

It is not what you know, it is who you know

A study concerning the timing of reputable Venture Capital firms' investments

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Abstract

Reputation is widely considered to play an important role in the Venture Capital (VC) industry. This paper examines whether there are any significant positive associations between long-term post-IPO performance and early stage investments from a more reputable VC firm. Our empirical sample consists of 422 VC-backed listed companies in the U.S. between 1997 and 2014. Using market share as a measure for reputation we look at three well-known performance measures: i) industry adjusted rate of return on assets, ii) market-to-book ratio and iii) long-run abnormal stock return. Furthermore, our sample companies are divided into groups depending on the stage in which they have received funding. To assess where our findings might be derived from we use the portfolio companies' investment in capital expenditure as a proxy for growth. We put forth evidence that companies backed by more reputable VC firms in an early stage exhibit better post-IPO performance for all of our three performance measures and show that these companies also demonstrate significant positive association with our growth ratio.

Keywords: Reputation, Venture Capital, Investment timing, Post-IPO performance

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1. Introduction

The Venture Capital (VC) industry is highly fragmented with 635 active firms in the U.S. market (Franklin and Taylor, 2015). The fact that the top quintile of the firms manages about 80 percent of the total capital reveals an intensely competitive environment where *reputation* is believed to be of significant value for firms to attract both capital and investment opportunities. The value of VC certification along with different potential in value-adding services such as recruiting executive managers (Hellmann and Puri, 2002) have led to deductions in line with: “It is far more important *whose* money you get [as an entrepreneur] than how much you get or how much you pay for it” (Bygrave and Timmons, 1992) and “From whom you raise capital is often more important than the terms” (Sahlman, 1997). Clearly, VC firms represent more than just financial capital to entrepreneurs.

Even though there has been an extensive use of different measures seeking to capture VC reputation in the academic literature, there is limited research on formulating a consistent measure. This is surprising considering both the alleged importance reputation has in this industry and the prevalence of studies in other industries (particularly auditing and investment banking literature), highlighting the performance implications of reputation of financial intermediaries on public companies (see, e.g., Walter et al., 2007 and Beatty, 1989). However, in recent years a handful of studies have examined the impact of VC reputation on the probability of future success in IPOs and post-IPO performance of VC-backed companies (Krishnan *et al.*, 2011 and Nahata, 2008). The reputation measures used are based on the lead VC (defined as the VC with the most capital invested at the time of the IPO) (Lin and Smith, 1998). An obvious drawback with evaluating solely the lead VC at the date of the IPO is the theoretical possibility for a more reputable VC to only have been involved with the portfolio company for a short period of time (i.e. investing in the investment round closest to the IPO).

To our knowledge, there is no research examining whether there is a difference in the post-IPO performance of VC-backed companies when studying the timing of the VC’s investment. We find it reasonable to assume that a more reputable VC firm that finances a company at an early stage, Series A round (a company’s first round of institutional financing aiming to initiate fundamental business development efforts) and Series B round (predominantly a larger investment round with focus on operational improvements and scaling), would impact the development of a company to a greater magnitude than a VC investing at a later stage. With this in mind, the aim of this study is to answer the following question:

(i) Is there significant positive association between long-term post-IPO performance and early stage investments from more reputable VC firms?

To answer this question 422 VC-backed IPOs in the U.S. market between 1997 and 2014 along with their respective financing rounds are examined. Following Krishnan *et al.* (2011) our VC reputation measure is based on a VC's past market share of completed VC-backed IPOs, referred to as IPO Market Share. We examine the association of early stage investments by more reputable VCs with the long-run performance measures of portfolio companies after going public. We use three well-known performance measures: i) industry adjusted rate of return on assets (ROA), ii) industry market-to-book equity ratio and iii) long-run abnormal stock returns (see, e.g., Moeller, Schlingemann and Stulz (2004), Gompers, Ishii and Metrick (2003), and Field and Karpoff (2002)). The measures are based on cumulative values from the date of the IPO to the 8th quarter. To distinguish the impact of timing of VC investment, we split our observed companies into: i) companies backed by a more reputable VC in a Series A round exclusively, ii) companies backed by a more reputable in a Series B round exclusively, and iii) companies backed by a more reputable VC in both Series A and B rounds.

In line with prior findings on this subject, our analysis shows that VC reputation measures based on past IPO Market Share are associated with positive post-IPO performance of our observed firms. We also find that companies backed by a more reputable VC in a Series B round exhibit the best median post-IPO performance, followed by companies having a more reputable VC in both the Series A and B round. More reputable VCs continue to have a significant positive association with ROA and market-to-book ratio at the 1% level¹. Long-run stock returns show signs of similar positive association, though insignificant. This evidence is interpreted as an indication that enduring post-IPO support and development by more reputable VCs positively affect the long-run performance. This leads us to ask what mechanism VCs use to add value and we consequently aim to answer the second question:

(ii) What could be a plausible explanation for the positive association of early stage more reputable investments and long-run performance?

Previous research aiming to assess this linkage has found high VC reputation to be related to greater representation of independent outsiders on the board, which ultimately leads to a

¹ Except for Series A and B, which exhibit a 5% significance level for ROA.

decreasing power of the CEO (Baker and Gompers, 2003). In addition, by examining whether VC reputation is associated with stronger corporate governance, Krishnan *et al.* (2011) immerse the earlier research and conclude that more reputable VCs exhibit stronger long-run post-IPO support for portfolio firms by continued involvement through shareholdings and board directorship.

Using a proxy measure, as put forward by Gompers (1995), we aim to capture the expected growth rate in firm asset value through its investment in capital expenditure. With the scope of this measure we analyze whether there is any significant explanatory value of early stage investments from more reputable VCs with long-term performance. We find that our early stage investment variables have significant association with our growth ratio. Our findings can therefore be seen as evidence that firms backed by more reputable VC investors in an early phase tend to have higher post-IPO investments. This is consistent with our interpretation of the association between more reputable early stage VC investors and long-run performance measures.

Considering the research that has been conducted on corporate governance's association with positive post-IPO performance heretofore, we present evidence that are well in line with these findings. More reputable VCs tend to recruit board members with industry experience and knowledge on how to maximize company value (Hochberg, *et al.*, 2007). Traditionally, value is added through aggressive expansion strategies and increases in capital expenditure (Nahata, 2008), thus resulting in higher growth measures.

Henceforth, the paper is organized as follows. The next section presents previous literature and definitions. Chapter 3 introduces the sample design, data collection and data treatment. Chapter 4 describes chosen methodology, followed by a discussion on our results in chapter 5. Subsequently, we highlight our conclusions in chapter 6. Limitations and previous literature are then discussed in chapter 7 and 8 respectively.

2. Background and Definitions

In this section, we start off by briefly elaborating on the aspects of reputation and its importance. We proceed by summarizing what previous literature has concluded on different measures of reputation, both in Venture Capital and other industries. Thereafter we present a general definition of the investment rounds.

2.1 Background

There are a number of potential reasons entrepreneurs would want to be affiliated with more reputable VCs. Strong VC reputation means important benefits for portfolio firms, including advice from experienced VC partners, better access to professional management talent and reputable investment banks. In addition, it will lead to VC guarantees on portfolio company borrowings, greater credibility with customers, suppliers, and other investors. Finally, being associated with more reputable VC will lead to a greater likelihood of larger rounds of VC funding and a greater likelihood of successful IPO or acquisition (higher takeover premium) (Nahata, 2008).

2.2 Previous literature

For companies interested in raising capital, the reputation of financial service providers and the cost benefit analyzes of association with reputed actors are important considerations (Gompers and Lerner, 1999). External investors are inclined to rely on the reputation of a company's associates as certifiers of the company's quality unless provided with credible and adequate information. Several theories that aim to explain reputation in the financial services industry have been developed in recent years, especially within investment banking, law and insurance (see, e.g., Besanko and Kanatas, 1993 and Holmstrom and Tirole, 1997).

As put forward by Krishnan and Masulis (2011), researchers have historically used market shares to identify top-tier financial intermediaries and have equated it with reputation. Examples include Megginson and Weiss (1991) for lead underwriters in IPOs, who conclude that VC-backed companies are to a greater extent underwritten by higher quality underwriter as opposed to their non VC-backed counterparts and are further associated with post-IPO long-run performance (Carter *et al.* 1998). Walter *et al.* (2007) investigate the impact reputation has for investment banks' M&A advisory work, Beatty (1989) for auditors, Beatty and Welch (1996) for the securities practices of law firms, and Hellmann *et al.* (2008) for the Venture Capital investment activities of commercial banks. High market shares or top league-table rankings imply a depth of experience with many earlier clients, placing top-ranked intermediaries in an advantageous position to fruitfully elicit further business and to influence deal outcomes.

Previous literature on the effect of reputable intermediaries is abundant, but literature that examine what impact reputation has in the VC industry is sparse. Gompers (1996) uses VC firms age as a measure of reputation, and finds that younger VCs can have strong incentives to “grandstand” by taking weak firms public too early. Lee and Wahal (2004) develop the same measure by adding the number of IPO firms the VC firm has backed previously, and argue that the relation between VC reputation and post-IPO performance measure can be the result of reputable VCs having access to more promising business ventures.

In addition, Hochberg, Ljungqvist and Lu (2007) present a measure showing that better-networked VCs at the time a fund is raised, which is likely to correlate with reputation, subsequently enjoy significantly better fund performance, as measured by the rate of successful portfolio exits over the next 10 years. Repeated IPO Success can provide a VC with better access to attractive investment opportunities and the ability to negotiate more generous investment terms (Hsu, 2004). The author confirms the proposition that entrepreneurs are willing to accept a discount on the valuation of their start-up in order to access the capital of VCs with better reputation.

Nahata (2008) documents the relation between VC reputation and successful exits of VC investments. The author proposes a measure that consistently predicts VC investment and portfolio company performance, based on cumulative market capitalization of IPOs backed by the VC. It is found that companies backed by more reputable VCs are more likely to exit successfully - the connectedness (i.e. how well connected a company is to a more reputable VC) being 6.86% (4.19%) when it backs a successful (unsuccessful) portfolio company. Furthermore, the companies will access public markets faster, and have higher asset productivity at IPO, if backed by a more reputable VC. Krishnan *et al.* (2011) use a similar measure as Nahata (2008), and find that VC reputation, measured by the past market share of VC-backed IPOs, has a significant positive association with the probability of successful exits. They conclude that with IPO firms’ long-run firm performance measures and the likelihood of profitable acquisitions of these firms in the future.

2.3 Definitions of investment rounds

We use the following definitions throughout the thesis²:

- i. **Seed Round** - Seed financing provides capital needed to support salaries for the management team, R&D, proof-of-concept, prototype development, and testing, etc. Sources of capital include e.g. bootstrapping and angel investors. The capital raised is limited due to its dilutive impact at minimal valuations. The goal during the seed stage is to achieve development milestones and proof-of-concept which will enable a company to attract investors for the next rounds of financing.
- ii. **Series A Round** - The Series A Round is predominantly led by one or more venture investors and is the company's first institutional financing. The valuation will reflect the progress made with the seed capital, the quality of the management team and other qualitative assessments conducted in the seed round. VC investors usually claim one or more board seats and aim to influence the decision making to keep it in line with the VCs objectives. Typical targets of this round are to continue the progress on development, hire top talent, achieve value-creating milestones, further validate product, initiate business development efforts, and attract investor interest in the next financing round.
- iii. **Series B Round** - Usually a quite larger financing than the Series A. By now, development should be complete, technology risk is removed, and early revenue streams are taking shape. Valuation is gauged on a blend of subjective and objective data, such as capital, technical assets, intellectual property, milestones achieved, comparable company valuations and rationalized revenue forecasts. Goals of this round may include operational developments, building scale, further product development, revenue transaction, and value creation for the next round of financing.
- iv. **Series C Round** - This series may be a later-stage financing designed to strengthen the balance sheet, provide operational capital to achieve profitability, finance acquisitions, develop additional products/services, or prepare the company for exit via IPO or acquisition.

² The definitions have been retrieved from: <http://calacanis.com/2015/01/18/the-official-definitions-of-seed-series-a-and-series-b-rounds/> and originate from Barry, C, C. Muscarella, J. Peavy and M. Vetsuypens, 1990, The role of venture capital in the creation of public companies.

3. Data

The following chapter covers our primary sources of data and our sample selection process. We present an overview of how we construct our sample, allocate our reputable (hereafter denoted *Tier-1*) VC measures and a general overview of the long-run performance measures we use.

3.1 Sample design and data collection

The self-constructed dataset of VC-backed IPOs, the related investment rounds and data on VCs that have invested in different funding rounds are one of the most valuable contributions of this paper. To our knowledge only Krishnan *et al.* (2011) and Nahata (2008) have constructed similar datasets.

The sample data is composed of U.S. VC-backed IPOs that have been completed in the period 1997 – 2014. All VC-backed IPOs are collected from the Bloomberg database³. Our VC investors and VC characteristics in IPO issues are taken from Pitchbook⁴. We manually check each VC-backed IPO in Pitchbook in order to determine the lead VC of the different early stages of financing. In most cases when the lead investor is specified in Pitchbook there is only one lead in Series A and Series B, respectively. If there are more than one lead investor in a specific series of financing, A or B, all lead investors are assigned lead status for the given deal, similar to Krishnan and Masulis (2011). When no lead is specified we observe the dollar value of the investment amount of the different VCs to determine whether we can distinguish a significantly larger investment by a specific VC firm, which is then assigned lead status.

Book-value of assets, market-to-book ratio, return measures and capital expenditure values are extracted from Datastream. Other IPO issuer financial data comes from Compustat. We do not consider VC backed IPOs that (a) are not listed on major U.S. exchanges⁵ (b) IPOs of financial intermediaries (since they apply different accounting standards), limited partnerships (LPs), reverse LBOs, spinoffs, and (c) when any variable required for the regression analysis is unavailable.

In comparison to other papers we analyze a smaller sample size of VC-backed IPOs. This is merely attributed to the fact that the VC-backed IPOs we collect in Bloomberg have to be matched with early stage investment characteristics from Pitchbook in order to conduct our

³ Bloomberg is one of the most comprehensive real time financial market data platform that provides company specific information; <http://Bloomberg.com>

⁴ Pitchbook is a global private equity and venture capital database which provides specific information on VC investors and investment rounds; <http://pitchbook.com/>

⁵ Major U.S. exchanges as defined by the Compustat Database.

analysis. Since not all investment rounds are disclosed this becomes problematic, which in turn leads to a sample size that is roughly half of the sample used by most recently published papers (see e.g., Krishnan and Masulis, 2011 and Nahata, 2008). Our dataset consists of 422 VC-backed IPOs and 450 VC firms.

4. Methodology and Theory

In this section we cover the econometric models applied in our empirical analysis. At first we describe the foundation of our key long-run performance measures, followed by processing the structure and calculation of our VC reputation measure and how we aim to control for it in our regression. Thereafter we describe the multivariate regression model used, our chosen control variables and descriptive statistics.

4.1 Post-IPO issuer performance measures

The first measure of long-run performance we analyze is the return on assets (ROA) where we, similar to previous studies (Krishnan and Masulis, 2011) focus on the match-adjusted return on assets⁶. The second measure of long-run performance we use in our regression model is the market-to-book (M/B) equity ratio. This measure can be seen as a proxy for Tobin's Q and aims to value a company's real options. Examples of other studies that use M/B as a performance measure include Jain and Kini (1994), Gompers *et al.* (2003) and Moeller *et al.* (2004). The first two performance measures are processed as follows. Each IPO in our sample is matched to a cluster of non-equity issuers looking at three years before and after the given IPO date for the issuer. The sample is later matched by the issuers industry, measured by its 4-digit Standard Industrial Classification (SIC) code given that there are at least five other firms in that industry. Otherwise we base the industry comparison on its 3- or 2-digit SIC code which enables us to obtain a sample of at least five non-issuing firms. We continue by calculating the median ROA and M/B of the matched cluster and subtract it from the issuers ROA and M/B to obtain abnormal returns. Median is used rather than mean measures to control for outliers that often distort the means (Kaplan, 2001). Evidence that supports the usage of median adjustment in similar tests can be found in Barber and Lyon (1996).

The ROA and M/B ratios are measured at the end of the 8th quarter following the firm's IPO and in order to avoid any survivorship bias we use the n -quarter ROA and M/B values for firms that do not stay listed for eight quarters following their IPO date. This is usually attributed to the fact that they are acquired by other firms and not because of bankruptcy (Nahata, 2008). Both return

⁶ Defined as net income divided by book-value of total assets.

on assets and market-to-book ratios are winsorized at the 5% and 95% levels in order to minimize the effects of extreme outliers that are included in our sample.

In our third measure of long-run performance we take inspiration from much of the previously written IPO literature by calculating abnormal stock returns for our VC-backed IPO sample. The measure is calculated as the issuers cumulative abnormal stock return over the first 8 quarters following the IPO. Abnormal returns are, as ROA and M/B, winsorized at 5% and 95% levels in order to control for outliers.

4.2 VC reputation measure

The VC reputation measure used in our analysis to determine whether or not an issuer has had an early stage Tier-1 investor is calculated as a VC's dollar market share of all VC-backed IPOs in the preceding three calendar years. This method of calculating reputation is the same as Nahata (2008) and Krishnan *et al.* (2011) use and is widely regarded as the most sophisticated measure for reputation.

	t-3	t-2	t-1	Sum
Dollar Value "VC X"	1	1	1	3
Total Market Share Dollar Value	500	500	500	1500
VC X's Market Share				0.2%

For example (see Market Share Table above), in 2000 (year t), we aggregate the dollar value of all IPOs backed by “VC X” during years 1997 (year t-3), 1998 (year t-2) and 1999 (year t-1). If there is only one lead VC involved in the concerned IPO, it is given full credit for the deal. If there are two VCs, the dollar value of the IPO is divided between the two and so on. When “VC X” has been given its individual dollar value for each year, it is divided with the total dollar value of all VC-backed IPOs in that given year. Hence, every individual VCs dollar value is calculated as a proportion of the total dollar size of all VC-backed IPOs in the three-year period leading up to the IPO. This process is continued for the sample period, 2000-2014, using a rolling window approach. We define the dollar size of an IPO as its gross proceeds, following previous literature (Megginson and Weiss, 1991). Since the information used to calculate IPO Market Share is known before the event it is free from look-ahead bias.

After calculating our VC reputation measure we take the top 2% VC firms for every year in the period 2000-2014 and denote them *Tier-1*. Pitchbook provides information on every investment

round and in what year it has taken place, thus we are able to see whether a company has had a Tier-1 VC in a Series A or Series B. If a firm has a lead Tier-1 VC in Series A we include an indicator variable that is equal to 1, otherwise the variable is given the value 0. This procedure is repeated for issuers with a lead Tier-1 VC in Series B and for issuers who have had a lead Tier-1 VC in both Series A and B. We have a total of 49 VC-backed IPOs with a Tier-1 VC investor in the Series A, 26 in Series B and 79 in both Series A and B. Series A, Series B and Series A & B will collectively be denoted *early stage investment variables* henceforth.

There are numerous of cases where there are multiple early stage VC investors in a completed IPO. However, as mentioned, focus is solely placed on the lead investors. This is mainly because prior research finds that lead VCs tend to be more actively involved in the post-IPO period as shareholders and directors within the firm (Krishnan and Masulis, 2011). For issuers who have multiple leads in a specific early stage investment round we equally weight the market share of the IPO for the involved VC firms. When there is only one VC in an early stage we define this investor as the lead, regardless of whether the VC firm is listed as the lead or not.

We find that the average IPO Market Share is 0.88% and the median value is 0.69%. Given that these values are close to each other, extreme outliers should not be a serious concern for our VC reputation measure. Even though Nahata (2008) and Krishnan *et al.* (2011) analyze different time periods they report similar market share figures. It is noteworthy that VCs such as Accel, Benchmark, Greylock, Kleiner Perkins Caufield and Byers and Sequoia all have annual IPO Market Shares exceeding 1%. Even though these firms possess relatively strong position in the overall market, the VC industry in general is highly fragmented seeing as only 39 firms have annual IPO Market Shares greater than 0.5%. To put in perspective, roughly 90% of IPO underwriter's market share is controlled by the top 10 investment banks⁷.

Many VC firms who possess the highest IPO Market Share, and consequently are more reputable according to our measure, are also highly ranked within different external VC rankings. For example, the renowned VCs previously mentioned also frequently appear in industry publications that rank the top VC firms, e.g. Forbes and Entrepreneur⁸.

⁷ Thomson Reuters SDC Platinum is a global database on new issues, M&A and syndicated loans.
<http://thomsonreuters.com>

⁸ See: Electronic resources in Section 8.2.

4.3 Regression model specification

During the first step of our analysis we look at the explanatory power of our early stage investment variables.

(1)

$$PM = \beta_0 + \beta_1 \text{Tier} - 1 \text{ A} + \beta_2 \text{Tier} - 1 \text{ B} + \beta_3 \text{Tier} - 1 \text{ AB} + \varepsilon_i$$

Where:

- **PM** is one of our three long-run performance measures: ROA, M/B or Return.
- **Tier-1 A** is a binary variable that is equal to 1 if the issuer had a lead Tier-1 VC investor in Series A.
- **Tier-1 B** is a binary variable that is equal to 1 if the issuer had a lead Tier-1 VC investor in Series B.
- **Tier-1 AB** is a binary variable that is equal to 1 if the issuer had a lead Tier-1 VC investor in both Series A and B.

In the second step in our analysis we add control variables and conduct a regression on the same long-run performance measures used in regression (1).

(2)

$$PM = \beta_0 + \beta_1 \text{Tier} - 1 \text{ A} + \beta_2 \text{Tier} - 1 \text{ B} + \beta_3 \text{Tier} - 1 \text{ AB} + \beta_4 \text{ Offer Size} \\ + \beta_5 \text{ AUM} + \beta_6 \text{ Dry Powder} + \beta_7 \text{ Investment Professionals} \\ + \beta_8 \text{ Age} + \beta_9 \text{ Investments} + \beta_{10} \text{ Exits} + \beta_{11} \text{ Funds Close} \\ + \beta_{12} \text{ Fund Size} + \beta_{13} \text{ Minimum Investment} + \beta_{14} \text{ Maximum Investment} + \varepsilon_i$$

Our control variables are used to control for effects of other VC characteristics on post-IPO performance to ensure that our early stage investment variables are not seen as a proxy for observable sample heterogeneity.

If the issuer has more than one early stage lead investor control variables are calculated based on median values, which is in line with previous literature (see e.g., Krishnan and Masulis, 2011 and Nahata, 2008).

- i. **Offer Size** (IPO gross proceeds) is a common and regularly discussed issue characteristic, widely used in the academic literature. It is often argued that financially stronger and established firms are positively correlated to larger offers (Krishnan and Masulis, 2011).
- ii. **AUM** represents the assets under management the VC has at the time of the investment. This measure is argued to be indicative for the VC's fundraising and investment management ability, according to Gompers and Lerner (1999).
- iii. **Dry Powder** aims to capture the VC's investment capacity. Additionally, it helps us to analyze in what stage the investment was made in a fund's life-cycle, given dry powder in relation to fund size. Investments made earlier in a fund's life-cycle tend to be less debated than investments made at a later stage (Krishnan *et al.*, 2011).
- iv. **Investment Professionals** measures the number of employees for the given time period of the investment. Seeing that it is not possible to determine the exact number of investment professionals per VC that are assigned to a specific deal, we use the total investment professionals per firm as a proxy. Nahata (2008) argues that the availability of VC expertise to a firm is positively associated with post-IPO performance.
- v. **Age** is based on the number of years between the IPO date and the VC firm's incorporation date or January 1, 1980, if the incorporation date is earlier. According to Gompers and Lerner (1999) and Hellman, Lindsey and Puri (1996) the reinterpretation of the Employee Retirement Income Security ACT (ERISA) standard in 1979 is widely believed to mark the beginning of the modern VC market. Throughout the academic literature, VC age has been used as a reputation measure (Gompers, 1996) and as a measure of investment experience (Hsu, 2004).
- vi. **Investments** is used to measure the number of investments done by the lead VC and captures investment experience and investment frequency, Hsu (2004). This measure should in return provide valuable insights and have a positive effect on our performance measures.

- vii. **Exits** aims to capture the number of exits done by a VC and will provide guidance towards if exit experience will be able to shape positive post-IPO performance. The control variable does not distinguish between trade sale and IPO exits.
- viii. Similar to how Exits captures exit experience through number of exits, **Funds Closed** aims to do the same but is measured through the number of closed funds a VC has.
- ix. **Fund Size** measures the median fund size of the lead VC investors.
- x. **Maximum Investment** and **Minimum Investment** represent the preferred dollar size of investment for our sample VCs.

In order to linearize our control variables and change the distribution, e.g. make it normally distributed, we use the natural logarithm of Offer Size, AUM, Dry Powder, Fund Size, Maximum Investment and Minimum Investment (Krishnan *et al.*, 2011).

As pointed out by Hsu (2004) and Lee and Wahal (2004) the post-IPO performance of portfolio companies can be attributed to reputable VCs having access to more promising business ventures (selectivity), it can also be an effect of the impact of a VCs development efforts. Previous literature argues that it is probably a combination of the two. Nonetheless, selectivity should be controlled for, but due to limited access to the required data we are unable to.

When checking the correlation between our control variables we find that the number of investments and number of exits made by a VC is positively correlated. This predicament is nothing unexpected per se, but should be controlled for later in the regression analysis. Strong positive correlation can also be found in the amount of dry powder a VC has and the number of funds it has closed.

The significant difference between mean and median values for our control variables and performance measure suggests that there is a considerable distance between the minimum and maximum values. For our control variables this difference can be explained by the general difference in a VCs size and development. For our performance measures these outliers represent issuers that have performed extremely poorly or well.

Meggison and Weiss (1991) amongst others, have found that VC-backed firms have relatively strong post-IPO performance compared to non VC-backed IPOs. As discussed earlier in this paper, there have been several studies examining the affect of VC reputation on post-IPO performance in comparison to non VC-backed performance. In studies of that nature adjustments to the regression have to be made to ensure that the results are not merely capturing the affects of VC-backed performance but rather the impact of having more reputable VC investors. Seeing as how we are analyzing a sample composed of exclusively VC-backed companies we do not have to control for this noise in our regression.

4.4 Descriptive statistics

We initially have a dataset consisting of 882 U.S. VC-backed IPOs from the period 1997 to 2014 and after sorting on the previously stated criteria we end up with a sample size of 422 VC-backed IPOs. This is roughly half of the sample size that Krishnan and Masulis (2011) use in their analysis.

Using the VC-backed IPOs that were issued during the first three years of our sample period (1997–1999) we calculate a VC’s initial reputation measure in 2000. This reputation measure is updated annually with data linked to the prior three years on a rolling basis. After calculating the VC reputation measure we study the affects on post-IPO long-run performance of early stage Tier-1 investments.

Table 1 shows that out of the 422 IPOs in our sample, 49 have had a Tier-1 VC in Series A, 26 of the firms have had a Tier-1 VC in Series B and 79 firms have had a Tier-1 VC in both Series A and B. A total of 268 firms have not had a Tier-1 VC in either Series A or B. In our dataset 35% of our issuers are backed by a single VC firm, 32% are backed by 2 VCs, 17% are backed by 3 VCs, 8% are backed by 4 VCs, 5% are backed by 5 VCs and the remaining 3% are backed by 6 VCs or more.

Table 1. Number of Completed IPOs

	(1)	(2)	(3)	(4)
	Tier-1 A	Tier-1 B	Tier-1 AB	No Tier
	N	N	N	N
Sum	49	26	79	268

Notes: Table 1 reports the number of early stage VC-backed IPOs in our sample in the 1997 - 2014 period. Column (1) reports the number of completed IPOs backed by a Tier-1 VC firm in Series A. Column (2) - (4) present similar values for their respective investment stage.

Table 2 shows the different VC characteristics of completed IPOs for our Tier-1 early stages investment variables and for the firms who have not received Tier-1 financing. After analyzing our descriptive statistics we can clearly see that issuers who have had Tier-1 VC investors in both Series A and B exhibit a significantly larger offer size and the engaged VCs have a larger amount of dry powder compared to the rest of our sample. Additionally, they have done considerably more investments which is in line with the fact that they tend to invest in both Series A and B rounds. As earlier discussed we see strong correlation between the number of investments and exits. An interesting discovery shown in Table 2 is that Tier-1 VC firms who invest in only Series A rounds appear to not only be younger, but also have less investment professionals. In terms of fund size and maximum preferred investment amount the non-reputable VCs display the highest numbers.

Table 2. Median IPO Characteristics

	(1)	(2)	(3)	(4)
Capex	Tier 1 A	Tier 1 B	Tier 1 AB	No Tier 1
	Median	Median	Median	Median
Offer Size (\$million)	201	227	365	126
Assets Under Management (\$million)	12184	3711	12543	12181
Dry Powder (\$million)	835	1277	1787	933
Investment Professionals	29	35	50	309
Age	18	19	23	18
Investments	177	251	361	152
Exits	95	121	176	81
Funds Closed	8	12	15	9
Fund Size (\$million)	277	207	263	315
Investment Minimum (\$million)	5	2	2	4
Investment Maximum (\$million)	109	63	85	112

Notes: Table 2 reports the median VC characteristics for the lead VCs in the early stage investment rounds and for those who have not received Tier-1 financing.

Table 3 compares the post-IPO performance measures of completed IPOs within our different early stage investments rounds. All investment stages report long-run performance measures that are higher than the measures of firms that do not have a Tier-1 VC in early stage investments. Companies that have had a Tier-1 VC in a Series B round demonstrate a ROA measure of 6.74%, which is superior to the other early investment stages, 4.1% for Series A, 2.35% for Series A and B and -1.64% for companies without a Tier-1 VC. Furthermore, Tier-1 B have the highest market-to-book ratio at 6.495, followed by the companies with a Tier-1 VC in a Series A and B

(5.555) and Series A (5.43). The companies without a Tier-1 VC exhibit a significantly lower ratio of 3.83. The return measure is also significantly larger for firms with investors in Series B compared the other stages. Conclusively, we see that having a Tier-1 VC investor in an early stage generates higher median long-run performance measures compared to not having one.

Table 3. Median IPO Issuer Long-Run Performance Measures

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Tier 1 A		Tier 1 B		Tier 1 AB		No Tier	
	N	Median	N	Median	N	Median	N	Median
ROA (%)	40	0,041	22	0,067	67	0,023	199	-0,016
M/B	49	5,43	26	6,495	79	5,555	187	3,83
Return (%)	44	0,006	26	0,039	75	0,024	197	-0,023

Notes: Table 3 reports the median long-term performance meaasures for our early stage variables. The long-run performance measures are defined in the data section.

5. Empirical Results

In this chapter we outline our empirical results and how they are associated with our initial hypothesis. We begin by analyzing our regression model with and without control variables, following section 5.1 we delve deeper by observing the association of early stage Tier-1 VC investments and capital expenditure. Finally, we conduct a robustness analysis on our results in section 5.3.

5.1 Multivariate regression analysis

Strong post-IPO long-run performance should be a direct result of the monitoring, support and advice provided by Tier-1 VCs to their portfolio companies at an early stage of the firm's life-cycle. We therefore use the regression below to assess the power of early stage Tier-1 VC investments and how it explains potential abnormal long-run firm performance.

(1)

$$PM = \beta_0 + \beta_1 \text{Tier} - 1 \text{ A} + \beta_2 \text{Tier} - 1 \text{ B} + \beta_3 \text{Tier} - 1 \text{ AB} + \varepsilon_i$$

Where the dependent variable Performance Measure (PM) is one of the post-IPO long-run performance measures: ROA, M/B or Return.

Table 4 presents coefficient estimates and t-statistics that are based on standard errors robust to heteroskedasticity for our three early stage Tier-1 investment variables. Our analysis shows that having Tier-1 VCs in an early phase has statistically significant positive associations with two of our main long-run performance measures, ROA and M/B. While not statistically significant for the long-run measure Return, it does show signs of similar associations exhibiting positive coefficients for all three early stage investment stage variables. Our findings conclude that Tier-1 early stage VC investors is a statistically important characteristic of VC-backed IPO issues. Even though the statistical significance is larger for different early stage investments, dependent on performance measures, we cannot truly say that one early stage investments is better than the other. This is mainly because in all of the long-run performance measures the values within the 95% coefficient interval overlap for our three early stage investment values.

Table 4. Long-Run Performance and Early Stage Investment Variables

	(1)	(2)	(3)
Dependent Variable	ROA	M/B	Return
Tier 1 Series A	0.0654*** (2.953)	2.566*** (3.744)	0.0524 (0.777)
Tier 1 Series B	0.0896*** (3.015)	3.206*** (3.589)	0.0469 (0.556)
Tier 1 Series AB	0.0346** (2.032)	2.260*** (3.941)	0.0523 (0.953)
N	328	338	342
R²	0.052	0.083	0.004

Notes: Table 4 presents the estimated coefficients from regressing binary variables of different investing stages in VC-backed companies on long-term performance indicators. These variables are: a 0 or a 1 indicator of a high reputational venture capital investor in a series A (Tier 1 series A), a 0 or a 1 indicator of a high reputational venture capital investor in a series B (Tier 1 series B) and a 0 or a 1 indicator of a high reputational venture capital investor in both series A and B (Tier 1 series AB). These results are presented in columns 1 - 3.

The significance levels are represented by (two-tail) test levels 10% (*), 5% (**) and 1% (***).

It is often motivated that a regression with more control variables is said to have causal interpretation, while a shorter one does not (Angrist and Pische, 2008). Thus, our early stage investment variables can be seen as biased. Therefore, as can be observed in Table 8, VC characteristics are included as control variables in our regression. It can be argued that the added control variables are slightly correlated to our three existing variables. Tier-1 Series AB could for example be an indication of a firm's willingness and ability to make multiple stage investments, which then should correlate with our added controls such as Assets Under Management and/or Dry Powder and/or Investments Professionals. We check and compare our findings with additional VC characteristics with our findings without the chosen control variables.

(2)

$$\begin{aligned} PM = & \beta_0 + \beta_1 \text{Tier} - 1 \text{ A} + \beta_2 \text{Tier} - 1 \text{ B} + \beta_3 \text{Tier} - 1 \text{ AB} + \beta_4 \text{Offer Size} \\ & + \beta_5 \text{AUM} + \beta_6 \text{Dry Powder} + \beta_7 \text{Investment Professionals} \\ & + \beta_8 \text{Age} + \beta_9 \text{Investments} + \beta_{10} \text{Exits} + \beta_{11} \text{Funds Close} \\ & + \beta_{12} \text{Fund Size} + \beta_{13} \text{Minimum Investment} + \beta_{14} \text{Maximum Investment} + \varepsilon_i \end{aligned}$$

When including control variables in our regression early stage investments by Tier-1 VCs continue to have statistical significance with long-run performance measures, ROA and M/B, at the 1% level. However as shown in Table 8, the significance is somewhat declining for these measures. Early stage variables continue to show signs of positive association with our Return measure and are close to statistically significant.

[INSERT TABLE 5 - 8]

The difference between the coefficients in Tables 4 and 8 are determined by the omitted variable bias. The coefficients should be similar whenever the omitted and included variables are uncorrelated. Table 9 compares the shift in coefficients with and without controlling for VC characteristics. Adding control variables will have a slightly negative effect on ROA coefficients for our early stage variables and M/B coefficients will also somewhat decrease. However, adding control variables will have marginal effects on the model. The decrease in these coefficients when including new variables are, according to the omitted variable bias formula, a result from the fact that the chosen controls positively correlate with both our long-run performance measure and our Tier-1 variables. If we compare the regressions with and without controlling for the strong

correlation between number of exits and investments we show that it has a negative effect on our coefficients if we choose to remove one of the mentioned variables, which means that both have explanatory value.

[INSERT TABLE 9]

Surprisingly, our results contradict Nahata's (2008) research regarding the positive association with number of employees at a VC firm. We find significantly negative associations with number of employees and long-run performance measures, while Nahata (2008) find positive association. We also show that offer size almost has statistically significant negative association with ROA and Return, which is consistent with prior findings (see, e.g., Krishnan and Masulis, 2011 and Carter *et al.*, 1998). Consistent with Krishnan *et al.*, (2011)'s findings, Table 9 shows that assets under management has a strong negative association with ROA but positive association with M/B.

The proven positive association between early stage Tier-1 VC investors and post-IPO performance warrants further discussion. A possible interpretation is that the positive relation acts as evidence that market participants are inefficient in fully acknowledging the argued benefits of having Tier-1 VCs as early stage investors. Furthermore, another interpretation is that issuers with early stage Tier-1 financing continue to invest in growth opportunities associated with high risk after the IPO, thus increasing the firm's average risk level. These interpretations might lead us in the right direction toward where the significant positive association is derived from and will be analyzed further in the section 5.2.

5.2 Forward looking for long-term growth

For further explanation on the positive association between early Tier-1 VCs and long-run performance measures we choose to examine a less conventional forward looking measure of long-term growth. This is in line with our previously stated interpretation of the positive association with early stage Tier-1 financing and investment in growth opportunities. The forward looking measure we choose to analyze is capital expenditure divided by total assets (Gompers, 1995 and Loughran and Ritter, 1997) and is based on a two year average after the IPO⁹. Gompers (1995) argues that our chosen forward looking ratio is a proxy for capturing expected growth rate within a firm's total assets as a result of its capital expenditure. Table 10

⁹ To the extent that data is available.

presents the median capital expenditure ratios for our different early stage VCs in the 1997-2014 period.

Table 10. Issuer Post-IPO Capital Expenditure Ratio

	(1)	(2)	(3)	(4)
Capex	Tier 1 A	Tier 1 B	Tier 1 AB	No Tier 1
Median	0,045	0,066	0,022	0,025
N	48	23	60	193

Notes: Table 10 reports the median capital expenditure ratios for our early stage variables. The long-run performance measures are defined in the data section.

We regress our capital expenditure ratio against our key variables used in Table 4 and, in order to further analyze the explanatory degree, against the control variables used in Table 8. Given that our capital expenditure measure is censored at 0, with defaults closing to 0, we use a tobit regression with left-censoring. Table 11 reports coefficient estimates and t-statistics that are based on standard errors robust to heteroskedasticity. Our findings show that our Tier-1 A and Tier-1 B variables have statistically significant positive association at the 1% level. However, Tier-1 Series A and B is not significant with a higher capital expenditure ratio. We see no obvious interpretation of this finding. One possible explanation could be that VCs who have been engaged within a firm for a longer period of time might have streamlined and/or enabled major changes in operations before the IPO. Another potential explanation is the credibility that could arise merely from the fact that a Tier-1 VC invests in a firm's early stage rounds (i.e. both Series A and B). This could in return simplify recruitment before the IPO. The evidence put forth shows that firms with early stage Tier-1 VCs have high post-IPO growth rates which is in line with our interpretation of the positive association with post-IPO long-run performance measures.

[INSERT TABLE 11]

5.3 Additional robustness analysis

We try to assess whether our early stage investment variables continue to be significantly associated with the key long-run performance measures, ROA and M/B, if we choose not to winsorize our long-run performance variables at 5% and 95%. The analysis shows that all of our early stage investment variables continue to have significant positive association with the key performance variables, ROA & M/B, at the 1%, 5% and 10% levels if we use the regression model shown in Table 12. However, Tier-1 AB loses its statistical significance from the previous 10% level.

Table 12. Issuer Long-Run Performance and Tier 1 Investor Variables, Robustness Analysis

	(1)	(2)	(3)
Dependent Variable	ROA	M/B	Return
Tier 1 Series A	0.0744** (2.137)	6.501*** (3.802)	0.0574 (0.574)
Tier 1 Series B	0.0935** (2.071)	3.943* (1.768)	0.0379 (0.303)
Tier 1 Series AB	0.0342 (1.205)	2.786* (1.949)	0.0417 (0.512)
N	328	341	342
R²	0.024	0.047	0.002

Notes: The table gives the estimated coefficients from regressing binary variables of different investing stages in VC-backed companies on long-term performance indicators. These variables are: a 0 or a 1 indicator of a high reputational venture capital investor in a series A (Tier 1 series A), a 0 or a 1 indicator of a high reputational venture capital investor in a series B (Tier 1 series B) and a 0 or a 1 indicator of a high reputational venture capital investor in both series A and B (Tier 1 series AB). These results are presented in columns 1 - 3.

The significance levels are represented by (two-tail) test levels 10% (*), 5% (**) and 1% (***).

When adding control variables we show that our early stage investment variables continue to exhibit significant impact on the performance measures. Additionally, control variables Investment Professionals and Age exhibit statistical significance with ROA and M/B. We conclude that the affect winsorizing has on mitigating the long-run performance measures does not qualitatively change the positive association of early stage Tier-1 investors with our key variables, as seen in Table 13.

[INSERT TABLE 13]

In order to further deepen our robustness analysis we remove the natural logarithm from our control variables. We show clear results that the early stage investment variables continue to be significant even without logarithmic control variables. Surprisingly, we prove that, apart from our previously discussed significant controls, Offer Size, Dry Powder, Investments and Fund Size now also exhibit significant association with our performance measures, as seen in Table 14.

[INSERT TABLE 14]

Even though we prove a marginally lower r-squared for our three performance measures when removing logarithm and not winsorizing the dependent variables, we clearly show significant associations with our performance measures that were earlier not captured using regression (1) and (2). We present a general overview of the development of our robustness analysis in Table 15.

[INSERT TABLE 15]

6. Conclusion

By taking a closer look at the post-IPO performance of VC-backed companies that have received early stage Tier-1 funding, the aim of this paper is to contribute to the current discussion where both academia and the private sector debate the effects of Venture Capital ownership. In particular it focuses on the usefulness of distinguishing VCs by reputation and investment timing by examining whether Tier-1 VCs who have made early stage investments have stronger effects on post-IPO performance of their portfolio firms.

We find that having early stage Tier-1 VCs have statistically significant positive associations with two of our main long-run performance measures, return on assets (ROA) and the market-to-book (M/B) ratio. The coefficients for our third measure, return, indicate that early stage Tier-1 VCs also are positively associated with long-run performance. However, these results are in no instance significant. When controlling for VC characteristics through control variables we find that the statistical significance in our model remains at the previously stated levels and this is further validated by conducting a robustness test. These findings can be interpreted in different ways, one of which is that the positive relation acts as evidence that market participants are inefficient in fully acknowledging the argued benefits of having Tier-1 VCs as early stage investors. Another feasible interpretation is that issuers with early stage Tier-1 financing continue to invest in growth opportunities associated with high risk after the IPO, thus increasing the firm's average risk level.

Even though different early stage variables provide stronger significance levels for our performance measure we are unable to statistically determine if one specific investment round is better than the other. This is due to the fact that the 95% coefficient interval for all our early stage investment variables overlap each other.

As we are further interested in what drivers that might lay behind the provided evidence, we examine the post-IPO activity of our sample companies. Using a well-known proxy measure for growth, capital expenditure divided by book-value of assets, we present findings showing that our early stage investment variables are significantly associated with higher capital expenditure ratios.

Returning to our initial hypothesis *“Is there significant positive associations between long-term post-IPO performance and early stage investments from Tier-1 VC firms?”* we find a persuasive body of evidence that early stage Tier-1 VCs have a significantly positive impact on their portfolio companies, in terms of ROA, M/B and return. In addition our findings indicate that these VCs through, what is

interpreted as continued post-IPO involvement, have a positive association with future portfolio company growth.

We can with statistical confidence argue that the timeworn saying which emphasizes that it is of more importance who you know, rather than what you know is only partly accurate. By presenting our research, this study contributes with a cultivating rephrasing of this saying: “It is not what you know, but who you know – and when you know them”

7. Limitations and Suggestions for Future Research

In this chapter we outline implications regarding the dataset and method which could limit the ways in which results can be interpreted. Additionally, we elaborate on potential future fields of research related to our thesis.

7.1 Limitations

Our primary concern with this paper is associated with the data gathering process. Firstly, given our sample criteria we have analyzed a less extensive dataset than previous research. This is mainly due to the fact that we need to match the retrieved VC-backed IPOs with early stage investment data from Pitchbook. This database tends to consist of VC characteristics for more successful VC-backed IPOs, which in turn leads to a data sample that is biased towards more publicized IPOs. Consequently our dataset is less thorough, applying to both VC-backed IPOs and VC firms, compared to prior studies. We base our analysis on a VC dataset consisting of *only* 422 VC firms, while there are a total of 631 active VC firms in the U.S. market today.

The issues that arise from not being able to control for selectiveness as previous similar research has done (see e.g., Krishnan *et al.*, 2011 and Nahata, 2008) is also related to our data-set limitations (Pitchbook does not contain data on VCs syndicate size, top auditors etc.). As a consequence we cannot be entirely confident what reasons might underlie the differences in post-IPO performance for the observed portfolio companies.

Although the usage of 4-digit SIC codes is standard in similar research, we are not been able to collect an optimal amount of companies within the same industry to benchmark against. This leads to abnormal returns that might be misleading and unrealistically high compared to if we would have had a larger sample of same-industry companies.

Seeing as we use n -quarter values for our long-run performance measures our data can be subject to survivorship biases (Kothari *et al.*, 1995). Survivorship bias will skew results as firms that are delisted or file for bankruptcy will be omitted from our sample dataset. Aiming to minimize survivorship bias attempts have been made to manually control for delisted firms during our given period.

7.2 Suggestions for future research

Whilst conducting this study, interesting aspects of reputation have come to our attention. Not only is it intriguing to understand what factors might affect reputation but more importantly if it is possible for a VC to lose its reputation and the effect this would have on future post-IPO performance of portfolio firms. Another interesting field of research is what implications on reputation follow if a prominent principle quits or if a VC suffers a large loss in a fund.

Moreover, as established in the introduction, there have been extensive research on security-offerings and controlling for underwriter reputation. There is an obvious correlation between VC reputation and the reputation of other stakeholders involved in an IPO: auditors, law firms and credit lenders. This raises interesting questions on how closely related these financial intermediaries are for client selection and how they collectively impact the long-term performance of a company.

Conclusively, the understanding of the mechanisms through which VCs add value are somewhat limited. Against this background, qualitative studies of the *modus operandi* of the VC firms are a possible area for future research. Given that the lion's share of studies examining VC reputation have been done on the mature U.S. market, which may reduce the generalizability of the results, interesting insights could be provided if studying other geographical markets.

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A. Tables and Figures

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Table 5. Issuer Long-Run Performance and Tier 1 Investor Variables, Controlling for Addition VC Characteristics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Dependent Variable	AROA	AROA	AROA	AROA	AROA	AROA	AROA	AROA	AROA	AROA	AROA	AROA
Tier 1 Series A	0.0654*** (2.953)	0.0707*** (3.249)	0.0728*** (3.369)	0.0726*** (3.369)	0.0712*** (3.296)	0.0722*** (3.296)	0.0720*** (3.257)	0.0727*** (3.340)	0.0715*** (3.275)	0.0700*** (3.202)	0.0684*** (3.161)	0.0652*** (2.918)
Tier 1 Series B	0.0896*** (3.015)	0.0950*** (3.091)	0.0924*** (2.954)	0.0950*** (3.038)	0.0945*** (3.022)	0.0941*** (3.013)	0.0921*** (2.893)	0.0913*** (2.880)	0.0909*** (2.850)	0.0916*** (2.858)	0.0912*** (2.808)	0.0902*** (2.752)
Tier 1 Series AB	0.0346** (2.032)	0.0391** (2.244)	0.0430** (2.462)	0.0460*** (2.640)	0.0448** (2.564)	0.0434** (2.477)	0.0397** (2.138)	0.0409** (2.192)	0.0397** (2.119)	0.0379** (2.017)	0.0374** (1.983)	0.0370* (1.946)
Offer Size		-0.0141 (-1.486)	-0.0121 (-1.242)	-0.0113 (-1.177)	-0.0112 (-1.172)	-0.0113 (-1.180)	-0.0121 (-1.280)	-0.0130 (-1.395)	-0.0133 (-1.422)	-0.0132 (-1.396)	-0.0133 (-1.407)	-0.0124 (-1.290)
AUM			-0.00458* (-1.798)	-0.00222 (-0.549)	-0.00146 (-0.355)	-0.00177 (-0.436)	-0.00187 (-0.459)	-0.00149 (-0.367)	-0.00150 (-0.370)	0.000362 (0.0843)	-0.000282 (-0.0677)	-0.00125 (-0.275)
Dry Powder				-0.00326 (-0.812)	-0.00358 (-0.889)	-0.00411 (-1.013)	-0.00500 (-1.118)	-0.00487 (-1.106)	-0.00400 (-0.872)	-0.00249 (-0.498)	-0.00243 (-0.482)	-0.00306 (-0.596)
Investment Professionals					-2.74e-06*** (-3.488)	-2.80e-06*** (-3.485)	-2.77e-06*** (-3.412)	-2.81e-06*** (-3.520)	-2.84e-06*** (-3.566)	-3.02e-06*** (-3.915)	-3.00e-06*** (-3.979)	-2.65e-06*** (-2.717)
Age						0.000526 (0.757)	0.000341 (0.449)	0.000419 (0.551)	0.000411 (0.539)	0.000351 (0.461)	0.000341 (0.446)	0.000318 (0.416)
Investments							2.78e-05 (0.615)	0.000134 (1.233)	0.000160 (1.337)	0.000154 (1.309)	0.000178 (1.471)	0.000164 (1.362)
Exits								-0.000254 (-1.031)	-0.000277 (-1.068)	-0.000263 (-1.030)	-0.000266 (-1.032)	-0.000261 (-1.023)
Funds Closed									-0.000574 (-0.917)	-0.000659 (-1.063)	-0.000660 (-1.053)	-0.000555 (-0.846)
Fund Size										-0.00535 (-0.850)	-0.00563 (-0.895)	-0.00548 (-0.866)
Minimum Investment											0.00502 (0.969)	0.00410 (0.766)
Maximum Investment												0.00383 (0.623)
N	328	328	328	328	328	328	328	328	328	328	328	328
R²	0.052	0.059	0.067	0.069	0.073	0.075	0.076	0.079	0.080	0.082	0.085	0.086

Notes: The table gives the estimated coefficients from regressing binary variables of different investing stages in VC-backed companies on long-term performance indicators. These variables are: a 0 or a 1 indicator of a high reputational venture capital investor in a series A (Tier 1 series A), a 0 or a 1 indicator of a high reputational venture capital investor in a series B (Tier 1 series B), a 0 or a 1 indicator of a high reputational venture capital investor in both series A and B (Tier 1 series AB), gross proceeds from IPO (Offer Size; ln(median Offer Size), assets under management in the lead venture capital firms (AUM; ln(median Assets Under Management)), dry powder (Dry Powder; ln(median dry powder), number of investment professionals at the venture capital firm (Investment Professionals; (median investment professionals), VC firm age (Age; (median firm age), the number of investments made by the VC firm (Investments; (median investments), the number of exits made by the VC firm (Exits; (median number of exits made), the number of funds dosed (Funds Closed; (median number of funds dosed), the size of the funds dosed (Fund Size; ln(median fund size), minimum size of investment made by the VC firm (Minimum Investment; (median minimum investment)).

The significance levels are represented by (two-tail) test levels 10% (*), 5% (**) and 1% (***).

Table 6. Issuer Long-Run Performance and Tier 1 Investor Variables, Controlling for Addition VC Characteristics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Dependent Variable	M/B	M/B	M/B	M/B	M/B	M/B	M/B	M/B	M/B	M/B	M/B	M/B
Tier 1 Series A	2.566*** (3.348)	2.515*** (3.260)	2.461*** (3.201)	2.461*** (3.191)	2.488*** (3.226)	2.485*** (3.215)	2.490*** (3.206)	2.489*** (3.203)	2.424*** (3.127)	2.393*** (3.125)	2.489*** (3.234)	2.608*** (3.268)
Tier 1 Series B	3.206*** (2.837)	3.157*** (2.782)	3.230*** (2.849)	3.227*** (2.828)	3.237*** (2.832)	3.238*** (2.832)	3.344*** (2.946)	3.344*** (2.941)	3.322*** (2.944)	3.321*** (2.934)	3.319*** (2.937)	3.333*** (2.951)
Tier 1 Series AB	2.260*** (3.962)	2.201*** (3.739)	2.096*** (3.538)	2.092*** (3.411)	2.117*** (3.449)	2.124*** (3.460)	2.278*** (3.567)	2.276*** (3.566)	2.223*** (3.461)	2.168*** (3.375)	2.225*** (3.438)	2.254*** (3.464)
Offer Size		0.173 (0.597)	0.131 (0.448)	0.130 (0.437)	0.128 (0.432)	0.128 (0.430)	0.160 (0.535)	0.161 (0.537)	0.147 (0.488)	0.148 (0.496)	0.163 (0.553)	0.130 (0.437)
AUM			0.123 (1.445)	0.120 (0.989)	0.105 (0.879)	0.107 (0.904)	0.114 (0.957)	0.114 (0.949)	0.115 (0.956)	0.166 (0.977)	0.200 (1.184)	0.241 (1.374)
Dry Powder				0.00385 (0.0304)	0.00989 (0.0787)	0.0131 (0.0990)	0.0550 (0.399)	0.0548 (0.396)	0.100 (0.689)	0.144 (1.021)	0.145 (1.044)	0.172 (1.218)
Investment Professionals					5.40e-05 (0.528)	5.43e-05 (0.530)	5.24e-05 (0.512)	5.24e-05 (0.512)	5.11e-05 (0.500)	4.59e-05 (0.450)	4.46e-05 (0.435)	3.02e-05 (0.295)
Age						-0.00323 (-0.140)	0.00615 (0.253)	0.00602 (0.248)	0.00539 (0.221)	0.00383 (0.157)	0.00449 (0.187)	0.00557 (0.230)
Investments							-0.00138 (-0.847)	-0.00154 (-0.383)	-0.000241 (-0.0600)	-0.000368 (-0.0908)	-0.00160 (-0.379)	-0.00105 (-0.247)
Exits								0.000376 (0.0464)	-0.000812 (-0.101)	-0.000505 (-0.0623)	-0.000486 (-0.0589)	-0.000658 (-0.0815)
Funds Closed									-0.0295 (-1.636)	-0.0321* (-1.708)	-0.0324* (-1.710)	-0.0362* (-1.820)
Fund Size										-0.153 (-0.659)	-0.140 (-0.629)	-0.145 (-0.657)
Minimum Investment											-0.254 (-1.574)	-0.214 (-1.223)
Maximum Investment												-0.159 (-0.779)
N	338	338	338	338	338	338	338	338	338	338	338	338
R²	0.083	0.084	0.089	0.089	0.090	0.090	0.092	0.092	0.094	0.096	0.102	0.104

Notes: The table gives the estimated coefficients from regressing binary variables of different investing stages in VC-backed companies on long-term performance indicators. These variables are: a 0 or a 1 indicator of a high reputational venture capital investor in a series A (Tier 1 series A), a 0 or a 1 indicator of a high reputational venture capital investor in a series B (Tier 1 series B), a 0 or a 1 indicator of a high reputational venture capital investor in both series A and B (Tier 1 series AB), gross proceeds from IPO (Offer Size; ln(median Offer Size), assets under management in the lead venture capital firms (AUM; ln(median Assets Under Management), dry powder (Dry Powder; ln(median dry powder), number of investment professionals at the venture capital firm (Investment Professionals; (median investment professionals), VC firm age (Age; (median firm age), the number of investments made by the VC firm (Investments; (median investments), the number of exits made by the VC firm (Exits; (median number of exits made), the number of funds dosed (Funds Closed; (median number of funds dosed), the size of the funds dosed (Fund Size; ln(median fund size), minimum size of investment made by the VC firm (Minimum Investment; ln(minimum investment size) and the maximum size of investments made by the VC firm (Maximum Investment; ln(maximum investment size).

The significance levels are represented by (two-tail) test levels 10% (*), 5% (**) and 1% (***).

Table 7. Issuer Long-Run Performance and Tier 1 Investor Variables, Controlling for Addition VC Characteristics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Dependent Variable	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP
Tier 1 Series A	0.0524 (1.309)	0.0635 (1.532)	0.0671 (1.597)	0.0672 (1.596)	0.0630 (1.484)	0.0579 (1.373)	0.0567 (1.341)	0.0560 (1.326)	0.0551 (1.281)	0.0591 (1.365)	0.0642 (1.486)	0.0513 (1.123)
Tier 1 Series B	0.0469 (1.084)	0.0566 (1.275)	0.0503 (1.118)	0.0474 (1.015)	0.0459 (0.982)	0.0460 (0.927)	0.0288 (0.584)	0.0282 (0.572)	0.0280 (0.566)	0.0277 (0.569)	0.0275 (0.559)	0.0262 (0.534)
Tier 1 Series AB	0.0523 (1.231)	0.0636 (1.467)	0.0723 (1.642)	0.0684 (1.450)	0.0648 (1.366)	0.0716 (1.520)	0.0455 (0.961)	0.0466 (0.977)	0.0459 (0.959)	0.0512 (1.055)	0.0547 (1.121)	0.0524 (1.067)
Offer Size		-0.0325 (-1.375)	-0.0287 (-1.194)	-0.0294 (-1.224)	-0.0292 (-1.213)	-0.0298 (-1.264)	-0.0355 (-1.522)	-0.0369 (-1.581)	-0.0370 (-1.597)	-0.0373 (-1.615)	-0.0366 (-1.582)	-0.0332 (-1.425)
AUM			-0.0101 (-1.357)	-0.0125 (-0.956)	-0.00998 (-0.752)	-0.00773 (-0.572)	-0.00896 (-0.666)	-0.00830 (-0.613)	-0.00830 (-0.612)	-0.0143 (-1.031)	-0.0124 (-0.871)	-0.0165 (-1.101)
Dry Powder				0.00333 (0.229)	0.00225 (0.154)	0.00634 (0.428)	-0.000251 (-0.0159)	-7.55e-05 (-0.00479)	0.000574 (0.0345)	-0.00411 (-0.203)	-0.00431 (-0.211)	-0.00701 (-0.349)
Investment Professionals					-8.90e-06*** (-2.942)	-8.48e-06*** (-2.919)	-8.17e-06*** (-2.751)	-8.27e-06*** (-2.798)	-8.29e-06*** (-2.799)	-7.69e-06** (-2.481)	-7.77e-06** (-2.472)	-6.32e-06* (-1.703)
Age						-0.00380* (-1.859)	-0.00528** (-2.221)	-0.00515** (-2.141)	-0.00515** (-2.141)	-0.00499** (-2.083)	-0.00494** (-2.067)	-0.00504** (-2.124)
Investments							0.000221* (1.849)	0.000390 (1.501)	0.000409 (1.480)	0.000425 (1.554)	0.000353 (1.258)	0.000298 (1.021)
Exits								-0.000399 (-0.650)	-0.000418 (-0.699)	-0.000458 (-0.775)	-0.000440 (-0.748)	-0.000425 (-0.713)
Funds Closed									-0.000424 (-0.111)	-0.000135 (-0.0354)	-0.000142 (-0.0377)	0.000228 (0.0638)
Fund Size										0.0172 (0.695)	0.0179 (0.706)	0.0182 (0.742)
Minimum Investment											-0.0133 (-0.867)	-0.0173 (-1.122)
Maximum Investment												0.0161 (0.783)
N	342	342	342	342	342	342	342	342	342	342	342	342
R²	0.004	0.008	0.012	0.012	0.016	0.025	0.031	0.032	0.032	0.034	0.036	0.038

Notes: The table gives the estimated coefficients from regressing binary variables of different investing stages in VC-backed companies on long-term performance indicators. These variables are: a 0 or a 1 indicator of a high reputational venture capital investor in a series A (Tier 1 series A), a 0 or a 1 indicator of a high reputational venture capital investor in a series B (Tier 1 series B), a 0 or a 1 indicator of a high reputational venture capital investor in both series A and B (Tier 1 series AB), gross proceeds from IPO (Offer Size; ln(median Offer Size), assets under management in the lead venture capital firms (AUM; ln(median Assets Under Management), dry powder (Dry Powder; ln(median dry powder), number of investment professionals at the venture capital firm (Investment Professionals; (median investment professionals), VC firm age (Age; (median firm age), the number of investments made by the VC firm (Investments; (median investments), the number of exits made by the VC firm (Exits; (median number of exits made), the number of funds dosed (Funds Closed; (median number of funds dosed), the size of the funds dosed (Fund Size; ln(median fund size), minimum size of investment made by the VC firm (Minimum Investment; ln(minimum investment size) and the maximum size of investments made by the VC firm (Maximum Investment; ln(maximum investment size).

The significance levels are represented by (two-tail) test levels 10% (*), 5% (**) and 1% (***).

Table 8. Issuer Long-Run Performance and Tier-1 Investor Variables, Controlling for Addition VC Characteristics

	(1)	(2)	(3)
Dependent Variable	ROA	M/B	Return
Tier 1 Series A	0.0652*** (2.918)	2.608*** (3.268)	0.0513 (1.123)
Tier 1 Series B	0.0902*** (2.752)	3.333*** (2.951)	0.0262 (0.534)
Tier 1 Series AB	0.0370* (1.946)	2.254*** (3.464)	0.0524 (1.067)
Offer Size	-0.0124 (-1.290)	0.130 (0.437)	-0.0332 (-1.425)
AUM	-0.00125 (-0.275)	0.241 (1.374)	-0.0165 (-1.101)
Dry Powder	-0.00306 (-0.596)	0.172 (1.218)	-0.00701 (-0.349)
Investment Professionals	-2.65e-06*** (-2.717)	3.02e-05 (0.295)	-6.32e-06* (-1.703)
Age	0.000318 (0.416)	0.00557 (0.230)	-0.00504** (-2.124)
Investments	0.000164 (1.362)	-0.00105 (-0.247)	0.000298 (1.021)
Exits	-0.000261 (-1.023)	-0.000658 (-0.0815)	-0.000425 (-0.713)
Funds Closed	-0.000555 (-0.846)	-0.0362* (-1.820)	0.000228 (0.0638)
Fund Size	-0.00548 (-0.866)	-0.145 (-0.657)	0.0182 (0.742)
Minimum Investment	0.00410 (0.766)	-0.214 (-1.223)	-0.0173 (-1.122)
Maximum Investment	0.00383 (0.623)	-0.159 (-0.779)	0.0161 (0.783)
N	328	338	342
R²	0.086	0.104	0.038

Notes: The table gives the estimated coefficients from regressing binary variables of different investing stages in VC-backed companies on long-term performance indicators. These variables are: a 0 or a 1 indicator of a high reputational venture capital investor in a series A (Tier 1 series A), a 0 or a 1 indicator of a high reputational venture capital investor in a series B (Tier 1 series B), a 0 or a 1 indicator of a high reputational venture capital investor in both series A and B (Tier 1 series AB), gross proceeds from IPO (Offer Size; $\ln(\text{median Offer Size})$), assets under management in the lead venture capital firms (AUM; $\ln(\text{median Assets Under Management})$), dry powder (Dry Powder; $\ln(\text{median dry powder})$), number of investment professionals at the venture capital firm (Investment Professionals; $\ln(\text{median investment professionals})$), VC firm age (Age; $\ln(\text{median firm age})$), the number of investments made by the VC firm (Investments; $\ln(\text{median investments})$), the number of exits made by the VC firm (Exits; $\ln(\text{median number of exits made})$), the number of funds dosed (Funds Closed; $\ln(\text{median number of funds dosed})$), the size of the funds dosed (Fund Size; $\ln(\text{median fund size})$), minimum size of investment made by the VC firm (Minimum Investment; $\ln(\text{minimum investment size})$) and the maximum size of investments made by the VC firm (Maximum Investment; $\ln(\text{maximum investment size})$).

The significance levels are represented by (two-tail) test levels 10% (*), 5% (**) and 1% (***).

Table 9. Issuer Long-Run Performance and Tier 1 Investor Variables, Controlling for Addition VC Characteristics

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable	ROA	ROA	M/B	M/B	SP	SP
Tier 1 Series A	0.0654*** (2.953)	0.0652*** (2.918)	2.566*** (3.744)	2.608*** (3.268)	0.0524 (0.777)	0.0513 (1.123)
Tier 1 Series B	0.0896*** (3.015)	0.0902*** (2.752)	3.206*** (3.589)	3.333*** (2.951)	0.0469 (0.556)	0.0262 (0.534)
Tier 1 Series AB	0.0346** (2.032)	0.0370* (1.946)	2.260*** (3.941)	2.254*** (3.464)	0.0523 (0.953)	0.0524 (1.067)
Offer Size		-0.0124 (-1.290)		0.130 (0.437)		-0.0332 (-1.425)
AUM		-0.00125 (-0.275)		0.241 (1.374)		-0.0165 (-1.101)
Dry Powder		-0.00306 (-0.596)		0.172 (1.218)		-0.00701 (-0.349)
Investment Professionals		-2.65e-06*** (-2.717)		3.02e-05 (0.295)		-6.32e-06* (-1.703)
Age		0.000318 (0.416)		0.00557 (0.230)		-0.00504** (-2.124)
Investments		0.000164 (1.362)		-0.00105 (-0.247)		0.000298 (1.021)
Exits		-0.000261 (-1.023)		-0.000658 (-0.0815)		-0.000425 (-0.713)
Funds Closed		-0.000555 (-0.846)		-0.0362* (-1.820)		0.000228 (0.0638)
Fund Size		-0.00548 (-0.866)		-0.145 (-0.657)		0.0182 (0.742)
Minimum Investment		0.00410 (0.766)		-0.214 (-1.223)		-0.0173 (-1.122)
Maximum Investment		0.00383 (0.623)		-0.159 (-0.779)		0.0161 (0.783)
N	328	328	338	338	342	342
R²	0.052	0.086	0.083	0.104	0.004	0.038

Notes: The table gives the estimated coefficients from regressing binary variables of different investing stages in VC-backed companies on long-term performance indicators. These variables are: a 0 or a 1 indicator of a high reputational venture capital investor in a series A (Tier 1 series A), a 0 or a 1 indicator of a high reputational venture capital investor in a series B (Tier 1 series B), a 0 or a 1 indicator of a high reputational venture capital investor in both series A and B (Tier 1 series AB), gross proceeds from IPO (Offer Size; ln(median Offer Size), assets under management in the lead venture capital firms (AUM; ln(median Assets Under Management), dry powder (Dry Powder; ln(median dry powder), number of investment professionals at the venture capital firm (Investment Professionals; (median investment professionals), VC firm age (Age; (median firm age), the number of investments made by the VC firm (Investments; (median investments), the number of exits made by the VC firm (Exits; (median number of exits made), the number of funds dosed (Funds Closed; (median number of funds dosed), the size of the funds dosed (Fund Size; ln(median fund size), minimum size of investment made by the VC firm (Minimum Investment; ln(minimum investment size) and the maximum size of investments made by the VC firm (Maximum Investment; ln(maximum investment size).

The significance levels are represented by (two-tail) test levels 10% (*), 5% (**) and 1% (***).

Panel 11. Issuer Capital Expenditure Ratios and Tier-1 Investor Variables, Controlling for Addition VC Characteristics

	(1)	(2)
Dependent Variable	Capex	Capex
Tier 1 Series A	0.0350*** (3.488)	0.0383*** (3.616)
Tier 1 Series B	0.0433*** (3.067)	0.0441*** (3.148)
Tier 1 Series AB	-0.00203 (-0.329)	-0.000576 (-0.0829)
Offer Size		-0.00201 (-0.601)
AUM		0.000126 (0.0633)
Dry Powder		-0.00123 (-0.599)
Investment Professionals		9.25e-08 (0.0889)
Age		-0.000158 (-0.521)
Investments		1.82e-05 (0.376)
Exits		-9.11e-05 (-0.946)
Funds Closed		0.00710 (1.223)
Fund Size		0.00154 (0.605)
Minimum Investment		-0.00383* (-1.654)
Maximum Investment		-0.000671 (-0.249)
N	315	315

Notes: The table gives the estimated coefficients from regressing binary variables of different investing stages in VC-backed companies on long-term performance indicators. These variables are: a 0 or a 1 indicator of a high reputational venture capital investor in a series A (Tier 1 series A), a 0 or a 1 indicator of a high reputational venture capital investor in a series B (Tier 1 series B), a 0 or a 1 indicator of a high reputational venture capital investor in both series A and B (Tier 1 series AB), gross proceeds from IPO (Offer Size; ln(median Offer Size), assets under management in the lead venture capital firms (AUM; ln(median Assets Under Management), dry powder (Dry Powder; ln(median dry powder), number of investment professionals at the venture capital firm (Investment Professionals; ln(median investment professionals), VC firm age (Age; ln(median firm age), the number of investments made by the VC firm (Investments; ln(median investments), the number of exits made by the VC firm (Exits; ln(median number of exits made), the number of funds dosed (Funds Closed; ln(median number of funds dosed), the size of the funds dosed (Fund Size; ln(median fund size), minimum size of investment made by the VC firm (Minimum Investment; ln(minimum investment size) and the maximum size of investments made by the VC firm (Maximum Investment; ln(maximum investment size). These results are presented in columns 1 - 3.

The significance levels are represented by (two-tail) test levels 10% (*), 5% (**) and 1% (***).

Table 13. Issuer Long-Run Performance and Tier 1 Investor Variables, Robustness Analysis Without Winsorizing

	(1)	(2)	(3)
Dependent Variable	ROA	M/B	Return
Tier 1 Series A	0.0754** (2.267)	6.037* (1.965)	0.0415 (0.739)
Tier 1 Series B	0.0988** (2.305)	3.845*** (2.787)	0.00636 (0.108)
Tier 1 Series AB	0.0373 (1.263)	2.382** (2.541)	0.0368 (0.621)
Offer Size	-0.0213 (-1.287)	-0.221 (-0.387)	-0.0274 (-0.895)
AUM	0.000653 (0.104)	0.237 (1.074)	-0.0122 (-0.638)
Dry Powder	-0.000715 (-0.110)	0.0281 (0.140)	-0.00523 (-0.200)
Investment Professionals	-3.44e-06** (-2.493)	8.71e-05 (0.737)	-7.96e-06* (-1.901)
Age	0.000703 (0.801)	-0.101 (-0.814)	-0.00516* (-1.804)
Investments	0.000200 (1.263)	0.00855 (0.822)	0.000449 (1.303)
Exits	-0.000286 (-0.899)	-0.0152 (-1.042)	-0.000740 (-1.037)
Funds Closed	-0.00125 (-1.356)	-0.0385 (-1.428)	-0.000678 (-0.167)
Fund Size	-0.00870 (-1.176)	-0.0269 (-0.0863)	0.0218 (0.740)
Minimum Investment	0.00938 (0.955)	-0.265 (-1.171)	-0.0226 (-1.249)
Maximum Investment	0.00177 (0.197)	0.421 (0.692)	0.00427 (0.164)
N	328	341	342
R²	0.048	0.062	0.026

Notes: The table gives the estimated coefficients from regressing binary variables of different investing stages in VC-backed companies on long-term performance indicators. These variables are: a 0 or a 1 indicator of a high reputational venture capital investor in a series A (Tier 1 series A), a 0 or a 1 indicator of a high reputational venture capital investor in a series B (Tier 1 series B), a 0 or a 1 indicator of a high reputational venture capital investor in both series A and B (Tier 1 series AB), gross proceeds from IPO (Offer Size; ln(median Offer Size), assets under management in the lead venture capital firms (AUM; ln(median Assets Under Management), dry powder (Dry Powder; ln(median dry powder), number of investment professionals at the venture capital firm (Investment Professionals; (median investment professionals), VC firm age (Age; (median firm age), the number of investments made by the VC firm (Investments; (median investments), the number of exits made by the VC firm (Exits; (median number of exits made), the number of funds dosed (Funds Closed; (median number of funds dosed), the size of the funds dosed (Fund Size; ln(median fund size), minimum size of investment made by the VC firm (Minimum Investment; ln(minimum investment size) and the maximum size of investments made by the VC firm (Maximum Investment; ln(maximum investment size).

The significance levels are represented by (two-tail) test levels 10% (*), 5% (**) and 1% (***).

Table 14. Issuer Long-Run Performance and Tier 1 Investor Variables, Robustness Analysis Without Winsorizing and Log

	(1)	(2)	(3)
Dependent Variable	ROA	M/B	Return
Tier 1 Series A	0.0752** (2.178)	6.458* (1.815)	0.0194 (0.386)
Tier 1 Series B	0.0926** (2.214)	3.523** (2.416)	-0.00602 (-0.104)
Tier 1 Series AB	0.0379 (1.221)	2.353*** (2.612)	0.0136 (0.242)
Offer Size	-5.01e-06 (-1.373)	-7.67e-05 (-0.441)	-3.20e-05*** (-7.031)
AUM	-2.25e-07* (-1.867)	1.93e-06 (0.612)	-1.87e-07 (-1.160)
Dry Powder	-5.62e-06 (-0.919)	-0.000346 (-0.924)	-3.77e-05** (-2.039)
Investment Professionals	-2.19e-06** (-2.285)	7.94e-05 (0.722)	-8.66e-06*** (-3.527)
Age	0.000800 (0.883)	-0.0923 (-0.759)	-0.00584** (-2.013)
Investments	0.000161 (0.960)	0.0107 (1.019)	0.000742** (2.103)
Exits	-0.000338 (-0.966)	-0.0138 (-1.024)	-0.00115 (-1.445)
Funds Closed	-0.000528 (-0.516)	0.0424 (0.668)	0.00516 (1.071)
Fund Size	5.97e-06** (2.183)	8.92e-05 (0.424)	-5.18e-05*** (-8.332)
Minimum Investment	8.10e-05 (0.171)	-0.00101 (-0.0564)	0.00107 (0.995)
Maximum Investment	9.50e-06** (2.039)	6.61e-05 (0.177)	1.25e-05 (1.366)
N	328	341	342
R²	0.040	0.057	0.046

Notes: The table gives the estimated coefficients from regressing binary variables of different investing stages in VC-backed companies on long-term performance indicators. These variables are: a 0 or a 1 indicator of a high reputational venture capital investor in a series A (Tier 1 series A), a 0 or a 1 indicator of a high reputational venture capital investor in a series B (Tier 1 series B), a 0 or a 1 indicator of a high reputational venture capital investor in both series A and B (Tier 1 series AB), gross proceeds from IPO (Offer Size; $\ln(\text{median Offer Size})$), assets under management in the lead venture capital firms (AUM; $\ln(\text{median Assets Under Management})$), dry powder (Dry Powder; $\ln(\text{median dry powder})$), number of investment professionals at the venture capital firm (Investment Professionals; (median investment professionals), VC firm age (Age; (median firm age), the number of investments made by the VC firm (Investments; (median investments), the number of exits made by the VC firm (Exits; (median number of exits made), the number of funds dosed (Funds Closed; (median number of funds dosed), the size of the funds dosed (Fund Size; $\ln(\text{median fund size})$), minimum size of investment made by the VC firm (Minimum Investment; $\ln(\text{minimum investment size})$ and the maximum size of investments made by the VC firm (Maximum Investment; $\ln(\text{maximum investment size})$.

The significance levels are represented by (two-tail) test levels 10% (*), 5% (**) and 1% (***).

Table 15. Issuer Long-Run Performance and Tier 1 Investor Variables, Robustness Analysis Without Winsorizing and Log

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Dependent Variable	ROA	ROA	ROA	M/B	M/B	M/B	SP	SP	SP
Tier 1 Series A	0.0744** (2.137)	0.0754** (2.267)	0.0752** (2.178)	6.501*** (3.802)	6.037* (1.965)	6.458* (1.815)	0.0574 (0.574)	0.0415 (0.739)	0.0194 (0.386)
Tier 1 Series B	0.0935** (2.071)	0.0988** (2.305)	0.0926** (2.214)	3.943* (1.768)	3.845*** (2.787)	3.523** (2.416)	0.0379 (0.303)	0.00636 (0.108)	-0.00602 (-0.104)
Tier 1 Series AB	0.0342 (1.205)	0.0373 (1.263)	0.0379 (1.221)	2.786* (1.949)	2.382** (2.541)	2.353*** (2.612)	0.0417 (0.512)	0.0368 (0.621)	0.0136 (0.242)
Offer Size		-0.0213 (-1.287)	-5.01e-06 (-1.373)		-0.221 (-0.387)	-7.67e-05 (-0.441)		-0.0274 (-0.895)	-3.20e-05*** (-7.031)
AUM		0.000653 (0.104)	-2.25e-07* (-1.867)		0.237 (1.074)	1.93e-06 (0.612)		-0.0122 (-0.638)	-1.87e-07 (-1.160)
Dry Powder		-0.000715 (-0.110)	-5.62e-06 (-0.919)		0.0281 (0.140)	-0.000346 (-0.924)		-0.00523 (-0.200)	-3.77e-05** (-2.039)
Investment Professionals		-3.44e-06** (-2.493)	-2.19e-06** (-2.285)		8.71e-05 (0.737)	7.94e-05 (0.722)		-7.96e-06* (-1.901)	-8.66e-06*** (-3.527)
Age		0.000703 (0.801)	0.000800 (0.883)		-0.101 (-0.814)	-0.0923 (-0.759)		-0.00516* (-1.804)	-0.00584** (-2.013)
Investments		0.000200 (1.263)	0.000161 (0.960)		0.00855 (0.822)	0.0107 (1.019)		0.000449 (1.303)	0.000742** (2.103)
Exits		-0.000286 (-0.899)	-0.000338 (-0.966)		-0.0152 (-1.042)	-0.0138 (-1.024)		-0.000740 (-1.037)	-0.00115 (-1.445)
Funds Closed		-0.00125 (-1.356)	-0.000528 (-0.516)		-0.0385 (-1.428)	0.0424 (0.668)		-0.000678 (-0.167)	0.00516 (1.071)
Fund Size		-0.00870 (-1.176)	5.97e-06** (2.183)		-0.0269 (-0.0863)	8.92e-05 (0.424)		0.0218 (0.740)	-5.18e-05*** (-8.332)
Minimum Investment		0.00938 (0.955)	8.10e-05 (0.171)		-0.265 (-1.171)	-0.00101 (-0.0564)		-0.0226 (-1.249)	0.00107 (0.995)
Maximum Investment		0.00177 (0.197)	9.50e-06** (2.039)		0.421 (0.692)	6.61e-05 (0.177)		0.00427 (0.164)	1.25e-05 (1.366)
N	328	328	328	341	341	341	342	342	342
R²	0.024	0.048	0.040	0.047	0.062	0.057	0.002	0.026	0.046

Notes: The table gives the estimated coefficients from regressing binary variables of different investing stages in VC-backed companies on long-term performance indicators. These variables are: a 0 or a 1 indicator of a high reputational venture capital investor in a series A (Tier 1 series A), a 0 or a 1 indicator of a high reputational venture capital investor in a series B (Tier 1 series B), a 0 or a 1 indicator of a high reputational venture capital investor in both series A and B (Tier 1 series AB), gross proceeds from IPO (Offer Size; ln(median Offer Size), assets under management in the lead venture capital firms (AUM; ln(median Assets Under Management), dry powder (Dry Powder; ln(median dry powder), number of investment professionals at the venture capital firm (Investment Professionals; (median investment professionals), VC firm age (Age; (median firm age), the number of investments made by the VC firm (Investments; (median investments), the number of exits made by the VC firm (Exits; (median number of exits made), the number of funds closed (Funds Closed; (median number of funds closed), the size of the funds closed (Fund Size; ln(median fund size), minimum size of investment made by the VC firm (Minimum Investment; ln(minimum investment size) and the maximum size of investments made by the VC firm (Maximum Investment; ln(maximum investment size).

The significance levels are represented by (two-tail) test levels 10% (*), 5% (**) and 1% (***).

For our complete Venture Capital IPO Market Share database please follow link below:

https://docs.google.com/spreadsheets/d/1AWedTupDyDdfDpVd62Y2iU1eYtrtJbHHI1moHEDh7_0/edit#gid=0

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
3i Group																0,12%	0,06%	0,05%
5AM																		0,10%
Aberdare																	0,05%	0,23%
Abingworth																	0,05%	0,08%
ABS									0,41%	5,45%	5,42%	6,10%	1,09%			0,24%	0,17%	0,15%
Abu Dhabi Investment Authority														5,74%	3,58%	1,82%		
Aæel	8,01%	2,88%		1,39%	0,26%						0,50%	1,18%	1,67%	0,79%	1,14%	4,81%	1,31%	4,27%
Actua															1,62%	0,83%	0,41%	
Adage																0,30%	0,15%	0,45%
Adams Street												0,60%	0,84%	0,79%				
Advanced Technology									0,26%	0,19%	0,42%	0,30%	0,42%			0,42%	0,21%	0,78%
Advanta									0,18%	0,14%	0,12%							
Advent									0,19%	0,14%	0,59%	0,78%	1,10%	0,30%				
Aisling																0,10%	0,09%	0,12%
Alafi																		0,31%
Alliance												1,16%	1,64%	1,54%				
Alloy																0,11%	0,09%	0,14%
Alta								4,11%	0,86%	0,64%	0,12%	0,14%	0,20%			0,11%	0,06%	0,15%
Altira															0,34%	0,17%	0,09%	0,01%
American																0,41%	0,21%	0,19%
American Bailey																0,14%	0,07%	0,06%
Ampersand									0,19%	0,14%	0,12%							
Anthelion									0,18%	0,14%	0,12%							
AOL			3,84%	2,82%	1,80%	1,81%									0,51%	0,26%	0,13%	
Apax			2,61%	1,91%	1,22%	1,23%					0,18%	0,21%	0,30%					
Apex															0,18%	0,09%	0,05%	
Applewood			3,41%	2,51%	1,60%	1,61%												
Aquent																0,89%	0,45%	0,40%
ARCH									0,44%	0,32%	0,28%						0,10%	0,32%
Ardian											0,12%	0,14%	0,20%					
Aries								3,12%	0,65%	0,48%								
Artiman															0,25%	0,13%	0,06%	
Artis																		0,14%
Ascension									0,19%	0,14%	0,12%							
Ascant					2,05%	2,07%	2,83%											
Asiavest																		
Asset Management																		0,02%
Associated Group																0,08%	0,04%	0,04%
Atlantic Bridge																	0,06%	0,05%
Atlas									0,33%	1,51%	1,49%	1,63%	0,46%	0,16%				