Research article

Venture capital backing: financial policies and persistence over time

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Abstract: The present article seeks to analyze the financial policies of companies backed by Private Equity and Venture Capital funds (PE/VC). Our sample consists of firms completing an initial public offering between January 1991 and December 2000. Our hypotheses relate to the difference between VC and non-VC-backed firms in terms of financial policies and their persistence. We use four measures to evaluate the firms' financial policies: i) Cash holdings; ii) Leverage; iii) dividends out of their earnings; and iv) interest coverage. To test the four hypotheses, we run Pooled OLS regressions. The results suggest that VC-backing firms keep a higher level of cash holdings than non-VC-backed firms. This effect lasts for at least 8 years after the IPO. We show that VC-backed firms are associated with a lower level of leverage over the first 8 years after the IPO. Differently, while interest coverage is lower in the first years after the IPO, results are not persistent, even reverting in later years. Finally, we do not find statistically significant evidence of a difference between VC- and non-VC-backed firms on dividend to earnings ratio. Our results are robust across statistical methods and different methodologies.

Keywords: venture capital; private equity; IPO; financial policies

JEL Codes: G24, G30, M41

1. Introduction

Corporate culture matters for a firm's policy choices and financial performance. Corporate finance polices vary across firms and a substantial portion of the cross-sectional variation remains unexplained. Additionally, there are few empirical results showing the long-run benefit that Venture Capitalists (VCs) provide to companies in which they invest. This article investigates how VCs may impact firms' investment and financing choices by comparing VC-backed to non-VC-backed firms' financial policies.

Brav and Gompers (1997) show moderate outperformance of VC-backed firms in the long-run compared to non-VC-backed firms. Other authors have analyzed the role of VCs at the time of the initial public offering (henceforth IPO). According to this literature, VCs provide benefits for IPO firms in two key ways: monitoring (Barry et al., 1990) and certification (Megginson and Weiss, 1991). In this paper, we quantify the role VCs play in the operating practices of newly public firms after their IPO. VCs have incentive to help the firms they finance maintain good performance even after the IPO: frequently the IPO does not mark the exit of VC from these firms, but rather it is a way for the IPO firm to obtain funds to finance expansion. VCs retain their equity position for years after the IPO (Barry et al. (1990)). Thus, it is expected that VCs, long-run investors, have an important role in improving the firm's performance even after the IPO. Thus, our question is, do VCs provide long-term identifiable characteristics to the firms in which they have an equity stake?

There is considerable empirical literature that suggests that venture capital firms contribute significantly to the success of start-up companies. This is usually attributed to the VCs' superior abilities of screening potential portfolio companies, as well as monitoring and providing consulting services to portfolio companies (Barry et al., 1990). Brav and Gompers (1997) present three reasons why VC-backed IPOs might differ from non-VC-backed IPOs. First, VCs implement management structures that help the portfolio firm's operating practices. Additionally, VCs can use their industry expertise to improve the firm's operations as well as provide valuable information about ways to raise capital. Second, VCs might affect who holds the firm's shares after an IPO. Larger investors hold shares of VC-backed IPOs because VCs have on-going relationships with large and more respected investment banks. These ties to large investors and investment banks usually lead to further joint businesses after the IPO. Finally, VCs obtain positions on the board of directors of the start-up firms and retain these positions long after the IPO. Having VCs on the board brings in experience in raising capital that may be lacking in a start-up firm. Therefore, a question that emerges is whether these characteristics have an impact on the firm's operating practices over time, i.e, is there a difference between VC-backed IPOs and non-VC-backed IPOs in terms of financial policies over time?

Pommet (2017) provides evidence about the advantages and disadvantages linked to the presence of VC firms in the capital of their companies. Entrepreneurs should consider that certain types of venture capitalists might be more or less able to be involved in the monitoring and value-adding process. Bruton et al. (2010) find support for the agency theory argument that concentrated ownership improves IPO performance. They show that the two types of private equity investors—VCs and angel investors—have a differential impact on performance, and the legal institutions in a given country moderate this impact.

For Kreps (1990) and Hermalin (2001), understanding corporate culture is necessary if we want to understand firms' policy choices and ultimately their performance. Thus, several of our key findings support a culture-based explanation for the difference between VC-backed and non-VC-backed firms

in terms of financial policies and their persistence. There are many definitions for corporate culture. There is a common element in economic theories that corporate culture is a specific set of norms, beliefs, values, and preferences that is shared among its executives and workers. In this view, the firm's culture can matter for its policy choices because the culture defines the "right" behavior when players within a firm are confronted with unforeseen contingencies or when faced with situations with multiple equilibria, Kreps (1990).

In this paper, we follow Nilsson, Cronqvist and Low (2009) and use four measures that relate to firms' financial policies and their persistence over time. These measures are: i) cash holdings; ii) leverage; iii) dividends out of their earnings; and iv) interest coverage.

Our results show that there is a positive and statistically significant relationship between VC-backed firms and cash holdings. These results are persistent for at least 8 years after the IPO. Additionally, we consider two robustness checks. First, we eliminate the observations during the dot-com bubble from our sample. Second, we include in our sample only firms that have data available for all periods after the IPO (henceforth overlapping firms' sample).[1] This result is preserved in both robustness checks.

In general, VCs seek young, high-growth and risky companies with the potential to produce breakthrough products and services and achieve strong growth. Thus, they tend to make their investments at an early stage of development when the prospects of success are far from certain. For Serrasqueiro, Sardo, and Félix (2019), debt is more important for smaller than for larger VC-backed investments. The moderation effect of VC ownership reduces the magnitudes of the positive impact of cash flows and debt as well as the negative effect of growth opportunities on investment in both smaller and larger VC-backed.

VCs, therefore, have an influential role in the strategic evolution of the company as well as its investment and financing decisions. In addition to playing an active role in the firms by participating in activities, they provide financing. Thus, VC-backed firms may be more likely to issue equity than debt, and, consequently, they would have lower levels of leverage compared to non-VC-baked firms. Serrasqueiro, Sardo, and Félix (2020) also show evidence that after VC participation on their equity, firms probably become less dependent on debt, choosing internal finance to fund assets that are firm-specific or have an intangible nature, and, hence cannot be pledged as collaterals.

Our results show that VC-backed firms have significantly less leverage in all 8 years both during and after their IPOs compared to non-VC-backed firms. Similarly with leverage, the interest coverage ratio is considered to be a financial leverage ratio in that it analyzes one aspect of a company's financial viability regarding its debt. We find that VC-backed firms present lower levels of interest coverage than non-VC-backed firms. However, results for interest coverage are not as persistent over time, reverting 3 years after the IPO.

The life cycle and dividend signaling theories provide the theoretical background to explore the link between VC involvement and choice of post-IPO payout mechanism adopted by IPO firms. The life cycle theory suggests that dividends are typically paid by mature, profitable, established firms with low growth prospects while earnings retention is preferred by young, high-growth firms with an abundance of investment opportunities and limited resources (DeAngelo et al., 2006). Since VC-backed firms are typically young, high-growth firms that make the transition from private to public at an earlier stage in their growth cycle relative to similar non-VC backed firms (Lerner, 1994), the life cycle theory would suggest that VC-backed IPO firms are more likely to prefer retention to payouts and therefore are not expected to

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[1]An overlapping sample is used when there are paired samples with data missing in one or more samples.

initiate dividends during the post-IPO phase. Unfortunately, we do not have evidence that the presence of a VC yields a relationship statistically significant with the level of dividend to earnings ratio.

This paper is organized as follows: Section 2 presents our testable hypotheses. Section 3 describes our data, sample, regressions models and treatment for endogenous choice of venture capital investments. Section 4 presents empirical results. Finally, Section 5 concludes the paper.

2. Hypotheses development

Prior studies indicate that VCs play different roles in firms. Directly, they are financiers, and indirectly, they monitor business operations (Phillips, 1991; Wasserman, 1988). In addition, VCs are often considered value-added investors and their involvement with corporate strategies is an important value-added activity (Fired et al., 1998). Agency theory suggests that there may be managerial mischief when the interests of shareholders and managers (agents) diverge. One possible solution to this agency problem is the alignment of shareholders and agent interests, known as the interest-alignment hypothesis. The interest-alignment hypothesis suggests that shareholders are more willing to accept large cash holdings to finance potential investment projects if the firms have effective monitoring mechanisms. As financiers, VCs often oversee managerial decisions (Carpenter et al., 2003; Chen et al., 2016; Van den Berghe and Levrau, 2002). The interest-alignment hypothesis suggests that the existence of large shareholders improves shareholder protection, leading to a positive effect of VC ownership on cash holdings. Thus, our first hypothesis is that the presence of venture capitalists may have a positive effect on the firm cash holdings in the years immediately after its IPO. Therefore, our first hypothesis can be stated as:

Hypothesis 1: VC-backed firms present higher levels of cash holdings in the years after their IPO than non-VC-backed ones.

Our second objective in this paper is to analyze how VC backing affects a firm's financial structure in the years after its IPO. Venture capitalists may play an important role in conveying a firm's intrinsic value to the financial market, thereby reducing the extent of information asymmetry it faces. Reduced information asymmetry, in turn, may influence various aspects of a firm's financial policies (see, e.g., Myers and Majluf (1984)). In particular, this implies that VC-backed firms may be more likely to issue equity (since they are more likely to get a fair price for their stock), so that they will have lower levels of leverage. Thus, if venture capitalists are able to certify intrinsic firm value and thus reduce the extent of information asymmetry facing the firm, VC-backed firms will be associated with lower leverage ratios. Therefore, our second hypothesis can be stated as:

Hypothesis 2: VC-backed firms present lower levels of leverage in the years after their IPO than non-VC-backed ones.

Companies which pay out a large part of their earnings in the form of dividends are less inclined to hoard cash on their balance sheet or feel obliged to spent cash on acquisitions or marginal investments. Jain, Shekhar and Torbey (2009) show that the probability of dividend initiation declines with number of uses of IPO proceeds, initial returns, risk of the issue, venture capital participation, membership in emerging industries, and pre-IPO capital expenditure intensity. Thus, if venture capitalists are related with young and high growth firms, VC-backed firms will pay less dividends out of their earnings. Therefore, our third hypothesis can be stated as:

Hypothesis 3: VC-backed firms present lower level of dividends out of their earnings in the years after their IPO than non-VC-backed ones.

Finally, the interest coverage ratio is considered to be a financial leverage ratio in that it analyzes one aspect of a company's financial viability regarding its debt. Similarly with hypothesis 2, our fourth hypothesis tests if VC-backed IPOs present lower levels of interest coverage than non-VC-backed IPOs. Therefore, our fourth hypothesis can be stated as follows:

Hypothesis 4: VC-backed firms present lower levels of interest coverage in the years after their IPO than non-VC-backed ones.

3.   Data and methodology

3.1. Data and sample

In this paper, we use four measures for the firms' financial policy: i) cash holdings; ii) leverage; iii) dividends out of their earnings; and iv) interest coverage. These measures are based on Nilsson, Cronqvist, and Low (2009). Table 1 describes each variable with more detailed definitions.

Our sample consists of US firms completing an IPO between January 1991 and December 2000. As we analyze firms up to 8 years after the IPO, we use financial statement data observations from Compustat from 1990 through 2008.[2] As usual, we exclude unit offerings, closed-end funds, limited partnerships, IPOs with an offer price of less than five dollars, IPOs of financial institutions (SIC codes 6000–6999), utilities (SIC codes 4900–4999) and real-estate investment trusts. We also exclude American depositary receipts (ADRs). Our final sample consists of 2,833 IPOs with information on all variables used in regressions. Over the same period, Loughran and Ritter (2002) report 4,470 IPOs. Thus, our sample contains 63.4% of their total number of IPOs.

Our dataset has a broad range of firm variables related to financial policy. We use leverage, interest coverage, cash holdings, and dividends. Our set of control variables includes age at IPO, technology firm identifier, lagged logarithm of book assets, cash flow, lagged Tobin's q, lagged ROA, Sales Growth, lagged net property, plant, and equipment, offer size and size offer-to-book value of assets.

Information on offer price, offer date, proceeds, leading underwriter name, price interval, SEO, and firm age comes from the new issues database of Securities Data Corporation (SDC-Platinum). Data on sales, book value of assets, and Big-Four auditing come from Compustat. Information on venture capital sponsoring comes from Venture Economics database. Measure of underwriter quality is the Carter and Manaster's index (1990) updated by Loughran and Ritter (2002). High-tech firms are identified following Loughran and Ritter (2002) classification. Descriptive statistics for these variables are presented in Table 2.

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[2]Due to changes in institutional affiliations, we do not have currently access to some of the databases needed in order to further update the data.

Table 1. Definitions for principal variables.

Cash Holdings	Is defined as cash and short-term investments (DATA 1) divided by book value of assets (DATA 6) less cash and short-term investments (DATA 1)
Leverage	Is defined as the sum of long-term debt (DATA 9) and debt in current liabilities (DATA 34) scaled by book assets (DATA 6).
Dividend/earnings	Is the ratio of the sum of common dividends (DATA 21) and preferred dividends (DATA 19) over operating income before depreciation (DATA 13).
Interest Coverage	Is defined as operating income before depreciation (DATA 13) divided by interest expenses (DATA 15).
Venture Capital (VC)	Is a dummy variable assuming value one for a Venture Capital backed IPO, and zero otherwise.
Underwriter	We use the Carter-Manaster index (updated for the period 2001-2010 by Ritter (2013)) of the member of the underwriting syndicate with the highest score
Auditor	Dummy variable that takes value one when the firm had its financial statements audited by one of the Big Four auditing companies, and zero otherwise
Cash Flow	Is defined as the sum of earnings before extraordinary items (DATA 18) and depreciation (DATA 14) divided by lagged book value of assets (DATA 6).
Net property, plant, and equipment ratio	Is defined as the net property plant and equipment (DATA 8) divided by book value of assets (DATA 6). This variable is lagged.
Book Value of Assets (Size)	Is the natural logarithm of book value of assets (DATA 5)
Tobin's q	Is defined as the market value of assets divided by the book value of assets (DATA 6). The market value of assets equals the book value of assets plus the market value of common equity (DATA 25 × DATA 199) less the sum of the book value of common equity (DATA 60) and balance sheet deferred taxes (DATA 74). This variable is lagged.
Sales Growth	Is the geometric average sales growth during past three years (or available period if less) (DATA 12)
Technology	As defined in Loughran and Ritter (2002).
Age at IPO	The year of the IPO minus the founding year.
Offer Size	Filled amount of proceeds from IPO (MM).
Offer Size-to-Assets	Filled amount of proceeds from IPO (MM) divided by book value of assets.
Industry	Industry dummies mapped to US 2-digit SIC codes when using common controls
τ_t	Time dummies per year

Table 2. Descriptive statistics.

	VC-backed	Non-VC-backed	Difference
Panel A: Sample Description for Dependent Variables			
Cash Holdings	2.767	1.508	**1.26***
	(3.537)	(20.293)	**(4.42)**
Dividend to Earnings Ratio	−0.013	0.001	−0.01
	(0.394)	(0.149)	(1.43)
Interest Coverage	−0.233	0.093	**−0.33***
	(0.64)	(0.400)	**(4.34)**
Leverage	0.275	0.434	**−0.16***
	(0.231)	(0.349)	**(4.74)**
Panel B: Descriptive Statistics for Covariates			
Top Underwriter	0.812	0.626	**0.19***
	(0.391)	(0.484)	**(3.74)**
Big-Four Auditor	0.358	0.313	**0.05***
	(0.48)	(0.464)	**(3.87)**
Cash Flow	−0.213	0.056	**−0.27***
	(1.106)	(1.18)	**(1.85)**
Net PPE	0.133	0.241	**−0.11**
	(0.151)	(0.224)	**(2.22)**
Book Value of Assets	4.226	4.529	**−0.30***
	(0.966)	(1.362)	**(2.75)**
Tobin's q	8.924	4.674	**4.25***
	(18.884)	(6.923)	**(3.83)**
Sales Growth	0.786	0.629	**0.16***
	(0.481)	(0.418)	**(3.21)**
Technology	0.481	0.224	**0.26***
	(0.5)	(0.417)	**(2.85)**
Age at IPO	8.152	18.032	**−9.88***
	(9.15)	(22.012)	**(2.77)**
Offer Size	3.850	3.797	**0.05***
	(0.753)	(1.061)	**(1.72)**
Offer Size-to-Assets	0.001	0.001	0.00
	(0.001)	(0.016)	(0.47)
Number of Firms	1,190	1,643	
Number of Observations	11,658	16,099	

Table 3 reports correlation among the exogenous variables. In general, correlations are quite low, although almost all correlations are statistically significant at the 1% level. As expected, the correlation between variables Auditor and Underwriter indicates that firms that choose highly reputed auditors also tend to choose highly reputed underwriters. Large firms tend to hire better underwriters and present higher ROA. Finally, firms that hire top auditors are less indebted.

Table 3. Correlation matrix for independent variables.

	Underwriter	Auditor	SEO	ROA	Leverage	Growth	Size
Underwriter	1						
Auditor	0.08***	1					
SEO	0.06***	0.02***	1				
ROA	0.07***	0.03***	0.01	1			
Leverage	0.01	−0.04***	−0.03***	0.03***	1		
Growth	0.02***	0.01	0.06***	−0.05***	−0.09***	1	
Size	0.45***	0.11***	0.1***	0.26***	0.11***	0.01	1

Note: *** denote significance at the 1% levels

3.2. Methodology

Our hypotheses relate to the difference between VC-backed firms and non-VC-backed firms in terms of financial policy and its persistence. We use four measures to evaluate a firm's financial policy: i) cash holdings; ii) leverage; iii) dividends out of their earnings; and iv) interest coverage. For the four hypotheses we run Pooled OLS regressions. Our specification for this model is:

$$Dependent_{i,t} = \beta_0 + \beta_1 VC_i + \beta_2 Underwriter_i + \beta_3 Auditor_i + \gamma^{'} x^{'}_{i,t} + \pi' g^{'}_{i,t} +$$

$$\theta^{'} industry_i + \tau_t + \mu_{i,t} \qquad (1)$$

where

$Dependent_i$: there are four dependent variables: i) cash holdings; ii) leverage; iii) dividends out of their earnings; and iv) interest coverage;

$x^{'}_{i,t}$: is a vector of predetermined characteristics of firm i at year t: cash flow, net PPE ratio, Tobin's q, technology firm identifier, age at IPO, book value of assets, and sales growth;

$g^{'}_{i,t}$: is a vector of predetermined characteristics of issue i: offer size and offer size scaled by book value of assets;

The regression specified in Model 1 is estimated using pooled OLS with industry and time dummies and random effects. We also employ the White (1980) procedure for robust standard errors that are clustered by firm.

We also present robustness checks that aim to deal with the possibility of endogeneity issues. In particular, we use matching estimators to assure that the comparison is made between treated (VC-backed-IPOs) and untreated firms (non-VC-backed) that are otherwise similar in terms of observable features such as industry (two-digit SIC code), firm size, and ROA.

4. Results

4.1. Cash holdings

In general, cash holdings might result from precautionary reasons or from limited access to external finance. In this paper, we analyze the factors conditioning firms' cash holdings levels and persistence over time for VC-backed firms and non-VC-backed firms.

In Table 4, we present our results. VC-backing firms keep a higher level of cash holdings and these results last for at least 8 years after the IPO. This result is robust even when we eliminate the observations during the dot-com bubble from our sample (Table 4b) or when we run only overlapping firms (Table 4c). Neither the presence of a Big-Four auditor nor top underwriter presents a relationship statistically significant with the level of cash holdings.

In terms of offer characteristics, larger offer sizes would usually present higher levels of cash holdings over the first 8 years after the IPO. Differently, if a larger fraction of the firm—proxied by the ratio of offer size to book value of assets—is sold during the IPO, the firm presents lower level of cash holdings over time.

Finally, in terms of firm characteristics, older firms, firms in technology sectors, larger firms, and firms with higher net PPE keep a lower level of cash holdings.

The positive relationship between VC-backing firms and cash holdings is related to the research by Chen and Chuang (2009). These authors find that the presence of VCs in the corporate board is associated with higher cash holdings for a list of high-tech firms listed on NASDAQ from 1997 to 2003. In their paper, they do not focus on the persistence of the effect. Nevertheless, Krishan et al. (2011) highlight that VCs—in particular reputable VCs—keep their board seats up to 3 years after an IPO. Consequently, if board membership is a way in which VCs influence cash holdings, we should expect at least some degree of persistence.

Table 4a. Cash holdings.

Year	1	2	3	4	5	6	7	8
Venture Capital	1.152***	0.754***	0.630***	0.617***	0.731***	0.770***	0.763***	0.781***
	(9.66)	(7.91)	(7.26)	(6.40)	(7.13)	(7.68)	(6.40)	(5.83)
Top Underwriter	0.424***	0.262**	0.184*	0.150	0.263**	0.129	0.172	0.150
	(3.18)	(2.44)	(1.85)	(1.35)	(2.18)	(1.09)	(1.19)	(0.97)
Big-Four Auditor	0.056	0.088	0.148**	0.136*	0.237***	0.190**	0.166*	0.029
	(0.52)	(1.07)	(2.00)	(1.80)	(2.86)	(2.28)	(1.74)	(0.26)
Bubble Dummy	1.043***	0.236*	0.458***	0.402***	0.132	0.195	0.103	0.063
	(6.72)	(1.71)	(3.35)	(2.90)	(0.94)	(1.26)	(0.62)	(0.35)
Cash Flow	−0.032	0.041	−0.023	0.017**	−0.016	0.015	−0.002	−0.020
	(−0.65)	(1.11)	(−0.77)	(2.41)	(−0.85)	(0.73)	(−0.06)	(−0.63)
Net PPE	−3.830***	−2.259***	−1.988***	−1.787***	−1.955***	−1.816***	−2.162***	−2.165***
	(−16.48)	(−13.75)	(−12.85)	(−10.96)	(−10.51)	(−9.41)	(−9.04)	(−8.35)
Book Value of Assets	−0.361***	−0.409***	−0.313***	−0.249***	−0.263***	−0.176***	−0.193***	−0.186***
	(−6.93)	(−9.40)	(−7.52)	(−5.98)	(−6.02)	(−3.76)	(−4.56)	(−3.85)

Continued on next page

Year	1	2	3	4	5	6	7	8
Tobin's q	0.001	0.017*	−0.003	−0.005	−0.002	0.001	0.006	0.012
	(0.18)	(1.91)	(−0.67)	(−1.35)	(−0.35)	(0.12)	(0.84)	(1.42)
Sales Growth	−0.606***	−0.283**	−0.219**	−0.042	0.003	0.159	−0.185	−0.277
	(−3.97)	(−2.31)	(−2.07)	(−0.35)	(0.02)	(0.83)	(−0.95)	(−1.20)
Technology	−0.405***	−0.350***	−0.263***	−0.255***	−0.372***	−0.490***	−0.593***	−0.758***
	(−3.42)	(−3.61)	(−2.96)	(−2.76)	(−3.39)	(−4.11)	(−4.40)	(−5.06)
Age at IPO	−0.015***	−0.008***	−0.007***	−0.006***	−0.007***	−0.006***	−0.008***	−0.008***
	(−8.54)	(−7.03)	(−6.22)	(−6.23)	(−5.80)	(−4.38)	(−5.53)	(−5.39)
Offer Size	0.171**	0.338***	0.346***	0.271***	0.250***	0.228***	0.300***	0.220***
	(2.32)	(5.11)	(5.26)	(4.57)	(3.62)	(3.33)	(3.79)	(3.11)
Offer Size−to−Assets	−5.307***	−5.380***	−1.418***	−0.829***	−0.179***	−0.137***	−0.044***	−0.034***
	(−3.35)	(−7.13)	(−7.18)	(−6.61)	(−6.39)	(−5.54)	(−5.73)	(−4.53)
Observations	2,833	2,663	2,361	2,084	1,829	1,586	1,424	1,259
R−squared	0.2248	0.1988	0.2059	0.1734	0.1764	0.1619	0.1743	0.1718
Industry and Quarter Dummies	yes	yes	Yes	yes	Yes	yes	yes	yes
Constant	yes	yes	Yes	yes	Yes	yes	yes	yes

Note: *, **, and *** respectively indicate significance levels at 10%, 5%, and 1% levels. The dependent variable is the cash holdings from year 1 to year 8 after IPO. We run Pooled OLS with errors clustered by firm. The sample consists of 2,833 IPOs with information on all variables used in regressions from 1990 to 2008. T (or z) statistics heteroskedastic−consistent by White (1980) are in brackets.

Table 4b. Cash Holdings (without bubble sample).

Year	1	2	3	4	5	6	7	8
Venture Capital	1.070***	0.801***	0.667***	0.588***	0.706***	0.757***	0.722***	0.745***
	(8.26)	(8.07)	(7.89)	(5.81)	(6.07)	(7.06)	(5.42)	(4.97)
Top Underwriter	0.422***	0.179	0.152	0.169	0.234*	0.088	0.181	0.085
	(2.96)	(1.56)	(1.57)	(1.48)	(1.79)	(0.72)	(1.24)	(0.51)
Big−Four Auditor	0.008	0.044	0.159**	0.153**	0.213**	0.079	0.106	0.013
	(0.07)	(0.50)	(2.22)	(2.00)	(2.34)	(0.91)	(1.06)	(0.11)
Cash Flow	−0.177	−0.022	−0.034	0.025*	−0.011	0.018	0.006	−0.035
	(−1.41)	(−0.44)	(−0.79)	(1.82)	(−0.57)	(0.86)	(0.23)	(−1.15)
Net PPE	−3.153***	−1.992***	−1.566***	−1.486***	−1.774***	−1.615***	−1.957***	−1.994***
	(−13.22)	(−11.58)	(−10.38)	(−8.73)	(−8.79)	(−8.24)	(−7.67)	(−7.24)
Book Value of Assets	−0.421***	−0.369***	−0.292***	−0.276***	−0.251***	−0.128**	−0.186***	−0.168***
	(−7.27)	(−7.36)	(−7.06)	(−5.74)	(−4.66)	(−2.54)	(−4.57)	(−2.99)
Tobin's q	0.004	0.037**	−0.001	−0.001	0.002	0.001	0.004	0.014
	(0.62)	(2.55)	(−0.15)	(−0.30)	(0.21)	(0.23)	(0.46)	(1.12)
Sales Growth	−0.723***	−0.348**	−0.140	0.035	0.096	0.176	−0.107	−0.166
	(−4.07)	(−2.55)	(−1.41)	(0.31)	(0.52)	(0.91)	(−0.52)	(−0.70)

Year	1	2	3	4	5	6	7	8
Technology	−0.232*	−0.349***	−0.218***	−0.271***	−0.317**	−0.297**	−0.438***	−0.603***
	(−1.78)	(−3.21)	(−2.64)	(−2.86)	(−2.54)	(−2.55)	(−3.02)	(−3.77)
Age at IPO	−0.013***	−0.007***	−0.006***	−0.006***	−0.007***	−0.005***	−0.007***	−0.008***
	(−7.58)	(−6.31)	(−6.04)	(−5.46)	(−5.62)	(−4.02)	(−5.15)	(−4.84)
Offer Size	0.273***	0.343***	0.333***	0.287***	0.260***	0.220***	0.277***	0.222***
	(3.37)	(4.57)	(4.76)	(4.40)	(3.32)	(2.88)	(3.61)	(2.80)
Offer Size-to-Assets	−6.056***	−5.436***	−1.359***	−0.848***	−0.185***	−0.121***	−0.039***	−0.033***
	(−4.32)	(−6.52)	(−6.32)	(−6.04)	(−5.53)	(−4.55)	(−5.18)	(−3.80)
Observations	2,194	2,100	1,896	1,681	1,463	1,268	1,139	1,009
R-squared	0.2044	0.2049	0.1916	0.1584	0.1593	0.1478	0.1552	0.1577
Industry and Quarter Dummies	yes	yes	Yes	yes	Yes	yes	yes	yes
Constant	yes	yes	Yes	yes	Yes	yes	yes	yes

Note: **, and *** respectively indicate significance levels at 10%, 5%, and 1% levels. The dependent variable is the cash holdings from year 1 to year 8 after IPO. We run Pooled OLS with errors clustered by firm. The sample consists of 2,833 IPOs with information on all variables used in regressions from 1990 to 2008. T (or z) statistics heteroskedastic-consistent by White (1980) are in brackets.

Table 4c. Cash Holdings—Overlapping Firms.

Year	1	2	3	4	5	6	7	8
Venture Capital	1.196***	0.826***	0.774***	0.763***	0.843***	0.820***	0.733***	0.781***
	(6.47)	(5.62)	(6.40)	(6.40)	(7.09)	(7.36)	(5.84)	(5.83)
Top Underwriter	0.572***	0.244	0.177	0.099	0.252*	0.198	0.168	0.150
	(2.95)	(1.39)	(1.23)	(0.74)	(1.83)	(1.49)	(1.11)	(0.97)
Big−Four Auditor	0.047	0.103	0.130	0.086	0.122	0.155*	0.065	0.029
	(0.31)	(0.91)	(1.39)	(0.95)	(1.28)	(1.74)	(0.65)	(0.26)
Bubble Dummy	1.312***	0.513**	0.405**	0.378**	0.156	0.278	0.158	0.063
	(4.95)	(2.24)	(1.99)	(1.99)	(0.85)	(1.51)	(0.86)	(0.35)
Cash Flow	−0.193	−0.060	−0.010	0.012	−0.049	0.014	−0.024	−0.020
	(−1.12)	(−0.78)	(−0.27)	(0.57)	(−1.20)	(0.59)	(−0.70)	(−0.63)
Net PPE	−4.219***	−2.614***	−2.234***	−1.896***	−2.072***	−1.897***	−2.123***	−2.165***
	(−12.43)	(−10.00)	(−9.62)	(−8.79)	(−9.11)	(−8.79)	(−8.49)	(−8.35)
Book Value of Assets	−0.321***	−0.470***	−0.321***	−0.221***	−0.254***	−0.197***	−0.173***	−0.186***
	(−4.04)	(−7.41)	(−5.90)	(−5.05)	(−5.32)	(−3.79)	(−3.74)	(−3.85)
Tobin's q	0.002	0.005	−0.003	−0.003	0.003	−0.000	0.012	0.012
	(0.23)	(0.82)	(−0.37)	(−0.60)	(0.32)	(−0.01)	(1.39)	(1.42)
Sales Growth	−0.766***	−0.435**	−0.382**	−0.192	−0.087	0.154	−0.067	−0.277
	(−2.94)	(−2.24)	(−2.27)	(−1.10)	(−0.46)	(0.69)	(−0.31)	(−1.20)
Technology	−0.658***	−0.578***	−0.414***	−0.349***	−0.522***	−0.525***	−0.565***	−0.758***
	(−3.46)	(−3.60)	(−3.04)	(−2.68)	(−3.73)	(−3.83)	(−3.97)	(−5.06)

Year	1	2	3	4	5	6	7	8
Age at IPO	−0.017***	−0.009***	−0.008***	−0.007***	−0.007***	−0.007***	−0.008***	−0.008***
	(−6.13)	(−5.13)	(−5.07)	(−5.29)	(−4.89)	(−5.29)	(−5.05)	(−5.39)
Offer Size	0.099	0.414***	0.388***	0.276***	0.247***	0.237***	0.290***	0.220***
	(0.95)	(3.99)	(4.06)	(3.50)	(3.02)	(3.04)	(3.52)	(3.11)
Offer Size−to−Assets	−4.591***	−6.812***	−1.585***	−0.833***	−0.189***	−0.143***	−0.044***	−0.034***
	(−2.88)	(−5.86)	(−5.63)	(−5.34)	(−5.70)	(−5.06)	(−5.50)	(−4.53)
Observations	1,266	1,278	1,269	1,271	1,265	1,263	1,265	1,259
R−squared	0.2571	0.2158	0.2194	0.1865	0.1917	0.1834	0.1785	0.1718
Industry and Quarter Dummies	yes	yes	Yes	yes	Yes	yes	yes	yes
Constant	yes	yes	Yes	yes	Yes	yes	yes	yes

Note: *, **, and *** respectively indicate significance levels at 10%, 5%, and 1% levels. The dependent variable is the cash holdings from year 1 to year 8 after IPO. We run Pooled OLS with errors clustered by firm. The sample consists of 2,833 IPOs with information on all variables used in regressions from 1990 to 2008. T (or z) statistics heteroskedastic-consistent by White (1980) are in brackets.

4.2. Leverage

Our findings on leverage for VC-backed firms and non-VC-backed firms are the following. Table 5 shows that VC-backing is associated with a lower level of leverage over the first 8 years after the IPO. This result is robust even when we eliminate the observations during the dot-com bubble from our sample (Table 5b) or when we use only overlapping firms (Table 5c). We obtain a similar qualitative effect for the presence of a Big-Four auditor, although the magnitude is smaller and it does not seem to have an effect immediately after the IPO, i.e., the coefficient is only statistically significant from the 2rd. year after the IPO on. There is also a negative relationship between leverage and the presence of a top underwriter, but only in the short term—first 1 year after the IPO.

In terms of offer characteristics, larger offer sizes present higher level of leverage in the medium to long run, i.e., within 5 to 8 years after the IPO. In terms of firm characteristics, older firms and larger firms keep a higher level of leverage at the short and medium run, i.e., within 1 to 3 years after the IPO. Firms with higher net PPE present a higher level of leverage over the first 8 years after the IPO. Differently, firms in technology sectors keep a lower level of leverage over time. These results are robust to the exclusion of the dot-com bubble and overlapping sample firms.

Overall results are in line with evidence from the literature, which shows that IPO firms tend to have lower levels of leverage than mature public firms (see Eckbo and Norli (2005)), and that leverage may be even lower for VC-backed IPOs. In particular, Barry and Mihov (2015) highlight that VC-backed firms may be more uncertain than non-VC-backed firms in terms of firm value. Consequently, they are less likely to rely on debt financing. Overtime, as some of this uncertainty is resolved, it is expected that VC-backed firms increase their access to debt financing, weakening the statistical significance of our initial results.

Table 5a. Leverage.

Year	1	2	3	4	5	6	7	8
Venture Capital	−0.075***	−0.063***	−0.102***	−0.086***	−0.087**	−0.097***	−0.123***	−0.068*
	(−5.32)	(−4.89)	(−3.21)	(−4.76)	(−2.49)	(−2.77)	(−2.72)	(−1.71)
Top Underwriter	−0.024*	−0.020	0.028	−0.015	−0.041	−0.064**	−0.034	−0.024
	(−1.66)	(−1.55)	(1.18)	(−0.81)	(−1.24)	(−1.99)	(−1.03)	(−0.66)
Big−Four Auditor	−0.002	−0.014	−0.062***	−0.049***	−0.084***	−0.103***	−0.075**	−0.034
	(−0.16)	(−0.98)	(−2.82)	(−2.88)	(−3.52)	(−3.78)	(−2.37)	(−1.14)
Bubble Dummy	−0.113***	−0.080***	−0.057	−0.071***	−0.095**	−0.195***	−0.146**	−0.082
	(−7.09)	(−3.26)	(−0.94)	(−2.96)	(−2.32)	(−3.63)	(−2.41)	(−1.45)
Cash Flow	−0.009	−0.067***	−0.067***	−0.042***	−0.090***	−0.042**	−0.076***	−0.059***
	(−1.64)	(−6.71)	(−4.17)	(−4.44)	(−2.84)	(−2.46)	(−4.13)	(−2.89)
Net PPE	0.405***	0.296***	0.273***	0.314***	0.384***	0.261***	0.253***	0.246***
	(5.87)	(7.11)	(7.57)	(7.47)	(4.55)	(4.62)	(4.26)	(4.36)
Book Value of Assets	0.049***	0.056***	0.036***	0.010	−0.002	−0.008	−0.008	−0.022
	(3.56)	(5.34)	(2.61)	(0.83)	(−0.09)	(−0.52)	(−0.31)	(−0.92)
Tobin's q	0.004**	0.001	0.009**	0.008***	0.011***	0.016***	0.016***	0.010***
	(2.03)	(0.53)	(1.99)	(3.75)	(3.59)	(4.47)	(3.71)	(3.17)
Sales Growth	−0.014	−0.001	−0.032	−0.059***	−0.025	−0.068	−0.059*	−0.024
	(−0.92)	(−0.06)	(−1.18)	(−2.88)	(−0.76)	(−1.64)	(−1.90)	(−0.58)
Technology	−0.026***	−0.033**	−0.021	−0.056***	−0.057**	−0.069**	−0.072*	−0.083**
	(−2.62)	(−2.27)	(−0.75)	(−3.15)	(−2.15)	(−2.07)	(−1.92)	(−2.57)
Age at IPO	0.002***	0.001***	0.001**	0.000	0.000	0.001	0.002	0.000
	(5.56)	(4.38)	(2.09)	(1.39)	(0.84)	(1.63)	(1.34)	(0.33)
Offer Size	−0.002	−0.014	−0.016	0.018	0.021	0.046*	0.047	0.084**
	(−0.16)	(−1.19)	(−1.23)	(1.24)	(0.93)	(1.88)	(1.22)	(2.22)
Offer Size−to−Assets	0.502	0.085	0.055	−0.041	−0.025**	−0.043***	0.014***	0.014***
	(0.74)	(0.41)	(1.48)	(−1.25)	(−2.12)	(−3.06)	(3.22)	(3.02)
Observations	2,833	2,663	2,361	2,084	1,829	1,586	1,424	1,259
R−squared	0.1721	0.1605	0.0603	0.1279	0.1167	0.1329	0.1765	0.1400
Industry and Quarter Dummies	yes	yes	Yes	yes	Yes	yes	yes	yes
Constant	yes	yes	Yes	yes	Yes	yes	yes	yes

Note: *, **, and *** respectively indicate significance levels at 10%, 5%, and 1% levels. The dependent variable is the leverage from year 1 to year 8 after IPO. We run Pooled OLS with errors clustered by firm. The sample consists of 2,833 IPOs with information on all variables used in regressions from 1990 to 2008. T (or z) statistics heteroskedastic-consistent by White (1980) are in brackets.

Table 5b. Leverage (without bubble sample).

Year	1	2	3	4	5	6	7	8
Venture Capital	−0.063***	−0.061***	−0.124***	−0.064***	−0.063	−0.090**	−0.108**	−0.048
	(−4.12)	(−5.11)	(−3.77)	(−3.52)	(−1.53)	(−2.29)	(−2.14)	(−1.07)
Top Underwriter	−0.039**	−0.028**	0.001	−0.035*	−0.064*	−0.107***	−0.055	−0.060
	(−2.24)	(−1.97)	(0.05)	(−1.83)	(−1.72)	(−2.63)	(−1.53)	(−1.40)
Big−Four Auditor	0.004	−0.019	−0.060***	−0.079***	−0.100***	−0.111***	−0.054	−0.020
	(0.25)	(−1.59)	(−3.53)	(−5.32)	(−4.08)	(−3.55)	(−1.59)	(−0.62)
Cash Flow	−0.006	−0.097***	−0.100***	−0.057***	−0.087***	−0.046***	−0.073***	−0.055***
	(−0.60)	(−8.78)	(−7.44)	(−2.58)	(−2.67)	(−2.60)	(−3.95)	(−2.70)
Net PPE	0.366***	0.251***	0.211***	0.257***	0.375***	0.213***	0.217***	0.253***
	(4.73)	(5.48)	(6.25)	(7.00)	(3.97)	(3.55)	(3.35)	(4.16)
Book Value of Assets	0.068***	0.078***	0.070***	0.033***	0.042**	0.036**	0.029	0.001
	(4.25)	(7.26)	(2.88)	(3.36)	(2.02)	(2.15)	(0.90)	(0.04)
Tobin's q	0.008*	0.002	0.018*	0.009***	0.020***	0.031***	0.026***	0.017***
	(1.91)	(0.56)	(1.77)	(4.21)	(3.21)	(4.30)	(3.58)	(3.20)
Sales Growth	−0.007	0.002	0.006	−0.050**	−0.027	−0.052	−0.093***	−0.019
	(−0.34)	(0.08)	(0.26)	(−2.22)	(−0.86)	(−1.11)	(−2.74)	(−0.42)
Technology	−0.046***	−0.024*	−0.017	−0.089***	−0.090***	−0.099**	−0.085**	−0.106***
	(−3.70)	(−1.84)	(−0.69)	(−5.07)	(−3.06)	(−2.49)	(−1.99)	(−2.80)
Age at IPO	0.002***	0.002***	0.001***	0.001*	0.001	0.002**	0.002	0.001
	(5.10)	(4.82)	(3.71)	(1.86)	(1.55)	(2.06)	(1.56)	(1.15)
Offer Size	−0.013	−0.025**	−0.032*	0.003	−0.018	0.034	0.036	0.077*
	(−0.85)	(−2.41)	(−1.78)	(0.21)	(−0.86)	(1.24)	(0.80)	(1.81)
Offer Size−to−Assets	0.591	0.132	0.071	−0.015	−0.027**	−0.065***	0.012**	0.012**
	(0.93)	(0.75)	(1.62)	(−0.59)	(−2.09)	(−3.47)	(2.17)	(2.07)
Observations	2,194	2,100	1,896	1,681	1,463	1,268	1,139	1,009
R−squared	0.1530	0.2500	0.1308	0.1832	0.1567	0.1904	0.2242	0.1854
Industry and Quarter Dummies	yes	yes	Yes	yes	Yes	yes	yes	yes
Constant	yes	yes	Yes	yes	Yes	yes	yes	yes

Note: *, **, and *** respectively indicate significance levels at 10%, 5%, and 1% levels. The dependent variable is the leverage from year 1 to year 8 after IPO. We run Pooled OLS with errors clustered by firm. The sample consists of 2,833 IPOs with information on all variables used in regressions from 1990 to 2008. T (or z) statistics heteroskedastic−consistent by White (1980) are in brackets.

Table 5c. Leverage—Overlapping Firms.

Year	1	2	3	4	5	6	7	8
Venture Capital	−0.068***	−0.047***	−0.061***	−0.065***	−0.080***	−0.049	−0.104**	−0.068*
	(−3.45)	(−2.80)	(−3.46)	(−3.57)	(−2.92)	(−1.59)	(−2.43)	(−1.71)
Top Underwriter	−0.037	−0.026	−0.013	−0.014	−0.018	−0.067*	−0.024	−0.024
	(−1.25)	(−1.29)	(−0.81)	(−0.66)	(−0.64)	(−1.95)	(−0.76)	(−0.66)
Big−Four Auditor	0.011	−0.020	−0.036**	−0.040**	−0.051**	−0.058**	−0.032	−0.034
	(0.60)	(−1.26)	(−2.58)	(−2.38)	(−2.25)	(−2.07)	(−1.10)	(−1.14)
Bubble Dummy	−0.117***	−0.108***	−0.047**	−0.039	−0.074*	−0.137***	−0.114**	−0.082
	(−4.68)	(−4.99)	(−2.01)	(−1.33)	(−1.79)	(−2.59)	(−2.03)	(−1.45)
Cash Flow	0.009	−0.046**	−0.051**	−0.034	−0.055***	−0.033**	−0.053***	−0.059***
	(1.39)	(−2.29)	(−2.23)	(−1.52)	(−3.47)	(−2.00)	(−3.88)	(−2.89)
Net PPE	0.417***	0.337***	0.289***	0.269***	0.296***	0.276***	0.234***	0.246***
	(3.97)	(4.39)	(7.96)	(6.91)	(5.64)	(4.51)	(4.24)	(4.36)
Book Value of Assets	0.032	0.054***	0.043***	0.017	0.004	0.001	−0.012	−0.022
	(1.40)	(3.26)	(4.56)	(0.97)	(0.16)	(0.10)	(−0.48)	(−0.92)
Tobin's q	0.006	0.003	0.002*	0.005***	0.010***	0.014***	0.012***	0.010***
	(1.37)	(0.83)	(1.69)	(3.48)	(3.46)	(3.71)	(3.43)	(3.17)
Sales Growth	−0.043	0.003	0.018	−0.001	−0.011	−0.003	−0.041	−0.024
	(−1.57)	(0.07)	(0.84)	(−0.05)	(−0.26)	(−0.06)	(−1.49)	(−0.58)
Technology	−0.033*	−0.028*	−0.021	−0.032*	−0.053**	−0.077**	−0.096***	−0.083**
	(−1.92)	(−1.71)	(−1.34)	(−1.68)	(−2.03)	(−2.47)	(−3.03)	(−2.57)
Age at IPO	0.002***	0.001***	0.001**	0.001**	0.001**	0.001**	0.000	0.000
	(3.28)	(3.15)	(2.50)	(2.35)	(2.31)	(1.98)	(0.85)	(0.33)
Offer Size	0.010	−0.010	0.001	0.018	0.027	0.036	0.052	0.084**
	(0.54)	(−0.73)	(0.10)	(1.06)	(1.27)	(1.53)	(1.32)	(2.22)
Offer Size−to−Assets	0.350	0.083	0.060	−0.018	−0.022*	−0.032**	0.016***	0.014***
	(0.66)	(0.45)	(1.54)	(−0.51)	(−1.65)	(−2.23)	(3.30)	(3.02)
Observations	1,266	1,278	1,269	1,271	1,265	1,263	1,265	1,259
R−squared	0.1661	0.2031	0.2000	0.1039	0.1020	0.1352	0.1532	0.1400
Industry and Quarter Dummies	yes	yes	Yes	yes	Yes	yes	yes	yes
Constant	yes	yes	Yes	yes	Yes	yes	yes	yes

Note: *, **, and *** respectively indicate significance levels at 10%, 5%, and 1% levels. The dependent variable is the leverage from year 1 to year 8 after IPO. We run Pooled OLS with errors clustered by firm. The sample consists of 2,833 IPOs with information on all variables used in regressions from 1990 to 2008. T (or z) statistics heteroskedastic-consistent by White (1980) are in brackets.

4.3. Dividend to earnings

There is a belief that VC money leads to greater innovation and hence greater pressures on publicly-traded firms with less knowledge and experience. Thus, we would expect that less experienced firms with lower payout yield to be hurt proportionately more by VC investment than more experienced and profitable firms. Table 6 presents the results on dividend to earnings ratio.

We do not have evidence that the presence of a VC or top underwriter or Big-Four auditor presents a statistically significant relationship with the level of dividend to earnings ratio. The results are qualitatively similar for offer and firm characteristics. The reason for this lack of evidence may be that firms usually initiate dividend payments when they are in a more mature stage of their life cycle (see DeAngelo, DeAngelo, and Stulz (2006). As a result, a significant share of firms in the sample do not begin paying dividends until latter periods of the sample, if at all.[3] Furthermore, the share of firms paying dividends among VC-backed firms may be even lower. According to Amini et al. (2020), VC-backing further delays dividend initiation.

Table 6. Dividend to earnings.

Year	1	2	3	4	5	6	7	8
Venture Capital	−0.006	0.039*	0.144	−0.102	0.005	−0.026	−0.016	0.108
	(−0.40)	(1.70)	(1.05)	(−1.04)	(0.30)	(−1.28)	(−0.48)	(0.89)
Top Underwriter	−0.028**	−0.023*	−0.041	0.123	−0.019	0.005	0.074**	−0.044
	(−2.32)	(−1.73)	(−0.96)	(1.05)	(−0.98)	(0.31)	(2.05)	(−0.62)
Big-Four Auditor	0.019*	0.007	0.090	−0.055	−0.046	0.028	0.029	0.111
	(1.66)	(0.40)	(1.13)	(−0.68)	(−1.35)	(1.14)	(1.37)	(1.36)
Bubble Dummy	−0.021	−0.026	−0.227	−0.039	−0.015	0.021	0.050	−0.180
	(−1.02)	(−1.05)	(−1.05)	(−0.71)	(−0.50)	(0.45)	(1.27)	(−1.07)
Cash Flow	0.010	−0.002	0.015	−0.021	0.010**	−0.016	0.014	0.029
	(1.24)	(−0.39)	(0.82)	(−0.65)	(2.12)	(−0.57)	(0.80)	(0.68)
Net PPE	0.019	−0.052	0.058	0.018	0.024	0.124	−0.092	0.034
	(0.55)	(−1.28)	(0.47)	(0.67)	(0.66)	(1.10)	(−1.25)	(0.42)
Book Value of Assets	−0.002	0.022	0.005	0.034	0.009	−0.001	−0.034	0.046
	(−0.45)	(1.29)	(0.55)	(1.24)	(0.99)	(−0.09)	(−1.38)	(0.96)
Tobin's q	0.000	−0.000	0.006	−0.001	−0.010	0.002	−0.005***	0.005
	(0.78)	(−0.94)	(0.85)	(−0.88)	(−1.29)	(1.07)	(−2.64)	(0.86)
Sales Growth	0.009	−0.018	0.105	−0.157	−0.032	−0.026	−0.042	−0.016
	(0.80)	(−1.08)	(0.93)	(−1.04)	(−0.69)	(−1.15)	(−0.93)	(−0.66)
Technology	0.008	−0.013	−0.150	−0.042	0.107	0.041	−0.026	−0.103
	(0.55)	(−0.95)	(−1.14)	(−0.70)	(1.24)	(1.12)	(−0.58)	(−1.03)
Age at IPO	0.000	0.000	0.002	−0.002	−0.000	−0.000	0.001	0.001
	(1.14)	(0.64)	(1.18)	(−0.99)	(−0.23)	(−0.12)	(1.28)	(1.19)
Offer Size	0.013*	−0.004	−0.030	−0.038	−0.011	0.022**	−0.004	−0.036
	(1.75)	(−0.56)	(−0.84)	(−1.08)	(−0.66)	(2.21)	(−0.43)	(−0.83)
Offer Size−to−Assets	−0.144	0.033	0.092	0.040	0.033	−0.011	0.000	0.002
	(−1.40)	(0.53)	(0.98)	(1.18)	(1.24)	(−1.51)	(0.31)	(0.75)
Observations	2,443	2,352	2,079	1,828	1,632	1,426	1,292	1,152
R-squared	0.0062	0.0083	0.0064	0.0032	0.0242	0.0120	0.0170	0.0133

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[3]Only 20 percent of VC-backed firms pay dividends, compared to 35 percent of non-VC-backed firms. Similarly, 53 percent of VC-backed firms have positive earnings in the sample, compared to 58 percent of non-VC-backed firms.

Year	1	2	3	4	5	6	7	8
Industry and Quarter Dummies	yes	Yes	Yes	yes	Yes	yes	yes	yes
Constant	yes	Yes	Yes	yes	Yes	yes	yes	yes

Note: *, **, and *** respectively indicate significance levels at 10%, 5%, and 1% levels. The dependent variable is the dividend to earnings from year 1 to year 8 after IPO. We run Pooled OLS with errors clustered by firm. The sample consists of 2,833 IPOs with information on all variables used in regressions from 1990 to 2008. T (or z) statistics heteroskedastic−consistent by White (1980) are in brackets.

Table 6b. Dividend to Earnings (without bubble sample).

Year	1	2	3	4	5	6	7	8
Venture Capital	0.000	0.036	0.009	−0.112	0.002	−0.016	−0.015	−0.016
	(0.03)	(1.33)	(0.44)	(−0.95)	(0.17)	(−0.83)	(−0.36)	(−0.71)
Top Underwriter	−0.021	−0.014	0.010	0.151	−0.016	0.000	0.093**	0.027
	(−1.64)	(−1.17)	(0.50)	(1.00)	(−0.85)	(0.02)	(2.00)	(1.16)
Big−Four Auditor	0.021*	0.020	0.021*	−0.106	−0.013	0.002	0.030	0.037*
	(1.69)	(0.89)	(1.72)	(−1.05)	(−1.12)	(0.14)	(1.10)	(1.80)
Cash Flow	0.011	−0.011	0.011	−0.054	0.005***	0.012*	0.015	−0.012
	(0.65)	(−0.93)	(1.16)	(−0.64)	(2.61)	(1.91)	(0.83)	(−1.21)
Net PPE	0.041	−0.063	−0.049*	0.015	−0.024	0.021	−0.111	−0.035
	(1.03)	(−1.36)	(−1.94)	(0.46)	(−1.11)	(0.52)	(−1.28)	(−0.66)
Book Value of Assets	−0.003	0.030	0.002	0.042	−0.005	0.005	−0.049	−0.003
	(−0.61)	(1.23)	(0.23)	(1.27)	(−0.70)	(0.54)	(−1.48)	(−0.46)
Tobin's q	0.000	0.000	0.000	−0.001	−0.004	0.002	−0.008***	−0.001
	(0.74)	(0.57)	(0.32)	(−0.45)	(−1.30)	(0.76)	(−2.65)	(−1.13)
Sales Growth	0.013	−0.016	0.005	−0.192	−0.006	−0.015	−0.045	−0.002
	(0.88)	(−0.73)	(0.26)	(−1.06)	(−0.36)	(−1.28)	(−0.83)	(−0.12)
Technology	0.008	−0.014	−0.038	−0.075	0.029	0.003	−0.037	−0.004
	(0.50)	(−0.95)	(−1.52)	(−1.18)	(1.49)	(0.12)	(−0.62)	(−0.19)
Age at IPO	0.000	0.000	0.001	−0.002	0.000	−0.000	0.001	0.000
	(1.50)	(0.55)	(1.12)	(−1.00)	(0.64)	(−1.26)	(1.16)	(0.89)
Offer Size	0.008	−0.010	−0.001	−0.054	0.009	0.010*	−0.001	0.009
	(0.91)	(−0.90)	(−0.06)	(−1.10)	(1.09)	(1.95)	(−0.08)	(1.45)
Offer Size−to−Assets	−0.082	0.077	0.001	0.068	0.007	−0.007	0.001	−0.000
	(−0.68)	(0.74)	(0.06)	(1.17)	(1.17)	(−0.96)	(0.75)	(−0.40)
Observations	1,894	1,850	1,654	1,460	1,298	1,132	1,028	923
R−squared	0.0053	0.0107	0.0092	0.0043	0.0246	0.0132	0.0236	0.0112
Industry and Quarter Dummies	yes	yes	Yes	Yes	Yes	yes	yes	yes
Constant	yes	yes	Yes	Yes	Yes	yes	yes	yes

Note: *, **, and *** respectively indicate significance levels at 10%, 5%, and 1% levels. The dependent variable is the dividend to earnings from year 1 to year 8 after IPO. We run Pooled OLS with errors clustered by firm. The sample consists of 2,833 IPOs with information on all variables used in regressions from 1990 to 2008. T (or z) statistics heteroskedastic-consistent by White (1980) are in brackets.

Table 6c. Dividend to earnings—overlapping firms.

Year	1	2	3	4	5	6	7	8
Venture Capital	0.022	0.023	0.005	−0.023	0.004	−0.027	−0.020	0.108
	(1.42)	(0.88)	(0.17)	(−0.88)	(0.15)	(−1.24)	(−0.53)	(0.89)
Top Underwriter	−0.002	−0.006	0.014	−0.007	−0.014	−0.008	0.084**	−0.044
	(−0.25)	(−1.15)	(0.49)	(−0.35)	(−0.56)	(−0.51)	(2.14)	(−0.62)
Big−Four Auditor	0.007	0.006	0.026	0.031	−0.053*	−0.004	0.035	0.111
	(0.97)	(0.68)	(1.42)	(0.91)	(−1.88)	(−0.25)	(1.48)	(1.36)
Bubble Dummy	−0.017	−0.022	−0.023	0.001	−0.033	−0.036	0.055	−0.180
	(−1.08)	(−1.16)	(−0.96)	(0.02)	(−1.12)	(−1.19)	(1.28)	(−1.07)
Cash Flow	0.004	−0.008	0.006	0.027*	0.009	0.011	0.014	0.029
	(0.50)	(−0.77)	(0.88)	(1.76)	(1.53)	(1.36)	(0.67)	(0.68)
Net PPE	0.051	−0.048	−0.063*	−0.004	0.018	0.006	−0.081	0.034
	(0.94)	(−1.48)	(−1.86)	(−0.16)	(0.58)	(0.14)	(−1.04)	(0.42)
Book Value of Assets	−0.004	0.010	0.022**	0.012	0.001	0.008	−0.040	0.046
	(−0.78)	(1.12)	(2.39)	(1.30)	(0.07)	(0.70)	(−1.42)	(0.96)
Tobin's q	−0.000	−0.000	0.001	−0.001	−0.016	0.001	−0.006***	0.005
	(−0.56)	(−0.83)	(1.17)	(−1.31)	(−1.23)	(0.73)	(−2.69)	(0.86)
Sales Growth	0.001	0.012	−0.018	0.001	−0.056	−0.001	−0.053	−0.016
	(0.32)	(1.10)	(−0.85)	(0.06)	(−0.93)	(−0.08)	(−1.01)	(−0.66)
Technology	−0.010	−0.008	−0.027	0.017	0.137	0.002	−0.030	−0.103
	(−1.12)	(−0.87)	(−1.19)	(0.46)	(1.19)	(0.07)	(−0.60)	(−1.03)
Age at IPO	0.000	0.001	0.001	−0.000	−0.000	−0.000	0.001	0.001
	(1.10)	(1.07)	(0.97)	(−0.29)	(−0.34)	(−1.23)	(1.25)	(1.19)
Offer Size	0.005	0.001	−0.015	−0.010	−0.006	0.014**	−0.003	−0.036
	(0.99)	(0.44)	(−1.43)	(−1.09)	(−0.35)	(1.97)	(−0.32)	(−0.83)
Offer Size−to−Assets	−0.051	−0.020	0.039*	0.026	0.045	−0.006	0.000	0.002
	(−1.09)	(−0.63)	(1.82)	(1.34)	(1.16)	(−0.92)	(0.22)	(0.75)
Observations	1,088	1,123	1,121	1,116	1,128	1,139	1,150	1,152
R−squared	0.0133	0.0147	0.0159	0.0122	0.0364	0.0112	0.0193	0.0133
Industry and Quarter Dummies	yes	yes	Yes	yes	Yes	yes	yes	yes
Constant	yes	yes	Yes	yes	Yes	yes	yes	yes

Note: *, **, and *** respectively indicate significance levels at 10%, 5%, and 1% levels. The dependent variable is the dividend to earnings from year 1 to year 8 after IPO. We run Pooled OLS with errors clustered by firm. The sample consists of 2,833 IPOs with information on all variables used in regressions from 1990 to 2008. T (or z) statistics heteroskedastic-consistent by White (1980) are in brackets.

4.4. Interest coverage

Similar to the results for leverage presented in Table 5, we find that there is a negative and statistically significant relationship between VC-backed firms and interest coverage over time (Table 7). The effect of the presence of a top underwriter is also negative. The effect of the presence of a top underwriter is also negative. However, neither effect is persistent over time. In fact, results for VC-backing revert after the first

3 years, even becoming positive and statistically significant for some of the later years. The reasons for this reversal are not particularly clear. One of the main challenges is that we expect changes in both the numerator and the denominator over time. In terms of the denominator, as we discussed in section 3.2, debt financing may change over time, as uncertainty about the firm declines. Similarly, we may expect changes in the numerator. As discussed by Chen and Liang (2016), operating performance for VC-backed firms may be worse than for non-VC-backed firms due to larger cash holdings. However, according to their results, this gap in operating performance seems to narrow over time. As a result, the changes in the impact of VC-backing on interest coverage over time may depend on the relative changes that occur in the numerator and denominator. Further research is needed to properly decompose this effect.

In terms of offer characteristics, larger offer sizes present lower levels of interest coverage over the first 8 years after the IPO, while offers that sell a larger fraction of the firm (proxied by the ratio of offer size to book value of total assets) are associated with lower levels of interest coverage over time.

Finally, in terms of firm characteristics, older firms, firms in technology sectors, larger firms, firms with higher net PPE, firms with higher cash flow and firms that present a higher sales growth keep a higher level of interest coverage. These results are robust to the exclusion of the dot-com bubble and when we use only overlapping firms.

Table 7a. Interest coverage.

Year	1	2	3	4	5	6	7	8
Venture Capital	−0.216***	−0.120***	−0.100***	−0.082***	−0.092***	−0.096***	−0.069**	−0.097***
	(−8.99)	(−5.25)	(−5.56)	(−4.59)	(−5.00)	(−4.27)	(−2.17)	(−3.83)
Top Underwriter	−0.046*	−0.050**	−0.029	−0.030	−0.026	−0.075*	−0.012	−0.017
	(−1.71)	(−2.00)	(−1.33)	(−1.49)	(−1.05)	(−1.85)	(−0.23)	(−0.58)
Big−Four Auditor	0.028	−0.011	−0.013	−0.004	0.020	−0.006	−0.012	0.025
	(1.30)	(−0.56)	(−0.78)	(−0.21)	(1.10)	(−0.23)	(−0.37)	(1.02)
Bubble Dummy	−0.351***	−0.145***	−0.032	0.058**	0.060**	0.086**	0.117*	0.035
	(−11.02)	(−5.12)	(−1.10)	(1.99)	(2.07)	(2.44)	(1.87)	(0.80)
Cash Flow	0.059**	0.146***	0.067***	0.021**	0.046***	0.077***	0.061***	0.074***
	(2.41)	(5.93)	(4.44)	(2.02)	(4.25)	(4.34)	(4.08)	(3.36)
Net PPE	0.247***	0.118***	0.079**	0.080**	0.080**	0.104**	0.174**	0.116**
	(5.69)	(2.79)	(2.26)	(2.42)	(2.48)	(2.28)	(2.51)	(2.38)
Book Value of Assets	0.098***	0.154***	0.114***	0.118***	0.098***	0.103***	0.071***	0.086***
	(6.43)	(10.32)	(9.19)	(7.44)	(6.26)	(4.46)	(3.43)	(4.09)
Tobin's q	0.002	−0.002	−0.003**	−0.003***	−0.002	−0.003**	−0.008*	−0.002
	(1.19)	(−1.26)	(−2.41)	(−2.58)	(−1.29)	(−2.22)	(−1.69)	(−1.01)
Sales Growth	0.117***	0.083**	0.140***	0.123***	0.099***	0.128***	0.157***	0.169***
	(3.74)	(2.52)	(5.12)	(5.34)	(3.39)	(3.04)	(2.80)	(3.09)
Technology	0.127***	0.091***	0.075***	0.096***	0.078***	0.063*	0.078**	0.082***
	(5.17)	(3.85)	(3.47)	(4.20)	(3.15)	(1.84)	(1.97)	(2.91)
Age at IPO	0.002***	0.001**	0.001***	0.001**	0.001*	0.000	0.000	0.001
	(4.14)	(2.47)	(2.75)	(2.46)	(1.68)	(0.50)	(0.06)	(0.79)
Offer Size	−0.047**	−0.110***	−0.075***	−0.070***	−0.046***	−0.024	−0.032	−0.017
	(−2.40)	(−6.29)	(−5.09)	(−4.89)	(−2.84)	(−1.28)	(−1.27)	(−0.60)

Year	1	2	3	4	5	6	7	8
Offer	0.121	1.287***	0.267***	0.191***	0.033***	0.033***	0.010***	0.006***
Size−to−Assets	(0.42)	(6.18)	(5.82)	(6.14)	(4.61)	(4.42)	(2.70)	(2.82)
Observations	2,444	2,353	2,080	1,828	1,633	1,427	1,292	1,152
R−squared	0.2183	0.2511	0.2445	0.2381	0.1949	0.1598	0.1499	0.2081
Industry and	yes	Yes	Yes	yes	Yes	yes	yes	yes
Quarter Dummies								
Constant	yes	Yes	Yes	yes	Yes	yes	yes	yes

Note: *, **, and *** respectively indicate significance levels at 10%, 5%, and 1% levels. The dependent variable is the interest coverage from year 1 to year 8 after IPO. We run Pooled OLS with errors clustered by firm. The sample consists of 2,833 IPOs with information on all variables used in regressions from 1990 to 2008. T (or z) statistics heteroskedastic-consistent by White (1980) are in brackets.

Table 7b. Interest Coverage. (without bubble sample).

Year	1	2	3	4	5	6	7	8
Venture Capital	−0.168***	−0.083***	−0.085***	−0.084***	−0.102***	−0.109***	−0.071*	−0.111***
	(−6.37)	(−3.17)	(−4.24)	(−4.13)	(−4.59)	(−4.24)	(−1.89)	(−3.59)
Top Underwriter	−0.059**	−0.043	−0.015	−0.008	−0.018	−0.065	0.001	−0.010
	(−2.05)	(−1.61)	(−0.69)	(−0.35)	(−0.65)	(−1.36)	(0.01)	(−0.29)
Big−Four Auditor	0.036	−0.024	−0.012	−0.008	0.028	−0.004	−0.006	0.041
	(1.60)	(−1.04)	(−0.64)	(−0.41)	(1.34)	(−0.14)	(−0.18)	(1.57)
Cash Flow	0.086	0.163***	0.089***	0.046***	0.042***	0.085***	0.056***	0.065***
	(1.56)	(4.68)	(5.78)	(2.90)	(4.13)	(4.44)	(3.98)	(3.27)
Net PPE	0.205***	0.092**	0.084**	0.083***	0.091***	0.123***	0.180**	0.092*
	(4.65)	(2.08)	(2.37)	(2.62)	(2.82)	(2.66)	(2.36)	(1.90)
Book Value of	0.087***	0.141***	0.099***	0.106***	0.090***	0.095***	0.038	0.070***
Assets	(5.49)	(8.20)	(7.25)	(5.48)	(5.11)	(3.46)	(1.44)	(3.02)
Tobin's q	0.002	−0.005*	−0.010***	−0.007***	−0.003	−0.006**	−0.015*	−0.004
	(0.87)	(−1.90)	(−3.57)	(−3.24)	(−1.42)	(−2.27)	(−1.74)	(−1.33)
Sales Growth	0.202***	0.108***	0.122***	0.109***	0.115***	0.128***	0.156**	0.167***
	(5.22)	(2.61)	(4.36)	(4.04)	(3.29)	(2.61)	(2.33)	(2.71)
Technology	0.121***	0.105***	0.098***	0.105***	0.082**	0.062	0.082	0.066*
	(4.32)	(3.65)	(4.05)	(3.76)	(2.56)	(1.38)	(1.54)	(1.83)
Age at IPO	0.001***	0.001	0.001*	0.001	0.000	−0.000	−0.001	−0.000
	(3.22)	(1.51)	(1.90)	(1.59)	(1.16)	(−0.63)	(−1.24)	(−0.66)
Offer Size	−0.039*	−0.093***	−0.067***	−0.065***	−0.039**	−0.018	−0.008	−0.002
	(−1.86)	(−5.38)	(−4.55)	(−4.37)	(−2.38)	(−0.98)	(−0.37)	(−0.06)
Offer	−0.073	1.169***	0.264***	0.186***	0.033***	0.035***	0.010**	0.005**
Size−to−Assets	(−0.21)	(5.78)	(5.68)	(5.69)	(4.18)	(4.37)	(2.23)	(2.31)
Observations	1,895	1,851	1,655	1,460	1,299	1,133	1,028	923
R−squared	0.1505	0.1964	0.2433	0.2506	0.1852	0.1508	0.1492	0.1969
Industry and Quarter	yes	yes	Yes	Yes	Yes	yes	yes	yes
Dummies								

Year	1	2	3	4	5	6	7	8
Constant	yes	yes	Yes	Yes	Yes	yes	yes	yes

Note: *, **, and *** respectively indicate significance levels at 10%, 5%, and 1% levels. The dependent variable is the interest coverage from year 1 to year 8 after IPO. We run Pooled OLS with errors clustered by firm. The sample consists of 2,833 IPOs with information on all variables used in regressions from 1990 to 2008. T (or z) statistics heteroskedastic-consistent by White (1980) are in brackets.

Table 7c. Interest coverage—overlapping firms.

Year	1	2	3	4	5	6	7	8
Venture Capital	−0.250***	−0.130***	−0.138***	−0.081***	−0.082***	−0.108***	−0.054	−0.097***
	(−6.88)	(−4.00)	(−5.26)	(−3.37)	(−3.71)	(−4.21)	(−1.58)	(−3.83)
Top Underwriter	−0.089**	−0.042	−0.033	−0.033	−0.029	−0.098*	0.006	−0.017
	(−2.09)	(−1.16)	(−1.06)	(−1.14)	(−0.90)	(−1.96)	(0.10)	(−0.58)
Big−Four Auditor	0.007	−0.024	−0.026	−0.007	0.010	0.021	0.006	0.025
	(0.22)	(−0.86)	(−1.15)	(−0.30)	(0.40)	(0.61)	(0.17)	(1.02)
Bubble Dummy	−0.307***	−0.120***	−0.025	0.062	0.057	0.089**	0.105	0.035
	(−6.15)	(−2.73)	(−0.63)	(1.55)	(1.53)	(2.18)	(1.55)	(0.80)
Cash Flow	0.067	0.197***	0.072**	0.031**	0.073***	0.089***	0.067***	0.074***
	(1.27)	(4.82)	(2.07)	(2.03)	(2.59)	(3.74)	(3.55)	(3.36)
Net PPE	0.269***	0.143**	0.117**	0.092*	0.068*	0.084	0.148**	0.116**
	(4.12)	(2.30)	(2.16)	(1.92)	(1.79)	(1.60)	(2.01)	(2.38)
Book Value of Assets	0.105***	0.164***	0.132***	0.133***	0.104***	0.103***	0.065***	0.086***
	(4.14)	(6.81)	(6.75)	(5.64)	(4.81)	(3.69)	(2.87)	(4.09)
Tobin's q	0.002	−0.003	−0.006***	−0.005***	−0.003	−0.003*	−0.010*	−0.002
	(0.87)	(−1.35)	(−2.82)	(−2.64)	(−1.37)	(−1.89)	(−1.77)	(−1.01)
Sales Growth	0.177***	0.135***	0.211***	0.174***	0.107***	0.135**	0.156***	0.169***
	(3.46)	(2.74)	(5.83)	(5.55)	(2.74)	(2.58)	(2.63)	(3.09)
Technology	0.178***	0.158***	0.137***	0.126***	0.071**	0.049	0.068	0.082***
	(4.56)	(4.29)	(4.17)	(3.80)	(2.24)	(1.20)	(1.63)	(2.91)
Age at IPO	0.002***	0.001**	0.001	0.001*	0.001	0.000	−0.000	0.001
	(3.04)	(2.00)	(1.60)	(1.70)	(1.25)	(0.24)	(−0.04)	(0.79)
Offer Size	−0.033	−0.101***	−0.085***	−0.076***	−0.052**	−0.022	−0.028	−0.017
	(−1.08)	(−4.01)	(−3.98)	(−3.88)	(−2.54)	(−1.06)	(−1.03)	(−0.60)
Offer Size−to−Assets	0.002	1.405***	0.327***	0.223***	0.038***	0.032***	0.011**	0.006***
	(0.00)	(4.85)	(4.67)	(5.09)	(4.16)	(3.74)	(2.47)	(2.82)
Observations	1,088	1,123	1,121	1,116	1,128	1,139	1,150	1,152
R−squared	0.2318	0.2759	0.2980	0.2688	0.2043	0.1502	0.1484	0.2081
Industry and Quarter Dummies	yes	yes	Yes	yes	Yes	yes	yes	yes
Constant	yes	yes	Yes	yes	Yes	yes	yes	yes

Note: *, **, and *** respectively indicate significance levels at 10%, 5%, and 1% levels. The dependent variable is the interest coverage from year 1 to year 8 after IPO. We run Pooled OLS with errors clustered by firm. The sample consists of 2,833 IPOs with information on all variables used in regressions from 1990 to 2008. T (or z) statistics heteroskedastic-consistent by White (1980) are in brackets.

4.5. Robustness

In this paper, our interest is to analyze the relationship between whether or not a firm is VC-backed and that firm's financial policies over time. In an ideal experiment, we could observe an individual firm's financial policies both as a VC-backed IPO and not. This would allow us to make causal inferences about the effect of venture backing on the firms' financial policy. In other words, if the provision of venture financing were random, we could simply compute differences between the operational practices of VC-backed and non-VC-backed IPOs. However, a firm's decision to raise venture capital funds (and the decision of a venture capitalist to provide financing to a particular firm) is likely to be endogenous. Firm characteristics may determine which firms are VC-backed in the first place. In that case, the problem is that venture backing is not randomly distributed, introducing a selectivity bias that can easily reverse inferences.

To account for this bias, we use a methodology similar to that of Lee and Wahal (2004) that endogenizes the receipt of venture financing and does not impose linearity or function form restrictions. Each VC-backed IPO is matched with a non-VC-backed IPO that is in the same two-digit SIC code and similar in ROA and firm size. Addressing the endogeneity issue directly produces results that are similar to the initial results presented in this paper.

Table 8 presents the results for the difference in terms of firms' financial policy between VC backed and non-VC backed IPOs. Each VC-backed IPO is matched with one or more non-VC-backed IPOs using the highest propensity score. We again find evidence that VC-backed firms maintain higher levels of cash holdings and lower levels of leverage than non-VC-backed ones. The results are statistically significant at the 1% level.

Table 8. Univariate analysis for each dependent variable by Propensity Score Matching.

	1	2	3	4	5	6	7	8
Cash	1.935	1.279	1.088	1.017	1.121	1.103	1.100	1.090
Holdings	(18.37)***	(16.00)***	(14.55)***	(13.00)***	(13.10)***	(11.77)***	(10.38)***	(9.20)***
Leverage	−0.172	−0.134	−0.127	−0.116	−0.086	−0.083	−0.117	−0.069
	(11.57)***	(10.53)***	(5.14)***	(7.28)***	(2.80)***	(2.75)***	(3.76)***	(2.29)**
Dividend to	−0.015	0.019	0.068	−0.105	−0.043	−0.009	−0.002	0.043
Earnings	(1.25)	(1.42)	(0.81)	(1.02)	(1.06)	(0.36)	(0.07)	(0.68)
Interest	−0.326	−0.264	−0.191	−0.168	−0.132	−0.165	−0.130	−0.144
Coverage	(15.79)***	(12.81)***	(10.76)***	(9.21)***	(7.17)***	(5.86)***	(4.13)***	(5.48)***

Note: For each VC backed IPO, a matched with one or many non-VC backed IPOs is computed using the two-digit SIC code dummies, firm size, and ROA as instrumental variables in each matching approach.

5. Conclusions

In this paper, we analyze the role of venture capitalists in firms' financial policies and the persistence (firm-fixed effects) of those policies over time. A key finding is that a common firm origin leads to similarities in firm policies even long after the IPO. VC-backed firms choose a set of policies that are different than those non-VC-backed.

Our contribution is to show that, in terms of financial policy, VC-backed and non-VC-backed firms behave differently. We note that both groups are different in terms of cash holdings, leverage,

and interest coverage. Our results are robust across statistical methods and different methodologies used to estimate the operational practices.

We find that VC-backed firms keep a higher level of cash holdings than non-VC-backed firms. This effect lasts for at least 8 years after the IPO. We show that VC-backed firms are associated with a lower level of leverage and interest coverage over the first 8 years after the IPO. Finally, we do not have evidence statistically significant between VC and dividend to earnings ratio.

Our limitation in this article is that we do not analyze the performance of companies in terms of market returns. Future research may also consider performance analysis in terms of market returns to understand how the market evaluates companies that are backed by VC funds.

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Conflict of interest

The authors declare no conflicts of interest in this paper.

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