Two-Way Selection of Venture Capital and P2P Platform

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Abstract

Venture capital has the special favor to P2P platform. The new rules of network loan make P2P platform operate more standardized. As the problematic platform gradually collapsed, the concentration ratio increased. P2P platform plays a significant role in the alleviation of the SME's financial problems. What's more, national policies encourage social innovation and entrepreneurship. So future prospects of P2P platform are worth waiting for. This paper analyzes the motivation and effect on two-way selection of venture capital and P2P platform. Empirical results show that venture capital helps P2P platform spread risk and improve risk matching ability; venture capital can increase the trading volume of platform, which indicates that the two-way selection of venture capital and P2P platform may benefit SMEs' financing.

Keywords

Venture Capital, P2P Platform, Risk Matching, SMEs' Financing

1. Introduction

In 2014, the development of P2P platforms was brought to a new peak. The P2P platform attracted many venture capital firms to invest in. Although the trend was declined by the state's new regulations in P2P platforms, as the regulations landed gradually, the P2P will have new development opportunities. So venture capital will look back to the P2P platform. According to Zero2IPO Research Center, in angel investors' eyes, the most favored industry in China is Internet Industry in the first half of 2016. Only on June 2016, P2P platforms attracted a total of nearly 1.5 billion yuan.[1]

With customer and data information advantages, the P2P platform has a better understanding of the needs of SMEs as a result of the long time contacts. And

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[1]The statistic is from Zero2IPO Research Center.

the most of P2P platforms are operated by small enterprises, which are desired for venture capital. Venture capital and P2P platform benefit each other, providing low-cost, all-round, specialized services, which promote the innovation of society. This article aims to have a deeper understanding of the relationship between venture capital and P2P platform in China. Based on the previous research, we are devoted to the theme of public entrepreneurship and innovation, so as to better serve SMEs.

Two-Way Selection between VC and SMEs

Venture capital provides equity capital to high-growth start-ups that mainly belong to science and technology and provides management and consulting services to them so as to obtain medium and long-term capital growth through equity transfer. Venture capital emerged in the 15th century in the United Kingdom and prospered in the United States. In 1984, National Science and Technology for Development Research Center proposed "venture capital" in the study of "the new revolution in science and technology and China's countermeasures". This is the beginning of venture capital's development in our country. The Decision on the Reform of Science and Technology System published the following year proposed to support the development of high-tech industries by means of venture capital investment and set up China's first official venture capital firm, China New Technology Venture Capital Corporation.

Risk mismatch, which is similar to resource mismatch and capital mismatch, means that the risk of the project does not match the risk appetite of its investors in financial markets, due to information asymmetry and so on.

The crowding-out effect of venture capital means that the increase of risk capital invested in P2P platform will reduce the number of external investors. For example, when conducting a project review, VCs get ahead of risky high-yielding projects that result in a reduction of external investors in the P2P platform.

SMEs refer to various forms of small and medium-sized enterprises that are legally established in accordance with the law in China. They are conducive to meeting the needs of the community, increasing employment, complying with the national industrial policies, and of producing and operating in scales. SMEs play an important role in solving employment problems, flourishing the market and making technological innovation. Our government gives great support to SMEs to promote the transformation and upgrading of China's economy.

This paper reviews the existing researches on venture capital and network loan platform. Combining with relevant theories, we analyze the motivation and effect of two-way choice of venture capital and P2P platform. The paper empirically tests the influence of venture capital on the operation risk and turnover of P2P platform with the method of multiple regression. We conclude that venture capital helps to disperse the operating risk of the platform and increase the turnover of the platform. This paper indirectly reflects the positive effect of venture capital on the financing of small and medium-sized enterprises, and gives

suggestions from three angles: venture capital, net loan platform and government supervision.

2. Theoretical Basis and Literature Review

On the model of control right, venture capitalists play two roles: to prevent entrepreneurs from making decisions that are not conducive to the interests of investors; to give advice on the management of entrepreneurs. Two kinds of effects can be produced under the framework of multi-task: encouraging venture capital to give more advice and assistance to entrepreneur, on the contrary, it leads to excessive supervision, which weakens entrepreneurs' motivation.

Reverse order hypothesis. Priority financing theory holds that firms tend to choose a preferred order of financing: firstly, internal financing, and secondly debt. Finally, the issue of stock financing. Some factors may deviate from the order of financing theory, empirical evidence shows that small high-growth firms basically do not act in accordance with the order hypothesis. Although these enterprises are indeed full of information asymmetry problems, but poor cash flow enterprises have to reduce the demand for debt financing in order to survive; The exit strategies of entrepreneurs and large investors also require more equity issues or other "high information density claims" [1] [2].

Based on the classical principal-agent theory, the financing contract model in the context of bilateral moral hazard, there is an optimal set of contracts in venture capital. Different subsets of optimal contracts in the optimal contract set can achieve the same social suboptimal state.

The reverse order hypothesis provides a basis for the small enterprises using equity financing more frequently in China. The model of control rights shows that there are two opposite effects of venture capital on corporate governance, but there is an optimal set of venture capital in the context of bilateral moral hazard.

The existing research shows that VC investment can enhance the management ability of P2P platform, assist the platform in technological innovation, and promote the development of P2P platform [3] [4] [5] [6]. On the other hand, VC can use the resources of Internet financial platform to exploit the potential investment opportunities, take P2P platform as investment intermediary, and provide decision support for investment matching. VC and P2P platform cooperation can achieve a win-win effect.

The empirical analysis of the effect of venture capital on increasing the transaction volume of P2P network lending platform is not consistent with the theoretical analysis, and it is worth further empirical test [7] [8].

3. Theoretical Analysis

Venture capital can directly invest in small and medium-sized enterprises. Or through the use of funds to P2P platform, SMEs obtain loan funds from the P2P platform, so that venture capital indirectly plays a positive role in SME financing.
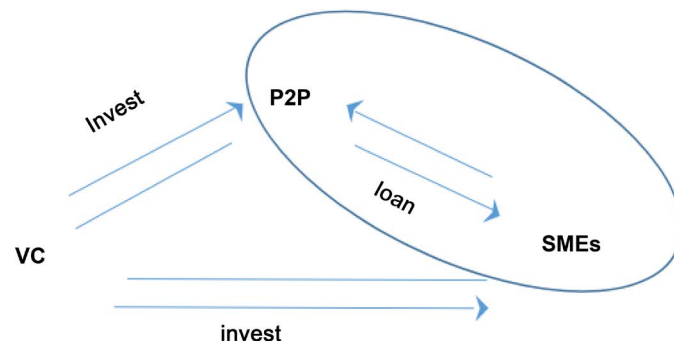
Figure 1. Relationship between venture capital and SMEs including P2P platform.

Figure 1 depicts the possible financial relationships between venture capital, P2P platforms and SMEs.

3.1. Incentives for Venture Capital to Favoring P2P Platforms

P2P platforms are mostly small and high-growth enterprises. Based on the country's strong support for the SMEs, P2P platforms usually operate by a strong vitality and high development potential enterprise. Some are based on financial services and financial information, the other is based on network services and science and technology. So investing P2P platform is a form of VCs' direct investment in small and medium-sized enterprises.

VC invests in P2P platforms for potential capital appreciation. Acquiring capital appreciation is the ultimate goal, and the best exit mechanism of venture capital is IPO. In 2016, China's capital market was generally depressing. The National SME share transfer system issued Announcement on Matters Related to listing Financing of Financial Enterprises on May 28, 2016. It made P2P listed in the new three boards to be suspended by the regulatory layer. Overseas IPO is difficult, and easy to produce "unfavorable". The IPO plan of many P2P platforms will be stranded temporarily [9] [10]. VC's investment in P2P platform and gain from capital appreciation through its listing will not work in the short term. The collection cycle of VC capital is longer than 3 - 8 years, from now on, waiting for P2P platform into a rational and healthy development track, especially with industrial policy cleared after IPO. Access to capital appreciation and exit is the best option.

In addition, it is not possible for IPO to realize the exit of venture capital for the time being, thus avoiding the short-sighted behavior of venture capital to speed up the listing of enterprises in order to obtain high short-term returns [11].

P2P platforms' information superiority can enlarge the investment scope of venture capital. In addition to gaining capital appreciation, a large number of information resources on P2P platform can help VC invest in venture enterprises with advanced products, good investment environment, good reputation and high management level [12]. The number of venture companies available in VC will be expanded.

There is obvious spatial agglomeration of venture capital industry in China, which forms the investment city network with Beijing and Shanghai as the core, but the original central level model has the tendency of weakening. With the help of P2P platform, VC can make enterprise finance more flexible, reduce geographical restrictions, provide funds for good projects in remote cities, and make the radiation range of venture capital network wider.

3.2. Motivations of P2P Platform to Accept Venture Capital

VC Improve platform management ability and reduce operational risk.VC equity, after being platform's shareholders, can get more information which an external investor cannot get. There are many rounds of VC investment, and repeated game can solve the principal-agent problem between VC and enterprise [13] [14]. The financing contract model in the context of bilateral moral hazard also shows that there is an optimal set of contracts in venture capital.

P2P platform receives venture capital for platform construction, team building, strengthening technology development, etc. Venture capitalists play a role beyond traditional financial intermediaries. The supervision of the enterprise can standardize the operation of the platform, enhance the due diligence of the project beforehand, and improve risk control ability of the platform itself, based on the control model. Excessive regulation may also reduce incentives for entrepreneurs.

Conjecture 1 VC helps to reduce the operation risk of P2P platform.

VC Enhance the investment reliability and increase the trading volume of the platform. At present, P2P platform has the problem of risk mismatch. Because of the opaque operation of the platform and the asymmetry of information between the fund demanders and the fund providers, the risk matching function that the platform should have cannot be reflected. Small and medium investors often bear excessive risk [15]. VC has the high-risk preference, which can transfer the risk beyond the scope of the medium and small investors.

The addition of VC can improve the risk matching degree of the platform project, enhance the trust of the external investors to the platform, and increase the turnover. On the other hand, there is the extrusion of the external investors by VC.

Conjecture 2 VC can help improve the trading volume of P2P platform.

4. Empirical Test

4.1. Data Sources and Variables Description

We selected cross-Section data from "net loan House" website in June 2016 online loan platform development rating data and platform transaction data. Platform selection was according to the network loan platform development rating ranking top 100. These platforms develop well, avoiding the problem of data interruption caused by running in tracking research.

Venture capital (VC) is a dummy variable, as of June 2016, the "Internet loan

House" platform file on the 100 platforms indicated that the acceptance of venture capital injection is a value of 1, otherwise the value is 0. DEVELOP represents the comprehensive influence of a P2P platform. The average of 100 platforms' DEVELOP in the sample is 48.59. VOLUME represents platform turnover index, the higher the VOLUME, the higher the platform turnover. VOLUME is calculated according to the actual volume of the month and the weighted volume of time of the month. The mean value of VOLUME is 55.69. The maximum value is 99.36, and the minimum value is 8.02, which shows that the turnover between different platforms is very different. POPULAR shows the number of investors and borrowers on the platform. The higher the POPULAR score, the more people are investing and borrowing on the platform. This index is based on the number of investors and the number of borrowers. The mean value of POPULAR is 49.06. DISPER is used to characterize platform borrowings and investment funds dispersed. The higher the DISPER score, the more decentralized the platform investment and borrowers, and the lower the risk of platform operation. The mean value of DISPER is 56.83. The maximum value is 93.84, and the minimum value is 7.26, which shows that there are significant differences in operating risks of different platforms. LIQUI shows the investment fund recovery time. The mean value of LIQUI is 69.87 and the median is 70.26, which shows that the fluidity of platform in the sample is good. The higher the TRANSP score, the more transparent the platform information is.[2]

4.2. Data Description

Table 1 gives the basic descriptive statistics of each variable. Table 2 shows the correlation coefficients between variables. It can be seen that the popularity and dispersion are significantly positive correlation, indicating that the higher the dispersion, that is, the more dispersed the borrower. The higher the number of loans, the higher the popularity. Transparency is significantly positive correlation with the popularity, indicating that the higher the popularity, the more the number of people investing in or borrowing from the platform, the higher the disclosure of information on the platform. The degree of risk investment is

Table 1. Variable data description.

Variable Code	Average	Max	Min	Median	Standard Deviation
DEVELOP	48.59	70.30	42.10	45.91	7.15
VOLUME	55.69	99.36	8.02	52.92	20.38
POPULAR	49.06	100.00	7.18	46.19	18.98
DISPER	56.83	93.84	7.26	52.82	21.06
LIQUI	69.87	100.00	32.46	70.26	16.89
TRANSP	39.49	70.65	14.27	38.06	10.50
VC	0.28	1	0	0	0.45

[2]It refers to the relevant definitions of the "Web loan platform Development Index rating Index detailed rules" published on the official website of "Internet loan House".

Table 2. Correlation coefficients between variables.

	DEVELOP	DISPER	LIQUI	POPULAR	TRANSP	VC	VOLUME
DEVELOP	1						
DISPER	0.58***	1					
LIQUI	)0.08	)0.16	1				
POPULAR	0.72***	0.49***	)0.01	1			
TRANSP	0.48***	0.08	0.09	0.19*	1		
VC	0.41***	0.29***	0.10	0.39***	0.26***	1	
VOLUME	0.72***	0.40***	)0.19*	0.74***	0.18*	0.34***	1

Note: ***, **, *represent the significance under 1%, 5%, 10%.

significantly positively correlated with diversification, popularity, trading volume, and transparency. When a platform has the access to VC investment, it also has more dispersed the borrowers, the larger the number of loans, the higher the turnover, more open platform information [16]. It has significantly positive correlation with dispersion, popularity and transparency, and negative correlation with liquidity, which indicates that the more diversified the borrower, the more the number of investment or loan, the more information of the platform open, the higher the trading volume of the platform. The faster the platform recovers principal and interest, the lower the trading volume score, which may be due to the proportion of net worth mark and second mark in the total trading volume due to the percentage of net value and second mark in the calculation of transaction index. There is a strong correlation between sentiment and turnover, which is related to the calculation of the index.

4.3. Regression Results

To test conjecture 1, set up a linear regression model

$$\text{DISPER}_i = \beta_0 + \beta_1 \text{VC}_i + \beta_2 \text{LIQUI}_i + \beta_3 \text{TRANSP}_i + \varepsilon_i \tag{1}$$

The test result of the impact of venture capital on the operating risk of the platform is as follows:

$$\hat{\text{DISPER}}_i = 68.5621 + 14.6313 \text{VC}_i - 0.2449 \text{LIQUI}_i + 0.0289 \text{TRANSP}_i \tag{2}$$

se = (9.7107) (5.4993) (0.1185) (0.2020)

t = (7.0604)*** (2.6606)*** (−2.0658)** (0.1429)

$R^2 = 0.1250$ F = (4.5243)***[3]

The coefficient of venture capital is 14.6313, and it is significant at 1% level, which indicates that the higher the dispersion integral of the platform with venture capital injection, the more dispersed the borrowers of the platform. The lower the operating risk of the platform. Conjecture 1 is verified. The liquidity coefficient (LIQUI) is negative, indicating that the faster the platform recovers

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[3]Note: In order to avoid heteroscedasticity and autocorrelation problems, the results obtained are the results of correcting standard errors using the Nevis-West method. The significant level of 10% is significant.

principal and interest, the more concentrated borrowers are on the platform. Many of those who need money understand that they cannot repay their loans in the short term. The transparency factor (TRANSP) is positive, but it is not significant. Transparency is not an important reason to influence the choice of platform.

To test conjecture 2, set up a linear regression model

$$\text{VOLUME}_i = \gamma_0 + \gamma_1 \text{VC}_i + \gamma_2 \text{LIQUI}_i + \gamma_3 \text{TRANSP}_i + \varepsilon_i \tag{3}$$

The test results of the effect of venture capital on the turnover of P2P platform are as follows:

$$\hat{\text{VOLUME}}_i = 62.2461 + 14.6732 \text{VC}_i - 0.2730 \text{LIQUI}_i + 0.2236 \text{TRANSP}_i \tag{4}$$

se = (9.1292) (4.2463) (0.1172) (0.1984)
t = (6.8183)*** (3.4555)*** (−2.3291)** (1.1273)
R^2 = 0.1765 F = (6.7853)***

Venture capital (VC) has a significant positive impact on the trading volume of the platform, indicating that with venture capital, the turnover of the platform will be increased, and the impact of venture capital on the external investors of the platform is not very large. Venture capital helps to facilitate P2P platform lending services to individuals and small businesses in need of capital [17] [18]. The negative liquidity factor is due to the transparency of the calculation of indicators. The transparency coefficient (TRANSP) is still not significant. It shows that the transparency of the platform has a limited impact on the trading volume of the platform.

4.4. Robustness Analysis

The development index (DEVELOP) is used to replace the dispersion degree (DISPER) as the explained variable, and the model (1) is re-estimated.

$$\hat{\text{DEVELOP}}_i = 40.8000 + 5.0158 \text{VC}_i - 0.0651 \text{LIQUI}_i + 0.2784 \text{TRANSP}_i \tag{5}$$

se = (2.7463) (1.7352) (0.0419) (0.0807)
t = (14.8565)*** (2.8907)*** (−1.5544) (3.4504)***
R^2 = 0.3368 F = (16.0847)***

The results show that the venture capital coefficient is still positive and significant, which promotes the development of P2P platform. The liquidity coefficient becomes no longer significant, while the transparency coefficient is significant, which does not affect the test of conjecture 1. It still proves that VC helps to disperse the operational risk of P2P platform.

The model (3) was re-estimated by using POPULAR instead of VOLUME as the explained variable.

$$\hat{\text{POPULAR}}_i = 42.2274 + 15.3757 \text{VC}_i - 0.0641 \text{LIQUI}_i + 0.1821 \text{TRANSP}_i \tag{6}$$

se = (9.0635) (4.5373) (0.1153) (0.1890)
t = (4.6590)*** (3.3888)*** (−0.5563) (0.9637)
R^2 = 0.1610 F = (6.0777)***

The results show that the venture capital coefficient is still positive and significant, and the liquidity coefficient and transparency coefficient are not significant, which does not affect the test on conjecture 2, which shows that VC improves the trading volume of P2P platform.

5. Conclusions and Suggestions

From the empirical analysis, we can see that VC can promote the operation risk of P2P platform and increase the trading volume of the platform. In this paper, some suggestions on the future development of venture capital and P2P platform are put forward.

From the perspective of venture capitalists, after venture capital is injected into P2P platform, it is necessary to supervise the capital operation and the construction of the platform properly, to improve the level of platform management but not to weaken the enthusiasm of entrepreneurs. From the point of view of P2P platform, we should strengthen our own construction and strive to create the development characteristics of attracting venture capital. At the same time, after getting the venture capital, we should apply the funds to the development platform reasonably; we cannot rely on the venture capital and ignore the platform construction and corporate governance. From the perspective of the government, we should create a good policy environment for the development of venture capital and P2P platform, and further standardize the P2P platform to maintain a healthy development situation. On the other hand, we should introduce more venture capital into high-quality small enterprises and promote social innovation and entrepreneurship.

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