table 7)	**N**	**Mean**	**s.d.**	**Median**	**Min**	**Max**
Ivy League	6,924	0.231	0.421	0	0	1
MBA	6,924	0.276	0.447	0	0	1
Entrepreneurial Experience	6,924	0.189	0.391	0	0	1
Panel C: Organizational Characteristics (Table 8)	**N**	**Mean**	**s.d.**	**Median**	**Min**	**Max**
Founder Active	3,677	0.788	0.409	1	0	1
Lead Investor	6,924	0.226	0.419	0	0	1
Board Seat	6,924	0.248	0.432	0	0	1
Dedicated CVC Unit	6,924	0.791	0.407	1	0	1

Table A7
Human capital of CVC investors.

Dependent variable:	Ivy League		MBA degree		VC Experience		Entrepreneurial Experience	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Family Firm	-0.013		-0.065		-0.017		0.015	
	(0.827)		(0.219)		(0.581)		(0.546)	
Family Firm with Family CEO		0.047		-0.040		-0.006		0.008
		(0.485)		(0.529)		(0.876)		(0.826)
Family Firm with Professional CEO		-0.097		-0.102		-0.033		0.025
		(0.172)		(0.109)		(0.341)		(0.537)
Ln (Sales)	0.034**	0.031**	0.009	0.008	0.001	0.000	0.000	0.000
	(0.013)	(0.014)	(0.689)	(0.727)	(0.927)	(0.968)	(0.987)	(0.962)
Observations	791	791	791	791	791	791	791	791
Adjusted R2	-0.004	-0.001	0.056	0.055	0.004	0.003	0.006	0.005
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Results are obtained by means of OLS regressions. The unit of observation is the employee-CVC unit pair. *Ivy League* is a dummy that equals one if the individual obtained a degree from one of the Ivy League universities. *MBA* is a dummy that equals one if the individual pursued an MBA. Given that the date when the individuals obtained an MBA or attended a certain institution is often missing, we assumed that they attended an Ivy League institution/obtained an MBA before founding the venture. *VC Experience* is a dummy that equals one if the individual had prior experience in an independent venture capital firm. *Entrepreneurial Experience* is a dummy that equals one if the individual has founded a company that received VC financing before joining the CVC unit. For details on the construction of the variables, please refer to the legend of Table 6. All specifications include CVC's parent firm (2-digit SIC) industry fixed effects and year fixed effects (referring to the year the employee joined the CVC unit). Robust standard errors are clustered at the parent firm level. p-values in parentheses. *** p<0.01,
** p<0.05,
* p<0.1.

Table A8
Investment exit. Probit regressions.

Dependent variable: Successful Exit										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Family Firm	0.190***		0.177***		0.171***		0.187***		0.175***	
	(0.000)		(0.000)		(0.001)		(0.000)		(0.000)	
Family Firm with Family CEO		0.238***		0.199***		0.193***		0.207***		0.197***
		(0.000)		(0.000)		(0.001)		(0.001)		(0.000)
Family Firm with Professional CEO		0.103		0.139**		0.132**		0.154**		0.139**
		(0.140)		(0.037)		(0.047)		(0.039)		(0.038)
Ln (Sales)	0.040**	0.033*	0.015	0.012	0.010	0.007	0.028	0.026	0.015	0.012
	(0.039)	(0.093)	(0.449)	(0.552)	(0.604)	(0.718)	(0.163)	(0.223)	(0.441)	(0.541)
Cash/Assets	0.201	0.187	0.291	0.284	0.317	0.310	0.223	0.218	0.293	0.286
	(0.455)	(0.489)	(0.292)	(0.304)	(0.244)	(0.256)	(0.395)	(0.407)	(0.290)	(0.302)
Capex/Assets	-0.414	-0.382	-0.992*	-0.975	-0.848	-0.831	-0.930	-0.917	-0.979	-0.962
	(0.487)	(0.521)	(0.099)	(0.101)	(0.152)	(0.157)	(0.155)	(0.156)	(0.102)	(0.105)
R&D Intensity	-0.257	-0.229	0.021	0.030	-0.009	0.001	0.307	0.316	0.029	0.038
	(0.486)	(0.529)	(0.955)	(0.934)	(0.981)	(0.998)	(0.412)	(0.398)	(0.937)	(0.917)
Unreported R&D	-0.063	-0.040	-0.045	-0.035	-0.045	-0.034	-0.094	-0.085	-0.046	-0.036
	(0.475)	(0.663)	(0.572)	(0.674)	(0.573)	(0.678)	(0.280)	(0.354)	(0.565)	(0.665)
Debt/Assets	-0.005	0.030	0.051	0.066	0.053	0.068	0.075	0.088	0.056	0.070
	(0.977)	(0.873)	(0.789)	(0.739)	(0.783)	(0.730)	(0.710)	(0.674)	(0.772)	(0.723)
ROA	-0.367	-0.314	-0.187	-0.166	-0.178	-0.156	-0.205	-0.189	-0.187	-0.166
	(0.198)	(0.269)	(0.501)	(0.553)	(0.524)	(0.578)	(0.514)	(0.548)	(0.501)	(0.551)
Blockholder Shares	0.235	0.207	0.181	0.170	0.170	0.159	0.142	0.134	0.180	0.170
	(0.223)	(0.285)	(0.361)	(0.393)	(0.392)	(0.426)	(0.504)	(0.533)	(0.360)	(0.391)
Parent VC Backed	0.009	-0.001	0.044	0.039	0.042	0.037	-0.016	-0.020	0.043	0.038
	(0.899)	(0.985)	(0.572)	(0.616)	(0.579)	(0.626)	(0.856)	(0.816)	(0.576)	(0.619)
VC Experience	-0.005	0.005	-0.013	-0.008	-0.011	-0.006	-0.024	-0.020	-0.013	-0.009
	(0.870)	(0.872)	(0.684)	(0.796)	(0.724)	(0.841)	(0.466)	(0.560)	(0.661)	(0.770)
Ln (Venture Age)			0.231***	0.232***	0.219***	0.220***	0.236***	0.237***	0.234***	0.235***
			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Ln (Syndicate Size)			0.199***	0.198***	0.132***	0.131***	0.167***	0.166***	0.198***	0.196***
			(0.000)	(0.000)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Foreign			-0.168***	-0.166***	-0.152***	-0.150***	-0.197**	-0.196**	-0.163***	-0.161***
			(0.002)	(0.002)	(0.004)	(0.004)	(0.017)	(0.017)	(0.004)	(0.004)
Reputation Most Reputable Partner					0.029**	0.030**				
					(0.013)	(0.013)				
Reputation Lead Investor							0.010	0.010		
							(0.290)	(0.289)		
Ivy League									0.023	0.022
									(0.622)	(0.631)
MBA									0.026	0.026
									(0.615)	(0.612)
Entrepreneurial Experience									0.013	0.013

(*continued on next page*)

Table A8 (*continued*)

Dependent variable: Successful Exit										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
									(0.746)	(0.755)
Lead Investor			0.099**	0.098**	0.110**	0.109**			0.099**	0.098**
			(0.034)	(0.036)	(0.022)	(0.023)			(0.036)	(0.037)
Board Seat			0.091*	0.092*	0.084	0.085	0.086	0.088	0.090*	0.092*
			(0.099)	(0.093)	(0.127)	(0.119)	(0.214)	(0.210)	(0.098)	(0.092)
Dedicated CVC Unit			0.262***	0.260***	0.258***	0.255***	0.221***	0.219***	0.262***	0.259***
			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	6,801	6,801	6,801	6,801	6,801	6,801	5,252	5,252	6,801	6,801
Pseudo R2	0.099	0.099	0.124	0.124	0.126	0.126	0.120	0.120	0.124	0.124
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

This table replicates the estimates of Table 9 using probit regressions rather than OLS regressions. Standard errors are clustered at the parent firm level. p-values in parentheses.

*** p<0.01,

** p<0.05,

* p<0.1.

Table A9

IPO exit.

Dependent variable: IPO Exit										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Family Firm	0.030***		0.034***		0.033***		0.035***		0.033***	
	(0.005)		(0.001)		(0.001)		(0.004)		(0.002)	
Family Firm with Family CEO		0.032***		0.037***		0.036***		0.037***		0.035***
		(0.002)		(0.001)		(0.002)		(0.003)		(0.003)
Family Firm with Professional CEO		0.027		0.030		0.029		0.031		0.030
		(0.215)		(0.147)		(0.164)		(0.218)		(0.151)
Ln (Sales)	-0.006	-0.006	-0.006	-0.006	-0.006	-0.007	-0.007	-0.007	-0.005	-0.005
	(0.164)	(0.143)	(0.174)	(0.149)	(0.126)	(0.107)	(0.117)	(0.113)	(0.224)	(0.201)
Cash/Assets	-0.012	-0.013	-0.011	-0.011	-0.006	-0.007	0.003	0.002	-0.008	-0.009
	(0.771)	(0.760)	(0.804)	(0.785)	(0.892)	(0.874)	(0.956)	(0.965)	(0.843)	(0.828)
Capex/Assets	-0.165*	-0.164*	-0.174*	-0.172*	-0.148	-0.146	-0.126	-0.124	-0.178*	-0.177*
	(0.089)	(0.095)	(0.082)	(0.083)	(0.135)	(0.139)	(0.211)	(0.219)	(0.075)	(0.076)
R&D Intensity	0.019	0.020	-0.002	-0.001	-0.008	-0.007	0.007	0.008	0.004	0.005
	(0.816)	(0.805)	(0.979)	(0.987)	(0.919)	(0.927)	(0.936)	(0.929)	(0.956)	(0.950)
Unreported R&D	0.014	0.015	0.007	0.008	0.007	0.008	0.003	0.005	0.006	0.007
	(0.492)	(0.503)	(0.713)	(0.700)	(0.712)	(0.696)	(0.874)	(0.845)	(0.759)	(0.753)
Debt/Assets	-0.049	-0.048	-0.044	-0.042	-0.043	-0.041	-0.033	-0.032	-0.043	-0.041
	(0.198)	(0.218)	(0.253)	(0.272)	(0.256)	(0.277)	(0.438)	(0.461)	(0.248)	(0.264)
ROA	-0.054	-0.053	-0.047	-0.045	-0.045	-0.043	-0.043	-0.041	-0.052	-0.050
	(0.379)	(0.398)	(0.440)	(0.461)	(0.451)	(0.475)	(0.549)	(0.564)	(0.392)	(0.406)
Blockholder Shares	-0.058	-0.058	-0.071*	-0.073*	-0.073*	-0.075**	-0.105**	-0.106**	-0.068*	-0.069*
	(0.113)	(0.105)	(0.060)	(0.053)	(0.050)	(0.043)	(0.018)	(0.015)	(0.069)	(0.062)
Parent VC Backed	0.013	0.013	0.017	0.017	0.017	0.017	0.016	0.015	0.017	0.016
	(0.353)	(0.387)	(0.229)	(0.263)	(0.231)	(0.265)	(0.352)	(0.384)	(0.243)	(0.273)
VC Experience	0.009	0.009	0.003	0.003	0.003	0.004	0.004	0.005	0.002	0.003
	(0.276)	(0.238)	(0.707)	(0.649)	(0.682)	(0.621)	(0.588)	(0.527)	(0.755)	(0.712)
Ln (Venture Age)			0.057***	0.057***	0.055***	0.055***	0.061***	0.061***	0.060***	0.061***
			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Ln (Syndicate Size)			0.041***	0.041***	0.028***	0.028***	0.057***	0.057***	0.039***	0.038***
			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Foreign			0.042***	0.042***	0.045***	0.045***	0.050***	0.050***	0.046***	0.046***
			(0.008)	(0.008)	(0.005)	(0.006)	(0.003)	(0.003)	(0.002)	(0.002)
Lead Investor			0.015**	0.014**	0.017**	0.017**			0.014*	0.014*
			(0.047)	(0.048)	(0.025)	(0.025)			(0.061)	(0.062)
Board Seat			-0.011	-0.010	-0.012	-0.012	-0.016	-0.016	-0.010	-0.010
			(0.272)	(0.281)	(0.220)	(0.228)	(0.204)	(0.215)	(0.279)	(0.286)
Dedicated CVC Unit			-0.003	-0.003	-0.004	-0.004	-0.003	-0.004	-0.002	-0.003
			(0.813)	(0.788)	(0.737)	(0.709)	(0.820)	(0.795)	(0.842)	(0.823)
Reputation Most Reputable Partner					0.006***	0.006***				
					(0.000)	(0.000)				
Reputation Lead Investor							0.003***	0.003***		
							(0.006)	(0.006)		
Ivy League									0.023**	0.023**
									(0.047)	(0.047)
MBA									-0.009	-0.009
									(0.390)	(0.391)
Entrepreneurial Experience									0.027*	0.027*
									(0.052)	(0.052)

(*continued on next page*)

Table A9 (*continued*)

Dependent variable: IPO Exit										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Observations	6,924	6,924	6,924	6,924	6,924	6,924	5,350	5,350	6,924	6,924
Adjusted R2	0.135	0.135	0.163	0.163	0.165	0.165	0.172	0.171	0.165	0.165
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

This table replicates the estimates of Table 9 using as a dependent variable a dummy that takes a value of one if the investor successfully exited the investment in the venture via IPO; zero elsewhere. Standard errors are clustered at the parent firm level. p-values in parentheses.

*** p<0.01,

** p<0.05,

* p<0.1.

Table A10

Acquisition exit.

Dependent variable: Acquisition Exit										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Family Firm	0.037**		0.028*		0.027*		0.031*		0.029*	
	(0.013)		(0.078)		(0.088)		(0.058)		(0.067)	
Family Firm with Family CEO		0.054***		0.034*		0.033*		0.037*		0.035*
		(0.002)		(0.077)		(0.085)		(0.077)		(0.061)
Family Firm with Professional CEO		0.008		0.018		0.017		0.021		0.018
		(0.714)		(0.363)		(0.396)		(0.313)		(0.367)
Ln (Sales)	0.018**	0.016**	0.010	0.010	0.010	0.009	0.016**	0.016**	0.010	0.009
	(0.012)	(0.034)	(0.181)	(0.221)	(0.210)	(0.254)	(0.034)	(0.048)	(0.203)	(0.250)
Cash/Assets	0.077	0.073	0.103	0.101	0.107	0.105	0.069	0.068	0.101	0.099
	(0.474)	(0.502)	(0.339)	(0.349)	(0.316)	(0.325)	(0.520)	(0.530)	(0.343)	(0.354)
Capex/Assets	0.043	0.053	-0.157	-0.153	-0.135	-0.131	-0.187	-0.183	-0.149	-0.144
	(0.824)	(0.781)	(0.426)	(0.432)	(0.490)	(0.499)	(0.397)	(0.400)	(0.453)	(0.461)
R&D Intensity	-0.107	-0.098	0.015	0.017	0.010	0.012	0.098	0.100	0.011	0.013
	(0.398)	(0.432)	(0.908)	(0.896)	(0.940)	(0.927)	(0.451)	(0.442)	(0.933)	(0.920)
Unreported R&D	-0.038	-0.030	-0.022	-0.020	-0.022	-0.020	-0.035	-0.032	-0.021	-0.018
	(0.195)	(0.313)	(0.369)	(0.437)	(0.367)	(0.437)	(0.171)	(0.219)	(0.392)	(0.469)
Debt/Assets	0.040	0.052	0.058	0.062	0.059	0.062	0.057	0.060	0.058	0.062
	(0.480)	(0.384)	(0.325)	(0.307)	(0.320)	(0.301)	(0.336)	(0.319)	(0.322)	(0.302)
ROA	-0.072	-0.055	-0.017	-0.011	-0.015	-0.010	-0.023	-0.019	-0.012	-0.006
	(0.424)	(0.545)	(0.851)	(0.898)	(0.864)	(0.913)	(0.822)	(0.857)	(0.890)	(0.944)
Blockholder Shares	0.137*	0.128*	0.131*	0.128*	0.130*	0.127*	0.152*	0.150*	0.128*	0.125*
	(0.058)	(0.078)	(0.070)	(0.077)	(0.075)	(0.083)	(0.058)	(0.061)	(0.078)	(0.086)
Parent VC Backed	-0.009	-0.013	-0.002	-0.004	-0.003	-0.004	-0.020	-0.021	-0.002	-0.003
	(0.728)	(0.629)	(0.932)	(0.896)	(0.929)	(0.891)	(0.563)	(0.538)	(0.946)	(0.906)
VC Experience	-0.010	-0.007	-0.006	-0.005	-0.006	-0.005	-0.012	-0.011	-0.006	-0.005
	(0.321)	(0.532)	(0.505)	(0.599)	(0.517)	(0.614)	(0.243)	(0.322)	(0.523)	(0.626)
Ln (Venture Age)			0.022**	0.022**	0.020*	0.020*	0.021*	0.021*	0.020*	0.020*
			(0.047)	(0.045)	(0.065)	(0.063)	(0.100)	(0.098)	(0.093)	(0.089)
Ln (Syndicate Size)			0.025*	0.025*	0.014	0.014	-0.001	-0.002	0.027**	0.027*
			(0.065)	(0.070)	(0.315)	(0.329)	(0.922)	(0.902)	(0.049)	(0.053)
Foreign			-0.101***	-0.101***	-0.098***	-0.098***	-0.120***	-0.120***	-0.105***	-0.104***
			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Lead Investor			0.019	0.019	0.021	0.021			0.020	0.020
			(0.260)	(0.269)	(0.225)	(0.233)			(0.241)	(0.250)
Board Seat			0.042**	0.043**	0.041**	0.042**	0.046**	0.046**	0.042**	0.043**
			(0.014)	(0.012)	(0.015)	(0.014)	(0.023)	(0.021)	(0.013)	(0.011)
Dedicated CVC Unit			0.091***	0.090***	0.090***	0.089***	0.079***	0.078***	0.090***	0.089***
			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Reputation Most Reputable Partner					0.005	0.005				
					(0.211)	(0.209)				
Reputation Lead Investor							0.000	0.000		
							(0.935)	(0.933)		
Ivy League									-0.018	-0.018
									(0.335)	(0.328)
MBA									0.017	0.017
									(0.337)	(0.334)
Entrepreneurial Experience									-0.023	-0.023
									(0.138)	(0.137)
Observations	6,924	6,924	6,924	6,924	6,924	6,924	5,350	5,350	6,924	6,924
Adjusted R2	0.119	0.119	0.134	0.134	0.134	0.134	0.130	0.130	0.134	0.134
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

This table replicates the estimates of Table 9 using as a dependent variable a dummy that takes a value of one if the investor successfully exited the investment in the venture via M&A or buyout; zero elsewhere. Standard errors are clustered at the parent firm level. p-values in parentheses.

*** p<0.01,

** p<0.05,
* p<0.1.

Table A11
Controlling for deal size (investment exit).

Dependent variable: Successful Exit								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Family Firm	0.055***		0.054***		0.064***		0.056***	
	(0.001)		(0.001)		(0.000)		(0.001)	
Family Firm with Family CEO		0.069***		0.068***		0.075***		0.070***
		(0.000)		(0.000)		(0.000)		(0.000)
Family Firm with Professional CEO		0.032		0.031		0.046*		0.032
		(0.201)		(0.214)		(0.082)		(0.199)
Ln (Sales)	0.004	0.002	0.004	0.002	0.008	0.006	0.004	0.002
	(0.543)	(0.735)	(0.603)	(0.798)	(0.287)	(0.401)	(0.559)	(0.755)
Cash/Assets	0.094	0.090	0.097	0.094	0.054	0.052	0.094	0.090
	(0.348)	(0.369)	(0.325)	(0.345)	(0.565)	(0.582)	(0.347)	(0.368)
Capex/Assets	-0.163	-0.150	-0.148	-0.135	-0.088	-0.078	-0.160	-0.147
	(0.425)	(0.452)	(0.462)	(0.494)	(0.697)	(0.725)	(0.434)	(0.464)
R&D Intensity	-0.020	-0.015	-0.022	-0.018	0.057	0.061	-0.021	-0.016
	(0.876)	(0.902)	(0.859)	(0.885)	(0.655)	(0.633)	(0.871)	(0.897)
Unreported R&D	-0.030	-0.024	-0.030	-0.024	-0.050	-0.044	-0.030	-0.024
	(0.275)	(0.410)	(0.280)	(0.416)	(0.103)	(0.166)	(0.280)	(0.418)
Debt/Assets	0.020	0.029	0.021	0.030	0.019	0.026	0.021	0.030
	(0.761)	(0.674)	(0.757)	(0.670)	(0.780)	(0.714)	(0.757)	(0.669)
ROA	-0.030	-0.019	-0.030	-0.019	-0.053	-0.046	-0.030	-0.018
	(0.746)	(0.841)	(0.748)	(0.842)	(0.603)	(0.656)	(0.754)	(0.851)
Blockholder Shares	0.076	0.069	0.074	0.067	0.061	0.056	0.074	0.068
	(0.304)	(0.354)	(0.318)	(0.369)	(0.441)	(0.486)	(0.313)	(0.364)
Parent VC Backed	0.013	0.009	0.013	0.010	-0.003	-0.005	0.013	0.009
	(0.602)	(0.697)	(0.595)	(0.689)	(0.919)	(0.845)	(0.607)	(0.702)
VC Experience	-0.004	-0.001	-0.004	-0.001	-0.006	-0.004	-0.004	-0.001
	(0.685)	(0.891)	(0.717)	(0.922)	(0.568)	(0.729)	(0.689)	(0.897)
Ln (Venture Age)	0.049***	0.049***	0.049***	0.049***	0.051***	0.051***	0.048***	0.048***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Ln (Syndicate Size)	0.030**	0.029**	0.021	0.020	0.022	0.021	0.030***	0.029**
	(0.010)	(0.013)	(0.137)	(0.152)	(0.155)	(0.179)	(0.009)	(0.011)
Foreign	-0.037**	-0.036**	-0.035*	-0.034*	-0.047*	-0.047*	-0.038**	-0.037*
	(0.042)	(0.046)	(0.052)	(0.055)	(0.056)	(0.057)	(0.047)	(0.051)
Lead Investor	0.026	0.025	0.028*	0.027			0.026	0.026
	(0.120)	(0.131)	(0.095)	(0.106)			(0.116)	(0.127)
Board Seat	0.020	0.021	0.019	0.020	0.016	0.017	0.020	0.021
	(0.341)	(0.316)	(0.352)	(0.327)	(0.508)	(0.492)	(0.341)	(0.316)
Dedicated CVC Unit	0.086***	0.084***	0.085***	0.083***	0.072***	0.071***	0.086***	0.084***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Reputation Most Reputable Partner		0.005	0.005					
		(0.216)	(0.216)					
Reputation Lead Investor				0.003	0.003			
				(0.292)	(0.288)			
Ivy League						0.001	0.001	
						(0.930)	(0.954)	
MBA						0.003	0.003	
						(0.883)	(0.873)	
Entrepreneurial Experience						-0.010	-0.011	
						(0.493)	(0.481)	
Ln (Deal Size)	0.054***	0.055***	0.050***	0.051***	0.056***	0.056***	0.054***	0.055***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	6,320	6,320	6,320	6,320	5,027	5,027	6,320	6,320
Adjusted R2	0.154	0.154	0.154	0.154	0.149	0.149	0.154	0.154
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

This table replicates the estimates of Table 9. However, we are also controlling for the natural logarithm,of one plus the size of deal (in $ million). Standard errors are clustered at the parent firm level. p-values in parentheses.
*** p<0.01,
** p<0.05,
* p<0.1.

Data availability

The authors do not have permission to share data.

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