VENTURE INVESTMENT RETURN AND ITS INFLUENCING FACTORS ANALYSIS

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ABSTRACT

In 1998, "Several Opinions on Accelerating the Development of Venture Capital in China" set off an upsurge of venture capital activities in our country. Twenty years of ups and downs have brought about a qualitative leap in China's venture capital industry in its tortuous progress. Scholars at domestic and abroad have researched China's venture capital. However, most are qualitative research, and quantitative research is less, especially for venture capital return and its influencing factors. There still needs to be more systematic theoretical and empirical research. This dissertation combines normative and empirical analysis to count the investment and financing situation of Chinese listed companies before listing and to study the factors that affect the return on investment, which makes up for the need for more research by domestic and foreign scholars in this area.

The research method of this dissertation adopts a combination of theory and demonstration: first, this dissertation reviews the previous research literature, uses information asymmetry theory and principal-agent theory to analyze, and then puts forward the relevant hypotheses of this dissertation. Secondly, this paper first analyzes the proportion of high investment returns. However, due to the small sample size of high investment return, the data results are specific and the number of financing projects at different stages is different. Therefore, we also compare and analyze the proportion of high investment return in different stages and the proportion of low investment return in different stages. From this, we can observe which categories are more likely to have high investment returns. Finally, binary logistic regression is used to analyze the factors that affect the return on investment. The sample size of the data in this paper is 1144, including seven variables including investment stage, nature of major shareholders, age and education of actual controller, industry and region to which the enterprise belongs, listed sector of the enterprise and post-investment valuation. The research finds that each variable has different impacts on investment return. Through the analysis of the factors affecting the high return on investment, we can see that the nature of major shareholders, the age and education of the real controller, the industry of the enterprise, the valuation of the investment, and the listed sector will have an impact on the return on investment. This shows that when making investment decisions, investment institutions need to comprehensively consider factors such as corporate governance, leadership quality, industry selection, valuation rationality and listed sectors, so as to comprehensively evaluate investment risks and return potential and improve the return on investment. It is found that the factors affecting the investment return of the early and middle period are quite different from those of the late period. Among them, the four variables of the actual controller's education and age, the listed sector and the post-investment valuation are still significant. However, the impact of industry and region on investment return is not significant, and early investment is more oriented to value investment. Whether it is manufacturing or service industry, it pays more attention to the differentiation and innovation of enterprises. Therefore, the impact of industry and region on investment return is not the core consideration. For the later projects, the enterprise has a stable cash flow, and its valuation is more accurate, so the impact of post-investment valuation on investment return is no longer significant. These findings highlight the different factors that affect venture capital returns and provide important recommendations for governments and investment institutions.

Key Words: Venture capital returns, influencing factors, venture capital institutions.

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CHAPTER 1

INTRODUCTION

Research Motivation

Venture capital institutions have officially entered China since the Internet age and are gradually exploring their best investment strategies. For example, Sequoia, taking advantage of its scale advantage, continues Sequoia's American track investment method, betting on leading companies in potential industries and gradually growing into China's most prominent venture capital institution with the help of a systematic investment model. Another example is Capital Today, which bets on JD.com, bringing thousands of times the return, focusing on high-quality investment in the industry, preferring to make mistakes, and not mindlessly selling. This investment model also brings enormous returns on investment. In terms of investment style, some investment institutions focus on investing in people, focusing on the ability and quality of the founders; some investment institutions focus on technology paths and directions, dig deep into technology know-how points, and analyze the technology moat of founding companies. In the investment industry, some investment institutions choose relatively promising industries to cover, such as new energy, medicine, semiconductors, etc.; Some institutions focus on the segmented dentistry track. In the investment stage, some investment institutions focus on early-stage investment, such as Inno Assets; some are more inclined to the later stage, such as the direct investment department of securities companies; and some choose to deploy both early-stage projects and late-stage projects. Different investment styles, logic, and preferences create different investment returns. Based on this, this article also wants to conduct in-depth research on the investment stage, investment industry, comprehensive quality of the founders, even the distribution area and industry of the investment project; and the selection of the listing sector of the final investment project will affect the investment of venture capital institutions. Returns have a more significant impact, which factors have a greater impact, and whether the impact can be quantified. Through the above analysis, this article hopes to provide some theoretical guidance for investment institutions to construct their own investment logic and investment direction, help the Chinese government and regulatory authorities to improve the environment for venture capital, and further promote the development of the venture capital industry.

Research Question

In the choice of different investment strategies, such as early investment institutions, they are more inclined to explore technology and bet on technologies with potential in the future. Under this type of investment logic, the failure rate of projects is relatively high, often through several projects. It brings high returns and increases the fund's overall return; for late-stage projects, it earns average returns, and low risk often means low returns. Nevertheless, for the entire fund, the specific configuration should be more in the early stage or more in the later stage to improve the overall investment return of the fund. Another example is in the investment industry, choosing to dig deep into a particular track and invest in high-quality projects with the help of years of industry accumulation or covering multiple tracks and using scale advantages to increase the return on investment of investment institutions. In terms of investment preference, whether to focus on the ability of the founding team or the advantages of products or technologies, one can better guarantee the project's success rate, thereby ensuring the overall return of the fund, etc. For funds, they invest in many projects, such as building a reasonable investment strategy and framework to increase the fund's average return, which is a problem many investors are concerned about. Based on this, this article deeply analyzes what factors will affect the return on venture capital investment. Specifically, if venture capital institutions intervene at the earliest stage, can they obtain greater returns compared to later stages; whether different shareholder properties have an impact on investment returns; whether different investment industries have an impact on the return on investment; whether different investment regions have an impact on the return on investment; whether different listing sectors have an impact on the return on investment, etc. Therefore, through theoretical and empirical regression, this dissertation uses data to explain the above problems from the perspective of listed companies in China and through the logistic regression model.

CHAPTER 2

LITERATURE REVIEW & THEORY

Literature Review

Many scholars analyze venture capital returns from different angles, including the industry selected for investment, the investment region, and the nature of shareholders. Start-up companies listed on the GEM; variable data comes from the prospectuses of start-up companies listed on the GEM in the WIND database. The relevant conclusions are as follows: From the analysis of the sources of venture capital funds in our country, we can see that the venture capital in our country is mainly direct investment (equity investment), and non-listed companies invest the most significant amount of funds in venture capital. From the time sequence of the growth and development of start-ups, it is found that venture capital invests the most significant amount of funds in the expansion period of start-ups, while the investment in the restructuring period is the least, and the number of projects invested in the seed stage decreases year by year. The number of projects is increasing year by year. In the exit stage, there are many cases in which Chinese venture capitalists choose IPO, M&A, and repurchase to withdraw funds, among which the IPO exit method is the most popular among investors, showing a trend of increasing year by year. By comparing the returns of different exit methods of venture capital in China, this dissertation finds that the return of IPO exit channels is significantly higher than that of mergers and acquisitions, repurchases, and liquidation channels. In 2013, the return rate of IPO exits remained at 4.86 times. There will be an inevitable loss if the capital is withdrawn from liquidation and liquidation. Through the descriptive statistics of the research variables, it is found that the average value of the book investment return of China's listing and exit on the GEM from

2009 to 2012 is about 7.43 times; the number of venture capital institutions participating in the same venture capital project generally does not exceed 3 The initial investment amount of a single investor is generally 10 million to 20 million; the investment period of investors is generally 1 year to 2 years, and the maximum is no more than 7 years; it is favored by investors and listed on the GEM 71% of start-ups in China are high-tech enterprises. The main conclusions drawn in the empirical part are as follows: (1) Venture capital projects with longer investment cycles can obtain higher returns on investment. (2) The return on investment of venture capitalists with a larger initial investment scale is lower. (3) The return on investment obtained by venture investors investing in high-tech industries is higher than that obtained by investing in traditional industries. (4) The more significant the operational risk of a venture enterprise, the higher the rate of return on venture capital exit. (5) There is no significant correlation between the location of the entrepreneurial enterprise, the number of venture capital institutions, the financial risk of the entrepreneurial enterprise, and the rate of return. Through the theoretical analysis and empirical analysis of the factors that affect the exit return of venture capital investment, and the relevant conclusions drawn from the analysis, it is found that the factors at the level of investment behavior have a relatively strong impact on the return on investment, and investors' entry into start-up companies has a significant effect on eliminating information asymmetry. The impact of factors at the enterprise risk level is weak but cannot be ignored.

Li Hui (2011) selected the sample data of Shenzhen SME board enterprises from 2004 to 2009, studied the factors that affect the risk investment returns of companies listed on the Shenzhen SME board, and believed that the correlation between returns and the return on net assets of enterprises is upbeat, has no significant relationship with the industry the company is in, is positively related to the experience of venture capital institutions, has no significant relationship with the market average price-earnings ratio, has no significant relationship with the capital scale, and has a relationship with the length of the investment period. Chen Teng (2013) collected 324 venture capital samples from 129 companies on the ChiNext Board. By studying their annual average return rate, he found that venture capital institutions' scale and establishment time positively impacts the return. , the number of independent directors, and the number of venture capital institutions participating in financing have a negative correlation with the return, and enterprises engaged in high-tech industries and the number of financing have a positive impact on the return; whether venture capital enters the first round of financing of start-up companies is related to the return of venture capital rate relationship is not significant. Zou Danhua (2010) conducted empirical research and analysis on factors affecting the rate of return on venture capital investment using US data. First, according to the research results of the references, select the financial and economic variables that may have an impact on the return rate of venture capital for theoretical analysis and select the quarterly data of venture capital in the United States from 1988 to 2009, and then use the time series model and autoregressive model (VAR Model) to carry out empirical research and analysis to test the direction and size of each explanatory variable on the return rate of venture capital. The research results show that factors such as book-to-market value ratio, investment ratio at the seed stage, changes in the unemployment rate, changes in commercial loan default rate, excess returns in the stock market, company size factors, non-agricultural productivity growth, and other factors have a significant effect on the rate of return on venture capital investment.

Bygrave and Timmons (1992) studied venture capital returns in the United States. The sample range was from 1969 to 1985. There were 13 venture capital funds and 383 samples of investment projects. From the research results, venture capital projects entering the creation and growth stages are more likely to succeed in the United States. Only 6.18% of projects had a rate of return of more than 10 times, and most projects failed. Berg, A. and Gottschalg, O (2005) found that the higher the stake in a start-up, the greater the return. Venture capital projects with longer project cycles have low returns. Zhang Yuqi (2021), based on the research results of previous scholars, took the listed companies in the biological industry as the research object, selected 57 companies listed in the ten years from 2009 to 2019, a total of 181 strategic investors, including 58 angel investors, 123 general venture investors. Using the two indicators of static index return on investment (BR) and dynamic index annual rate of return (IRR) as the standard to measure investment performance, the investment period, investment scale, and shareholding ratio of the strategic investors introduced in the start-up stage and the growth stage are respectively verified. And the impact of the four factors of industrialization background on its investment performance. The research results are as follows: First, the investment performance of angel investors (angel investors in this article refer to venture investors at the start-up stage of enterprises, and general venture investors refer to venture investors at the growth stage of enterprises) is higher than that of general venture investors, the return on investment obtained by strategic investors in the initial stage is higher than that in the growth stage. Second, the investment period of angel investors has a significant positive correlation with BR, but the investment period of general venture investors has no significant relationship with BR. The investment period of the angel and general venture investors has a significant negative relationship with IRR. Third, the BR and IRR of angel and general venture investors are significantly negatively correlated with the investment scale. Fourth, the shareholding ratios of angel and general venture investors have a significant positive correlation with BR. However, only the shareholding ratios of general venture investors have a significant positive relationship with IRR. Fifth, the BR, and IRR of the angel and general venture investors have no significant relationship with the industry background. Sixth, the BR of angel investors is higher than that of general venture investors, mainly due to the impact of the investment period and shareholding ratio.

In contrast, the IRR of angel investors is higher than that of general venture investors, mainly due to the impact of investment scale and shareholding ratio. Wang Yi (2017) collected samples of companies listed on the A-share market from 2010 to 2015 with the participation of venture capital institutions. The empirical research results show that the return rate of venture capital has a significant negative impact on the reputation, investment scale, and investment period of venture capital institutions. It has a significant positive correlation with the investment stage and no significant correlation with the institutional investment experience, the nature of shareholders, whether there are star investors, the institution's location, the investment industry, and the investment region.

A key factor in the return of venture capital is the exit time, and there are obvious cycles in any industry, and there are also obvious industry cycles in the capital market for companies to go public. If the listing channel is clearer, the capital market performance is better, then the invested enterprise can exit more quickly after listing, but if the listing expectation is not clear, the investment period will be extended, and the investment return expectation is relatively unclear. Long investment period, may encounter a good capital market environment, resulting in high market value and high yield exit; However, it may also encounter a poor capital market environment, the listing has been card, the investment period has been extended, but it cannot bring a higher return on investment. However, on the whole, funds have time returns, and the longer the investment period, the higher the fund manager's requirements for investment returns will be. Based on this, this paper propose hypothesis 1: The return on venture capital is affected by the length of the investment period, and the longer the investment period, the higher the investment return.

Tan Renyou (2017) studied the "risk-return" characteristics of venture capital in China, Europe, and the United States by combing and comparing the literature on venture capital (VC) returns and reached the following conclusions and inspirations: (1) China's venture capital returns are higher than those of European and American counterparts. However, it is at a disadvantage in "revenue influencing factors and their effects," which stems from China's vital innovation and entrepreneurial vitality; (2) Venture capital income (at least in the United States) is always higher than the same period of stock index income, indicating that venture capital as an Incorporating alternative assets into investment portfolios can help improve portfolio performance; (3) The "high risk-high return" feature has not been proven in the venture capital industry, and the fundamental way for venture capital to continue to obtain high returns is to adopt a portfolio investment strategy and tap the intrinsic value of the enterprise. Tang Zhiqiang (2013) selected 281 companies listed on the GEM during 2009-2011 as samples, took the venture capital companies they invested in before listing as the research object, and analyzed their holding time, cost, and income. The relevant conclusions of this dissertation are drawn: (1) From the perspective of the distribution of venture capital, there are pronounced regional differences. This distribution difference coincides with the regional nature of China's economic development. (2) In the GEM market, the investment time of venture capital is relatively short. The average investment period of venture capital in GEM is less than 2 years, which is quite different from the investment cycle of traditional venture capital; there is a tendency for "short-term investment," which affects the value evaluation of enterprises. (3) The length of investment time is negatively correlated with cost, and the length of investment time is positively correlated with income; the longer the investment time, the higher the income; the longer the investment time, the smaller the cost. (4) Compared with the investment returns of various countries and regions, the return on investment of China's ChiNext market is significantly higher. These data honestly and objectively reflect a serious overvaluation phenomenon in China's GEM market, and a tremendous asset bubble is hidden. It seriously affects the stability of our country's capital market and is not conducive to the development of our country's capital market. (5) In venture capital investment on the GEM, there are phenomena such as the direct investment of some securities companies binding sponsor securities companies and the homogeneity of private equity and venture capital investment behaviors.

China's regional distribution is Northeast, North, East, South, Central, northwest and southwest regions. East China includes Shanghai, Jiangsu, Zhejiang, Fujian and other coastal regions. These regions are more suitable for the rapid development of start-ups with complete industrial supporting policies, sound infrastructure, and relatively abundant talents. Meanwhile, the industrial advantages accumulated in these regions are also more conducive for start-ups to quickly complete product research and development and experiment with the help of the original supply chain, so as to seize market opportunities.

This paper argues that the return on venture capital is affected by the region invested, and the East China region may bring higher return on investment. Based on this, this paper proposes hypothesis 2: the return on venture capital is affected by the regional distribution of the invested enterprises. The invested enterprises are distributed in East China, and the higher the return on investment obtained by the investment institutions.

Kang Zhengfa (2016) used qualitative and quantitative analysis methods to discuss the influencing factors of venture capital returns in the TMT industry. The sample data analysis shows that the quality of invested companies, the experience of venture capital companies, investment period factors, and the number of joint venture capital companies are essential factors affecting venture capital returns. Ma Chaoying (2016) analyzed the statistical data on venture capital investment in the United States from 1995 to 2013 to determine the relationship between the return rate of venture capital investment and the impact factor. Through empirical research and analysis, the results showed that the total number of venture capital funds and the number of projects entered by venture capital funds at the seed stage of start-ups. The number of Internet-related projects invested by venture capital funds are negatively correlated with the internal rate of return of venture capital funds. Ma Wanli (2016) used the data of 605 intellectual property risk investment projects invested by 156 venture capital institutions (including fund companies) in Zhejiang Province from 2009 to 2011 and used OLS regression to quantify the investment risk status and industry differences empirically analyzed. The research results show that intellectual property venture capital presents apparent symmetry and industry differences between investment income and risk; communication and cultural entertainment are high-risk, high-yield investment industries, and medicine and health care and communication equipment industries are low-risk, low-yield investment industries. Investment industry, while the new material industry is an atypical high-risk, low-yield industry.

According to the above literature results, the return rate of venture capital is related to the industry of the enterprise. In terms of broad categories, we can generally divide all companies into three industries. The primary industry refers to agriculture, forestry, animal husbandry, fishery and other industries based on agriculture, mainly to ensure people's livelihood; The secondary industry, which has relatively technical barriers such as medicine and chemical industry, is also the pillar industry of our country. The tertiary industry is a service industry, including industries related to communication, culture and entertainment. Based on this, this paper puts forward hypothesis 3: the return on venture capital is affected by the nature of the industry, and the company investing in the tertiary industry will have higher return on venture capital.

Jeng (2000) found through the study of venture capital reports from 21 countries that IPO exit has the most significant impact on the venture capital industry. The results show that the overall exit total return rate of venture capital projects exited through Shenzhen GEM listing is relatively low. Gao. Ye Xiaojie (2014) took the investment and exit events of China's venture capital institutions from 2002 to 2009 as a research sample and investigated the impact of venture capital reputation on the exit of investment institutions from four perspectives: whether they successfully exited, exit methods, exit speed, and investment income. The study found that the higher the reputation of venture capital, the more likely the investment institution will achieve a successful exit within the observation period; the IPO exit is more beneficial to the investment institution, and the shorter the time required from the first investment to the successful exit, that is, the faster the exit speed. In addition, the higher the reputation of venture capital, the higher the investment income obtained by the institution's successful exit. Kang Kexin (2017) analyzed the case of Dinghui's exit from Focus Media and drew the main conclusion: the macroeconomic cycle, capital market environment, and internal factors of financing companies are the core factors that affect the choice of private equity investment exit methods.

The best choice can only be made after consideration; in terms of the choice of exit method, the IPO method has the highest return on investment and is the preferred exit method, but private equity institutions must consider pursuing the IPO method to exit the investment. They should flexibly choose a reasonable and effective exit method according to the actual situation Method. Wei Shanshan (2010) analyzed the factors affecting IPO exit performance by collecting data and empirical testing. This dissertation takes the total return rate of venture capital exit as the dependent variable. It selects seven influencing factors, including the equity background, initial investment scale, investment cycle, registered capital, working time, investment industry, and registration place of venture capital institutions. Based on the company's data, the projects with venture capital backgrounds are selected, and the factors affecting the exit performance of venture capital investment on the GEM are empirically analyzed through correlation analysis and regression analysis. The empirical data used in this article comes from the regular reports and information disclosures issued by companies listed on the GEM on the Shenzhen Stock Exchange, involving 32 companies listed on the GEM and 38 venture capital institutions. , the empirical results can accurately reflect the influencing factors of domestic venture capital GEM exit performance. Giot and Schwienbacher (2007) found through research that ventures capital companies in different industries have different holding times for venture capital. They studied more than 6,000 venture capital companies. They found that in the early stage of venture capital funds holding invested projects, venture capital companies are more likely to realize capital exit through IPO. However, as time passes, the proportion of IPO exits shows a downward trend. Giot and Schwienbacher also pointed out that even for venture capital companies that exit through IPO, their holding period will vary depending on their industry. Biology companies exit the fastest through IPO, and IT companies exit the slowest.

Based on the above analysis, this paper believes that after the venture capital institutions invest, the exit mode has a great impact on the return on investment. China's listed plates include GEM, science and technology board and main board. Listed enterprises on the main board are generally leading enterprises in the industry, listed enterprises on the main board require a cumulative operating income of more than 300 million yuan, the cumulative profit of the last three years is more than 100 million, such enterprises due to years of business development, mature business, stable income, after listing most have a better performance, the market value will be relatively high. Most of the listed enterprises on the science and technology innovation board are emerging technology enterprises in an emerging industry. Such enterprises are technologically advanced, but their products have not yet been used on a large scale in the market, and their revenue and market share are still in the early stage. However, due to the large market potential of their technology, the market is also willing to give such enterprises a high market value, so the listed performance of science and technology board enterprises is also good. Most of the enterprises listed on GEM are service enterprises, and the market value of enterprises after listing is usually small. Generally speaking,IPO exit has the highest return on investment; At the same time, in view of different industries, this paper combined with the actual situation of China, the capital has different preferences for different listed sectors, and believes that for hard technology enterprises, the science and technology board has the highest liquidity, and the market value after listing on the science and Technology Board is relatively high, so for such enterprises listed on the science and technology Board, the investment return will be relatively high. However, for consumer enterprises and service enterprises, they tend to choose to list on the main board and the domestic GEM.

Based on this, this paper puts forward hypothesis 4: the return on venture capital is affected by the listed sectors of the invested enterprises, and the enterprises listed on the main board will bring higher return on venture capital.

Regarding the impact of the nature of shareholders on investment returns, Wang Yi (2017) took 749 IPO companies with venture capital participation from 1996 to 2016 as a sample to investigate the impact of venture capital characteristics and invested company characteristics on the exit returns of venture capital institutions. Research shows no significant difference in IPO exit returns among state-owned, private, and foreign venture capital. Liu Xueping (2018) sorted out the investment and exit event databases of two types of 91 venture capital institutions from 2011 to 2017 and used historical venture capital. The total number of events measures market activity. Based on methods such as WLS regression, Logit regression, and Cox survival analysis, this dissertation empirically concludes that: high investment ability and high market activity have a positive effect on investment returns, and the latter has a relatively more significant impact; investment ability has a greater impact on external markets and investment. The relationship between returns has no moderating effect, but the characteristics of early investment and shareholding ratio have a moderating effect on the relationship between investment ability and investment return; the income of venture capital institutions with state-owned background is higher than that of venture capital institutions without state-owned background, and the background of state-owned There is no moderating relationship among the investment ability, market activity, and investment return, which shows that the venture capital institutions with the state-owned background in China already have the characteristics of marketization; at the same time, the staged investment characteristics of venture capital institutions with high investment ability are more prominent. At the same time, it can speed up the follow-up financing process of the invested enterprises, and the project exit speed is also faster.

Based on this, this paper puts forward hypothesis 5: the return on venture capital is affected by the nature of shareholders, and the nature of shareholders is private enterprises, which brings higher investment returns.

The impact of post-investment valuation on investment returns has been paid much attention in the investment field. Although many studies have explored this question, the answer is still not entirely clear. In our literature review, we found many studies showings that post-investment valuation has a positive impact on investment returns. These studies, often based on finance and economic theory, show that a reasonable valuation of an investee after an investment can provide clues about its future performance, thereby helping investors make more informed investment decisions. Moreover, corporate governance theory also suggests that an accurate valuation of a company can facilitate more efficient allocation of resources, thereby increasing investment returns. Chen Zhi (2022) has mentioned that a large number of PE institutions are keener on low valuation acquisitions. However, some studies have cast doubt on this. Some scholars argue that post-investment valuations may not always have a significant impact on investment returns because the market has already adequately priced in a company's value. In addition, excessive regulation and governance can also cause companies to overreact to market signals, which can negatively impact investment returns. In general, the return on venture capital investment is largely determined by the valuation of the project invested. When the IPO market is not performing well, the investment in the primary market will pay more attention to the post-investment valuation of the project, compress the project valuation to a large extent, and leave enough space for investment income.

Based on this, this paper puts forward hypothesis 6: there is a negative relationship between the return on venture capital and the post-investment valuation. The higher the post-investment valuation, the lower the return on venture capital.

Theory

Information Asymmetry Theory

The two phenomena of information asymmetry (Asymmetric Information) and incomplete (Incomplete Information) generally exist in various transactions in life.

The so-called information asymmetry means that one participant has information that the other does not; one party to the transaction has an information advantage over the other. Among them, the agent is the party with the information advantage, and the other party is the principal. Information asymmetry often leads to ex-ante choice and ex-post moral hazard. The so-called incomplete information means that market participants need all the knowledge of a specific economic environment; that is, both parties need complete information.

In venture capital, due to the high uncertainty of start-up companies, there is a severe information asymmetry and incomplete information between venture capital institutions as principals and start-up companies as agents. Therefore, venture capital institutions need to constrain the behavior of entrepreneurial enterprises through a series of risk control strategies so that they can choose to act in the interests of venture capital institutions as much as possible. This risk control strategy is dynamically adjusted concerning the performance of entrepreneurial enterprises and future market changes to ensure continuous risk control. This adjustment is essentially a dynamic game process between venture capital institutions and start-ups as the "incomplete information" gradually becomes apparent with the development of start-ups. In information economics, this dynamic game form is called the dynamic game with incomplete information.

Principal-Agent Theory

The basic premise of the principal-agent theory is that there is information asymmetry between the principal and the agent, and there is a conflict of interest between the two. When Boli and Means proposed the principal-agent theory in 1932, they mainly emphasized that in the modern corporate system in the management field, the separation of company management rights and ownership has led to different interests of different subjects. Higher salaries, while owners demand higher dividend returns, have led to inevitable conflicts between the behavior patterns of the two. Later, with the gradual development and improvement of the theory, it was gradually applied in various fields such as economics, management, and sociology. Due to the unique operating mechanism of venture capital institutions, there are multiple principal-agent relationships in their entire business activities, which also directly affects the exit of venture capital institutions.

In general, the above theories generally exist in enterprises operated by professional managers. Principal-agent theory and information asymmetry theory are also the reasons for the failure of managing enough information and not knowing the internal situation, leading to management imbalance, and finally investment failure or failure to obtain high returns. For example, the length of the investment cycle will ultimately affect the return on investment. In the original investment plan, if the investment cycle is prolonged, the information asymmetry may become more serious, resulting in investors not knowing the development status of the invested enterprise. Due to the inability to control the development of the invested enterprises in a timely manner, if the cash flow of the invested enterprises is broken or the business development is not good, it will often affect the investment return to a greater extent. In addition, when managers of invested enterprises choose the geographical location of R&D center and production of the company, which region they land in, etc., will affect the development of the enterprise to a certain extent. Investment institutions will also fail to timely control the development of the company, which will affect the exit mode of the company and further affect the investment income of investment institutions.

CHAPTER 3

DATA ANALYSIS

Validity Analysis

Validity is effectiveness. It refers to the degree to which a measurement tool or means can accurately measure the things to be measured. The more consistent the measurement results are with the content to be investigated, the higher the validity; otherwise, the lower the validity. In this analysis, we used the KMO test and the Bartlett sphericity test, and the validity analysis results are shown in the table below.

Table 1 KMO and Bartlett tests

Appropriate amount of KMO sampling		0.729
	Approximate chi-square	6842.007
Bartlett sphericity test	Degrees of freedom	595
	Significant	0.000

Kaiser gave the commonly used KMO validity metrics: above 0.9 means very suitable; 0.8 means very suitable; 0.7 means suitable; 0.6 means not suitable; below 0.5 means extremely unsuitable. According to the results in the above table, the KMO value of 0.729 is appropriate; the Bartlett value is 0.000, indicating that there is a correlation between variables. It can be seen that the data structure validity of this study is appropriate.

Descriptive Statistical Analysis

Variable Descriptive Statistics

Through public channels such as prospectuses, this research collects the financing situation of enterprises that have successfully listed on China's main board, GEM and Science and Technology Board. By cleaning up the data of domestic listings in the past four years, a total of 1,144 financing records were obtained, excluding enterprises with serious missing data. Because the core of this study is to understand the factors that affect the high return on investment, since the relevant information of the primary market is relatively confidential, the exit methods and exit time of each investment institution are inconsistent, and there are difficulties in data collection. Therefore, we regard each round of company financing as the occurrence of financing. We assume that all financing will be withdrawn on the day the company's shares are lifted, one year after the company's listing. Among them, we assume that the financing period of more than 4 years and above is the early and mid-term investment and financing, and the investment and financing within 4 years is the late-stage investment and financing. In addition, we assume that those with an annual investment return of more than 1.2 times (that is, the investment return rate of more than 20%) are high investment returns, and the rest are low investment returns. The high investment return of 20% in this paper is based on the average return of multiple equity investments in China. According to the latest data, the average return on equity investment in China shows a certain positive trend. According to the China Private equity industry performance benchmark report released by Preqin, the average median net internal rate of return (IRR) of RMB funds established in the Chinese market between 2016 and 2020 reached 25%, and the top quarter of RMB funds could achieve a return of 41%. This shows that the overall net IRR of PE/VC funds established in China in recent years exceeded 15%, with the return performance of RMB funds being particularly strong. In addition, according to data from Zerotek Research Center, as of the end of 2019, the median exit IRR of the overall equity investment market in China reached 23.2%, of which the exit IRR of emerging industries such as TMT, semiconductors, education, and clean technology was higher than the overall level of the market. This reflects the earning potential of specific industries in the equity investment market. In addition, the 2016 China Equity Investment

Return Research Report jointly released by CreditEase Wealth and Zeroqing Research Center pointed out that since 2004, the median IRR of China's equity investment funds has remained around 20%, while the median IRR of outstanding investment institutions (Top 25%) is close to 30%. Considering the average return on equity investment in China in the past few years and the data collected in this paper, it is reasonable to set the high return on investment at 20% or above.

After analysis, 1,144 financings were obtained, of which 290 were identified as having a high return on investment and 854 as having a low return on investment. High investment returns have their characteristics in the investment stage, the age of the actual controller, the educational background of the actual controller, the nature of the significant shareholder, and the distribution of medicine industries, industries, regions, and listed sectors.

Table 2 The number and proportion of each variable

		The Number of Investment	Total Proportion	The number of high returns on investment	The proportion of high return
Investment Stage	Early and Mid-term Stage	445	38.9%	106	23.8%
	Late Stage	699	61.1%	164	23.5%
the Nature of the Major Shareholder	Private enterprise	977	85.4%	245	25.1%
	State-owned enterprise	50	4.4%	16	32.0%
	Self-employed enterprise	84	7.3%	6	7.1%
	Sino-foreign joint venture	33	2.9%	3	9.1%
the Educational Background of the Actual Controller	Junior College and below	198	17.3%	39	19.7%
	Bachelor’s degree	246	21.5%	44	17.9%
	Master’s degree	425	37.2%	84	19.8%
	Doctor’s degree	219	19.1%	79	36.1%

Table 2 (continued)

		The Number of Investment	Total Proportion	The number of high returns on investment	The proportion of high return
the Age of the Actual Controller	25-34	7	0.6%	2	28.6%
	35-44	154	13.5%	20	13.0%
	45-54	489	42.7%	119	24.3%
	55-64	399	34.9%	97	24.3%
	Over 65	62	5.4%	15	24.2%
Industry	Primary industry	5	0.4%	3	60.0%
	Secondary industry	869	76.0%	220	25.3%
	Tertiary industry	270	23.6%	47	17.4%
Medicine Industries	Medical device	72	6.3%	41	56.9%
	Biopharma	24	2.1%	10	41.7%
	Chemical pharmaceutical	57	5.0%	26	45.6%
	Medical service	13	1.1%	7	53.9%
	Medical business	8	0.7%	0	0.0%
	Traditional Chinese medicine	1	0.1%	1	100%
Region	East China	647	56.6%	180	27.8%
	South China	201	17.6%	30	14.9%
	North China	140	12.2%	30	21.4%
	Central China	68	5.9%	14	20.6%
	Northeast China	29	2.5%	0	0%
	Northwest China	14	1.2%	4	28.6%
	Southwest China	45	3.9%	12	26.7%
Listed Sectors	Main board	172	15.0%	104	60.5%
	Gem (growth Enterprise Market)	154	13.5%	27	17.5%
	Science and technology board	818	71.5%	139	17.0%

Distribution Characteristics of Investment Return in Different Investment Stages

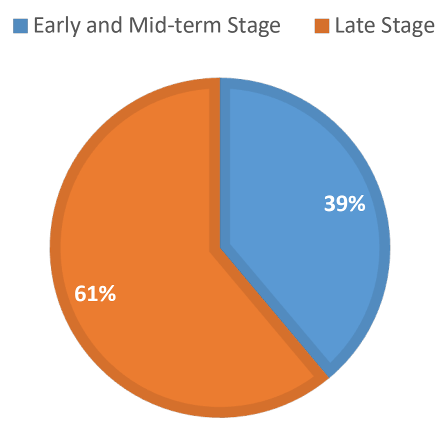

Figure 1. The proportion distribution of financing cases in the investment stage

According to statistics, 445 financings occurred in the early and mid-term, accounting for 39%; 699 investments occurred in the late stage, accounting for 61%. The number of early and mid-term investments is lower than that of late-stage investments, indicating that most investment institutions are more inclined to invest in late-stage projects. Early and mid-term investments are riskier and more complex, so that investment institutions will be more cautious.

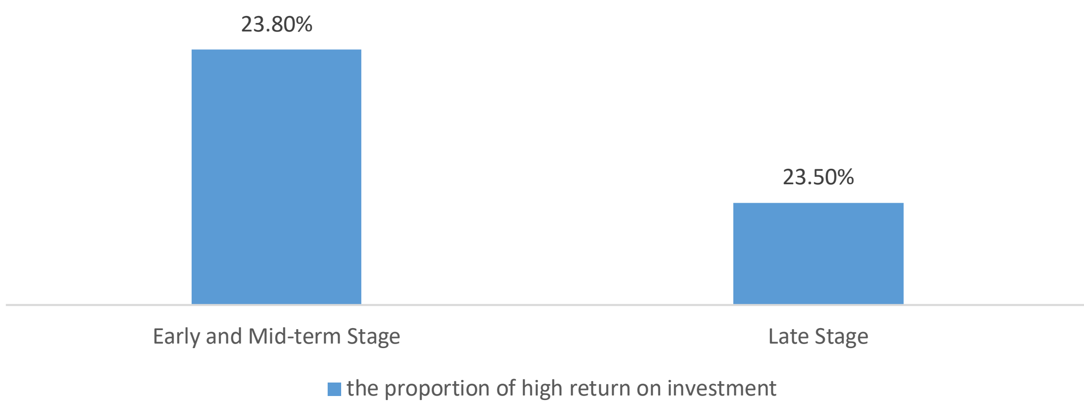

Figure 2. The proportion of high return in investment stage

As can be seen from the figure below, high investment returns accounted for 23.8% of the early and mid-term investment returns; high investment returns accounted for 23.5% in the later stages. No matter the investment stage, the proportion of getting a high return on investment is relatively close. Early-stage projects have high risk and high return characteristics, and the number of projects with a high return on investment is relatively large. Although the number of projects is dominant for late-stage investment, most earn safe returns with equal risk and return, so the number of projects with high returns on investment will be relatively small. There is not much difference between the proportion of the high return on investment in the early and mid-term and the proportion of the high return on investment in the later period.

Distribution Characteristics of Investment Returns in Different Industries

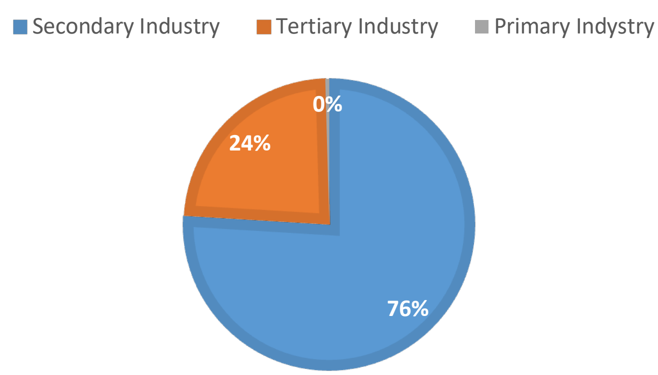

Figure 3. The proportion distribution of financing cases in the industry

Among the financing events in the statistics, the investment in the secondary industry accounted for the majority, accounting for 76%. Followed by the tertiary industry, it accounted for 24%.

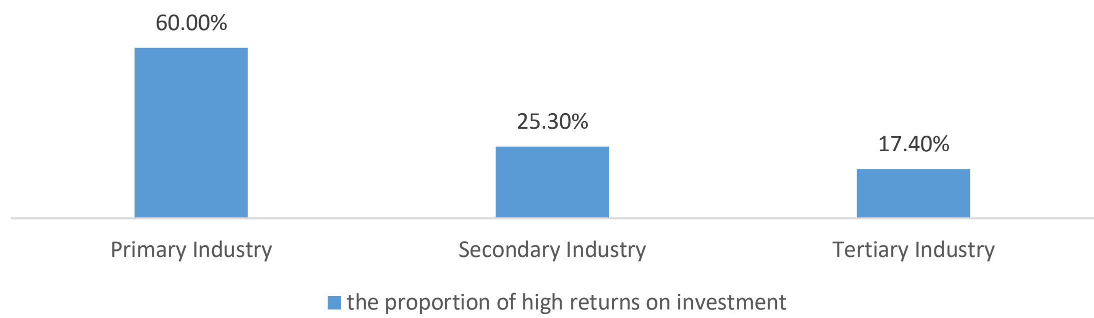

Figure 4. The proportion of high return in industry

Comparing the return of the three major industries, the return on investment of the primary industry is the highest. It is because among the financing events we have counted, only 5 are from the primary industry, and 3 have multiple returns on investment of more than 1.2, which means the data is unique. The high return on investment ratio in the secondary industry is higher than in the tertiary industry. From the perspective of data validity, investment in the industry is easier to obtain returns than investment in services.

The secondary industry mainly includes manufacturing, such as new energy, chemical, medical and other industries with high technical barriers and deep moats. After such enterprises go public, their technology will be more scalable, they will have a relatively large room for imagination, and their market value will be relatively high, so the investment returns they will bring will be relatively large. It is also in line with the logic of venture capital and is more inclined to companies with technical barriers requiring a lot of R&D investment.

Distribution Characteristics of Return on Investment in Different Medical Industry Segments

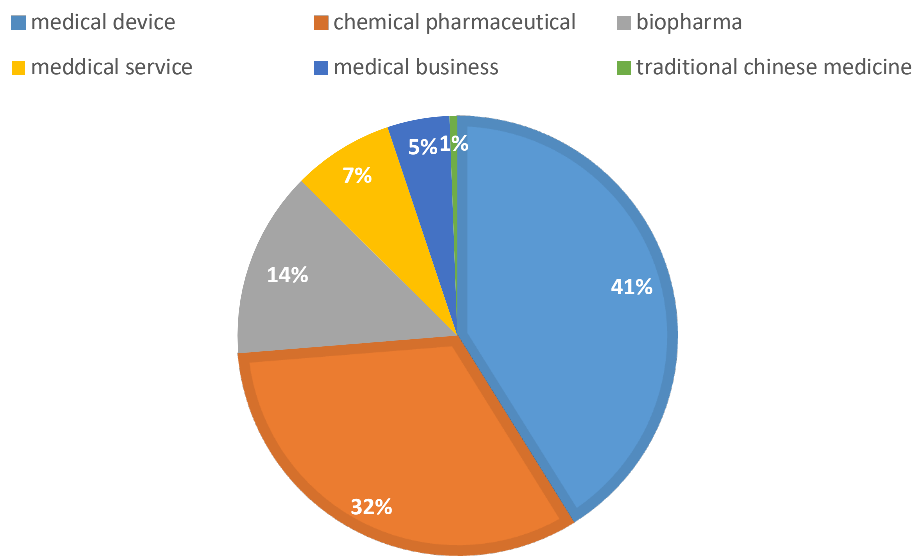

Figure 5. The proportion distribution of financing cases in the medicine industry

Among the investment events related to the medical industry, medical devices accounted for 41%, followed by chemical pharmaceutical stations with 32%, and biopharmaceuticals with 14%. The proportions of medical services, medical commerce and traditional Chinese medicine are relatively low.

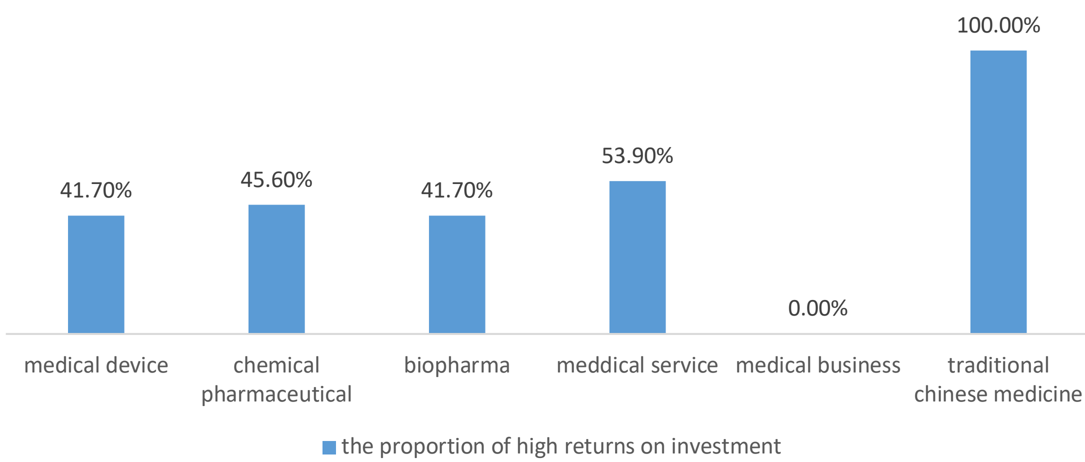

Figure 6. The proportion of high return in medicine industry

The data is specific to the medical subdivision industry because traditional Chinese medicine has only one transaction and a high return on investment. Medical services account for the highest return on investment among the rest of the medical industry, reaching 53.9%. The second is chemical pharmaceuticals, accounting for 45.6%. Medical devices and biopharmaceuticals had a similar percentage of high return on investment, at 41.7%. The figure below shows that the proportion of high investment returns exceeds 40%. Compared with analysis from other angles, medical investment can bring relatively large returns.

The Distribution Characteristics of Investment Return on Different Controllers' Educational Background

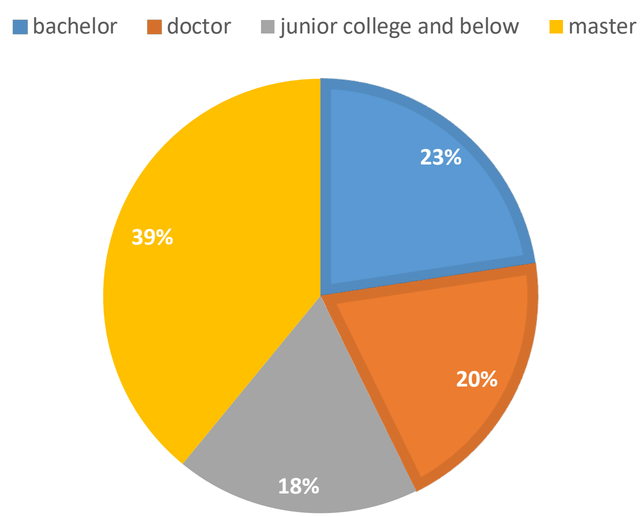

Figure 7. The proportion distribution of financing cases in the actual controller education

Among the investment events we counted, the proportion of actual controllers with a master's degree is the highest, accounting for 39%. This is followed by 23% for undergraduates, 20% for doctoral degrees, and 18% for junior college and below. It shows that investors still pay great attention to the education background of the actual controller when investing.

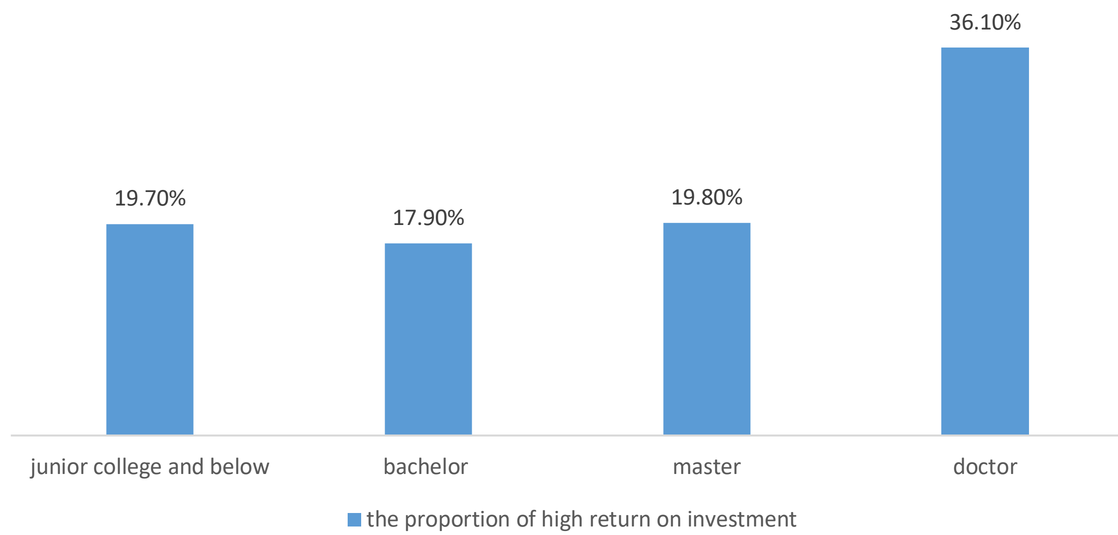

Figure 8. The proportion of high return in actual controller education

According to statistics on the proportion of the high return on investment under different educational backgrounds, doctoral degrees have the highest proportion, with a high return on investment accounting for 36.1%. The ratio of a high return on investment for actual controllers with a college degree and below and a master's degree is very close. The proportion of high return on investment with a bachelor's degree is relatively low, at 17.9%. The current era of entrepreneurship is an era of complex technology with high technical requirements for founders. Solid technical barriers exist behind medical care, materials, and new energy. Therefore, founders with doctoral degrees bring higher returns on investment. It is also very similar to the current preferences of investment institutions.

The Distribution Characteristics of Investment Return on the Age of Different Actual Controllers

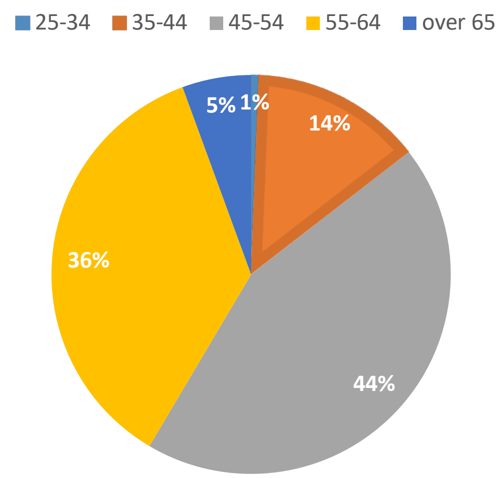

Figure 9. The proportion distribution of financing cases in the actual controller age

According to our statistics, most of the actual controllers are between 45 and 54 years old, accounting for 44%. Followed by the 55-64 age group, accounting for 36%.

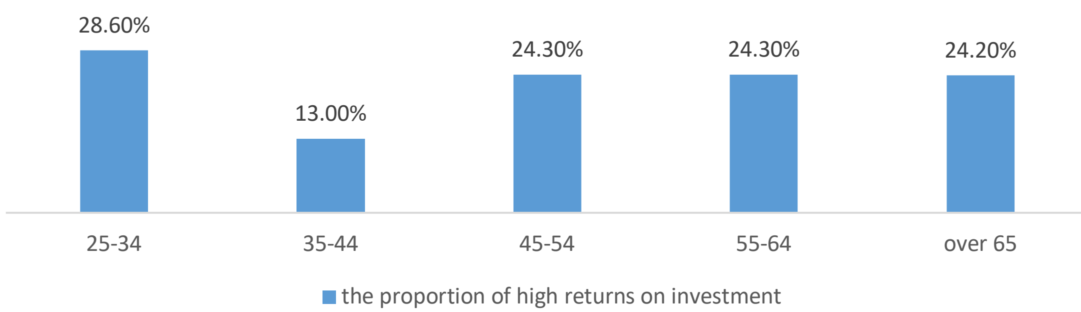

Figure 10. The proportion of high return in actual controller age

The actual controllers aged 25-34 have the highest proportion of high investment return, 28.6%. The proportion of high investment among the actual controllers aged 35-44 is the lowest, at 13%. The proportion of the high return on investment in the remaining three age groups is close, all around 24.3%. It may be because, as mentioned in the previous statistics, the age of the actual controller is 25-34 years old, and there are seven financing records in total, 2 of which belong to high return on investment. However, the sample data is small and specific, so that it could be more meaningful for comparison. However, from a practical point of view, the success rate of starting a business over 45 is relatively high, and the possibility of a high return on investment is also relatively high.

The Distribution Characteristics of Investment Returns in Terms of the Nature of Major Shareholders

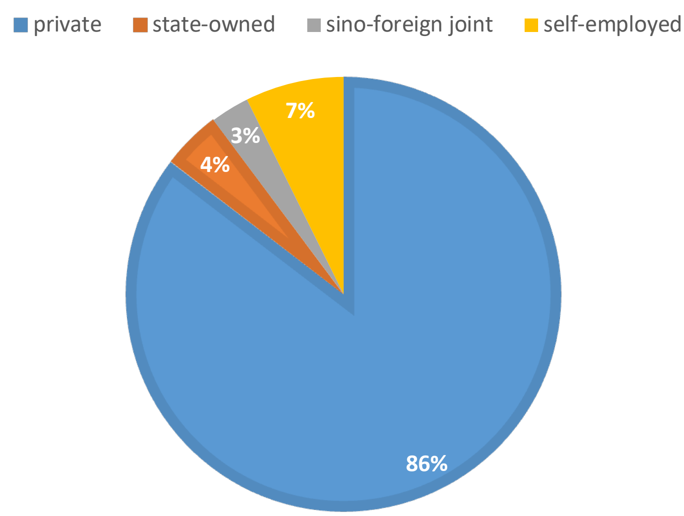

Figure 11. The proportion distribution of financing cases in majority shareholder

As for the nature of major shareholders, 86% of the major shareholders of enterprises are privately owned.

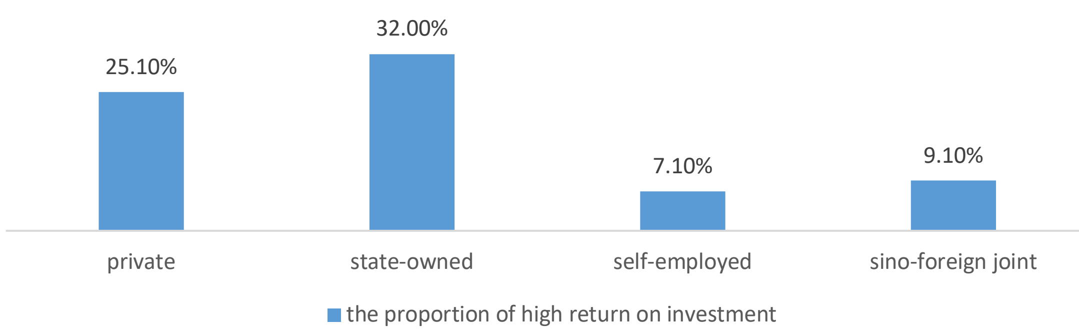

Figure 12. The proportion of high return in nature of major shareholder

From the perspective of the high return on investment under different natures of significant shareholders, the proportion of the high return on investment in state-owned enterprises is the highest, at 32%. The high return on investment of private enterprises accounted for 25.1%. Sino-foreign joint ventures and private enterprises have the lowest proportion of high investment returns, 9.1% and 7.1%, respectively. However, judging from the sample data, there is a large gap between private and state-owned, self-employed and Sino-foreign joint ventures. Private enterprises accounted for 86% of the significant shareholders; the remaining three types accounted for 14%. To sum up, it cannot be concluded that the return on investment from major shareholders to state-owned enterprises is higher than that of private enterprises.

Distribution Characteristics of Investment Returns in Different Regions

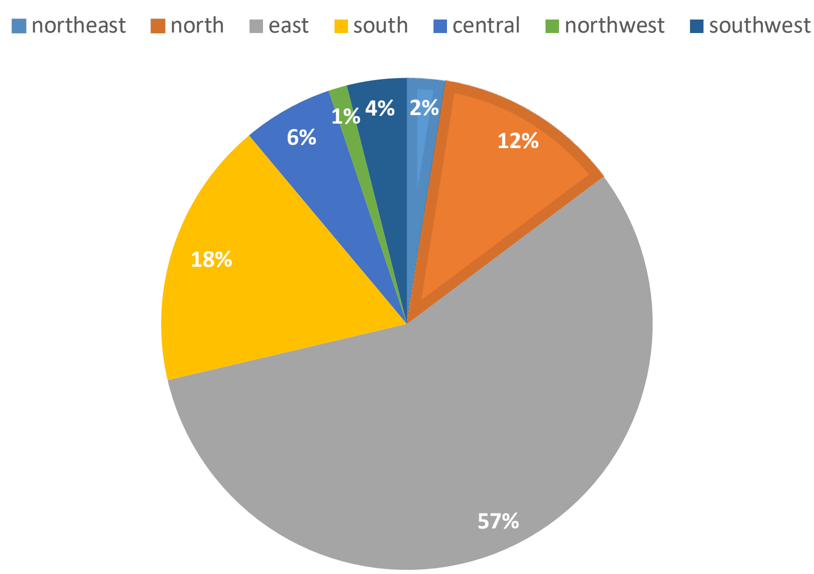

Figure 13. <u>The proportion distribution of financing cases in the region</u>

Among all the investment events, enterprises belonging to East China are the most, accounting for as high as 57%.

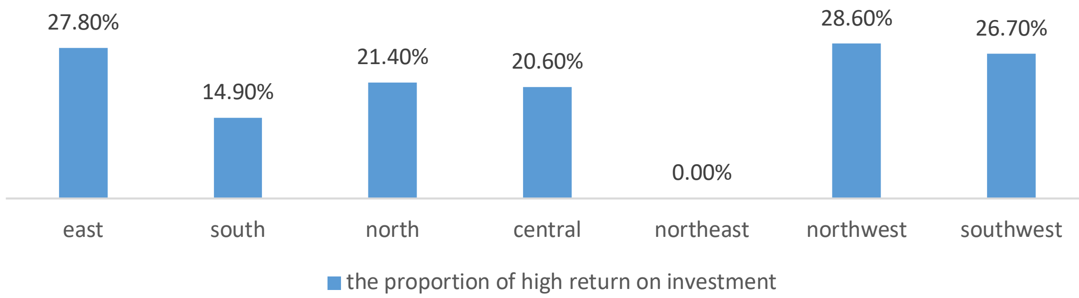

Figure 14. The proportion of high return in region

Among enterprises in East China, Northwest China, and Southwest China, the proportion of high investment returns is relatively high, accounting for 27.8%, 28.6%, and 26.7%, respectively. In China, East China includes Shanghai, Jiangsu, Zhejiang, Fujian, and other coastal areas. This type of regional economy is China's economic zone with the highest comprehensive technology level. Light, machinery, and electronic industries dominate the country, and railways, waterways, highways, and shipping are all in one place. These areas have convenient transportation, complete supporting industries, and rich talents. They have good industrial and government advantages. Therefore, start-up companies will also be in this area. With the help of innate local advantages, they are more likely to succeed and have a greater possibility of bringing high returns on investment.

Distribution Characteristics of Investment Returns on Different Listed Sectors

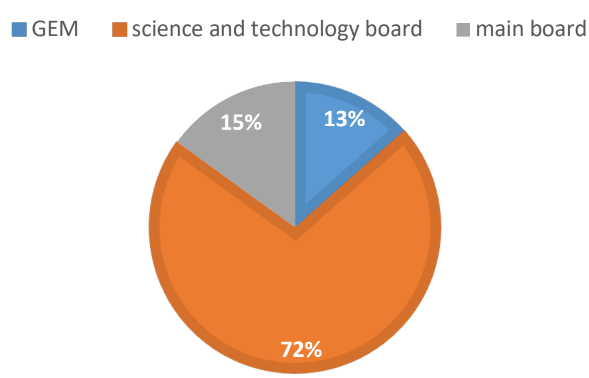

Figure 15. The proportion distribution of financing cases in the listed board

Among the investment events, 72% of the companies were finally listed on the Science and Technology Innovation Board. The main board and GEM were 15% and 13%.

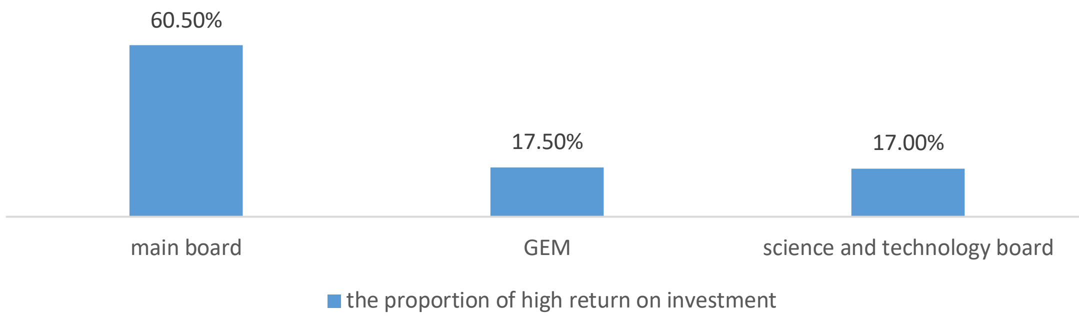

Figure 16. The proportion of high return in listed board

Regarding the proportion of high investment returns, the proportion of high investment returns on the main board is as high as 60.5%. In comparison, the ChiNext and the Science and Technology Innovation Board are 17.5% and 17%, respectively. The primary board market is the most complete and the earliest secondary trading market in China's capital market. For Chinese companies, it is also the sector with the strictest listing requirements. Only after the comprehensive factors meet the requirements can it be listed on the main board.

Moreover, most are hidden champions and leading companies in various market segments. After listing, they will further leverage their capital advantages to expand their market share, and they will have more advantages. Therefore, listing on the main board will also bring high returns on investment.

The Science and Technology Innovation Board was newly established in 2018, and it is also an essential strategic layout for China to transform into a technological power. Companies that choose to go public on the Science and Technology Innovation Board have vital research and technological attributes, and the primary market usually gives such companies a higher market valuation. In 2019 and early 2020, China's investment market was very prosperous. As the black swan event of the new crown epidemic hit the economic market, many companies failed to meet market expectations after listing. Therefore, since we assume that all investments will be launched one year after the listing ban is lifted, the possibility of high ROI on the Science and Technology Innovation Board and the ChiNext Board is even lower. In addition, most of the companies listed on the Science and Technology Innovation Board are technologically innovative, and the market still needs to verify their revenue and profits. As for the requirements for listing on the Science and Technology Innovation Board, it has low requirements for income and profits. Therefore, many high-tech companies can be listed on the Science and Technology Innovation Board when they are not profitable or have low incomes. For the existing secondary investors, their requirements for income and profit are higher. This article defines the return on investment for exiting after one year. The company's market value at this time may be affected by the lack of revenue increase, thereby affecting the return on investment multiple times.

Differences in Performance under Different Investment Returns

Due to the small sample size of some of the above indicators, the data results are specific, and there are differences in the number of financing projects at different stages. Therefore, this paragraph counts the proportion of high investment returns in different stages and the proportion of low investment returns in different stages and puts them together for comparative analysis. From this, it can be observed which stages have a higher return on investment advantages.

Education Background of the Actual Controller

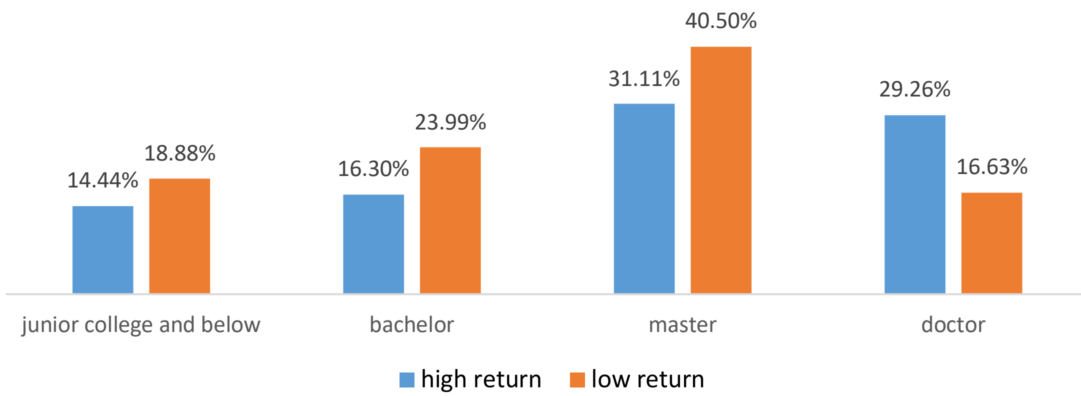

Figure 17. The distribution of high and low returns at different actual controller education

From the statistical results, the high return on investment will likely be brought by the company whose actual controller has a doctor degree. 29.26% of the high-return companies have a doctorate, while 16.63% of the low-return companies have a doctorate. Under other degrees, the proportion of the low return on investment exceeds that of the high return. Therefore, companies whose actual controllers have a doctor degree have apparent advantages in high return on investment.

The Age of the Actual Controller

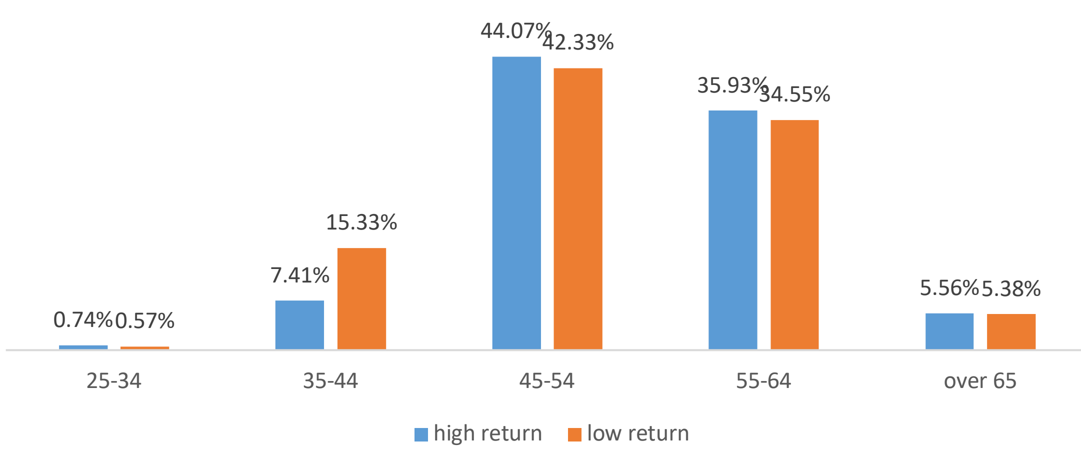

Figure 18. The distribution of high and low returns at different actual controller age

From the statistical results, the proportion of actual controllers with high investment returns is higher than the proportion of low investment returns between the ages of 45-64, and the gap between the ages of 45-54 is the largest, that is, high investment returns appear at this age stage. The actual controllers are between 25-34 and 65 years old and above, and the proportions of high and low investment returns are very close. The actual controllers are between 35 and 44 years old, and the proportion of low investment returns far exceeds the proportion of high investment returns, which shows that the possibility of low investment returns is more significant at this age.

It may be because entrepreneurship is a process of strength and resource accumulation. Founders between 45 and 64 have accumulated rich resources and capabilities. The country is seeking structural adjustments to the current unfavorable macroeconomic situation and the emergence of industries with technical barriers. The founders of this age have enough experience and experience to better deal with market risks and ensure the company's normal operation. Therefore, entrepreneurs in this age group have a higher proportion of high investment returns.

The Nature of Major Shareholders

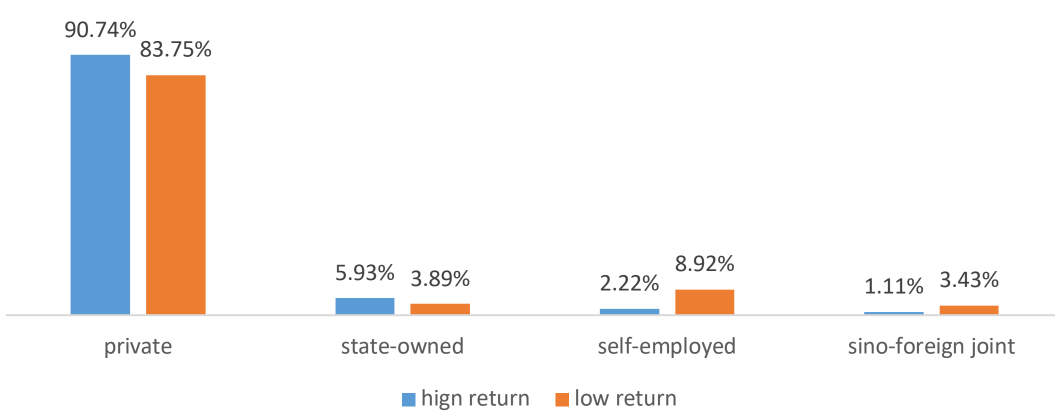

Figure 19. The distribution of high and low returns at different major shareholder

According to the statistical results, the majority shareholders of enterprises are private and state-owned enterprises. The proportion of the high return on investment is higher than the proportion of the low return on investment. The proportion of enterprises with a significant return on investment is higher than that of a low return. Compared with 6.99%, the advantage is the most obvious. The proportion of the high return on investment in enterprises whose majority shareholder is state-owned is slightly higher than that of low return on investment. Although state-owned enterprises have the advantages of financial strength and government resources, they need to consider more factors in their internal management, which sometimes leads to problems such as inefficient management. Therefore, the advantages of state-owned enterprises could be more obvious. However, for enterprises whose major shareholders are self-employed or Sino-foreign joint ventures, the proportion of low investment returns exceeds the proportion of high investment returns, and such enterprises are more likely to experience low investment returns.

Investment Stage

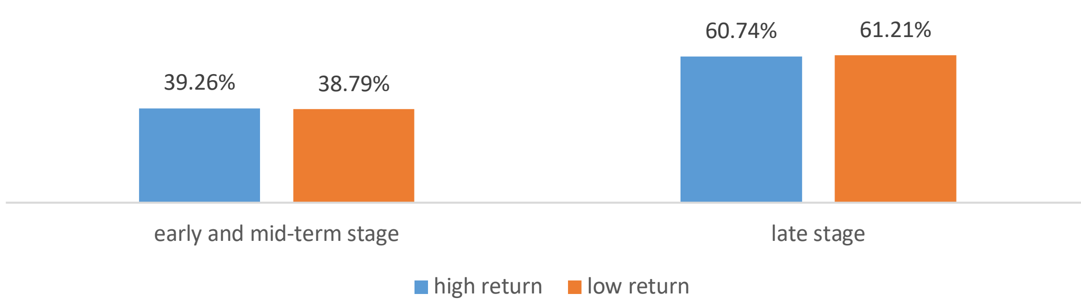

Figure 20. <u>The distribution of high and low returns at different investment stages</u>

Region

From the statistical results, the proportions of high and low investment return in the early, mid-term and late stages are very close. This shows that the investment stage is not the core factor that affects the quality of investment results.

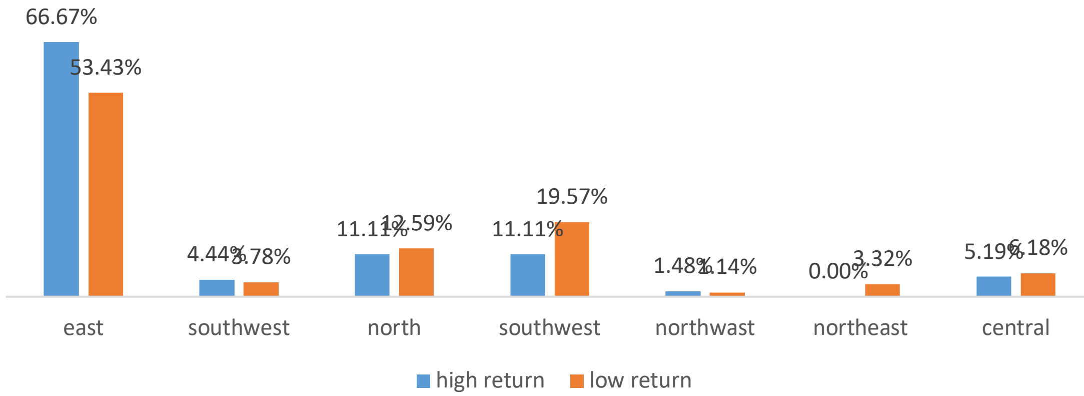

Figure 21. The distribution of high and low returns at different region

In terms of regional distribution, the high return on investment in East China is significantly higher than the low return on investment, while the proportion of high return on investment in North China, South China and Northeast China is lower than the proportion of low return on investment. In other regions, the high and low return on investment ratios is very close. This shows that enterprises in East China may have a greater probability of high return on investment.

Industry

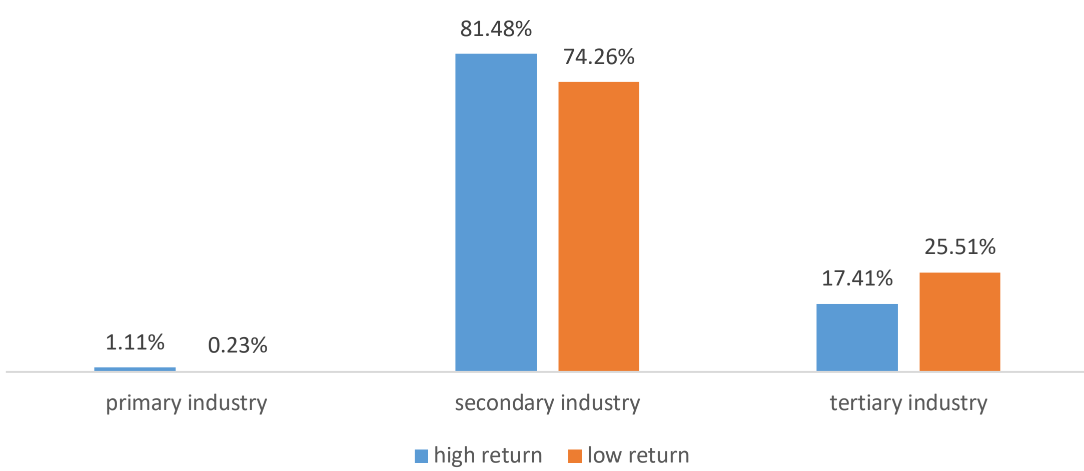

Figure 22. The distribution of high and low returns at different industries

In terms of industry, the proportion of high return on investment in the secondary industry is higher than that of low return on investment. On the contrary, in the tertiary industry, the proportion of low return on investment is greater than the proportion of high return on investment. Therefore, enterprises in the secondary industry may have a greater probability of high return on investment.

Medical Segment Industry

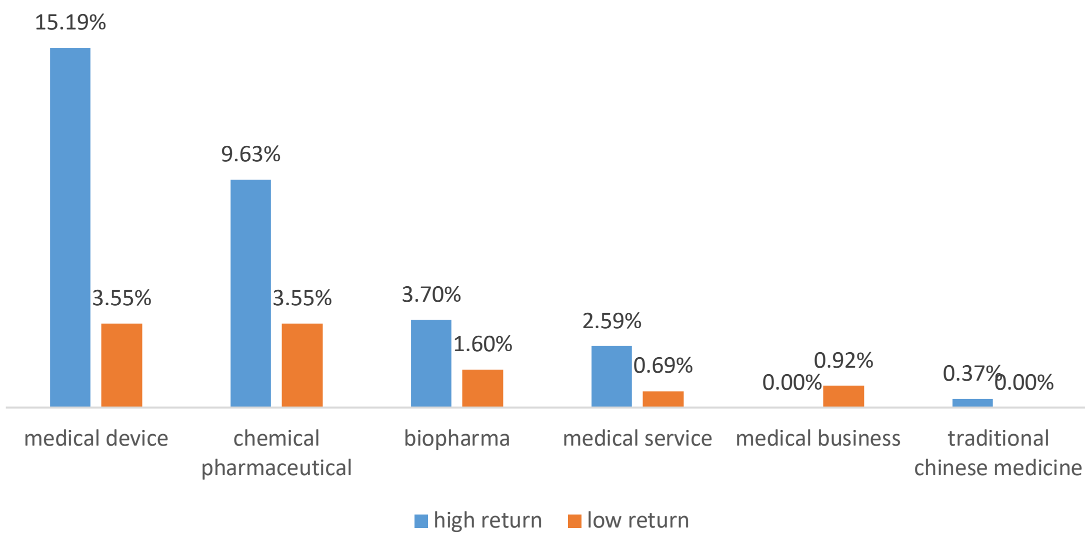

Figure 23. The distribution of high and low returns at different medical industry

Among the medical sub-sectors, the proportion of the high return on investment in the four sub-sectors of medical devices, chemical pharmaceuticals, biopharmaceuticals, and medical services is much higher than the proportion of the low return on investment, which shows that the medical industry is worthy of attention and has a tremendous potential track. Especially in the medical device industry, there is a significant gap between the high return on investment and the low return on investment. The R&D cycle of medical devices is lower than that of the pharmaceutical industry. It enters the profitable stage earlier, so the possibility of a high return on investment is more significant.

Listed Sector

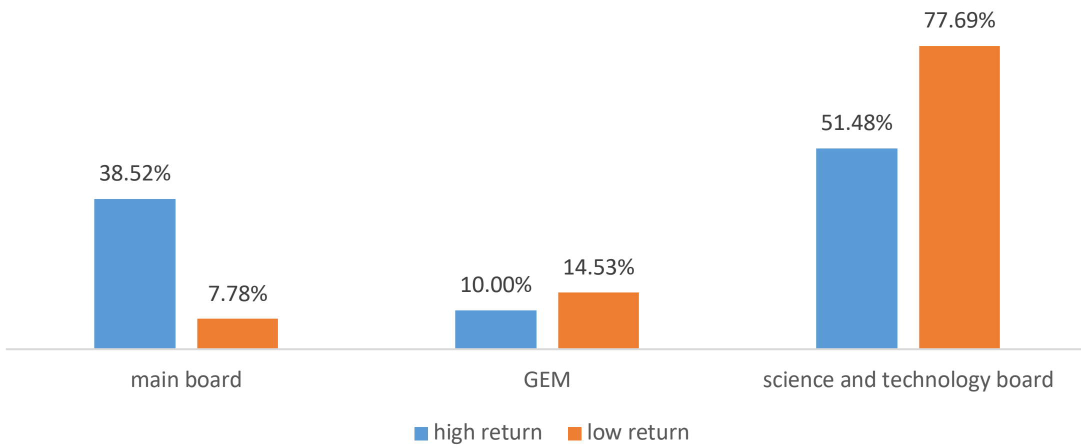

Figure 24. The distribution of high and low returns at different listed board

Among the companies listed on the main board, the proportion of high investment returns is significantly more significant than that of low investment returns. Among the companies listed on the GEM, the proportion of high investment returns is slightly lower than that of low. In the Science and Technology Innovation Board, the proportion of high investment returns is significantly lower than that of low investment returns. Therefore, companies listed on the main board are more likely to experience high returns on investment.

Modeling Pathway

Based on descriptive statistical analysis, this study will conduct binary logistic regression analysis on investment return to explore the degree of influence of different factors on investment return.

Logistic regression, known as Logistic regression analysis, is a generalized linear regression analysis model. It is a probabilistic nonlinear regression model. It is a multivariate analysis method for studying the relationship between binary classification observation results and some influencing factors. Whether or not an outcome occurs under certain factors is mainly used in research. It is often used in data mining, automatic disease diagnosis, economic forecasting, and other fields.

The reason why the Logistic model is widely used is mainly because of the explicit characteristics of its probability expression, the solution speed of the model is fast, and the application is convenient. When the model selection set does not change, but only when the level of each variable changes, it is convenient to solve the selection probability of each selection value in the new environment.

$$P = \frac{\exp(\beta_0 + \beta_1 x_1 + \cdots + \beta_p x_p)}{1 + \exp(\beta_0 + \beta_1 x_1 + \cdots + \beta_p x_p)}$$

$$1 - P = \frac{\exp(\beta_0 + \beta_1 x_1 + \cdots + \beta_p x_p)}{1 + \exp(\beta_0 + \beta_1 x_1 + \cdots + \beta_p x_p)}$$

The probability calculation method is as shown in the above formula.

The coefficient of the independent variable can be obtained through logistic regression analysis, so we can roughly understand which factors can get a higher rate of return. At the same time, the possibility of obtaining a high return on investment can be predicted based on the significant coefficient.

Logistic regression measures the relationship between a dependent variable and one or more independent variables by estimating the probability using its inherent logistic function.

Data Selection

Due to the limited dimensions of data collection, we cannot collect each investment institution's specific investment amount and exit time. Therefore, we do a binary logistic regression analysis on the return on investment, first assuming that the exit time of all financing is the opening price when the company is listed for one year after the ban is lifted. Because, at this point, the shares held by the original shareholders can be bought and sold freely.

In addition, the other assumptions remain consistent with the previous ones. Because the relevant information of the primary market is relatively confidential, the exit method and exit time of each investment institution are inconsistent, and there is difficulty in data collection. Therefore, we treat each round of financing of an enterprise as the occurrence of a financing and assume that all financing will exit on the day when the stock is lifted one year after the listing of the enterprise. Among them, we assume that the financing time of more than 4 years is the early and middle stage of investment and financing, and the four years is the late stage of investment and financing. In addition, we assume that the annual investment return of more than 1.2 times (that is, the investment return of more than 20%) is high investment return, and the rest are low investment return.

Table 3 Introduction to model variables (1)

	Variable name	Explain
Dependent Variable	Whether to obtain a high return on investment	1 high returns，0 low returns
Independent Vaiable	Whether it is a state-owned enterprise	1 yes，0 no
	Whether it is a private enterprise	1 yes，0 no
	Whether it is a self-employed enterprise	1 yes，0 no
	Whether it is a sino-foreign joint venture enterprise	1 yes，0 no
	Actual controller education	1 junior college and below，2 bachelor，3 master，4 doctor
	Actual controller age	1: 25-34， 2:35-44， 3: 45-54，4: 55-64，5: over 65
	Whether it is a primary industry	1 yes，0 no
	Whether it is a secondary industry	1 yes，0 no
	Whether it is a tertiary industry	1 yes，0 no
	Whether it is a science and technology board	1 yes，0 no
	Whether it is a main board	1 yes，0 no
	Whether it is the Growth Enterprise Market	1 yes，0 no

Table 3 (continued)

	Variable name	Explain
Independent Vaiable	Investment stage	0 early and mid-term stage，1 late stage
	Whether it is East China	1 yes，0 no
	Whether it is Sorth China	1 yes，0 no
	Whether it is Central China	1 yes，0 no
	Whether it is Northeast China	1 yes，0 no
	Whether it is Southwest China	1 yes，0 no
	Whether it is Northwest China	1 yes，0 no
	Whether it is North China	1 yes，0 no
	Post-investment valuation	The equity value of the company after investment, in hundreds of millions

Binary Logistic Regression Explores The Factors Affecting Investment Returns Under Different Time-to-Market

Table 4 Descriptive statistical analysis of variables

Variable name	Max	Min	Mean	Standard deviation
Whether to obtain a high return on investment	1	0	0.2360	0.4248
Whether it is a state-owned enterprise	1	0	0.0437	0.2045
Whether it is a private enterprise	1	0	0.0540	0.3532
Whether it is a self-employed enterprise	1	0	0.7343	0.2609
Whether it is a sino-foreign joint venture enterprise	1	0	0.0288	0.1674
Actual controller education	4	1	2.6112	1.0025
Actual controller age	5	1	3.3195	0.0029
Whether it is a primary industry	1	0	0.0043	0.0660
Whether it is a secondary industry	1	0	0.7596	0.4275
Whether it is a tertiary industry	1	0	0.2360	0.4248
Whether it is a science and technology board	1	0	0.7150	0.4516
Whether it is a main board	1	0	0.1346	0.3415
Whether it is the Growth Enterprise Market	1	0	0.1503	0.3576
Investment stage	1	0	0.6110	0.4877
Whether it is East China	1	0	0.5656	0.4959
Whether it is Sorth China	1	0	0.1757	0.3807
Whether it is North China	1	0	0.1224	0.3278

Table 4 (continued)

Variable name	Max	Min	Mean	Standard deviation
Whether it is Central China	1	0	0.0594	0.2366
Whether it is Northeast China	1	0	0.0253	0.1573
Whether it is Sorthwest China	1	0	0.0393	0.1945
Whether it is Northwest China	1	0	0.0122	0.1100
Post-investment valuation	650	0.6231	18.9677	32.7202

We select some variables for regression. In order to avoid multi-collinearity, we adopt backward retention of independent variables to obtain the best binary logistic regression model of investment return. Since the financing companies counted in this dissertation are listed companies from 2019 to 2022, to test the model's stability, we grouped the entire sample group according to the listing time and explained the full sample group model. According to the regression results, the following equation is finally obtained.

Table 5 Binary logsitic regression results

Independent variable	Full sample（2019-2022）	Available in 2020 and beyond	Available in 2021 and beyond
Whether the major shareholder is private	1.73*** (0.63)	1.89***（0.62）	2.38***（0.65）
Actual controller education	0.62*** (0.12)	0.79***（0.14）	1.22***（0.25）
Actual controller age	0.39***（0.13）	0.32**（0.14）	0.36***（0.16）
Whether it is a primary industry	2.73***（0.89）	2.45***（0.92）	/
Whether it is a secondary industry	0.86***（0.24）	0.82***（0.28）	0.77**（0.37）
Whether it is a science and technology board	-4.26***（0.34）	-4.37***（0.37）	-4.39***（0.34）
Whether it is the Growth Enterprise Market	-1.81***（0.39）	-2.28***（0.39）	-3.61***（0.64）
Whether it is South China	-1.41**（0.77）	-1.54**（0.82）	/

Table 5 (continued)

Independent variable	Full sample（2019-2022）	Available in 2020 and beyond	Available in 2021 and beyond
Post-investment valuation (Hundred million)	-0.33*** （0.08）	/	-0.12*** （0.04）
Sample	1144	949	524
Model goodness of fit test value (P-value)	0.0000	0.0000	0.0000
	Pesudo R^2 = 0.3353	Pesudo R^2 = 0.3561	Pesudo R^2 = 0.4150

Note: The value in brackets is the standard deviation of the variable, *** is at the 0.01 significance level, ** is at the 0.05 significance level.

The binary logistic regression model does not have a sum of squares decomposition formula, so Stata will use pseudo-R2 to measure the goodness of fit of the regression. This statistic was proposed by McFadden in 1974. The value of pseudo-R^2 is between 0-1. The larger the value, the better the goodness of fit, and the calculation formula is

$$PesudoR^2 = \frac{lnL_0 - lnL_1}{lnL_0}$$

Since we are conducting statistical analysis of cross-sectional data and most are categorical or sequential, the pseudo-determination coefficients are low, which is normal. It is valid for all binary logistic models in this report.

In the column of the goodness of fit test of the model, P<0.001 indicates that the partial regression coefficient of at least one independent variable in the model is not 0, suggesting that the model can be established.

In the case of different groups, there is no significant difference in the factors affecting the return on investment under different listing times of enterprises, so we can conclude that the model is relatively robust.

Explanation of the sign of the regression coefficient: The positive sign of the coefficient value indicates that as the value of this factor becomes extensive, the dependent variable believes that the occurrence of a high return on investment is more likely to fall on the side of the more significant value, that is, the occurrence of a high return on investment; if the factor coefficient takes a negative value, the interpretation is the opposite.

According to the analysis results of the summary table, seven factors significantly affect the possibility of increasing the high return on investment:

The nature of the major shareholder of the enterprise: The regression coefficient takes a positive sign, the major shareholder of the enterprise is a private enterprise, and the possibility of a high return on investment is significant. This is not quite consistent with hypothesis 5. It may be due to the greater flexibility of private enterprises in operational management. Compared with state-owned enterprises, the organizational structure of private enterprises is relatively simple. The approval procedures for relevant procedures are relatively simple, which can improve the organization's operational efficiency to a certain extent, reduce unnecessary expenses, optimize the company's income and expenditure model, and make it easier to expand. The volume is on the road to the listing. On the other hand, in the face of new market opportunities, private enterprises with greater flexibility are more likely to seize the opportunity and adjust the enterprise's strategic direction. It also ensures the sustainable and steady development of the company to a certain extent. Compared with self-employed enterprises, it is more scaled and systematic, with a complete organizational structure and more healthy and comprehensive development. For Sino-foreign joint ventures, they need to face problems such as inefficiency in cross-border communication and mistrust between principals and agents, resulting in low efficiency and reduced income, and the possibility of a high return on investment will also be reduced. Therefore, the nature of the major shareholder of the enterprise has an impact on the return on investment, which is consistent with the Hypothesis 5. In addition, due to the existence of information asymmetry, private enterprises may face higher capital costs in the capital market. In order to attract investors, these businesses may need to offer higher rates of return, further increasing the significance of the return on investment. By contrast, Chinese-foreign joint ventures and state-owned enterprises have better access to low-cost financing because of better disclosure, which means they do not have to offer particularly high returns to attract investment.

The educational background of the actual controller: The regression coefficient takes a positive sign; it means that the enterprise is managed by a person with a higher educational background and is more likely to have a high return on investment. People with higher academic qualifications have more professional education and know more outstanding people. They are more likely to be superior to other companies regarding corporate management and future strategic layout. Therefore, the higher the educational background of the actual controller, the greater the probability of high investment returns.

Age of the actual controller: The positive sign of the regression coefficient indicates that the older the actual controller is, the greater the probability of a high return on investment. This phenomenon can be understood from the perspective of information asymmetry. Older founders often have rich industry experience and a high reputation, which can alleviate the information asymmetry between investors and companies to some extent. In the absence of comprehensive information, investors tend to trust experienced leaders and perceive their ability to handle market volatility and operational challenges. In addition, older founders often bring in professional managers to assume day-to-day management responsibilities, which helps to improve the professional management level and information transparency of the enterprise, and further enhance investor confidence. As a result, investors have a relatively low risk assessment of these enterprises, leading to an increased probability of high investment returns.

Industry: The regression coefficient value takes a positive sign, it means that the enterprise belongs to the primary or secondary industry, and the probability of a high return on investment is significant. This is also inconsistent with hypothesis three. Possible reasons for this outcome include government policy support, economies of scale, and technological advances. The government has provided tax incentives, subsidies and loan concessions to the secondary industry, which has reduced the operating costs of enterprises. In addition, the economies of scale brought about by large-scale production significantly reduce unit production costs and improve profit margins. Technological advances and the application of automation equipment have increased labor productivity and further enhanced the return on investment. At the same time, the sound infrastructure and industrial park support have reduced operating costs, and the strong demand in the international market has also brought additional benefits to the manufacturing industry, improving the overall return on investment. In contrast, the service sector faces higher labor costs, market saturation, and margin pressures, which limit the improvement of its investment returns.

Listed sector: The regression coefficient takes a negative sign; it means that companies that choose to list on the Science and Technology Innovation Board and the ChiNext Board are likelier to have a low return on investment. The results of listing on the main board are not significant. However, the variable coefficient of main board listing is not significant, which does not mean that there is no relationship between main board listing and high investment return. It may be due to the diversity and stability of the companies listed on the main board that the relationship between them and the return on investment is difficult to be statistically significant. The company characteristics of the Science and Technology innovation board and the GEM are concentrated, so the significance and direction of the regression coefficient change. Companies that can be listed on the Science and Technology Innovation Board and the ChiNext Board have more robust technological attributes. The Science and Technology Innovation Board was newly established in 2018, and it is also an essential strategic layout for China to transform into a technological power. Companies that choose to go public on the Science and Technology Innovation Board have vital research and technological attributes, and the primary market usually gives such companies a higher market valuation. In 2019 and early 2020, China's investment market was very prosperous. As the black swan event of the new crown epidemic hit the economic market, many companies failed to meet market expectations after listing. Therefore, since we assume that all investments will be launched one year after the listing ban is lifted, the possibility of high ROI on the Science and Technology Innovation Board and the ChiNext Board is even lower. In addition, most of the companies listed on the Science and Technology Innovation Board are technologically innovative, and the market still needs to verify their revenue and profits. As for the requirements for listing on the Science and Technology Innovation Board, it has low requirements for income and profits. Therefore, many high-tech companies can be listed on the Science and Technology Innovation Board when they are not profitable or even have low incomes. For the existing secondary investors, their requirements for income and profit are higher. This article defines the return on investment for exiting after one year. The company's market value at this time may be affected by the lack of revenue increase, thereby affecting the return-on-investment multiple times. Therefore, the return on investment is affected by the listed sector of the company, which is consistent with the Hypothesis 4 to some extent.

Region: The regression coefficient takes a negative sign, the company is established in South China, which is more likely to have a low return on investment. This is not consistent with the second hypothesis of this paper. The representative cities in South China include Guangzhou and Shenzhen, which are dominated by manufacturing and high-tech industries, especially electronic information industry and advanced manufacturing industry. The market is very competitive. Fierce competition can cause companies to face price pressure and lower the price of their products to maintain market share, thus squeezing profit margins and affecting return on investment. While other regions are not a significant regressive variable, this may be because economic conditions, market environment, policy support and other factors in different regions may affect investment returns. However, the effects of these factors are often complex and varied. A single "regional" variable may not adequately capture these complex interaction effects and nuances, resulting in insignificant effects on high investment returns.

Post-investment valuation: The regression coefficient takes a negative sign, the lower the post-investment valuation, the greater the possibility of high investment returns. Investing in a company when the market undervalues it is easier to get a higher return on investment in the future. It is consistent with hypothesis 6.

In addition, according to our regression results, the investment stage is not a significant variable, which is inconsistent with Hypothesis 1.

Binary Logistic Regression Explores the Differences in Factors Affecting Investment Returns at Different Investment Stages

We further attempt to explore the factors that affect investment returns at different investment stages and their differences. This is mainly because in the primary market, there are significant differences in the investment logic of different institutions such as private equity and venture capital, which makes the factors they focus on when looking for investment opportunities are also different.

Table 6 Introduction to model variables (2)

	Variable name	Explain
Dependent Variable	Whether to obtain a high return on investment	1 high returns，0 low returns
Independent Vaiable	Whether it is a state-owned enterprise	1 yes，0 no
	Whether it is a private enterprise	1 yes，0 no
	Whether it is a self-employed enterprise	1 yes，0 no
	Whether it is a sino-foreign joint venture enterprise	1 yes，0 no
	Actual controller education	1 junior college and below，2 bachelor，3 master，4 doctor
	Actual controller age	1: 25-34， 2:35-44， 3: 45-54，4: 55-64，5: over 65
	Whether it is a primary industry	1 yes，0 no
	Whether it is a secondary industry	1 yes，0 no
	Whether it is a tertiary industry	1 yes，0 no
	Whether it is a science and technology board	1 yes，0 no
	Whether it is a main board	1 yes，0 no
	Whether it is the Growth Enterprise Market	1 yes，0 no
	Whether it is East China	1 yes，0 no
	Whether it is Sorth China	1 yes，0 no
	Whether it is Central China	1 yes，0 no
	Whether it is Northeast China	1 yes，0 no
	Whether it is Southwest China	1 yes，0 no
	Whether it is Northwest China	1 yes，0 no
	Whether it is North China	1 yes，0 no
	Post-investment valuation	The equity value of the company after investment, in hundreds of millions

Table 7 Descriptive statistics of factors affecting the likelihood of high investment returns in the early and middle stages

Variable name	Max	Min	Mean	Standard deviation
Whether to obtain a high return on investment	1	0	0.2382	0.4265
Whether it is a state-owned enterprise	1	0	0.0494	0.2170
Whether it is a private enterprise	1	0	0.8337	0.3728
Whether it is a self-employed enterprise	1	0	0.0966	0.2958
Whether it is a sino-foreign joint venture enterprise	1	0	0.0202	0.1409
Actual controller education	4	1	2.4604	0.9727
Actual controller age	5	1	3.3668	0.7824
Whether it is a primary industry	1	0	0.0067	0.0819
Whether it is a secondary industry	1	0	0.7506	0.4332
Whether it is a tertiary industry	1	0	0.2427	0.4292
Whether it is a science and technology board	1	0	0.5663	0.4961
Whether it is a main board	1	0	0.2607	0.4395
Whether it is the Growth Enterprise Market	1	0	0.1730	0.3787
Whether it is East China	1	0	0.5933	0.4918
Whether it is Sorth China	1	0	0.1888	0.3918
Whether it is North China	1	0	0.0809	0.2730
Whether it is Central China	1	0	0.0674	0.2510
Whether it is Northeast China	1	0	0.0157	0.1246
Whether it is Northwest China	1	0	0.0067	0.0819
Whether it is Sorthwest China	1	0	0.0472	0.2123
Post-investment valuation	405	0.6231	12.8470	22.6631

Table 8 Descriptive statistics of factors affecting the likelihood of high investment returns in the later stage

Variable name	Max	Min	Mean	Standard deviation
Whether to obtain a high return on investment	1	0	0.2346	0.4241
Whether it is a state-owned enterprise	1	0	0.0401	0.1962
Whether it is a private enterprise	1	0	0.8669	0.3398
Whether it is a self-employed enterprise	1	0	0.0587	0.2351
Whether it is a sino-foreign joint venture enterprise	1	0	0.0343	0.1822
Actual controller education	4	1	2.7049	1.0101

Table 8 (continued)

Variable name	Max	Min	Mean	Standard deviation
Actual controller age	5	1	3.2899	0.8146
Whether it is a primary industry	1	0	0.0028	0.05345
Whether it is a secondary industry	1	0	0.7654	0.4241
Whether it is a tertiary industry	1	0	0.2318	0.4222
Whether it is a science and technology board	1	0	0.8097	0.3928
Whether it is a main board	1	0	0.0801	0.2717
Whether it is the Growth Enterprise Market	1	0	0.1102	0.3133
Whether it is East China	1	0	0.5479	0.4981
Whether it is Sorth China	1	0	0.1674	0.3736
Whether it is North China	1	0	0.1488	0.3561
Whether it is Central China	1	0	0.0543	0.2269
Whether it is Northeast China	1	0	0.3147	0.1747
Whether it is Northwest China	1	0	0.0157	0.1245
Whether it is Sorthwest China	1	0	0.0343	0.1822
Post-investment valuation		1	22.8642	37.2473

We select some variables for regression. In order to avoid multi-collinearity, we adopt backward retention of independent variables, so as to obtain the best binary logistic regression model of investment return. According to the regression results, the following equation is finally obtained.

Table 9 Binary logistic regression results of early-middle and late period

Independent variable	Early and mid-term coefficient estimates	Late coefficient estimates
Whether the major shareholder is private	/	2.84*** (1.03)
Actual controller education background	1.00*** (0.24)	0.66*** (0.15)
Actual controller age	0.48** （0.22）	0.38*** （0.17）
Whether it is a secondary industry	/	1.09*** （0.33）
Whether it is listed on the science and technology board	-4.64*** （0.34）	-4.64*** （0.53）
Whether to be listed on GEM	-2.42*** （0.39）	-2.19*** （0.65）

Table 9 (continued)

Independent variable	Early and mid-term coefficient estimates	Late coefficient estimates
Whether it is in South China	/	-1.74** （0.86）
Post-investment valuation (billion)	-0.08** （0.03）	/
Model goodness of fit test value (P-value)	0.0000	0.0000
	Pesudo R^2 = 0.3784	Pesudo R^2 = 0.3353

Note: The value in brackets is the standard deviation of the variable, *** is at the 0.01 significance level, ** is at the 0.05 significance level.

The binary logistic regression model does not have a sum of squares decomposition formula, so Stata will use pseudo-R^2 to measure the goodness of fit of the regression. This statistic was proposed by McFadden in 1974. The value of pseudo-R2 is between 0-1. The larger the value, the better the goodness of fit, and the calculation formula is

$$PesudoR^2 = \frac{lnL_0 - lnL_1}{lnL_0}$$

Since we are conducting statistical analysis of cross-sectional data and most are categorical or sequential, the pseudo-determination coefficients are low, which is normal.

In the column of the goodness of fit test of the model, P<0.001 indicates that the partial regression coefficient of at least one independent variable in the model is not 0, suggesting that the model can be established.

Explanation of the sign of the regression coefficient: The positive sign of the coefficient value indicates that as the value of this factor becomes extensive, the dependent variable believes that the occurrence of a high return on investment is more likely to fall on the side of the more significant value, that is, the occurrence of a high return on investment; if the factor coefficient takes a negative value, the interpretation is the opposite.

Comparative analysis of the early-middle and late stage respectively, it shows that the three factors of the actual controller's education, the age of the actual controller, and the listing sector are all significant. The educational background and age of the actual controller are positive influencing factors in the regression results of the early-middle and late stages, and the influence coefficient is more significant in the early and middle stages, which is consistent with reality. The success rate of early-middle stage projects is more correlated with the founder's ability. The selection of listed sectors is similar between the early-middle and late stages.

Whether the majority shareholder is privately owned is not a significant variable in the early and mid-term. However, for late-stage projects, it is more likely that the majority shareholder is privately owned and will have a high return on investment.

Whether an enterprise belongs to the secondary industry is not a significant variable in the early and mid-term. However, for later projects, enterprises belonging to the secondary industry are more likely to have a high return on investment.

For late-stage projects, companies outside of South China are more likely to experience high returns on investment. In earlier regressions, this indicator was not significant. Other regions are insignificant variables regardless of the regression results in the early-middle or late stages. The region's impact on investment return could be more precise.

Regarding the post-investment valuation, in the early and mid-term regression results, the lower the post-investment valuation, the greater the possibility of high investment returns. In the later regression results, the impact of this indicator on high return on investment is not significant.

CHAPTER 4

CONCLUSION AND SUGGESTIONS

Conclusion

This dissertation analyzes the influencing factors of investment return based on the statistics of the financing situation of listed companies before listing. Use Stata to establish a binary logistic model to obtain further the influencing factors that increase the possibility of high investment returns and perform regressions on the early-middle and late stages to obtain the differences between the influencing factors. Through the above analysis, we draw the following conclusions:

According to our statistical results, the proportion of high investment returns is higher in enterprises whose majority shareholders are private. Enterprises whose controllers have a Ph.D. may be more professional in management, so the probability of a high return on investment is high. For enterprises whose actual controllers are between 45 and 64 years old, the probability of a high return on investment may be higher because the actual controllers have more management experience. In terms of the industry in which the enterprises are located, the return on investment of the secondary industry accounts for a higher proportion, which may be because China's development in recent years is inseparable from the industry. Regarding the region where the enterprises are located, enterprises in East China account for a more significant proportion of high investment returns. Among the boards where companies are listed, the main board has a relatively high proportion of high investment returns, and the proportion of high investment returns on the Growth Enterprise Market and the Science and Technology Innovation Board is relatively close.

Through the analysis of the influencing factors of a high return on investment through the logistic model, it is found that private enterprises with significant shareholders may have greater flexibility in corporate governance and are more likely to have a high return on investment; the educational background of the actual controller, the more significant the possibility of a high return on investment; the older the actual controller, the greater the possibility of a high return on investment. Enterprises from the primary or secondary industries are also more likely to have high returns on investment. The lower the post-investment valuation of a company, the greater the possibility of high investment returns. Companies choosing to go public on the Science and Technology Innovation Board or the ChiNext Board may reduce the possibility of high investment returns. Companies with high technological attributes have higher valuations in the primary market. Easy to break.

The regression of the early and mid-term investments found that the factors affecting the return on investment differ from those of the later projects. Among them, the four variables of the actual controller's education and age, listing sector, and post-investment valuation are still significant. However, the impact of industry, region, etc., on the return on investment is insignificant in the later stage. The regression of the late investment projects is relatively close to the result of the total regression, and the two indicators of whether it is the primary industry and post-investment valuation are no longer significant.

Suggestions

There are still many problems to be solved in China's current venture capital investment. Based on the findings of this dissertation, we make the following recommendations to countries and governments:

First, solve the problem of regional imbalance in venture capital development as soon as possible. Most start-up companies and venture capital institutions are concentrated in East China and South China, resulting in generally high valuations of investment projects in these regions. In many other regions, there are few investment institutions and weak efforts to promote the listing of projects. The government should use finance, or More strategies should be used to break this imbalance as soon as possible. China's economic reform has entered a deep-water zone. The imbalance between regional development is difficult to improve in the short term. The poor get poor, and the rich get rich. Over time, various contradictions will arise. Some underdeveloped provinces should step up efforts to support some good venture capital companies and, simultaneously, break down regional barriers and actively introduce venture capital institutions from developed provinces to introduce capital and advanced management and investment concepts.

Second, increase the disclosure of information on the venture capital industry. The writing of this article focuses on the calculation of return on investment with listing as the exit terminal. The information disclosure of companies after the listing is relatively affluent. In the pre-listing stage, enterprises have limited access to information that needs to be completed. As a high-risk industry, the venture capital industry needs external financial support, and fund holders can only wait and see under the premise of insufficient information. Therefore, provinces and cities should set up some relevant institutions to regularly disclose the situation of these start-ups and build a financing platform between investors and financiers. At the same time, start-ups should strengthen the scientific nature of management, learn from the management experience of start-ups in mature foreign markets, control their risks, and ensure the safe and smooth exit of venture capital as much as possible.

Third, continue to improve China's Science and Technology Innovation Board and Growth Enterprise Market. It is self-evident that the Sci-Tech Innovation Board and the GEM market play a role in the exit of venture capital. The Sci-tech Innovation Board and the GEM market in China are mainly established to meet the financing needs of entrepreneurial, small and medium-sized, and high-tech enterprises. The threshold of the science and technology innovation board and the growth enterprise board is lower than that of the primary board market, enabling potential small and medium-sized enterprises to obtain financing opportunities. In China's economic development strategy, the strategy of rejuvenating the country through science and education and the innovative national strategy have driven the development of the venture capital market from a policy perspective. As an essential exit path, the problem of breaking the issue also requires the joint efforts of various regulatory agencies and securities companies. All lead underwriters shall prudently write investment value reports by the requirements of the association's regulations, fully carry out investor roadshow communication work, remind market risks, manage issuers' valuation and pricing expectations, and reasonably plan fundraising projects, fully considering the market, industry, and underwriting Prudently determine the issue price after taking into account the risks. The regulators further tightened the responsibilities of intermediary agencies and continued to release strict regulatory signals.

For investment institutions, before investing in enterprises, we make the following suggestions:

First, conduct complete and strict commercial due diligence. Commercial due diligence can discover the intrinsic value of a project or enterprise. Investors and financiers analyze the intrinsic value of the enterprise from different angles, and there are often deviations. The evaluation and consideration of the intrinsic value of the enterprise must be based on due diligence. Identify potential fatal flaws and possible impacts on prospective investments. From an investor's perspective, due diligence is the first step in risk management. Financing parties usually clearly understand various risk factors of the enterprise, while investors still need to. Therefore, investors must make up for the imbalance in information acquisition between the two parties by conducting due diligence. Especially for companies investing in high-tech industries, more rigorous investigation and evaluation methods are required to screen out companies with potential in the market so that funds will flow to where the market needs them most.

Second, the founding team should be both professional and flexible. The founder's character, professional level, management experience, and strategic development also play a decisive role in the company. Especially in the early stage of the project, the strength of the founding team determines the company's future direction. A good founding team not only needs to be able to research and develop but also has rich experience and experience and a keen perception of the industry and market development trend. At the same time, the founding team also needs to have the operation and management capabilities of the enterprise. In the company's development process, as the team grows more prominent, maintaining the collaboration between teams and departments is inseparable from the founder's arrangements for the company's internal structure, employment system, and equity incentives. Therefore, investment institutions also need to focus on the overall situation of the actual controller before investing and make comprehensive judgments to minimize foreseeable investment risks.

Third, discover companies undervalued by the market. Before investing, investment institutions need to grasp the market economy. In addition to the policy level, it is also necessary to combine China's current situation, China's policies, and directions to find more investment opportunities in cross-cutting fields. Second, establish awareness of the track in which to invest. By establishing an industry panorama, sort out the industry's industrial chain, competition pattern, market demand, technical characteristics, etc., and track the development trend of the industry for a long time to discover potential and valuable companies. Investing when the market has not accepted its value can allow us to enter at a lower valuation and obtain a higher return on investment in the future.

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