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**VENTURE CAPITAL AND IPO UNDERPRICING IN CHINA**

**ВЕНЧУРНИЙ КАПІТАЛ І НЕДООЦІНКА ІРО В КИТАЇ**

**ВЕНЧУРНЫЙ КАПИТАЛ И НЕДООЦЕНКА ІРО В КИТАЕ**

**Summary.** *The stock pricing problem is a hot topic in the field of investment in China. Many investors, including speculative investors, have great enthusiasm in buying stocks that just finished IPO on the first day. It seems to be a very profitable deal because almost all the issue stock boost to a great extent at the end of the first trade day. However, with the investment strategy of short-wing trading, many investors tend to sell out the stock after a short time. What's more, the slow increase of company profit (E) and the high rate of P/E will result in selling climax. A large percent of the stock price drops off even below the issue price. To regulate the IPO issuing price, the China Securities Regulatory Commission (CSRC) set up a price inquiry system to help determine the price. Venture capital is quite popular in China because of the rapid increase of the economy. Many startups need help not only in the fund-raising part but also in market research, management, and development strategy. More importantly, getting the investment from famous Venture capital companies can bring in an excellent reputation, and invested companies will be considered as a project with a great development prospect and a good investment choice for ordinary investors. Almost all new issuing companies achieved the investment from foreign or local venture capital, will the attendance of venture capital influence the underpricing rate and the earnings yield of the stock is one of the problems we are going to research. Secondly, the underpricing phenomenon of IPO is not every obvious in the stock market of developed countries such as the USA, Japan, and the UK. What caused such a high IPO underpricing rate in China is another topic worthy of research and discussion. Last but not least, the investment strategy and trading mentality of Chinese investors is also a problem we would like to study.*

**Key words:** *stock pricing problem, investment, venture capital, IPO, underpricing, trading strategy, reputation.*

**Анотація.** У статті досліджено особливості та проаналізовано вплив венчурного інвестування на явище заниження ціни IPO прикладі китайських біржових ринків. Розглянуто поточну ситуацію щодо заниження ціни IPO та пов'язані з цим проблемні моменти на китайських фондових біржових площадках.

Також визначено наслідки зниження ціни IPO під впливом венчурного капіталу. В процесі аналізу поглядів китайських вчених на досліджувану проблему виокремлено загальну думку щодо взаємозв'язку існування венчурного капіталу та практики заниження ціни IPO на фондових ринках Китаю в порівнянні з фондовими ринками інших високорозвинених країн.

Проведений аналіз котирування акції на китайських та Гонконгской фондових біржах дозволив виокремити та охарактеризувати причини заниження ціни IPO в Китаї та обґрунтувати перспективи впливу заниження ціни IPO на обіг венчурного капіталу та методи впливу на вказане явище.

**Ключові слова:** венчурне інвестування, заниження ціни IPO, китайські біржі, теорія сертифікації, теорія нагляду, теорія несприятливого відбору.

**Аннотация.** В статье исследованы особенности и проанализировано влияние венчурного инвестирования на факт занижения цены IPO на примере китайских биржевых рынков. Рассмотрена текущая ситуация относительно занижения цены IPO и связанные с этим проблемные моменты на китайских фондовых биржевых площадках.

Также определены последствия снижения цены IPO под влиянием венчурного капитала. В процессе анализа взглядов китайских ученых на исследуемую проблему выделены общее мнение о взаимосвязи существования венчурного капитала и практики занижения цены IPO на

*фондовых рынках Китая по сравнению с фондовыми рынками других высокоразвитых стран.*

*Проведенный анализ котировки акции на китайских и Гонконгской фондовых биржах позволил выделить и охарактеризовать причины занижения цены IPO в Китае и обосновать перспективы влияния занижение цены IPO на обращение венчурного капитала и методы воздействия на указанное явление.*

*Ключевые слова: венчурное инвестирование, занижение цены IPO, Китайские биржи, Теория сертификации, Теория надзора, Теория неблагоприятного отбора.*

**Statement of the problem.** With the rapid expansion of the Chinese capital market, a negative tendency is observed in the Chinese stock market called the "3-highs issue": high issue prices, high offering P/E Ratio, and high raising funds. The high issue price leads to a severe over-raising of capital, which dramatically reduces the efficiency of capital market resource allocation [2, p. 3-4] and increases the risk for investors: more than 60% of stocks fall below their initial offer price [3, p.1]. A high P/E ratio stands for the lack of good business performance, and there will hardly be a significant increase in the stock price in the long term. The opportunity cost of investing in such stocks is comparatively high.

On the other side, due to various reasons such as information asymmetry and agency cost, the price of new stock on the first day of the listing is often significantly higher than the issue price of the stock. The phenomenon of underpricing of IPO widely exists in the stock market from all over the world. In the market of developed countries like the UK and USA, the underpricing rate is only around 20%; meanwhile, in the Chinese stock market, the rate is more than 150%. The excessive rates of underpricing have a terrible impact on the Chinese stock market. At First, the excessive capital inflow causes the unbalance of

supply and demand in the primary market, enlarging the speculative bubble. Secondly, the short-term arbitrage behavior of investors will cause a high risk to the stock and have a bad influence on the development of the stock market [4, p. 12-24].

Venture Capital plays a significant role in the development of startup companies and innovation of the financial system [5, p. 728]. There are four types of venture capital companies in China: foreign-invested companies, joint ventures, private-owned companies, and state-owned companies. For startups, the role of venture capital is not just to solve fund-raising problems but also to help startups find those unfavorable factors restricting the company's development and use their experience to tap the company's potential. There are several capital exit strategies for venture capitals: mergers and acquisitions, buy-backs, and IPO. Among them, mergers and acquisitions may cause the loss of ownership, and buy-backs may cause a shortage of liquidity. An IPO is considered the best option of capital exit for investors and entrepreneurs as the company value can be objectively examined by the market [1, p. 1].

**The analysis of recent research and publications.** Many Chinese economists researched the influence of venture capital on IPO underpricing. It has formed two different opinions: venture capital positively affects the IPO underpricing, and venture capital doesn't influence the IPO underpricing.

In the article "Impact of venture capital on IPO underpricing in the second-board market", author Zhu Yuanjia suggests venture capital doesn't influence the IPO underpricing. In this research, the author explained that nearly 70% of the companies in the second-board market have venture capital backgrounds. Still, the venture capital of startups has no significant impact on the underpricing rate, and the characteristics of companies and financial performance factors have no significant effect on IPO underpricing as well. The reason for the IPO underpricing in China's second-board market is that the immature operation mechanism of the second-board market and the speculation

investment in the secondary stock market are pretty common. In addition, Negative P/E ratio, Allocation Rate, Turnover rate may impact the IPO underpricing [6, p. 2-3].

In the research named "Analysis of the impact of venture capital on IPO underpricing", Chen Siming proposes that venture capital positively affects the IPO underpricing. To achieve a win-win goal with the invested enterprises, venture capitals will inevitably take the initiative to intervene in the management of the invested companies and actively promote their IPO process. After the theoretical analysis of the screening and supervision effect, certification effect, adverse selection effect, and market power theory, this author holds the opinion that the market power effect of venture capital is dominant in China's second-board market, which leads to the higher IPO underpricing rate of enterprises with venture capital [7, p. 6].

In the study on the impact of venture capital on IPO Underpricing in the second-board market, Wu Shujing agrees with the opinion that venture capital positively affects the IPO underpricing. The author explains that there are two different opinions in the academic circles: the first one is "certification effect and supervision effect"; the second is "the grandstanding theory". By collecting relevant data of listed companies in China from October 2009 to August 30, 2011, this paper applies an empirical analysis method to compare the impact of venture capital on IPO underpricing. The results show that (1) the underpricing rate of listed companies with venture capital participation is significantly higher than that of listed companies without venture capital participation, which indicates that venture capital is still in the stage of reputation building and confirms the grandstanding theory (2) The more shareholders of venture capital in a listed company, the lower the underpricing rate (3) The IPO underpricing rate of the listed companies with the participation of state-owned VC is significantly higher than companies with private-owned VC. that is to say, state-owned venture capital pays more attention to the reputation [8, p.11-13].

In the stock market of other countries like Singapore, there exists another theory that venture capital negatively affects IPO underpricing. The article named "Effects of venture capitalists' participation in listed companies" (Clement K. Wang) examined the effects of venture capital (VC) firms on VC-backed listed companies in Singapore and confirms that the post-IPO operating performance of VC-backed companies is inferior though they are less underpriced. The finding supports both the certification model and the adverse selection model. And they find that IPOs backed by older VC firms perform better, supporting the grandstanding model that younger VC firms bring their portfolios to the market prematurely [9, p. 4-5].

**Formulation of the goals of the article.** We have researched 300 stocks in the Chinese second-stock market, which listed in 2021: STAR Market (Shanghai), ChiNext (Shenzhen), and 100 stocks in Hongkong second-stock market GEM to understand the following problems:

- 1) Does VC relate to IPO underpricing?
- 2) The influence of Foreign & Local venture capital on IPO underpricing.
- 3) IPO underpricing situation in the stock of Mainland China and Hongkong.

**Presenting the main material.** We gathered the price of the stocks at the end of the first day of IPO and used this formula to calculate underpricing rate:

$$IR = \frac{\text{first day close price} - \text{issue price}}{\text{issue price}}$$

After getting the database of underpricing rate of every stock, we calculated the average rate and median rate to compare with different criteria.

In Table 1, we compared the underpricing rate of stocks with the investment from VC/PE companies and without the investment from VC/PE companies. As it can be seen, most of the issuing stocks get investments from VC/PE. Among 300 stocks researched, 246 of them with VC/PE. The average

underpricing rate for all 300 stocks is 107%. The rate for companies with VC/PE is higher (113%) than companies without VC/PE (79%).

*Table 1*

	<b>Obs</b>	<b>Average rate (%)</b>	<b>Median rate (%)</b>
<b>Total</b>	300	107	95
<b>VC/PE</b>	246	113	123
<b>Without VC/PE</b>	54	79	102

In Table 2, we change the criteria of comparing and try to understand will the background and characteristics of VC/PE companies affect the underpricing rate. For the companies invested by VC/PE, most of the companies get investment from local VC/PE (194) and have a comparatively high underpricing rate-120%, other companies with foreign VC/PE (64) have a lower underpricing rate-71%. We think it won't be very meaningful if other criteria are added like the size of the VC/PE companies, working years of VC/PE companies (more than five years & less than five years) because it will turn out to be the same result.

*Table 2*

	<b>Obs</b>	<b>Average rate (%)</b>	<b>Median rate (%)</b>
<b>Total</b>	246	113	123
<b>Foreign</b>	62	71	69
<b>Local</b>	194	120	109

In Table 3, we compare the stocks from the second board of Hongkong Stock (GEM) and China (STAR and ChiNext). Growth Enterprise Market (GEM) is a board of the Stock Exchange of Hong Kong opened in 1999 for growth companies that do not fulfill the profitability or track record requirements for the main board of the exchange. STAR, officially known as the Shanghai Stock Exchange Science and Technology Innovation Board, is a Chinese science and technology-focused equities market established on July 22, 2019. ChiNext is a NASDAQ-style subsidiary of the Shenzhen Stock Exchange. The first batch of firms started trading on ChiNext on October 30, 2009. The



reason for comparing these three stock markets is to understand whether the IPO underpricing rate differs under the different stock market systems of the same country, same people, and same investment habit.

*Table 3*

	<b>Obs</b>	<b>Average rate (%)</b>	<b>Median rate (%)</b>
<b>Total</b>	400	84	79
<b>Mainland</b>	300	107	95
<b>Hongkong</b>	100	14	22

From Table 1, we can conclude that venture capital positively affects the IPO underpricing, which can be explained by the adverse selection theory from Amity, Glosteei and Muller (1990) that there is information asymmetry between venture capitals and pre-IPO companies, and with insufficient information, VCs cannot correctly evaluate the real price of the company. As a result, they will propose a low issue price and cause the result of underpricing.

Table 2 shows that companies with foreign VCs have a lower underpricing rate than those invested by local VCs. It confirms the grandstanding theory that young VCs, local VCs, and state-owned VCs tend to issue the new stock as early as possible and get back their investment as soon as possible. In this way, they can quickly raise money to invest in other projects and gain a reputation. Apart from reputation consideration, the foreign VCs clearly have more experience in evaluating the company price and are more cautious on the process of IPO.

From Table 3, we can find that the underpricing rate in the stock of Hongkong is very low compared to the rate in Chinese stocks. Even though there are similar stocks in Hongkong & Mainland Chinese stock market, the regulation system in Hongkong stock is comparatively mature and well-developed. And the presence of over-allotment options increases IPO offer prices and reduces underpricing. It is also a major reason for price declines after IPOs. What's more, information asymmetry seems not to be a big problem in

Hongkong stock, as all companies are relatively transparent in the process of information sharing. Hongkong is one of the biggest economic centers in Asia. The whole stock system is similar to the European and American systems. With the attendance of the biggest worldwide VC companies, the underpricing rate is definitely low as in the USA. [10, p.18-20]

**Conclusions from this study.** From my research, we can draw the conclusion:

1. Chinese stock market is not a mature market. Certification theory and supervision theory are not quite suitable for the Chinese market because, without the proper regulation from the China Securities Regulatory Commission, the pre-IPO companies are not willing to share all authentic information with the VC.

2. Price Inquiry System is not working correctly. All issuers should inquire investment companies, finance corporations, or institutional insurance investors about the issue price. Still, due to information asymmetry, they cannot offer a suitable price. There is a considerable gap between inquired price and market price.

3. A large amount of speculative capital in the market and the single investment strategy of ordinary investors is the valid reason for IPO underpricing.

As our conclusion, the following steps are recommended to take to control the IPO underpricing:

1. Build a complete information disclosure mechanism, reduce market information asymmetry, and improve market transactions' transparency. Strengthen the communication between the pre-IPO companies and the potential investors.

2. Improve the Price Inquiry System, Strengthen the cooperation between the insurance companies, investment companies, and other financial institutions.

3. Increase the diversity of investment instruments so that investors have more options to invest, for example, Forex market and Future market. And enhance the investment education on the ordinary investors, including investment decision-making education, personal asset management education, and investment strategy education.

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