

A Case Study on Executive Team Heterogeneity, Corporate Performance and IPO Progress, Taking China's Chinext Listed Companies as Samples

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Keywords: Heterogeneity of executive team, Corporate Performance, IPO progress, Chinext

Abstract: China's IPO adopts the approval system, so the planned listed companies have a period of waiting for the approval of the CSRC before the IPO is successfully listed. This paper defines the IPO schedule. Based on the data of China Growth Enterprise Market (Gem) listed companies, this paper studies the relationship between top Management Team Heterogeneity, firm performance and IPO progress.

1. Introduction

Chinext is the intermediate force in the capital market reform under the background of high-quality development of China's economy. It is the cradle of high-tech enterprises and high-growth innovative enterprises (Jia Ru, Ge Yuhui, 2018). The development of Chinext provides necessary financial support for the rapid development of entrepreneurial enterprises, and also establishes an exit mechanism for venture capital (Gong Junmei, Yao Meifang, 2018).

IPO refers to Initial Public Offerings, and China's IPO adopts approval system. As a result, the company to be listed goes through a period of waiting for the approval of CSRC from the date when the company is changed into a joint stock limited company and registered in the administration for industry and commerce to the successful IPO listing. Wu Yuhui (2016) defines this period as the IPO progress. IPO progress is peculiar to our country securities market, Gong Junmei, Yao Meifang (2018) pointed out that at present China's Chinext IPO research mainly concentrated in the Chinext IPO pricing and underpricing question, the Chinext IPO risk investment and management, the Chinext IPO, regulation and sponsor, and there has been no extensive empirical study of the IPO progress.

Executive team heterogeneity refers to the differences among executive members in demographic background characteristics, important cognitive concepts and values (Finkelstein and Hambrick, 1990). The theory of high-level echelon indicates that the characteristics of high-level managers will affect corporate performance. As an important turning point of corporate strategy development, IPO is closely related to corporate performance. Xu Chenjie (2017) found through empirical research that heterogeneity of senior management team would have an impact on IPO progress. However, the existing research has not focused on the relationship between heterogeneity of executive team, corporate performance and IPO progress. The innovation of this paper is to explore whether corporate performance mediates the heterogeneity of senior management teams and IPO progress.

2. Theoretical analysis and hypothesis testing

2.1 Heterogeneity of executive team and IPO progress

At present, there are few researches on the relationship between heterogeneity of executive team and IPO progress. Wu Yuhui, Wu Shinong, Zhang Qiu Huang and Wei Zhihua (2016) studied the effect of chairman secretary's background on the IPO process of enterprises applying for IPO for the first time from 2006 to 2012 as samples, and found that professional chairman secretary could improve the success rate of enterprise IPO and thus accelerate the IPO progress. Luo Danglun, Wang Hong (2013) studied 280 gem IPO projects from 2009 to 2012 and found that the higher the reputation of the sponsor, the shorter the time from the application to the meeting, and the faster the IPO process. However, the longer the period passes, the lower the short-term discount after IPO and the long-term trend relative to the market, and the greater the possibility of declining performance of enterprises in the year of listing. Existing literature focuses on the relationship between heterogeneity of executive teams and IPO discount. Based on the signal transmission theory, Xia Wei and Yang Biyun (2011) proposed that heterogeneity of the executive team would send signals about the management quality of IPO companies to potential investors, thus affecting investors' judgment on the value of the enterprise and ultimately affecting IPO discount.

“Emil Velinov, Ales Kubicek(2013) analyze the role of top Management Teams Heterogeneity in IPO process. Data collected from firm's IPO prospectus and Thomson Reuters One, and there are more 150 observations for the period 2008-2012. They suggest that the TMT heterogeneity is negatively associated with IPO underpricing and thus improves firm performance in IPO process.”

Based on above, this paper proposes the following hypothesis:

Hypothesis 1: Age heterogeneity in TMT is negatively related to IPO waiting time.

Hypothesis 2: Education heterogeneity in TMT is negatively related to IPO waiting time.

Hypothesis 3: Functional heterogeneity in TMT is negatively related to IPO waiting time.

Hypothesis 4: Tenure heterogeneity in TMT is negatively related to IPO waiting time.

2.2 Heterogeneity of executive team and enterprise performance

At present, the academic field has not formed a unified view on the relationship between heterogeneity of executive team and enterprise performance. However, most scholars tend to believe that heterogeneity of executive team is significantly correlated with corporate performance. The research on the relationship between them has mainly formed two theoretical bases: information decision-making theory and social generalization theory (Zhang Jinqing, Xiao Jiaqi, 2018).

Some scholars believe that executive team heterogeneity can improve company performance. In 1984, Hambrick and Mason proposed the theory of high echelon teams. They found that the heterogeneity of the working backgrounds of senior management team members was conducive to improving the quality of decision-making and thus improving corporate performance. The research of Malcolm Higgs and other workers (1991) supports the view of Hambrick and Mason, and further pointed out that the relationship between heterogeneity of work background of senior management teams and corporate performance is affected by the complexity of their work. When work is complex, heterogeneity of work background of senior management teams is positively correlated with corporate performance. Li Weizheng (2011) pointed out in his empirical research that the higher the tenure and functional heterogeneity of the executive team, the better the corporate performance. Zhang Jianjun and Zhang Yanlong (2016) studied the data of Chinese listed companies and found that the heterogeneity of age and functional background between chairman and general manager has a positive impact on corporate performance.

Some scholars believe that heterogeneity of executive team will have a negative effect on

corporate performance. Michel and Robert (1992) proposed that heterogeneity would affect executive teams to make unified decisions, which would delay the implementation of corporate decisions and thus reduce corporate performance. Knight (1999) also believed that heterogeneity of executive team is negatively correlated with corporate performance. Liu Bing, Liu Jiabin and Li Yifang (2015) studied the relationship between heterogeneity of executive team and corporate performance of small and medium-sized listed companies in China. The results showed that the higher heterogeneity of executive team age, tenure and career background, the worse corporate performance.

In addition, scholars also introduced some mediating variables or moderating variables to study the relationship between heterogeneity of executive teams and corporate performance. Xiong Wei (2010) took listed companies in the CSI 300 index as samples and found that heterogeneity of executive team education and functional heterogeneity had a significant positive impact on the relationship between corporate diversification strategy and corporate performance. Liu Bing, Liu Jiabin and Li Yifang (2015) found through a study of 167 listed companies on China's small and medium-sized board in 2012 that management autonomy had a significant moderating effect on the relationship between heterogeneity of senior management team and corporate performance, and heterogeneity of senior management team age, tenure and career background was negatively correlated with corporate performance. Zhou Xiaohui, Tian Mengmeng and Nie Haoran (2017) studied China's A-share listed companies from 2008 to 2014 based on the theory of high echelon teams. The results showed that heterogeneity of high age and low tenure was positively correlated with the improvement of corporate performance. Meanwhile, earnings management could enhance the influence of heterogeneity of senior management team on corporate performance. Based on the above analysis, this paper proposes the following hypothesis:

Hypothesis 5: Age heterogeneity in TMT is negatively related to Enterprise performance.

Hypothesis 6: Education heterogeneity in TMT is negatively related to Enterprise performance.

Hypothesis 7: Functional heterogeneity in TMT is negatively related to Enterprise performance.

Hypothesis 8: Tenure heterogeneity in TMT is negatively related to Enterprise performance.

2.3 Mediating effect of corporate performance on the relationship between heterogeneity of executive team and IPO progress.

A large number of existing studies have shown that there is a correlation between heterogeneity of executive team and enterprise performance (Xiong Wei, 2010; Liu Bing, Liu Jiabin and Li Yifang, 2015; Zhou Xiaohui, Tian Mengmeng and Nie Haoran, 2017). The enterprise shall apply for the initial public offering of shares in line with the continuous profit in the last two years, and the accumulated net profit in the last two years shall not be less than 10 million yuan; or make a profit in the last year, with an operating income of not less than 50 million yuan in the last year. It can be seen that corporate performance is an important part of IPO of enterprises to be listed, which is related to IPO progress. Based on the above analysis, this paper proposes the following hypothesis:

Hypothesis 9: Enterprise performance mediates the relationship between Age heterogeneity in TMT and IPO waiting time.

Hypothesis 10: Enterprise performance mediates the relationship between Education heterogeneity in TMT and IPO waiting time.

Hypothesis 11: Enterprise performance mediates the relationship between Functional heterogeneity in TMT and IPO waiting time.

Hypothesis 12: Enterprise performance mediates the relationship between Tenure heterogeneity in TMT and IPO waiting time.

3. Data selection and research design

3.1 Sample selection and data sources

The China Securities Regulatory Commission has suspended IPOS several times, most recently from July 5, 2015 to November 2015. The data in this paper are from CSMAR database. EXCEL2010 is used for data processing and STATA14 is used for statistical analysis.

3.2 Variable design

3.2.1 The independent variable

3.2.1.1 Age heterogeneity

Age heterogeneity was calculated according to the length of time from the date of birth to the date of statistics in the sample, and the standard deviation coefficient was used to measure the continuous variables with the help of the existing literature. First, the age standard deviation and average age of the executive team were calculated. Then, age heterogeneity was calculated by the ratio of age standard deviation and average age. The calculation formula was as follows: $H_{age} = \frac{\sigma_{age}}{Aage}$. Among that,

$Aage = \sum age_i / n$, $\sigma_{age} = \sqrt{\frac{\sum (age_i - Aage)^2}{n}}$. Age_i represents the age of the first executive team member, and n represents the number of executive team members.

3.2.1.2 Heterogeneity of education level

Education level is divided into 5 categories: high school or below, junior college, bachelor's degree, master's degree, doctor's degree or above. The codes are :1 high school or below, 2 junior college degree, 3 bachelor's degree, 4 master's degree, 5 doctor's degree. The calculation formula is: $H_{edu} = 1 - \sum_{i=1}^n P_{edu_i}^2$, among that, P_{edu_i} represents the proportion of the executive team members with class i education level in the size of the whole executive team. i is the classification of education level, and n is the size of the executive team. It can be seen from the formula that the value range of H is $[0, 1]$. The higher the value of H is, the more heterogeneous the education level of the senior management team is.

3.2.1.3 Heterogeneity of occupational background H_{prof}

The professional background is divided into production, research and development, design, human resources, management, market, finance, finance, law and others, and the codes are: 1 for production, 2 for research and development, 3 for design, 4 for human resources, 5 for management, 6 for market, 7 for finance, 8 for finance, and 9 for law and others. The calculation formula is: $H_{prof} = 1 - \sum_{i=1}^n Prof_i^2$.

3.2.1.4 Tenure heterogeneity

Heterogeneity of tenure according to the data of senior management team members from the start date of tenure to the date of statistics during the sample period or the date of completion of tenure prior to the date of statistics during the sample period (take the earlier date of both as the date of termination of tenure), age heterogeneity was treated and calculated as follows: $H_{time} = \frac{\sigma_{time}}{A_{time}}$. Among that, $time_i$ represents the tenure of the i executive team member, and n represents the number

of executive team members.

3.2.2 The dependent variable

IPO progress refers to a period of time waiting for the approval of the CSRC between the date when the proposed listed company is changed into a joint stock limited company and registered in the administration for industry and commerce and the successful IPO listing.

3.2.3 The control variables

The introduction of asset-liability ratio (Debt) , return on equity (ROE) , company size (Size) , listing years (Year).

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