An Analysis on The Effect of Private Placement by Chinese Listed Companies

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Abstract

In this paper we examine three main effects (which are announcement effect of issue plan, discount of issue price and post-issue long-run abnormal returns) of private placement of equity by public firms in China and the relationships among them by separating the samples into three groups (large shareholders, outsider-investors, large shareholders and outsider-investors) according to the identity of participating investors. Our conclusions are as follows:

1. Plans of private placement of equity have significant positive announcement effect. The group of large shareholders has the strongest announcement effect, the group of outsider-investors has insignificant positive announcement effect and the group of large shareholders and outsider-investors has median significant positive announcement effect, which is in accordance with the opinion that large shareholders’ participation signals the good quality of firms.

2. Large shareholders’ participation increases the average discounts of issue price of groups relative to that of the group of outsider-investors and stronger announcement effect is associated with higher discount across three groups.

3. There are significant positive relations between issue price discounts and changes in stock prices during the period from the announcement of issue plan to execution of issuance, and issue price discounts is partially caused by the overoptimistic reaction of market.

4. We have found significant 1 year post-issue long-run abnormal returns in none of the three groups, which don’t contradict the signals. However, whether this is in accordance with signaling still need more research.

5. There are significant negative relations between the participating investors’ rational expectations about future performance of stock prices and issue prices discounts.

6. Participating investors of private placements gain significant positive post-issue long-run abnormal returns which are caused by discounts. Taking the reasons that caused discounts into consideration, we don’t think large shareholders tunnel through high issue price discounts when both large shareholders and outsider-investors participate.

Keywords:
private placement, announcement effect, discount, abnormal return
Introduction

Compared with public offerings of new shares, private placement is a non-public financing behavior that is targeted to particular investors. Particular corporation can purchase the stocks by cash or the assets with the same value. Private placement is not only a important mean for listed companies to finance, but good for decrease the intense of competition between the listed company and the companies in the same group. Thus it can improve the quality of the assets, increase the capital, and enhance the ability to continuously make profits. According to “Listed Company’s Detailed Rules for the Implementation of the Non-public Issuance of Stocks”, which is authorized by Chinese CSRC, there are following stages of private placement: the private placement plan should be approved and announced by the board, be passed by voting from the board, and be approved by CSRC, and the consequences of private placement and announcement should be implemented. The orientation can cause various influences on investment and financing. Since the different stages of orientation are quite different, doing research on the various stages can help to improve the understanding of the reaction to orientation of the market, and the motivation of issuer and issuing target. And then we can propose some suggestions for improvement.

Private placement can bring various influences to all sides of market, and these effects cannot be involved in only one research, thus, we should pay attention on the effect of announcement, the discount, and the price of the stocks in one year after the orientation and the relationships among them.

Literature Review and Discussion

Private placement has been one of the most important mean for listed companies to refinance since the time when “Administrative Measurement on Listed Companies’ Securities Issuing” was approved by CSRC in 2006. To March of 2010, there have been 443 orientations in “A” share market, involving 889.161 billion Yuan for financing (Wind Data Base). At present directional secondary system are still with many defects, such as the problem of unreasonable issuing price, a long time span that provides the opportunity for listed companies of monitoring, and the problem of protecting the interests of the shareholders. To solve these problems, it is necessary to improve the secondary system, making an overall research on the issuing process of private placement, understand the reaction of market and the influences of private placement. And thus we can make a more fair and reasonable issuing mechanism. The domestic research on such fields covers the way of issuing (private or public issuing), announcements effects, discount, and the price of stocks for a long time after the issuing, and the impacts of investors. Here are some literature reviews related to our topic.

1. The Motive of Private Placement

The reason for listed companies to choose private placement not only because of its low restriction, simple process, low prices, but also may be attributed to many other reasons. The private placement can realize the listing of group, dramatically increasing the value and improving the performance of the company. Besides, the listed company can invite strategic
investor to join, constructing a foundation for a long-term development. Also it can satisfy the diversification of payment for a large-scale M&A and restructuring, decreasing the capital pressure for the expansion and controlling the risk. Thus it can increase the efficiency of M&A and restructure. What’s more, private placement can change the capital structure of the company. (Xiaohong Wu, 2007)

There are three explanations from foreign literature review on the reason of choosing private placement instead of public offerings. One of the explanations is the theory of information asymmetry (Chemmanur and Fulghieri, 1999). People hold this explanation believes that companies prefer private placement because of information asymmetry, for less investors are involved in private placement and therefore can decrease the cost of publishing information of companies. Information asymmetry can introduce the companies with low quality, and such companies have no motive to publish their information. In contrast, the companies with high quality can publish their information of its high performance and value through private placement (Yilin Wu, 2004). Another explanation is the monitor demand theory (Wruck, 1989), though this theory has not been authorized yet. According to this theory, private placement can improve the monitor of management, for private placement can increase the concentration of stock rights, confining some transactions after further issuing. The last view point of this explanation believes that major shareholders can transfer profits in the company by private placement, and then “tunneling” the company. (Jae-Seung Baek, Jun-Koo Kang, Inmoo Lee, 2006)

2. The Effect of Private Placement

Private placement influence investment from various sides: announcement effect, wealth effect caused by the change of ownership structure, the long-term price of a stock after further issuing and long-term investment income of various investors.

(1) Announcement effect

Listed companies’ issuing equity announcement contains not only the information further issue, but also the information of the company. Hertzel and Smith (1993) calculated the abnormal returns (AR) of some companies during their time of publishing the announcement of private placement, and did statistical test. They found the result was significantly positive, which meant that the announcement conveyed the positive information of the company’s quality and the value of the company was undervalued. Hertzel and Smith did some theoretical analyses and concluded that under the situation of information asymmetry, the information is only a by-product of private placement instead of an intentional product. Since based on the authors’ analysis, the stocks of private placement were discount and cannot be transferred during a certain time, which provided investors with enough time figure out the real value of a company, increasing the cost of further issuing for companies with low quality.

Spindt Krishnamurthy, Subramaniam, and Woidtka (2004) got the same result by calculating the AR during announcement time of private placement (-3,0) of 397 listed companies of America. They also classified investors as participating investors and unrelated investors according to the investors’ relationship with listed companies. And then they figured out that the AR of private placement involving participating investors
would dramatically higher than that of private placement only involving unrelated investors. This result illustrated that market preferred the private placement with participating investors.

Wruck and Wu (2005) also got the same result by calculated the cumulative AR (CAR, -15.2). They classified investors as participating investors and outsider-investors, and classified private placement according to the situation of whether dominated investors were involved or not (no less than 50 percent of the stocks was bought by one investor, the investor is dominate investor). They figured out that CAR of a private placement involved with participating investors was obviously higher than that of a private placement only with outsider-investors. Furthermore, compared with private placements involved with dominated investors that have no relationships with listed companies, the private placements with the dominated investors that have new relationships with listed companies were more acceptable by the market with higher CAR of announcement time, which means that the market believes the relationships convey positive information of the company.

According to the current references, the announcement effect of Chinese private placements is positive. Weidong ZHANG (2007) found the positive Wealth Effect of the announcement of private placement made by Chinese listed companies. Besides, he also discovered that the announcement effect to large shareholders and their related parties was better than that to external investors; and the larger the subscription ratio of controlling interest and intercorporate stockholding was, the better the announcement effect would be. However, since refinancing was introduced in China on 7 May, 2006, there were not enough samples for research till 2007. This may result in errors of the research which was also mentioned by Weidong ZHANG himself in his paper. What’s more, the influences from extreme fluctuations of stock market cannot be excluded.

Lijiang WEI, Chaohong NA (2008) made an analysis on the abnormal returns before and after the announcement of issuing plan of listed companies in Shenzhen Securities Exchange in 2006 and 2007. The result showed that the issue scale and the subscription ratio of institutional investors are the main factors influencing the AR before and after the announcement of issuing plan. Besides, in the 20 trade dates before the benchmark date of pricing, the stock price of the issuing companies is lower than the market price; a negative AR exists. If accumulated AR of the 10 trade dates after the announcement date is positive, the issuing company has the positive Wealth Effect in a short period after the announcement.

Qi ZHENG (2009) did a research on the relationship between discount rate of issuing and the stock price after the announcement, discovering the positive overreaction from investors on the announcement of issue plan, especially on the announcement from the companies with a high discount rate.

Basing on all the above researches about announcement effect of issue plan in China, it is easy to find that all the researchers choose the announcement of issue plan as a standard to observe the market reaction. Their samples from both boom and crash of the stock market, however, without a special situation that the exchange between bearish and bullish.

(2) Long-term price of the stock after issuing and the earnings of various
parties of the market

Being a way of financing for listed companies, private placement has been introduced into China only for several years, which indicates that the researches on long-term stock price after issuing cannot been found in databases.

Hertzel, Lemmon, Linck and Lynnrees (2002) did a study on stock prices in three years after private placements of 619 listed companies in America, figuring out the negative long-term over carry ratio and low performance of the company. They believed that the result came from the overoptimistic expectation to the company’s future of the managers and investors. Thus they queried questions on certification effect of issuing.

Besides, Krishnamurthy, Spindt, Subramaniam and Woidtka (2004) also did a research on the stock price after private placement. Their result shows the long-term AR of companies with issuing to participating investors is obviously higher than that of companies with issuing to unrelated investors. And the long-term earnings rate would be normal if the aim group is participating investors, otherwise, the long-term earnings rate would be negative. However, this conclusion is not statistically remarkable. They maintained that this conclusion indicated that the participating investors would do the choice when participating the private placement, which confirms the certification effect of the announcement of private placement.

The differences of the results of the above researches may come from the differences of sample and their way to measure the long-term AR.

3. Issue Price Discounts And Wealth Transfer

Discount share is a common phenomenon in the process of private placement. Wruck (1989) believes discount is a compensation of a supervision behavior resulted from the concentration of equities of private placement. However, according to monitor demand theory, larger shareholders have stronger motivation to monitor managers. Thus small shareholders would not monitor the management and take negative ways to get a higher discount in private placement. Nevertheless, basing on empirical research, there is no significant difference of discount between large shareholders and small shareholders. Therefore, Wu(2004) believes the monitor demand theory is wrong. And we think this kind of reasoning is absurd, for he ignored that the small shareholders can take the policy of free ride.

Hertzel and Smith think that with the asymmetry of information, medium and small IT companies would be underestimated because of the shortage in fund, though they have good projects. Thus, by private placement, they can not only get the fund, but also publish the information of the company through investors. And investors would sort out such information and then provide a proper estimation of the company. Therefore, discount is a compensation of the cost for such behavior.

Barclay Holderness and Sheehan (2007) figured out that most listed companies would choose passive investors in private placement in order to firm the control of the company. This result came from a research with more samples (1979~1997). According to this result, they believed issue at a discount may not be a way to solving the problem of underestimation coming from information asymmetry and supervision, but a mean to protect managers’ control to the company.

In terms of studies on this field in China, most of the researches are done by statistical
comparison and quantitative analysis, focusing on the quantitative relation between discount and some relevant factors. Shaobing PENG and Gen ZHAO (2009) took the samples of private placement from “A” share market in 2006 and 2007, analyzing the preference of the issuing price. They concluded that there are obvious preferences on low issuing prices in China. And the discount may harm the interests of small shareholders.

Yu LIU (2006) maintains that the private placement will weaken the harm to small shareholders by theoretical analysis and a particular analysis on the Wuhan Iron and Steel shares. Qi ZHENG (2008) did a study on private placement of 157 listed companies of the year 2006 and 2007, finding that the discount price would be the highest with only large shareholders, while the discount price would be the lowest if only institutional investors are involved. Therefore, there is a way for listed companies to pass the interests to large shareholders by improper issuing prices, while harm the interests of small shareholders. Lishang ZHANG, Mian HUANG (2009), Zheng CHEN (2008), Ming ZHANG and Siyong GUO (2009) studied on the relationship between discount price of private placement of listed companies and related variables by multiple linear regression, discovering that discount has a close relationship with large shareholders. With the increase of subscription ratio of large shareholders, the discount increases. Thus, the large shareholders are harming the interests of small shareholders.

Through classification of relevant references, it is easy to figure out there are some differences of the studies on private placement between Chinese researches and foreign researches. Foreign studies focus on the reason of issuing discount through a theoretical way, with the regression analysis as a way to prove their theories, while there are still no systematical theories of issuing discount in China. Most of the studies are still focusing on the quantitative relationship between the discount and related variables. When analyzing relation between the discount and the subscription ratio of large shareholders, they might not study on the reason of the discount when only institutional investors are involved. And there is no study on the relations between announcement effect and discount. Though discount reflects large shareholders’ motivation on harming the interests of small shareholders to some degree, more evidences should be found to indicate the private placement’s influence on the wealth of investors. Besides, there is fewer studies on the long-term stock prices of private placement.

An Introduction of Data Resource and Research Method

1. Data Resource

All the data of this paper come from three databases: WIND, CSMAR, and RESSET. Firstly, we picked up the basic materials of all the listed companies that implemented private placement in “A” share market since April, 2006 from Wind database, including announcement date, implementation date, benchmark price, issuing target and issuing price, etc. Then we picked up all the published materials of big events of these companies from May, 2006 to March, 2009 in CSMAR by using the codes of these companies. We rejected companies with the events of equity assignment reformation, financial companies and ST companies, and companies with the events that led to suspension within the announcement
period. Since the financial reports of listed companies might have an influence of stock price (Yang WANG, Wen ZHOU, 2009; Xiangfei YIN, Liuqin CHEN, 2008), we also rejected companies that published their quarterly report, mid-year report and annual report. After these steps, we got 89 samples. Finally, we got the information of daily earnings yield, monthly carry ratio before the implementation of issuing and within one year after the implementation of issuing, the matching “A” share market earnings yield and corporate values, etc.

2. Logic Structure And Innovative Characters

Firstly, classifying and calculating announcement effect, discount rate of issuing an long-term stock price after issuing. Secondly, taking a look at the relation between announcement effect and discount ratio, figuring out the main factor that determines discount ratio of issuing. Thirdly, figuring out the relation between announcement effect and long-term effect and giving explanations. Fourthly, discovering the relation between discount ratio and long-term effect and analyzing the influence on discount ratio from anticipated factors. Finally, analyzing the reason of issuing targets’ gaining abnormal returns basing on related conclusions resulted from above steps.

The possible innovative characters of this paper:
(1) Intertwining three main points of private placement, making a systematic research of the whole process of private placement.
(2) Analyzing the influences on discount ratio from anticipated factors.
(3) Calculating and comparing AR in different period by using geometric mean and arithmetic mean.

3. An Introduction On Research Method

(1) Announcement effect
We took the date of issuing announcement at the time 0, the 20 days before the announcement and 5 days after the announcement as the observation time. That is the window period would be (-20, 5). The 240 days before window period are the estimation period, namely (-260, -21). By using CAPM to calculate the accumulated daily AR of samples, we can get:

\[
AR_{it} = R_{it} - \alpha_i - \beta_i R_t
\]

\[
CAR_i = \sum_{t=-20}^{t=5} AR_{it}
\]

\[
AR_{it} \quad \text{abnormal return of share } i \text{ in period } t
\]

\[
R \quad \text{returns of share } i \text{ in period } t
\]
\( \alpha, \beta \) coefficients calculated from CAPM by regression calculation
\( R_t \) “A” share market earnings yield
\( \text{CAR}_i \) accumulated daily abnormal return of company i during window period

During the time from announcement time to implementation of issuing, different companies have different waiting period (3~12 months). In order to make a comparison, we used two means to measure the AR during the process of issuing. The first way is to use geometric average value, namely

\[
\text{ABHR}_i = \left( \prod_{t=1}^{n} (1 + R_{it}) \right)^{1/n} - 1
\]

\[
\text{ABHAR}_i = \text{ABHR}_i - \left( \prod_{t=1}^{n} (1 + R_t) \right) + 1
\]

\( n \) number of month during the process of issuing which starts from the first month after the announcement to the last month before the implementation of issuing
\( \text{ABHR}_i \) average earnings yield of company i during the issuing
\( R_{it}, R_t \) earnings yield in month t of company i and market
\( \text{ABHAR}_i \) AR of company i

Another way to calculate the AR is to calculate the geometric mean, namely

\[
\text{ABHR}_i = \frac{1}{n} \sum_{t=1}^{n} (1 + R_{it}) - 1
\]

\[
\text{ABHAR}_i = \text{ABHR}_i - \frac{1}{n} \sum_{t=1}^{n} (1 + R_t) + 1
\]

The definitions of these variables are the same as those above.

(2) \textbf{Issuing discount}

Discount rate can be showed as the following formula:

\[
D_i = \frac{P_{il} - P_i}{P_{il}}
\]

\( D_i \) discount rate of company i
\( P_{il} \) closing price of the trading date before the issuing of company i
\( P_i \) closing price of trading date before issuing of the market

(3) \textbf{Long-term abnormal return}

This paper provides a calculation of AR of listed companies in one year after issuing. Using the way to calculate long-term AR from Brad M. Barber and John D. Lyon(1997) for reference, we applied Market Adjust Method and Control Company Method.

Market Adjust Method:
\[
BHR_i = \prod_{t=1}^{12} (1 + R_{it}) - 1
\]
\[
BHAR_i = \prod_{t=1}^{12} (1 + R_{it}) - \prod_{t=1}^{12} (1 + R_{t})
\]

BHR<sub>i</sub>  
carry earnings ratio of 12 months of company i

R<sub>it</sub>  
earnings ratio at month t of company i

R<sub>t</sub>  
earnings ratio at month t of market

BHAR<sub>i</sub>  
AR ratio of company i

Control Company Method:

\[
BHAR_i = BHR_i - BHR_{\text{control -i}}
\]

BHR<sub>\text{control -i}</sub>  
carry earnings yield of company i’s control company

The standards of choosing a control company: (1) Control company should be the listed company in “A” share market, but not in the ST or GEM, and not the company with further issuing. (2) Choosing four companies whose book to market ratio is closest to that of sample company if the ratio of the control companies’ value to sample companies value is between 80% and 120%. (3) If the company issues between January and June, the book to market ratio would be chosen as the data in last December, otherwise the number would be chosen as the data in June of this year. According to the rank of total value and circulated value, we chose eight control companies (into two groups) for each company.

Description of Samples’ Characters and Positive Analysis

1. Description of Samples

We got 89 samples (showed in table 1), including 30 samples in Shenzhen Security Exchange and 59 samples in Shanghai Security Exchange. Basing on the classification of issuing target, the number of additional issue only for large shareholders or their related parties is 22; the number for institutional investors or other organizational investors is 31; the number for both large shareholders and institutional investors is 36. The total sum of money from private placement is 93551706211, with the average value of 1051142766. The earliest time for the announcement is 17<sup>th</sup> May, 2006; the latest time is 12<sup>th</sup> August, 2008. The earliest time for implementation is 10<sup>th</sup> August, 2006; the latest time is 9<sup>th</sup> January, 2009. The number of companies with 3-year lock-up period is 26, and other companies have 1-year lock-up period.

<table>
<thead>
<tr>
<th>Issuing target</th>
<th>Shanghai stock market</th>
<th>Shenzhen stock market</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2: announcement effect

<table>
<thead>
<tr>
<th></th>
<th>CAR1</th>
<th></th>
<th>CAR2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>median</td>
<td>mean</td>
<td>median</td>
<td>mean</td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
<td>0.0419</td>
<td>0.0513***</td>
<td>0.0537</td>
</tr>
<tr>
<td>S(large shareholders)</td>
<td>22</td>
<td>0.0966</td>
<td>0.1242***</td>
<td>0.1135</td>
</tr>
<tr>
<td>SI(large shareholders &amp; institutional investors)</td>
<td>31</td>
<td>0.0419</td>
<td>0.0488**</td>
<td>0.0479</td>
</tr>
<tr>
<td>I(institutional investors)</td>
<td>36</td>
<td>0.0054</td>
<td>0.0090</td>
<td>0.0117</td>
</tr>
<tr>
<td>S=SI</td>
<td></td>
<td></td>
<td>1.7808*</td>
<td></td>
</tr>
<tr>
<td>S=I</td>
<td></td>
<td></td>
<td>2.5144**</td>
<td></td>
</tr>
<tr>
<td>SI=I</td>
<td></td>
<td></td>
<td>-1.0786</td>
<td></td>
</tr>
</tbody>
</table>

Note:
CAR1 and CAR2 respectively represents the accumulated abnormal return during (-260, -26) and (-25,5).
S=SI means the average value of groups of large shareholders and groups of large shareholders and institutional investors are the same. The number behind is statistic value t test, using for testing assumptions. The other two definitions are similar.
* * * significant at 0.01 level
* * significant at 0.05 level
* significant at 0.1 level

Table 3: issuing discount

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>median</th>
<th>mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>89</td>
<td>31.72%</td>
<td>0.3569***</td>
</tr>
<tr>
<td>S(large shareholders)</td>
<td>22</td>
<td>63.97%</td>
<td>0.5080***</td>
</tr>
<tr>
<td>SI(large shareholders &amp; institutional investors)</td>
<td>36</td>
<td>26.18 %</td>
<td>0.2852***</td>
</tr>
<tr>
<td>I(institutional investors)</td>
<td>31</td>
<td>34.20 %</td>
<td>0.3329***</td>
</tr>
</tbody>
</table>
2. Announcement Effect And Discount

(1) Announcement effect

We classified participating investors into three groups: large shareholders (S), large shareholders and institutional investors (SI), and institutional investors (I), respectively representing large shareholders and their related parties, large shareholders and institutional investors and institutional investors only. As a whole, the announcement of private placement can bring in positive abnormal return. And when large shareholders are involved, abnormal return would increase. When only large shareholders involved, announcement effect is the greatest. This reflects the positive attitude of the market to additional issue, namely the participation of large shareholders convey the positive information of the company which in accordance with the former research result. When only institutional investors are involved, the announcement effect is the weakest, with the accumulated abnormal return as zero. And the announcement effect of private placement when both parties are involved is mediate.

(2) Issuing discount ratio

The classification in this part is the same as above (showed in table 3). The average discount ratio of the total samples is 35.69%. The discount ratio of group S is the highest, achieving at 50.8%. The offering price to large shareholders and their related parties is the half of the market price. And when the issuing target is institutional investors only, the discount ratio is the lowest. The discount ratio is between the highest and lowest when both large shareholders and institutional investors are involved.

(3) Additional issue at a discount and announcement effect

The discount ratio has a positive relation with announcement effect. The group S has the highest discount ratio and strongest announcement effect. And the group I has both the lowest discount ratio and weakest announcement effect. How to explain this relationship between discount ratio and announcement effect? Is there a problem of market’s overreaction? We use the following model to solve these question.

\[
D_i = C + JS_i \ast \beta_1 + \frac{P_{il}}{P_{i0}} \ast \beta_2 + \epsilon_i
\]

\(D_i\) the discount ratio of company i
\(C\) constant
\(JS_i\) lock-up period of company i
\(P_{il}\) closing price of the trade date before issue
\(P_{i0}\) benchmark price of issue
\(\beta_1, \beta_2\) regression coefficients
\(\epsilon_i\) error term
The result is showed in table 4.

From the table we can know that $\beta_1$ and $\beta_2$ are remarkably under the degree of 0.01, indicating discount ratio has a close relation with the change of stock price in lock-up period and waiting period of further issue. When the lock-up period remains the same, if the stock price increases more, the discount ratio would higher, which means the overoptimistic attitude of market after announcement of additional issue will boost the discount ratio.

Table 4: Result of Regression

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-0.036417</td>
<td>0.041691</td>
<td>-0.87348</td>
<td>0.3848</td>
</tr>
<tr>
<td>JS</td>
<td>0.061267</td>
<td>0.018685</td>
<td>3.278982</td>
<td>0.0015</td>
</tr>
<tr>
<td>P1/P0</td>
<td>0.001313</td>
<td>0.000153</td>
<td>8.563349</td>
<td>0.0000</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.564277</td>
<td>Mean dependent var</td>
<td>0.356889</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.554144</td>
<td>S.D. dependent var</td>
<td>0.233992</td>
<td></td>
</tr>
<tr>
<td>F-statistic</td>
<td>55.68647</td>
<td>Prob(F-statistic)</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Note: implemented by EVIEW6.0

Table 5: Monthly Average Abnormal Return A

<table>
<thead>
<tr>
<th></th>
<th>ABHAR1</th>
<th></th>
<th>ABHAR2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>median</td>
<td>mean</td>
<td>median</td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
<td>0.0020</td>
<td>0.0120***</td>
<td>0.0076</td>
</tr>
<tr>
<td>S(large shareholders)</td>
<td>22</td>
<td>-0.0015</td>
<td>0.0162*</td>
<td>0.0055</td>
</tr>
<tr>
<td>SI(large shareholders &amp; institutional investors)</td>
<td>31</td>
<td>0.0048</td>
<td>0.0127*</td>
<td>0.0108</td>
</tr>
<tr>
<td>I(institutional investors)</td>
<td>36</td>
<td>-0.0012</td>
<td>0.0089</td>
<td>0.0056</td>
</tr>
<tr>
<td>S=SI</td>
<td></td>
<td>0.2933</td>
<td></td>
<td>0.2799</td>
</tr>
<tr>
<td>S=I</td>
<td></td>
<td>0.6364</td>
<td></td>
<td>0.5640</td>
</tr>
<tr>
<td>I=SI</td>
<td></td>
<td>-0.3691</td>
<td></td>
<td>-0.3045</td>
</tr>
</tbody>
</table>

Note: ABHAR is calculated by geometric method. ABHAR1 and ABHAR2 respectively take the circulated value weighted earnings yield and total value weighted earnings yield as references.

Table 5: Monthly Average Abnormal Return B

<table>
<thead>
<tr>
<th></th>
<th>ABHAR1</th>
<th></th>
<th>ABHAR2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>median</td>
<td>mean</td>
<td>median</td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
<td>0.0084</td>
<td>0.0199***</td>
<td>0.0183</td>
</tr>
<tr>
<td></td>
<td>BHAR1</td>
<td>BHAR2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------</td>
<td>---------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>median</td>
<td>mean</td>
<td>median</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>89</td>
<td>-0.0767</td>
<td>-0.0778</td>
<td>-0.0574</td>
</tr>
<tr>
<td><strong>S (large shareholders)</strong></td>
<td>22</td>
<td>-0.0708</td>
<td>-0.0255</td>
<td>-0.0490</td>
</tr>
<tr>
<td><strong>SI (large shareholders &amp; institutional investors)</strong></td>
<td>31</td>
<td>-0.1293</td>
<td>-0.0247</td>
<td>-0.1047</td>
</tr>
<tr>
<td><strong>I (institutional investors)</strong></td>
<td>36</td>
<td>-0.0803</td>
<td>-0.1554*</td>
<td>-0.0189</td>
</tr>
<tr>
<td><strong>S=SI</strong></td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>S=I</strong></td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>I=SI</strong></td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Note: BHAR is abnormal return of sample holding period. BHAR1 and BHAR2 respectively take the circulated value weighted earnings yield and total value weighted earnings yield as references.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Table 7: Hold Abnormal Return Ratio (Control Method)</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BHAR1</td>
</tr>
<tr>
<td></td>
<td>n</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>89</td>
</tr>
<tr>
<td><strong>S (large shareholders)</strong></td>
<td>22</td>
</tr>
<tr>
<td><strong>SI (large shareholders &amp; institutional investors)</strong></td>
<td>31</td>
</tr>
<tr>
<td><strong>I (institutional investors)</strong></td>
<td>36</td>
</tr>
<tr>
<td><strong>S=SI</strong></td>
<td>—</td>
</tr>
<tr>
<td><strong>S=I</strong></td>
<td>—</td>
</tr>
<tr>
<td><strong>I=SI</strong></td>
<td>—</td>
</tr>
</tbody>
</table>

Note: ABHAR is calculated by geometric method. ABHAR1 and ABHAR2 respectively take the circulated value weighted earnings yield and total value weighted earnings yield as references.
Note: BHAR is abnormal return of sample holding period. BHAR1 and BHAR2 respectively take the circulated value weighted earnings yield and total value weighted earnings yield as references.

During the period from the further issue announced to the implementation, the monthly average abnormal return of each group is presented in the table 5. Though the computing method of monthly hold abnormal return of A and B in table 5 has some difference, the result is the same generally. The result is that the average abnormal return of all specimen is positive obviously and the sequencing of the average in every group is in agreement with announcement effect, which in detail is that the group of large shareholder is the maximum, the group of institutional investors is the minimum and the group including both large shareholders and institutional investors is the mediate. However, since the size difference of these three groups is not significant, we should not reject the hypothesis that the average is equal. The remarkable positive average of both the whole group and each one group shows that market can play an active reaction when the plan announced, and can attain positive AR for a long time after the announcement. This situation shows an excessive phenomenon that investor is too optimistic and such a optimistic reaction, to some way, induces a big rate discount of further issue while combining the factor that affects the rate discount.

3. Announcement Effect and the Long-term Stock Price

(1) Long-term performance of stock price

We have applied two methods to compute the performance of stock price within the year after the traded company’s private placement. One is calculating the CAAR of each specimen using a reference standard of synchronism market rate of returns (circulated value weighted and total value weighted) and the result is presented in table 6. The other is calculating the CAAR of each specimen using a standard of synchronism company rate of returns which is contrast to the specimen and the result is presented in table 7. The data in table 6 shows that long-term stock prices of the group of institutional investors is the lowest, that is the average of abnormal return they hold is the minimum, long-term stock price of the group including large shareholders and institutional investors is the highest and the group of large shareholders is mediate. But these indexes are not remarkably equal 0, so the comparative meaning is not so significant. The result of table 7 is the opposite of that of table 6, which is the performance of the group of substantial shareholders is the worst and that of other two groups is better. In addition, these indexes are not remarkably equal 0 too and the comparative meaning is not significant. In all, we have not found significant abnormal return through an observation of the stock price within the year after issuance of orientation, so it needs a further study.

(2) Announcement effect and long-term effect

Based on the former research, we reach a conclusion that market has a overreaction to the announcement of further issue plan, that is announcement effect is very remarkable and during the period from the announcement to the implement, abnormal returns of sample company is also remarkable positive. However, within the year after the implementation of further issue, we have not found remarkable abnormal return. If it is consistent with the positive reaction of the market and issuance of orientation has conveyed the actual information, based on signal theory, the stock price of issuing companies should achieve non-negative abnormal returns for a long time. This is in
agreement with what we have observed (no remarkable abnormal return different with 0), but we do not think that it means that signal theory can present a proper interpretation, because there is a special overall situation, which is that the observation of long-term earnings of part of specimen is during “the great bull market” and the other part of specimen is under scary tumble, that may has an influence on the accuracy of long-term abnormal returns of specimen. As a result, it needs a further study.

4. Additional Issue at a Discount and Long-term Stock Price

(1). The expectational factor of issuing discount ratio

The investment income of the object of the issuance of orientation consists of two parts, that is the part of discount and holding profit of stocks after further issue. The former can be measured by discount rate and the latter by the profits of stocks held by the investors not involved in issuance of orientation. When the return required by the investors involved in issuance of orientation is fixed, the better the future profits of the expectational stock, the lower the issuing discount required, otherwise the higher. We use the following model to make an exploration:

$$D_i = C + JS_i \times \beta_1 + FB_i \times \beta_2 + SR_i \times \beta_3 + PE_i \times \beta_4 + \varepsilon_i$$

Where $D_i$ denotes discount rate, $FB_i$, $SR_i$ and $PE_i$ denote the rate of capital stock of further issue and capital stock before further issue, the rate of stock return within the year after further issue, PE ratio in the fourth quart after further issue, respectively. $\beta_1, \beta_2, \beta_3, \beta_4$ represent regression coefficient, $\varepsilon_i$ represents error term. The result of regression is shown in table eight. When other parameters do not change, the longer the moratorium is, the more significantly the limitation of the circulation of invested stocks is. As the compensation to the circulation, the discount rate should be larger and it is in agreement with the positive coefficient of parameters. The parameters $FB_i$, $SR_i$ and $PE_i$ all relates to investors’ expectation to future stock prices: the bigger the ratio of capital stock of further issue and capital stock before further issue, the more significantly the strike to the company capital structure from further issue. That also means that the profits will be diluted and subsequently the stock price will get negative effect. So the bigger the ratio is, the higher the discount ratio is. This conclusion is consistent with former research (Qi ZHENG, 2008). Although the holding rate of return of stocks within the year after further issue, if the investors are rational, the expectational result will be close to the actual value. As a result, it is reasonable, to some way, to replace the actual value by expectational value. Moreover, the parameter coefficient is remarkably negative, which illustrates that when the returns required by the investors involved in the issuance of orientation is fixed, the better the future profits of expectational stocks are, the lower the issuing discount required is. When selecting PE ratio of the fourth quarter after further issue as a parameter, also given that the rational expectation of investors and the actual value are approximate, the parameter, however, passed the test.

(2). Long-term return of objects of private placement

From the research result of the above context (long performance of stock price), the sample corporate stocks do not achieve remarkable abnormal returns within the year after the implementation of further issue, in other words, they achieve a profit similar to the market. But since there is some discount rate when the object of further issue buys shares, they will be
bound to achieve abnormal returns, shown as table nine.

Given that the length of lock-up period will influence discount rate and subsequently influence the investing profits of the object of further issue, we get 61 specimens whose moratorium are all one year, precluding the companies whose moratorium is more than two years. These specimens are divided into two groups according to the objects of further issue. One consists of only institutional investors (these specimens are from the group of institutional investor in the above context) and the other consists of substantial shareholders and substantial shareholders related party (these specimens are from the group including substantial shareholders and institutional investors). The holding profits of all specimens is remarkable in the level of 0.1, and the average of the holding profits of two groups is positive, but not remarkable; The average of abnormal returns in the group of substantial shareholders during holding period is the maximum, all specimens take the second place and the group of institutional investors is the worst. But the result is not remarkable, which explains that the investors not involved in further issue will achieve market proceeds.

The holding profits discount adjust is used to measure investment income of the object of further issue. From the data in the table, all specimens achieve remarkable abnormal returns as a whole. The group of substantial shareholder achieves the most abnormal returns and the group of institutional investors takes the second place. It is obvious that abnormal returns come from high discount and high discount is related to the factors, such as moratorium, the excessive reaction of the market and the object of further issue. It is necessary to state that when substantial shareholders and institutional investors participate in issuance of orientation simultaneously, the stock moratorium subscribed by institutional investors is one year and that by substantial shareholders is three years. This is one reason that accounts for why the discount ratio of the group including both substantial shareholders and institutional investors is bigger than that of the group of institutional group. The involvement of substantial shareholders makes the announcement effect of the group including both substantial shareholders and institutional investors better than that of the group of institutional investors, that is, the former is more valued by the market (though not remarkable statistically). Such a situation is another reason that leads to the result that discount rate of the group including both substantial shareholders and institutional investors is bigger than that of the group of institutional investors. Since the parameters except the object of further issue are all the same between two groups, given the reason of inducing discount, we learn that the contrast difference of abnormal returns cannot explain that substantial shareholders have the suspicion to infringe the minority shareholders’ interest through high discount. It is somewhat different from former research that substantial shareholders are doing value investment. Aiming at institutional investors to achieve abnormal returns, it is necessary to intensify the competition of further issue, suppress the market’s atmosphere of speculation, educate investors to regard issuance of orientation rationally and put more emphasis on the impact of the corporate actual value. All these will be helpful to decrease Arbitrage opportunity in further issue and promote the fairness of issuance of orientation.

Table 8: Result of Regression of Model 2

<p>| Included observations: 89 |</p>
<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
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</thead>
<tbody>
<tr>
<td>C</td>
<td>0.258608</td>
<td>0.054493</td>
<td>4.745749</td>
<td>0</td>
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<tr>
<td>JS</td>
<td>0.071752</td>
<td>0.024535</td>
<td>2.924478</td>
<td>0.0044</td>
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<tr>
<td>SR</td>
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<td>0.023411</td>
<td>-3.261004</td>
<td>0.0016</td>
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<tr>
<td>FB</td>
<td>0.197373</td>
<td>0.067588</td>
<td>2.92025</td>
<td>0.0045</td>
</tr>
<tr>
<td>PE</td>
<td>0.000169</td>
<td>0.000194</td>
<td>0.868933</td>
<td>0.3874</td>
</tr>
</tbody>
</table>

R-squared: 0.343571  Mean dependent var: 0.356889
Adjusted R-squared: 0.312312  S.D. dependent var: 0.233992
S.E. of regression: 0.194042  F-statistic: 10.99125
Sum squared resid: 3.162804  Prob(F-statistic): 0

Note: implemented by EVIEW 6.0

Table 9: Hold Abnormal Return After Discount Adjust

<table>
<thead>
<tr>
<th></th>
<th>BHR</th>
<th>BHAR1</th>
<th>BHAR2</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>61</td>
<td>-0.1143</td>
<td>-0.0722</td>
</tr>
<tr>
<td>median</td>
<td>-0.1143</td>
<td>0.2293</td>
<td>-0.0722</td>
</tr>
<tr>
<td>mean</td>
<td>0.2293</td>
<td>-0.0722</td>
<td>-0.0532</td>
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Institutional investors

<table>
<thead>
<tr>
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<th>BHAR1</th>
<th>BHAR2</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>33</td>
<td>-0.1396</td>
<td>-0.1144</td>
</tr>
<tr>
<td>median</td>
<td>-0.1396</td>
<td>0.2536</td>
<td>-0.1144</td>
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<tr>
<td>mean</td>
<td>0.2536</td>
<td>-0.1144</td>
<td>-0.0061</td>
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</table>

Institutional investors & large shareholders

<table>
<thead>
<tr>
<th></th>
<th>BHR</th>
<th>BHAR1</th>
<th>BHAR2</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>28</td>
<td>-0.0692</td>
<td>-0.0986</td>
</tr>
<tr>
<td>median</td>
<td>-0.0692</td>
<td>0.2005</td>
<td>-0.0986</td>
</tr>
<tr>
<td>mean</td>
<td>0.2005</td>
<td>-0.0986</td>
<td>-0.0855</td>
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</table>

DBHR

<table>
<thead>
<tr>
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<th>DBHR</th>
<th>DBHAR1</th>
<th>DBHAR2</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>61</td>
<td>0.4313</td>
<td>0.2481</td>
</tr>
<tr>
<td>median</td>
<td>0.4313</td>
<td>0.7899***</td>
<td>0.2481</td>
</tr>
<tr>
<td>mean</td>
<td>0.7899***</td>
<td>0.2481</td>
<td>0.2771</td>
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</table>

Institutional investors

<table>
<thead>
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<th>DBHAR1</th>
<th>DBHAR2</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>33</td>
<td>0.4082</td>
<td>0.2481</td>
</tr>
<tr>
<td>median</td>
<td>0.4082</td>
<td>0.7280***</td>
<td>0.2481</td>
</tr>
<tr>
<td>mean</td>
<td>0.7280***</td>
<td>0.2481</td>
<td>0.2823</td>
</tr>
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</table>

Institutional investors & large shareholders

<table>
<thead>
<tr>
<th></th>
<th>DBHR</th>
<th>DBHAR1</th>
<th>DBHAR2</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>28</td>
<td>0.4908</td>
<td>0.2250</td>
</tr>
<tr>
<td>median</td>
<td>0.4908</td>
<td>0.8629***</td>
<td>0.2250</td>
</tr>
<tr>
<td>mean</td>
<td>0.8629***</td>
<td>0.2250</td>
<td>0.2283</td>
</tr>
</tbody>
</table>

Note:

BHR hold earnings yields
BHAR1 hold abnormal returns basing on market return of circulated value weighted
BHAR2 hold abnormal returns basing on market return of total value weighted
DBHR hold earnings yields after the adjust of discount ratio
DBHAR\textsubscript{1} hold abnormal returns basing on market return of circulated value weighted after the adjust of discount ratio

DBHAR\textsubscript{2} hold abnormal returns basing on market return of total value weighted after the adjust of discount ratio

$$DBHR_i = \frac{1 + BHR_i}{1 - D_i} - 1$$

$$DBHAR_i = DBHR_i + 1 - \prod_{t=1}^{12} (1 + R_t)$$

Conclusion

Private placement has influences on many aspects of the market. We focused on announcement effect, discount, long-term stock price and the relations among them, basing on the classification of issuing targets.

The result shows there is a positive stock price effect of issuing announcement. And when only large shareholders and their related parties are involved, the announcement effect would be the strongest. When the issuing target is institutional investors only, the announcement effect is weakest. And when both large shareholders and institutional investors are involved, the announcement effect is positive too. This conclusion indicates that market believes large shareholders’ participation in further issue provides positive information of the company. Besides, large shareholders’ participation also raises discount ratio, creating the positive relation between issuing announcement and discount ratio. Further research proves the positive relation between discount price of issuing and the stock price of issuing. And the average AR of these three groups are positive, showing the overoptimistic attitude of the market to issuing announcement. Thus, high discount ratio is partly resulted from market’s overoptimistic attitude.

Considering the one-year stock price after the implementation of issuing, we didn’t get an AR apparently without the value of zero. This result is not paradox with Signal Theory. However, we cannot think the samples’ announcement effect and long-term effect obey the signal theory, for most samples’ estimation time are located at bullish or bearish, or both of them. The market will influence the study of AR, and then some conclusions should be based on further studies.

Then we divided investment returns of issuing targets into two parts, the discount part and carry earnings part, analyzing the impact on discount ratio from anticipated factors. This result proves the negative relation between investors’ anticipation of future stock price and discount ratio. We also checked the investment return of issuing target, discovering apparent abnormal return which comes from discount ratio. By comparing the groups with same lock-up period and reason for the different discount, finding that we cannot arbitrarily consider the large shareholders harm the interests of small shareholders by issuing additional stocks at a discount.

As to the overreaction of market to private placement, we recommend investors to join in it rationally, paying attention on additional issue’s effect on the companies’ value instead of sightless imitation. Thus, speculations can be reduced. In terms of the problem of issuing targets’ (institutional investors) gaining abnormal return, we suggest enhancing the competition of offering, curtailing the time of verifying by CSRC. Therefore, the offering price would be more reasonable.
Due to the lack of competition, the additional issue only to large shareholders and their related parties should be supervised more strictly, enhancing the quality of the assets of listed companies.

Reference

[17] Lijiang WEI, Chaohong NA, A Research on Market Reaction to Announcement of Private