EFFECT OF VENTURE CAPITAL MANAGEMENT ON BUSINESS PERFORMANCE

ZHAO Yuan-Jun

Glorious Sun School of Business and Management,

Donghua University

Shanghai China

ABSTRACT

Venture capital (VC) has been playing an increasingly important role in the growth of early-stage companies around the globe. In addition to providing equity financing, venture capitalists also involve heavily in the management of investee companies and provide a number of value-added services. However, Gompers(1996) notes that VCs have strong incentives to grandstand by taking investee firms public prematurely in order to exit and realize investment returns early. Hence, the net impact of VC involvement on firm performance remains unclear. Using a sample of companies listed on the Shenzhen small and medium-sized enterprises (SMEs)board between 2004 and 2012, this paper examines the impact of VC on the short-term and long-term firm performance in emerging markets, particularly China. Empirical results show that compared with non-VC backed firms, VC backed firms are generally younger and smaller at the time of their initial public offering (IPO), as well as exhibit greater IPO under pricing. Moreover, although VC and non-VC backed firms do not exhibit differential performance during the lockup period, the former experience significantly greater decline in accounting performance as well as poorer stock return after the expiration of the lockup period. Additional analyses show that the level of under pricing and decline in firm performance are negatively associated with the age of VC firms. These results provide empirical evidence in accordance with Gompers (1996) grandstanding hypothesis, suggesting that VC firms in China have strong incentives to take firms public prematurely in order to exit and realize investment returns early. This strategic behavior in turn has a negative impact on the long-term performance and well-being of investee companies. We further partition the subsample of VC-backed firms into those backed by state owned VC firms and those backed by non- state owned VC firms. Empirical evidence shows that companies invested by non-state owned VC firms tend to underperform those backed by state owned VC firms, suggesting that state owned VC firms have less incentive to grandstand.

Key Words: *Venture Capital; Initial Public Offering; Under-pricing; Lockup Period; Performance Decline*

1. INTRODUCTION

Venture capital is a kind of equity investment to emerging, with high growth potential of the unlisted enterprises. [2] since the eighties of the last century, after 20 years of development, venture capital has gradually become an important part of China's financial system. Especially in the past ten years, the rapid development of economy and the improvement of the capital market greatly promoted China's venture capital industry growth, investment scale and quantity are greatly improved, investment by $580000000 in 1999 to $4200000000 in 2012, the average annual compound growth rate reached 25%; investment case from 2001 the 21 growth in 2012 to 607. As a new type of financial intermediary, venture investment is usually concerned with "high technology, high growth potential, high risk" three characteristics of the enterprises and provide the necessary funds for their development. Unlike other financial investors, venture capital institutions, in addition to providing funds for the enterprise, also in more on corporate strategy and financial management. Usually in the venture capital investment company's board of directors office, to participate in important decisions in the company and provide value-added services to the company.

Although venture capital to solve the enterprise establish funding problems early, but the venture agency involvement on the long-term development of enterprises have what kind of influence is still very controversial. A kind of viewpoint thinks, venture capital institutions through participation in enterprise management, to constraint and risk monitoring on the effective investment enterprises; and perfect through the help enterprise governance initiatives, the enterprises to promote the long-term healthy development of value-added in as quickly as possible in a short time. Another view is that, because of venture capital institutions interest lies not in the mere possession of and long-term business venture, but in a certain period of time to quit and realized investment gains, so will the excessive pursuit of short-term effect and neglect the long-term development needs of the enterprise. Gompers[1] proposed the venture investment "by the name of motivation" (Grandstanding) hypothesis, namely venture out of their own performance pressure will be "spoil things by excessive enthusiasm" of the investment enterprises, promote the early listing, to the detriment of long-term interests of enterprises.

Impact of venture capital on the long-term performance and the development of enterprises in our country at present is the lack of systematic empirical study. This paper around the enterprises listed on this important venture capital exit way, through three aspects to discuss this issue. First of all, comparison of venture capital support enterprise and non VC backed companies listed on the first day underpricing; then, the long-term operating performance and market performance comparison of the two kinds of enterprises after the listing, change of corporate performance after and the effects of venture capital stock held by the lifting of the ban; finally, further inspection of venture capital business life, property and the enterprise shareholding characteristic to support enterprise long-term performance.

The research results can be summarized as follows: first, the venture capital support enterprises listed in the age and size significantly less than non VC backed companies, but the former bear a higher market underpricing cost; second, although there is no significant difference in the lock up period of venture capital support enterprise and non VC backed companies operating performance and the market, but the former in the lifting of the ban after the performance decline significantly higher than the latter, and the rate of stock investment is lower; third, in the age of the underpricing level and enterprise performance decline and venture capital institutions significantly negative correlation. In addition, state-owned venture capital institutions to support enterprise level of Underpricing and performance "changing face" was significantly lower than the non support of state-owned venture capital institutions. These results provide evidence for the currently prevailing in China venture capital institutions in the utilitarian tendency and its negative effects on the investment of enterprise, and how to regulate the management of venture capital industry and how to set comprises a lock up period, the market regulatory system has practical significance

2.THEORETICAL ANALYSIS AND ASSUMPTION

The system of venture investment involving three participants: investors, venture capital and venture enterprise. Venture capital funds from the supplier -- investors, the flow of funds to the operation of the venture capital mechanism --, after screening decision of the latter, and then to the users of funds -- enterprise. Venture capital institutions as an intermediary between investors and venture enterprises, in addition to help investors make investment decisions, but also exert their management knowledge, experience and social networks to help the enterprises invested in the venture capital operation and development, get the value added by listing mode of withdrawal, will return to investors.

This mode of operation of venture capital, double principal-agent relationship between investors and venture capital institutions, the formation of venture capital and venture enterprise. Investors usually provide funds, not involved in the mechanism of venture capital operation and management decision-making, capital of the separation of corporate ownership and management caused the first agency problem between investors and venture investment institutions, specific performance: (1) the adverse selection, information asymmetry between the investment and venture capital mechanism caused by the former is unable to accurately judge the latter's true ability. (2) the moral risk, which for some reason (such as venture capitalists personal interests), venture capital institutions may not start, deliberately misleading investment decision from the investor to maximize the benefits of screening angle in enterprise; investment, venture capital institutions may also seek personal gain, or not to help the enterprise value in Enterprise management.

To prevent these risks, investors will be through a series of system and incentive mechanism to protect their own interests, including its fund limited partnership system. Each fund's duration is usually ten years, of which the first three to eight years to find and investment enterprises, after a few years to help businesses grow and value-added, expiration must be liquidated, the principal and the profit distributed to investors. As a foundation in a few years after the founding of the inner will finish all the investment, venture capital institutions in order to maintain the operation must take rolling financing, namely every three to eight years to re financing, which leads to a repeated game between investors and venture capital mechanism. Each subsequent financing behavior, is actually an evaluation of venture capital institutions management level and ability, performance is considered before investors of venture capital capacity indicators, will directly affect the follow-up to the difficulty of financing, especially in the initial stage, because investors know nothing at all on the quality of venture capital institutions, so a few times before financing for venture capital institutions can survive critical. [3,4]

The limited partnership fund and finite duration mechanism, aim to constrain opportunistic behavior of venture capital firms and investors, alleviate the agency problem between. However, Gompers[1] points out, this mechanism has a potential problem, that is the venture capital institutions under the financing pressure, may pay too much attention to short-term performance, eager to implement exit, the duration of return investors, in order to ensure the sustainable financing and management ("by name motivation" hypothesis). And this kind of short-term pressure on venture capital institutions will directly on to the invested enterprise, to venture capital institutions and enterprises invested by different objectives, resulting in the dual principal-agent problem. Theoretical analysis of Stein, [5,6]Rajan[7] showed that the short-term investment period, investors can lead to management decisions cannot be from the company benefit maximization perspective. Because IPO is a venture capital institutions, an important way of exit and performance indicators, [1] venture capital institutions for the early achievements, prove their ability, have the motivation to be invested enterprises in is not yet mature conditions will rush to the capital market. Gompers[1] points out that, venture capital institutions that short practice time, qualifications is shallow because of the lack of record, and therefore more prone to "by name" tendency. And for those practitioners longer, has repeatedly successful financing venture capital institutions, investors for their ability to have a deeper understanding, an additional IPO marginal income to improve their capability of refinancing is relatively low, so they do not have a strong inclination for instant success.

Venture capital institutions "by name" motivation of the invested enterprise to produce negative influence through short-term performance (that is listed on the first day underpricing) and long-term performance (i.e., management and capital market performance) reaction. Underpricing (Underpricing) refers to the company's IPO price is lower than the closing price on the first day of the phenomenon. Domestic and foreign scholars on the world stock market phenomenon presents a plurality of interpretation, one of the main explanation based on the theory of information asymmetry. [8] first open corporation because of the shorter time, before the listing is not to disclose to the public the financial and operating performance of duty, therefore between listed and two secondary market investors are often serious information asymmetry exists, then carry high investors prior (Extant) risk, so enterprises will by reducing the issue price to attract more investors. The earlier [9] enterprises listed, the information asymmetry problem more serious, underpricing level is high. [10] underpricing on a speculative structure is a cost, because the stock is undervalued means they take a part of enterprise value free transfer to the new shareholders, so only "by name" strong motivation to venture capital institutions are willing to bear the cost of. In addition, if the venture capital institutions over the pursuit of short-term performance, in order to achieve the purpose of listed companies at an early date may be carried out on its performance "packaging". A lot of research were found, earnings management of listed before the performance of listed companies will directly lead to decline. [11-14]

Many western scholars have carried out research on the impact of venture capital management of enterprises listed on the Underpricing and long-term performance, however, the existing literature has not reached a consensus. Barry [15] America 1978 to 1987 between 433 venture capital backed companies and 1123 non VC backed companies, found that the degree of underpricing was significantly lower than that of the latter, Megginson and Weiss[16] are also found, and made the following explanation to the conclusion: (1) a speculative structure will do a lot of detailed due diligence survey of enterprises in the pre investment, only when the confirmation of its investment value, have relatively high future profitability, will put money into the company. So investors have reason to believe, venture capital institutions the option of the company's future performance may be better than other companies; (2) venture capital invested in the business development process to provide plenty of value-added services and participate in corporate governance, these measures can carry high performance and quality, reduce investment risk. Study of Barry and [15] have not found venture capital institutions USA has "by name" tendency, also found that venture capital involvement have positive effects on enterprise performance. In contrast, Gompers, Lee and Wahal[17] were found in empirical research, venture capital in increasing the enterprise listed underpricing level, but there is a significant negative correlation between venture capital and enterprises listed in the age of underpricing level, provides empirical evidence for venture capital institutions "by the name of motivation" hypothesis.

Some studies the influence of venture capital to participate in the long-term performance of the listed companies. Jain and Kini[18] of 136 venture capital backed companies and 136 non VC backed companies were ratio of research. The results show that, although the two companies have experienced a decline in performance after the listing, but the performance was significantly better than the latter. Brav and Gompers[19] studies found that, in the eight years after the listing of stock market returns in the venture capital business background is significantly high in non venture backed business background. They put the conclusion attributed to the venture capital institutions invested in the enterprise operation and management aspects of the intervention (including providing value-added services and participation in corporate governance) has a positive effect on improving enterprise performance. However, Gompers and Lerner[2] found, venture capital support enterprises in lock up period better than non VC backed companies, but the former exit in the venture capital institutions after the performance is significantly lower than that of the latter.

At present only a few literatures [21] research of venture investment on China's listed enterprise effect of underpricing, but these studies were limited to comparison of venture capital support enterprise and non venture backed enterprises price depression, no further research on the relationship between Underpricing and venture capital institutions feature, nor from the long-term perspective to study the effects of venture capital institutions its support for the listed companies performance. China's venture capital industry started late, just experienced the first ten years of rapid development, most of the VC institutions still need to prove their strength, establish the status of industry stage performance. We infer that at this stage "by name motivation" phenomenon in our country venture capital institutions as possible is more obvious, aggravated the venture capital institutions and support the agency cost in enterprises. The hypothesis of this paper is:

Hypothesis 1: in our country, venture backed companies listed on the degree of underpricing high no venture backed Enterprises

Hypothesis 2: in China, the long-term performance of the listed companies performance venture capital support than did not venture backed Enterprises

3. DEFINITION AND RESEARCH VARIABLES DESIGN

3.1 Venture Capital Market Affect the Under Pricing of Enterprises

Firstly, through the model (1) compared the venture capital support enterprise and non VC backed companies listed on the first day underpricing difference:

$$\begin{aligned} Underpricing_{i,t} = & a_0 + \sum_{Y=2004}^{2012} a_{1,Y} YR_{Y,i} + a_2 VC_{i,t} + a_3 Size_{i,t-1} \\ & + a_4 OfferSize_{i,t} + a_5 Age_{i,t} + a_6 StdReturn_{i,t} \\ & + a_7 Lev_{i,t-1} + a_8 Underwriter_{i,t} + a_9 Auditor_{i,t} \\ & + a_{10} HighTech_{i,t} + \varepsilon_{i,t} \end{aligned} \quad (1)$$

Among them, the explanatory variable Underpricing for enterprises listed on the first day underpricing, using formula (the first day closing price and the issue price) / IPO price; VC for venture investment dummy variable, if the enterprise has venture capital support, the value is 1, otherwise the value is 0; the control variables, the natural logarithm of total assets of the listed Size as before at the end of the year; OfferSize financing scale, calculation formula is (the issue price of the issued share capital of X number) the natural logarithm of the Age for the listing of enterprises; age, calculated as the enterprises listed on the year and year of establishment of the poor natural logarithm; StdReturn was 180 on the yield of enterprises after the listing of standard deviation, to measure the company's future cash the uncertainty; [22] Leverage for corporate debt, asset liability ratio to measure, calculated as listed before the end of the total liabilities divided by total assets at the end of the year; Underwriter for the Underwriters dummy variable, if the listing of enterprises of the underwriter is ranked in the top ten firms, the value is 1, otherwise the value of 0; Auditor for accounting firm dummy variable, if the listing of enterprises choose accounting firms ranked in the top ten, the value is 1, otherwise the value is 0; HighT ECH is a dummy variable, if the enterprises in the information technology industry, the value is 1, otherwise the value is 0. I and t on behalf of Sample Firms and listed on the annual. Because of the sample across the 2004-2012 for eight years, during which the market environment fluctuates greatly, for controlling for differences in price structure, we introduce a dummy variable YRY. When the sample from the Y, YRy is equal to 1, otherwise it is equal to 0.

If the venture capital institutions involved on the enterprise "certification" role, to reduce investment risk, we expect the model (1) the estimated coefficient VC is significantly negative; conversely, if the driver is venture capital institutions by their own interests, to promote listed companies at an early date would rather bear the high underpricing cost, we is expected in VC were significantly positive coefficients. In addition, the larger the company, the establishment of the longer the risk degree is relatively lower, we expect the regression coefficients of Size and Age were significantly negative; similarly, company risk lower financing scale, the regression coefficient OfferSize is expected future cash flow is significantly negative; high risk of investment risk is higher, the regression coefficient StdReturn is expected to significantly positive; enterprise debt rate is higher, the possibility of bankruptcy is more big, but also means being the more stringent regulation, so the regression coefficient of the wrong direction Lev expected; positive signal with high reputation underwriters or accountants can make enterprise high quality to investors, so the expected return coefficients of Underwriter and Auditor were significantly negative; in addition, the high-tech enterprises usually have a large number of R & D investment, intangible assets ratio is high, so the information asymmetry problem is more serious, we expect the regression coefficient is significantly positive for HighTech.

For the further study of venture capital investment and enterprises listed IPO price between, selects the venture backed enterprises as samples, using model (2) to influence the shareholding ratio, inspection of venture capital in the enterprise business life and property for the underpricing.

$$
\begin{aligned}
Underpricing_{i,t} = {} & a_0 + \sum_{Y=2004}^{2012} a_{1,Y} YR_{Y,i} + a_2 VC\_Own_{i,t} + a_3 VC\_Age_{i,t} \\
& + a_4 VC\_SOE_{i,t} + a_5 VC\_Num_{i,t} + a_6 Size_{i,t-1} \qquad (2) \\
& + a_7 OfferSize_{i,t} + a_8 Age_{i,t} + a_9 StdReturn_{i,t} \\
& + a_{10} Lev_{i,t-1} + a_{11} Underwriter_{i,t} + a_{12} Auditor_{i,t}
\end{aligned}
$$

Among them, the sum of VC_Own as an investment in an enterprise of all venture capital institutions in pre IPO ownership; VC_Age in the enterprise holding the highest proportion of venture capital institutions in the age, year of establishment of venture capital firms listed year minus calculation for the investment of enterprises; VC_SOE is a property investment mechanism, if the enterprise ownership the highest proportion of venture capital institutions for state-owned background, the value is 1, otherwise the value is 0; the company may also have involved a plurality of venture capital institutions, so we control the venture capital institutions number VC_Num. The definition and the model of other variables (1) the same.

3.2 Effect of Venture Capital on Long-Term Performance of Listed Companies

First of all, we pass on the accounting index and stock returns of the mean and median test to compare the venture capital support enterprise and non VC backed companies in business four years listed in the first three years after the first, and two kinds of enterprises in the performance of the stock market in four years after the listing. The rate of return on total assets (ROA) as a measure of performance, with the adjustment of Shenzhen A stock index after the excess rate of return (Buy-and-Hold Abnormal Return) metrics as the stock market performance. Then, use the following four models for multiple regression test:

$$
\begin{aligned}
CROA[-1,+j]_{i,t} = {} & a_0 + \sum_{Y=2004}^{2012} a_{1,Y} YR_{Y,i} + a_2 VC_{i,t} + a_3 Size_{i,t-1} \\
& + a_4 OfferSize_{i,t} + a_5 Age_{i,t} + a_6 StdReturn_{i,t} \qquad (3) \\
& + a_7 Lev_{i,t-1} + a_8 HighTech_{i,t} + \varepsilon_{i,t}
\end{aligned}
$$

$$
\begin{aligned}
CROA[-1,+j]_{i,t} = {} & a_0 + \sum_{Y=2004}^{2012} a_{1,Y} YR_{Y,i} + a_2 VC\_Own_{i,t} + a_3 VC\_Age_{i,t} \\
& + a_4 VC\_SOE_{i,t} + a_5 VC\_Num_{i,t} + a_6 Size_{i,t-1} \qquad (4) \\
& + a_7 OfferSize_{i,t} + a_8 Age_{i,t} + a_9 StdReturn_{i,t} \\
& + a_{10} Lev_{i,t-1} + a_{11} HighTech_{i,t} + \varepsilon_{i,t}
\end{aligned}
$$

$$
\begin{aligned}
Return[+1,+k]_{i,t} = {} & a_0 + \sum_{Y=2004}^{2012} a_{1,Y} YR_{Y,i} + a_2 VC_{i,t} + a_3 Size_{i,t-1} \\
& + a_4 OfferSize_{i,t} + a_5 Age_{i,t} + a_6 StdReturn_{i,t} \qquad (5) \\
& + a_7 Lev_{i,t-1} + a_8 HighTech_{i,t} + \varepsilon_{i,t}
\end{aligned}
$$

$$\begin{aligned} Return[+1,+k]_{i,t} = {} & a_0 + \sum_{Y=2004}^{2012} a_{1,Y} YR_{Y,i} + a_2 VC\_Own_{i,t} + a_3 VC\_Age_{i,t} \\ & + a_4 VC\_SOE_{i,t} + a_5 VC\_Num_{i,t} + a_6 Size_{i,t-1} \\ & + a_7 OfferSize_{i,t} + a_8 Age_{i,t} + a_9 StdReturn_{i,t} \\ & + a_{10} Lev_{i,t-1} + a_{11} HighTech_{i,t} + \varepsilon_{i,t} \end{aligned} \tag{6}$$

Among them, CROA[-1, +j] for enterprise J years after the listing and listing the assets yield difference; Return[+1, +k] calculations for the company after the listing of first months to K months of stock holding period return rate over the same period, minus the Shenzhen A share index; ROA is listed in the rate of return on total assets the average net profit, calculated as total assets divided by the beginning and end of the year. The definition and the model of other variables (1) and (2) the same. Most of the existing literature found that China's listed companies operating performance decline significantly, namely the performance "changed face". If the venture capital institutions involved in promoting long-term healthy development of enterprises, venture backed companies expected performance before and after the "face" of small amplitude than venture capital companies, namely model (3) the estimated coefficient VC is positive; in addition, the venture capital to support the stock market performance of enterprise is better than non VC backed companies, namely model (5) the estimated coefficient VC is positive; otherwise, if the venture capital mechanism has the mentality of quick success, is expected to venture capital support enterprises in the market, especially in the venture capital exit mechanism after the decline in performance than venture capital companies, namely model (3) the estimated coefficient is significantly negative in VC. In addition, the expected performance of the stock market than venture backed venture capital business support enterprises to be more depressed, namely model (5) the estimated coefficient is significantly negative in VC. And the model (2) - like, with model (4) and (6) to the shareholding ratio, inspection of venture capital in the enterprise business life and property three characteristics on the influence of support business performance and stock market performance after the listing of enterprises.

4. Empirical Results and Analysis

Because in our country the exit from the venture capital projects, the vast majority of Shenzhen SME board listed, so this paper chooses 2004-2012 years in the listed companies as the research sample. Venture capital support enterprise list and information from the branch group developed Zero2IPO Chinese VC database. The database records the names, venture investment mechanism of each enterprise establishment year, nature of equity, investment and scale and other related data date. Listing Corporation market and financial data from the Wind Chinese financial database.

4.1 Venture Capital Market Affect the Under Pricing of Enterprises

Table 1 lists the venture investment underpricing impact on its support enterprises listed on the first day of the multivariate regression results. The model 1 using VC dummy variable VC; and the single variable analysis results, the regression coefficient VC were significantly positive, that venture capital support enterprise underpricing was significantly higher than non VC backed companies. These results do not support the venture capital mechanism has the effect of "certification" hypothesis, which may be due to China's venture capital industry is still the overall in the early stages of development, lack of investment and management experience, able to provide for its investment enterprise value-added service is also very limited, so the "certification" ability is weak. We find that venture capital support enterprise in the listed regardless of the size or age was significantly smaller than non VC backed companies, these results suggest that venture capital institutions in China will urge enterprises listed stock is undervalued, leading to premature early realization of investment income, the issuance of enterprise could raise the funds are in the market, the formation of the west the so-called "money left on the table" (Leave Money on the Table) phenomenon. Model 2 (a) - (d) by 70 companies as the sample of venture capital support, to further examine the relationship between price suppression characteristics and corporate venture capital institutions. The results show that, venture capital institutions in the age of shorter, the investment of enterprises listed on the first day of the higher degree of price suppression; consistent found it and Gompers[1], the venture capital institutions junior more eager to use performance to prove himself. However, we found no shareholding and corporate venture capital institutions underpricing related, this may be the result of venture capital institutions only choose investment amount for each enterprise, so the success or failure of the enterprise and the rate of return on investment are very concerned.

Table 1 venture capital to companies listed on the first day under pricing regression results

Variables	Prediction of symbols	Model 1	Model 2 (a)	Model 2 (b)	Model 2 (c)	Model 2 (d)
VC	?	40.72				
		2.68***				
VC_Own	?		-26.65			-104.18
			-0.23			-0.92
VC_Age	?			-8.15		-6.88
				-2.08**		-1.75*
VC_SOE	?				-57.91	-53.75
					-2.39**	-2.16**
VC_Num	?		5.19	0.96	13.30	13.18
			0.34	0.07	0.90	0.86
Size	-	-19.70	-12.23	-17.98	-14.26	-14.40
		-1.82*	-1.69*	-1.78*	-1.72*	-1.73*
OfferSize	-	-11.54	-5.34	-2.48	-18.28	-11.94
		-0.46	-0.26	-0.13	-0.91	-0.58
Age	-	0.54	0.51	-0.09	-0.38	-0.23
		0.26	0.16	-0.03	45.48	43.71
StdReturn	+	38.97	48.31	46.83	45.48	43.71
		2.13**	5.43***	5.44***	5.30***	5.13***
Lev	?	1.26	-2.58	-0.56	-0.24	1.25
		0.21	-0.50	-0.11	-0.05	0.25
Underwriter	-	-4.57	-21.64	-13.39	-27.20	-16.78
		-0.32	-0.86	-0.54	-1.13	-0.69
Auditor	-	-11.47	-26.05	-26.55	-20.29	-14.15
		-0.77	-0.83	-0.89	-0.69	-0.47
High Tech	+	6.45	5.29	5.31	4.87	5.01
		1.24	1.13	1.14	1.02	1.06
Year dummies		Included	Include	Included	Included	Included
number of samples		273	70	70	70	70
Adjustment of R^2		0.03	0.04	0.04	0.05	0.06

In addition, the model 2 (c) and 2 (d) regression results show, state-owned venture capital institutions to support enterprise under pricing was significantly lower than the non-state-owned venture capital institutions, this conclusion still holds in the control of the venture capital institutions in the age of post. Because the state-owned venture commitment of promoting the local government's industrial development strategy, promote the local hi-tech industrialization task, not entirely to the rate of return on investment as the only goal, so [23] is not state-owned venture capital institutions so quick, the decision is also easier to start from the angle of the long-term interests of enterprises. The control variables, the degree of Under pricing and the scale of the enterprise Size significant negative correlation, positive correlation and the future of enterprise risk degree Std Return.

4.2 Effect of Venture Capital on the Long-Term Performance of Listed Company

Table 2 Comparison of performance from the long-term perspective, venture capital support enterprise and non VC backed companies in the business performance and degree of change before and after listing. Because venture capital institutions, usually in a short time period after the lock out, so we also pay special attention to venture capital stock held by the lifting of the ban on the investment performance of the enterprise. For the control of the lock up period length under the influence, we excluded 17 locks regularly for three years of the sample companies, the remaining 256 most early lifting of the ban time were 12 months after the listing of enterprises. Table 2 shows the following points: (1) the venture capital support enterprise and non VC backed companies in the profitability of listed in the first three years were good, the average rate of return of assets was maintained above 10% and listed before the year is slightly higher, but no significant differences between the two types of enterprises. Because of the strong profit ability is one of the basic conditions of enterprises in Shenzhen SME board listed, so the results are reasonable. (2) venture capital support enterprise and non VC backed companies in the year after the listing has experienced a certain degree of asset returns decline, which is mentioned in existing literature performance "changing faces" phenomenon. The causes of this phenomenon may have two: one is the enterprise to meet the listing requirements will use earnings management to deliberate on the operating performance of the "packaging". Since the majority of earnings management project will be reversed in later period, leading to decline in the performance of listed companies; two is the use of funds. If a company listing to raise funds for investment recovery period is longer, so the net profit rate of expansion after the listing of short-term growth rate will be significantly slower than the scale of assets, return on assets will fall. This kind of face is actually "false face", with the recovery of future investment profits, the company's return on assets will gradually rise; (3) although the lock up period (12 months) in venture capital support enterprise and non VC backed companies there is no significant difference in the degree of decline, but the former in the lifting of the ban after the performance decline degree significantly higher than the latter.

As shown in Figure 1, a VC backed companies fell, in three years of asset return straight after the lifting of the ban, in contrast, non VC backed companies return on assets gradually rising trend, indicating that the former performance in after the lifting of the ban "true face" the possibility is higher than that of the latter. These results further support the venture capital presence success tendency hypothesis. Because venture capital support enterprise in itself does not have the conditions and under the condition of short listed, and therefore need to conduct performance "packaging", leading to decline in the performance of listed after the range is larger, and the longer duration. In addition, the venture capital support enterprise after the lifting of the ban performance "changing faces" is greater than non VC backed companies empirical discovery, description driven entirely by venture capital institutions of their own interests, in order to obtain a higher rate of return on investment, opportunistic behavior of enterprises in the cash in the lifting of the ban, but no apparent its negative impact on the long-term performance of enterprises.

Table 2 Comparison of venture capital support enterprises and non VC backed companies before and after the return on assets

		-3	-2	-1	0	+1	+2	+3	+4
Venture capital support enterprise	mean	0.12	0.12	0.12	0.07	0.06	0.04	0.03	0.02
	Median	0.10	0.10	0.10	0.07	0.05	0.04	0.03	0.04
	Numberof samples	67	67	67	67	45	19	9	7
Non VC backed companies	mean	0.11	0.11	0.11	0.07	0.06	0.06	0.07	0.08
	Median	0.09	0.10	0.10	0.06	0.06	0.06	0.07	0.08
	number of samples	189	189	189	189	140	78	41	31
T test		0.95	0.95	1.33	0.52	-0.61	-2.12**	-2.01**	-1.96**
Z test		0.60	0.34	1.15	0.39	-1.09	-1.98**	-1.60*	-1.86*
		[-1,0]	[-1,+1]	[-1,+2]	[-1,+3]	[-1,+4]			
Venture capital support enterprise	mean	-0.05	-0.05	-0.07	-0.08	-0.08			
	Median	-0.03	-0.04	-0.04	-0.05	-0.05			
	number of samples	189	140	78	41	31			
Non VC backed companies	mean	-0.04	-0.04	-0.04	-0.05	-0.04			
	Median	-0.03	-0.04	-0.04	-0.05	-0.05			
	number of samples	189	140	78	41	31			
T test		-1.44	-1.07	-2.02**	-2.10**	-2.40**			
Z test		-1.50	-1.32	-2.36**	-1.78*	-1.64*			

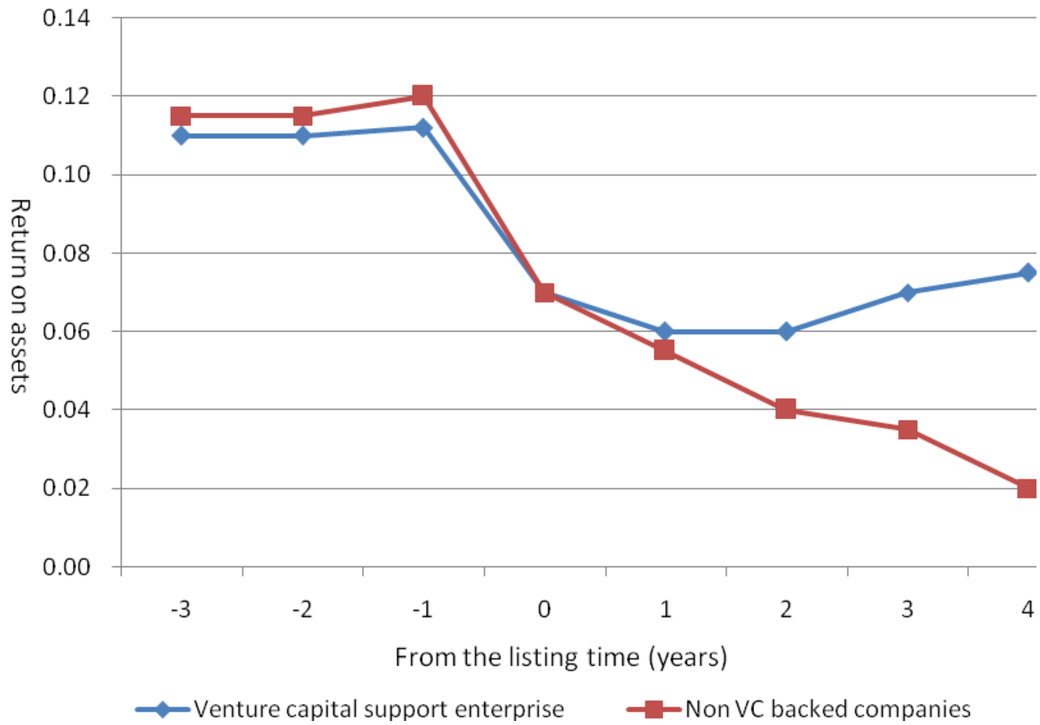

Fig. 1 Comparison of venture capital support enterprises and non venture backed companies before and after the return on assets

Table 3 lists the results of multiple regression analysis. Model 1 (a) compared the venture capital support enterprise and non VC backed companies in the degree of change before and after the listing of the year rate of return on total assets. The results showed no significant difference between the two. Model 1 (b) between the two types of enterprises in the second years after the listing, the lock up period ended with the average rate of return on assets listed before the year differences. A finding consistent with table 2, venture capital support enterprise performance decline was significantly higher than non VC backed companies. Model 2 (a) - (d) display, venture capital institutions working time shorter, the investment performance "changing faces" the bigger the venture capital institutions, eager young mind is more obvious; in addition, non state-owned venture capital institutions performance "changing faces" was significantly higher than state-owned venture capital institutions, the opportunism behavior the former is more serious. The control variables, the decline in performance and financing of the scale are related, it may be mentioned in the preceding paragraph "false face" caused; enterprise debt rate is high, the performance decline degree is low, the high debt ratio of enterprises may be subject to more stringent monitoring; in model 1 (a) and 1 (b). A negative relationship, enterprise age and face performance level, the duration time shorter enterprises need more after a performance "packaging" to be listed.

Table 3 The regression results of venture investment impact on operating performance of listed companies

Variables	Prediction of symbols	Model 1 (a) [-1,+1]	Model 1 (b) [-1,+2]	Model 2 (a) [-1,+1]	Model 2 (b) [-1,+1]	Model 2 (c) [-1,+1]	Model 2 (d) [-1,+1]
VC	?	-0.01-0.03					
		-0.77-2.02**					
VC_Own	?			-0.10			-0.10
				-1.15			-1.14
VC_Age	?				0.01		0.01
					1.68*		1.72*
VC_SOE	?					0.01	0.01
						1.97**	1.84*
VC_Num	?			0.01	0.01	0.01	0.01
				1.03	0.62	0.79	1.30
Size	-	-0.01	0.02	0.01	0.01	0.01	0.01
		-0.01	0.24	0.61	0.63	0.67	0.13
OfferSize	-	-0.01	-0.04	-0.03	-0.03	-0.03	-0.03
		-2.08**	-2.12**	-2.46**	-2.34**	-2.52**	-2.72**
Age	+	0.01	0.01	0.01	0.01	0.01	0.01
		2.10**	1.70*	0.99	0.94	0.65	0.82
StdReturn	-	-0.04	0.01	0.02	0.03	0.02	0.02
		-0.99	0.34	0.55	0.65	0.42	0.38
Lev	+	0.01	0.01	0.01	0.01	0.01	0.01
		2.92***	2.42**	2.64**	2.22**	2.97***	2.42**
High Tech	?	-0.01	-0.02	-0.01	-0.01	-0.01	-0.01
		-0.53	-0.67	-0.42	-0.46	-0.45	-0.41
Year dummies		Included	Include	Included	Included	Included	Included
number of samples		185	97	45	45	45	45
Adjustment of R^2		0.05	0.08	0.11	0.12	0.14	0.16

Table 4 shows the venture capital support enterprise and non venture capital support enterprises in the stock market performance after the listing. As can be seen, although the venture capital support enterprise and non venture backed enterprises in the 12 months after the listing within the yields are inferior to the Shenzhen composite index, but no significant difference between the two. However, the lock up period ends, the former's market performance significantly worse than the latter. Research on these results and performance found consistent, provide further support for venture capital institutions tend to.

Table 4venture capital support enterprise and non VC backed companies listed on the stock market after the comparison of return rate

		[+1,+6]	[+1,+12]	[+1,+18]	[+1,+24]	[+1,+30]	[+1,+36]	[+1,+42]
Venture capital support enterprise	mean	-0.19	-0.24	-0.49	-0.58	-0.41	-0.29	0.13
	Median	-0.22	-0.40	-0.52	-0.61	-0.42	-0.46	0.13
	number of samples	67	66	50	37	22	12	9
Non VC backed companies	mean	-0.09	-0.17	-0.29	-0.38	-0.19	0.30	0.46
	Median	-0.11	-0.27	-0.39	-0.46	-0.25	0.24	0.38
	number of samples	189	185	153	117	89	53	41
T test		-1.30	-1.59	-2.22**	-2.55**	-1.68*	-2.17**	-1.74*
Z test		-1.43	-1.56	-2.15**	-2.58***	-1.70*	-2.41**	-1.71*

Table 5 lists the excess stock returns multiple regression results. Model 1 (a) shows a VC backed firms and non VC backed companies on stock market performance in the lock period no significant difference; model 1 (b) shows the former listed in the 18 months after the excess stock returns is significantly lower than that of the latter, and table 4 consistent results. Model 2 (a) - (d) display in the age of long-term stock performance venture capital support enterprise and venture capital institutions a significant negative correlation; moreover, the non-state-owned venture capital institutions to support enterprise than state-owned venture capital support long-term stock performance of enterprises become more depressed. However, we did not find the company after the listing of the performance of the stock market and venture capital institutions have any significant relationship between the shareholding proportions.

Table 5 The regression results of venture capital to the company after the listing of the stock market performance

Variables	Prediction of symbols	Model 1 (a) [+1,+12]	Model 1 (b) [+1,+18]	Model 2 (a) [+1,+18]	Model 2 (b) [+1,+18]	Model 2 (c) [+1,+18]	Model 2 (d) [+1,+18]
VC	?	-0.01-0.09					
		-1.45-2.02**					
VC_Own	?			-0.52			-0.19
				-0.76			-0.27
VC_Age	?				0.04		0.04
					2.56**		2.36**
VC_SOE	?					0.11	0.09
						1.98**	2.36**
VC_Num	?			0.05	0.04	0.01	0.04
				0.71	0.63	0.22	0.55
Size	-	-0.08	-0.01	-0.19	-0.19	-0.15	-0.18
		-1.88*	-0.60	-2.18**	-2.48**	-1.69*	-2.08**
OfferSize	-	-0.12	-0.06	-0.19	-0.19	-0.18	-0.16
		-1.71*	-1.48	-1.89*	-1.98**	-1.80*	-1.45
Age	+	0.01	0.01	0.01	0.01	0.01	0.01
		0.44	1.76*	0.16	0.27	0.22	0.43
ROA	+	0.76	2.14	1.57	0.41	0.94	0.06
		0.60	2.88***	0.77	0.21	0.44	0.03
Lev	?	0.01	0.02	0.01	-0.03	-0.01	-0.04
		0.34	1.10	0.11	-0.93	-0.21	-1.09
High Tech	?	0.08	0.10	0.07	0.08	0.06	0.06
		0.74	0.85	0.64	0.70	0.60	0.75
Year dummies		Included	Include	Included	Included	Included	Included
number of samples		251	203	50	50	50	50
Adjustment of R^2		0.03	0.08	0.03	0.15	0.06	0.13

5. ROBUSTNESS TEST

5.1 Sample Selection Bias

Because venture capital support enterprise sample is not a random sampling of the results, but the venture capital institutions after due diligence to make the choice, and therefore possible sample selection bias (Selection Bias) problem. Using Rosenbaum and Rubin[24] matching preferences "" (Propensity Score Matching) method to control the problem. Specific approach is: first by using the Probit model for enterprises to obtain the probability of venture capital for regression. Among them, the dependent variable is the investment dummy variable, if the enterprise has the support of venture capital institutions, is equal to 1, it is equal to the 0 argument; issuing scale, industry, time to market, and listed total assets. Next, according to the regression coefficient for each sample enterprises calculate a tendency to "index", then for the enterprise non venture capital support each venture capital support enterprise ratio a tendency to "index" the closest.

Table 6 orientation ratio analysis results

	Listed on the first day underpricing（%）	Assets return rate [-1,2]	Excess stock returns [+1,+18]
difference between venture capital support enterprise and paired non venture capital enterprises	35.85	0.032	-0.37
number ofsamples	140	38	100
T test	2.69***	-1.98**	-2.04**

Table 6 shows that, after controlling for sample selection bias, VC backed companies listed underpricing was significantly higher than non VC backed companies; in addition, the decline in the lifting of the ban period of business performance degree was significantly higher than that of the latter, and stock market rate of return lower. This shows that the conclusion of this paper is not affected by sample selection bias.

5.2 Rate Of Return on Sales

Using the rate of return on total assets as a measure of business performance index is possible, asset size because of enterprises listed financing and immediate expansion, the listed assets yield comparison deviation. Therefore, we also tested another accounting index, the rate of return on sales, calculated as the annual net income divided by sales. Figure 3 shows, the venture capital support enterprise rate were significantly higher in the listed in the first three years of sales revenue from non VC backed companies. In addition, the rate of decline in market and the lifting of the ban after the sales income was significantly higher than that of the latter, the venture capital to support the company's long-term profitability significantly lower than non VC backed companies. These findings and the rate of return on total assets is consistent.

5.3 Other Robustness Tests

In order to ensure the steady, this paper also makes the following tests: (1) performance test in the stock market, this paper used the Shenzhen small and medium-sized version index to calculate the excess rate of return. Shenzhen because of the small plate KLCI was set up in 2005 June, the Shenzhen small and medium-sized plate composite as the market rate of return, only listed in 2005 June after the company sample. Although the number of samples is reduced, but we still find venture capital support enterprise is significantly lower than non VC backed companies in the stock market after the end of the lock up period; (2) the long-term operating performance and market performance test in the enterprise, in order to ensure the trend analysis is not affected by different enterprises listed time due to the influence of number of samples, using the listed more than three years of business as a fixed sample. The empirical findings and the full sample analysis results without essential difference.

6. CONCLUSIONS AND SUGGESTIONS

From 2004 to 2012 between the Shenzhen small and medium-sized plate 70 venture capital backed companies and 203 non VC backed companies based on the sample, this paper studies the impact of venture capital management of listed companies and the long-term development, and reached the following conclusions: (1) the venture capital to support the enterprises listed on the first day underpricing was significantly higher than that of non VC backed companies (; 2) from the long-term performance, although in the lock up period of venture capital to support the enterprise and business performance and the performance of the stock market non VC backed companies have no significant difference, but the former in the lifting of the ban after the decline in performance is significantly higher than that of the latter, and stock investment rate of return is lower; (3) in the age of the underpricing level and enterprise performance decline and venture capital institutions significantly negatively correlated; (4) the state-owned venture capital institutions to support enterprise level of Underpricing and performance decline was significantly lower than that of the non support state-owned venture enterprises. The results of this study further verified the Gompers[1] proposed "by name motivation theory", namely venture capital institutions young in order to achieve short-term benefits too early to immature Target Corp to market.

According to the above research conclusion and combined with the successful experiences and lessons of foreign venture capital institutions, the paper proposes the following policy recommendations：

(1) The relevant state departments should system design of our country's venture capital industry planning and reform. Venture capital industry as a financial intermediary new, its core idea is the use of venture capital institutions of industry experience and professional skills, with high growth potential enterprises investment, to achieve the optimal allocation of financial resources, is a good complement to the current financing system. However, the empirical results show that, if the design of the system is not comprehensive, venture capital institutions will be too much to consider its own interests, but the long-term healthy development of investment enterprises constitute obstacles. So it is suggested that the state departments of China's venture capital industry guidance and industry standard policy, extension of venture capital institutions to invest in enterprises of duty cycle, such as the growth of listed lock up period, short-term behavior and reduce the venture capital industry quick.

(2) A certain degree of supervision to venture capital institutions and practitioners. Countries in Europe and America venture capital industry, basically rely on the market operation, less government intervention. While the financial crisis shows that, to a certain extent of regulation of financial institutions is necessary. In order to long-term interests to venture capital institutions internal incentive and restraint mechanisms and the investment enterprises more consistent, suggested that the government from the sponsor and the representative of the sponsor management experience, register the venture capital

institutions and supervision on his performance, on the venture capital industry practitioners qualification examination, evaluation and publicity, for fraud and false institutions and individuals to implement market no man. This can effectively establish venture capital industry self regulatory mechanism, to avoid short-term opportunism flooded the market.

(3) Composed of improving venture capital institutions sponsor. This article think, venture capital institutions "the fundamental reason behind by name" phenomenon is not mature investor psychology and a source of investment gold instability. At present, China's venture capital institutions to raise funds in a considerable part from the folk capital. These private investors are not familiar with the rules of the venture capital industry, generally chase fast return of investment, the venture capital institutions have a greater pressure for short-term performance. In addition, also the higher demands on the liquidity of private investors, forcing the venture capital institutions in investment after the rush to get to shorten the investment cycle. Compared with developed countries, venture capital funds mainly from the mature institutional investors such as pension funds, endowment funds. They have a more rational and healthy investment mentality, and provides a relatively stable fund for venture capital institutions, from the fundamental guarantee for the steady development of the venture capital industry. It is suggested that the government to relax the policy restrictions, expand the venture capital industry, sources of funding, so that more investors into the venture capital market.

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