Review Article

Behavior of Information Asymmetry during SEOs Issue Process: Evidence from China

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ABSTRACT

This study examines the behavior of information asymmetry around different announcement dates involved in seasoned equity issue process in China. This study contributes three major findings. Firstly, SEOs announcement effects are found more negative on issuance date as compared to different announcement dates. In addition, among different announcement dates more stock price decline is observed on board of directors meeting date. Secondly, the study find support that price decline on announcement dates is due to information asymmetry between the mangers and outside investors, in addition, level of information asymmetry decrease on subsequent announcement dates. Finally, the study reports that on issuance date higher stock price decline is due to buying and selling imbalance exerted by supply of additional shares in the market on issuance date.

Keywords: Seasoned equity issues, information asymmetry, Buying and selling phenomena.

1. Introduction

Information asymmetry is a fundamental issue in seasoned equity issue process. This study analyzes the behavior of information asymmetry during the seasoned equity offerings process in China. Evidence on SEOs show that they are associated with significant negative price movement on their announcement. Myers and Majluf (1984), presented the main explanation of this fact, they developed the overvaluation hypothesis, which proposed that in an asymmetric information world where managers possess superior information about the value of their firm, they have an incentive to issue new equity when their firm is overvalued. Consequently, market interprets the equity announcement as unfavorable information about the issuing firm and thus revises the value of the issuing firm downward upon the announcement. Seasoned equity offering announcement effects have been observed by many researchers in different capital markets all over the world, (e.g. Smith, 1977; Masulis and Korwar, 1985; Mikkelson & Partch, 1986; Barclay and Litzenberger , 1988; Jung et al. 1996 ; Hei Wei Lee 1997; and R. Aggarwal, X. Zhao 2008; in US capital market, Chen et.al (2007) in China; J. Cai, T. Loughran(1998) in Japan; M.S. Dhatt et al.(1996) in Korea; Do, Quynh- Nhu (2009) in Finland; Marsden (2000) in New Zealand, K.M.L. Ching et al. (2006) in Hong Kong; J. F. Gajewski and E. Ginglinger (1998) in France). These studies have analyzed SEOs announcement effects around SEOs announcement dates.

However, studies on seasoned equity issues also observed stock price response around announcement and issuance date. A lot of research has done on USA capital market in relation to this perspective. Smith (1977) examines and compares market effects for both public offerings and rights offerings, but only around the issuance dates. His study could not find evidence of abnormal returns in either method of external equity financing. Marsh (1979) and Hess and Frost (1982) try to analyze the reason for price decline on issuance date in relation to the size of the issue. They could not find any significant support for this. In addition, they do not analyze the price response on announcement date of seasoned equity. Korwar 1983 does the same job in relation to announcement day in US capital market and he finds a significant drop of approximately 2.5% on announcement day. However, he does not study the relationship between the size of the issue and the degree of the price drop since it views equity issues from a capital structure point of view. Asquith and Mullins (1986) examine the announcement day and issue day price effects of both primary and registered secondary issues of seasoned equity. He finds that for industrial firms' seasoned equity, the announcement day price decline is significantly related to size of equity issue. However, their study does not find any significant price decline on issuance date of seasoned equity offerings. Muhtaseb et al.(1995) in a comparative study of rights offerings and public offerings by industrial firms and public utilities, try to analyze the market reaction on both the announcement date and the issuance date. They conclude that the uncertainty is associated with both public and rights offerings, except for public offerings by utilities, because of information asymmetry is not resolved fully on announcement date of equity issued, it further cause a price drop on actual issuance date because of partial adjustment of information asymmetry which was left on announcement date. In addition, they also conclude that market reaction at the issuance date is less severe than announcement date.

Mikkelson & Partch (1986) examine the stock price effects of security offerings and investigates the nature of information inferred by investors from offering announcements. They find that stock price decline is unrelated to the amount of new financing, relative offering size. The type of security is the only significant determinant of the price response. Completed offerings are associated with a positive average excess return between the announcement and issuance and a negative average return at the issuance. Conversely, the average return for cancelled offerings is negative between the announcement and the cancellation and is positive at the cancellation. They conclude that the opposite patterns of abnormal stock returns following the announcement of completed versus cancelled offerings suggest that managers issue common stock or convertible debt when in their view shares are overpriced.

Korajczyk, Lucas, and McDonald (1988), argue that the drop in stock price on the issuance date is related to additional information conveyed by the actual issuance, because not all announced seasoned equity offerings are followed through when an issuance is announced. The actual seasoned equity issue removes the uncertainty around the announcement. Lease, Masulis, and Page (1991) argue that in US market the price drop at seasoned equity issue is instead induced by the imbalance in the buy–sell order flow: many buy orders are sent to the primary market, while the sell orders continue to be routed to the secondary market, leading to negative returns on the issuance date.

Carlson et.al. (2006) theoretically predict that issuance of additional equity exerts selling pressure on the market. It is possible that supply outweighs demand around the issuance date, and this temporary supply –demand imbalance negatively affects stock prices. Following this logic, larger issuance size, and lower market liquidity leads to more negative issuance returns. R. Agarwal et. al. (2008) also provides two alternative explanations for issuance date abnormal returns associated with seasoned equity announcements. Firstly, an option-based explanation the issuance day returns may be negative because seasoned equity issuance reduces the option value of equity by reducing volatility. Secondly, a liquidity-based explanation, issuance of additional equity increase the supply of shares as compared to demand, resulting a decrease in value of shares. Further, their findings are not consistent with supporting both arguments on announcement dates of seasoned equity.

In US a lot of research has done in context of announcement and issuance date but as far as emerging markets are concerned there is lack of evidence of such issue. China Stock market is one of the best examples of emerging markets. China's capital market in less than two decades has been a period of rapid development, from small to large, from regional to national, the parties each side much has been achieved, has accumulated a wealth of experience. The extraordinary expansion and rapid growth of the Chinese stock markets have already initiated a large amount of research of Chinese stock markets. Previous studies have explored the announcement and issuance date puzzle on right issue, but there is a gap on research about the public announcement (SEOs) effects on different announcement dates, also how Chinese SEOs' firms announcement effects differ from the other world. Also its unusual regulatory nature (different announcement dates) provide us opportunity to analyze the changes in behavior of Chinese investors throughout the SEOs issue process. One of the major reason reported by US studies for diminishing price effect on SEOs announcement is due to information asymmetries between the managers and outside investors of firms. It is also important to examine whether informational asymmetries are resolved around the announcement dates or they persist around the actual issuance dates. This study add a contribution to early literature by measuring the information asymmetry between different announcement dates by using the stock volatility, this measure is previously used by Nathalie Dierkens (1991) in order to measure the information asymmetry before and after the announcement date. But in China we have several announcement dates so in order to measure the change in level of information asymmetry between different these dates, this study measure the stock volatility before each announcement date and then compare them with each other.

Rest of the paper is organized as follow: Section 2 presents the seasoned equity issue procedure in China, Section 3 presents proxy variables and hypothesis development, Section 4 describes the sample selection and methodology, section 5 provide the results and discussion and section 6 gives the concluding remarks.

2. Seasoned Equity Issue Procedure in China

In China, when a firm meets the requirements of the China Securities Regulatory Commission (CSRC) and plans to raise equity, it has to submit a proposal to the board of directors. Upon the approval from the board, the firm informs the stock exchange within two days and holds a shareholder meeting within one week. After approval by shareholders, the firm submits the

application materials to the CSRC. However, firms still has to wait for final issue after getting authorization from CSRC (Cao et al. 2007). How long they wait in queue, depends on the market situation. When the market is bullish, it is easier to issue new shares, but the delay can be large in a bear market. The CSRC has a great concern about the new issue's impact on the market. On average, the rights issue procedure takes five months from the signing of the prospectus until receipt of the proceeds. The procedure for public offerings is almost the same as for rights issues except that the firm has to get a pre-approval from the CSRC and then hold the shareholders meeting to determine the specific details in the prospectus. This prior submission and approval by the CSRC may add a delay. Only the prospectus announcement represents the final approval of the equity issue by the regulatory authority; the other two earlier announcements represent only the intention of the management and voting shareholders of the company to issue equity. Upon meeting the requirements, listed companies in China can announce two types of ordinary shares: A shares and B shares. Unlike the other partially segmented stock markets in which domestic investors have access to both the local and foreign classes of shares, the Chinese stock market is completely segmented. Domestic Chinese investors can buy and sell only A shares, while international investors can buy and sell only B shares. Finally after the announcement date is closed the share are issued to investors.

Due to the different regulatory nature, several announcement dates are available in China SEOs .i.e. board of directors meeting date, shareholders meeting date, CSRC approval date, announcement to the public, and issuance date. These different dates and corresponding available information set provide us an inimitable opportunity to assess behavior of Chinese investors in SEOs issue process.

2.1 Proxy variables and Hypothesis development

2.1.1 Announcement Dates Price Response

Previous studies show that there is positive correlation between the information asymmetry and the price drop on SEOs announcements i.e. higher the level of information asymmetry (IA), more negative the abnormal returns on announcement (Nathalie Dierkens 1991 and Kabir et.al 2003). Disclosure of credible information can reduce the valuation uncertainty about managers' private information and hence reduce the price drop at subsequent issue announcements. (Korajczyk et al.1988). If this is the case then equity issue announcement also reveals some information to market, as a result there should be decreasing trend in SEOs price decline on subsequent announcement dates i.e. Board of directors meeting date, Shareholders' meeting date, CSRC approval date and public announcement date and issuance date. In addition, this study develops the hypothesis that on issuance date if decline in stock prices increases then it will not be due to IA rather it will be due to selling pressure on market exerted by issuance of additional equity. Because of additional equity the supply outweighs demand around the issuance date, and this temporary supply –demand imbalance negatively affects stock prices (Carlson et.al. 2006).

2.1.2 Variables to Proxy Information Asymmetry

In order to check the information asymmetry (IA) we have used different proxy variables. Firm size measured as natural logarithm of book value of total assets is used as first proxy of IA. Following Rajan and Zingales (1995) this study hypothise that the larger the firm, the more

complex its organization, higher the cost of information asymmetries and the more difficult for the firm to raise external finance. Therefore SEOs issues by these firms will be considered as a negative signal and SEOs announcement effects will be more negative.

Another frequently used proxy for IA is offer price discount. Those firms having overvalued stock, they are more likely to provide large relative offer price discount (ROPD) to make the equity issue successful [Kabir et.al 2003]. The average offer price discount (The discount is calculated as $(P_{-1}\text{-OP})/P_{-1}$, for which OP is the offer price and P_{-1} is the closing share price the day before the initial announcement.) in China relative to closing price just before BOD date is 16.9% which is much higher than US SEOs price discount of 3% (Mola and Loughran, 2004). The average price discount is remarkably higher in Norway (about 50% reported by Bohren et al., 1997) and Greece (38% reported by Tsangarakis, 1996). Eckbo and Masulis (1992) find that the offer day subscription discount has no effect on excess returns in the U.S. Bohren et al. (1997) report similar results for Norwegian rights offerings, and Singh (1997) finds a weakly negative relationship for rights offerings by U.S. utilities. This study try to analyze either higher stock price discount as compared to US market have some impact on SEOs price decline.

Market to Book value (MBV) is often used to proxy IA (in growth prospective). As the adverse selection problem predicts that firms time to issue the equity when the market value of their stocks is high (Baker & Wurgler, 2002). Therefore, if the level of IA will be high then there will be negative relation between the announcement period price decline and MBV.

Following Nathalie Dierkens (1991) we have used residual volatility (defined as market adjusted residual variance of the daily stock price abnormal returns for two weeks preceding the each announcement date) of equity of firm in order to measure the information asymmetry before and after different announcement dates. We have measure the residual volatility of equity of firm before each announcement date i.e. Board of directors' meeting date, shareholders' meeting date, CSRC approval date and public announcement date. In addition, compare them with each other. Stock volatility will help to measure the stock fluctuation before the equity issue announcement. Higher the level of information asymmetry more the residual variance will be.

2.1.3 Variables to Proxy Buying and Selling Pressure

The key variable for the buying and selling phenomena is offer size. The larger the offer size, the more selling pressure, and the lower stock prices. So offer size should be negatively related to CAR (R. Aggarwal and X. Zhao; 2008). Secondly, stocks with higher liquidity should be more prepared to absorb the additional selling pressure. In order to measure stock liquidity, R. Aggarwal and X. Zhao (2008) use stock turnover ratio. However, turnover could be used as a measure of information asymmetry. Because higher the trading intensity of firm, more information about the firm are included in its market value, so stock will be less overvalued and less negative market response would be (Nathalie Dierkens 1991). Therefore, either liquidity or information asymmetry play a role here, in both cases turnover should be positively related to CAR.

3. Sample Selection and Methodology

The sample used in this study is made by the public offerings (later on SEOs for this paper) made by Chinese firm during the period of 1999-2008. We only consider the A-Share market while considering for sample inclusion, the SEOs that have identifiable board of directors (BOD) meeting dates, shareholder's meeting date CSRC approval date, announcement date to public, and finally the issue date, along with the data require for the calculation of abnormal returns around these event dates. We collect all the data about the stock issues and date from Wind database. While all the prices are collected from CCER, Chinese Center for Economic Research. If a company issues stock two or more times it is treated as a separate stock and the prices are obtained separately for it and if on the issue date stock is not trading then the first trading day is considered as day zero.

In order to capture the stock price decline on different event dates we compute the abnormal returns (Equation 1) as per Market adjusted return model out of three RGM (Return Generating Methods). According to market adjusted return model the expected return of security on a specific date is same for all the securities but it is different for other dates. Normally the return of market index is taken as expected return of securities in market adjusted return model (Aens and Andoval 2005, C.Chen, X.Chen 2007).

$$AR_{it} = R_{it} - \hat{R}_{it} \tag{1}$$

Where

i represents the firm i

AR_{it} = the abnormal return for firm i on day t

R_{it} = the observed return for firm i on day t

$\hat{R}_{it}$ = the expected return of security 'i' on day't'.

We calculate the average daily abnormal return for all the firms within the research window as follows

$$\overline{AR}_t = 1/N \sum_{i=1}^{N} AR_{it} \tag{2}$$

Where $\overline{AR}_t$ is the average daily abnormal return, N is the total number of firms. Cumulative abnormal return (CARs) for a certain period is computed by adding daily abnormal returns.

$$CARs(t1 - t2) = \sum_{t=t1}^{t2} AR_t \tag{3}$$

The significance of abnormal returns is tested by using t-test which is calculated as the ratio of the mean CAR_{it} to its estimated standard deviation. The t-value is given by

$$t = AAR_t / S(AAR_t) \tag{4}$$

Where $S(AAR_t)$ is the standard deviation of average residual returns equivalent

$$S(AAR_t) = \sqrt{\left(\sum_{t=-200}^{t=-11} (AAR_t - A^*)^2 \right) / 190} \tag{5}$$

$$A^* = \frac{1}{190} \sum_{t=-200}^{t=-11} AAR_t \qquad (6)$$

A^* is the abnormal return over estimation window relative to announcement . t-statistics for $CAR_{(t1,t2)}$ is

$$t = CAR_{(t1,t2)} / S(CAR_{(t1,t2)}) \qquad (7)$$

Where $S(CAR_{(t1,t2)})$ refer to standard deviation of cumulative average residuals over days t1 to t2, calculated by

$$S(CAR_{(t1,t2)}) = \sqrt{T \, \mathrm{var}(AAR_t)} \qquad (8)$$

Where T equals the number of days in the CAR statistics and $\mathrm{var}(AAR_t)$ is variance of abnormal returns of abnormal returns during the estimation period.

4. Results and Discussions

4.1 Behavior of Cumulative Abnormal Returns on Different Dates

Table 1 presents the cumulative abnormal returns around 3 different event windows for five different event dates involved in seasoned equity issue process.

Table 1: Cumulative Abnormal Returns Surrounding Different SEOs Dates

| The table reports cumulative abnormal returns (CARs) around board of directors meeting date, shareholders meeting date, CSRC approval date, public announcement and issuance date for all the public offerings made during a period of 1o years (1999-2008). Column 2, 3 and 4 represents the CARs in three different event windows i.e. day -2 to +2, day -1 to +1 day and -2 to +1. t-values are presented in parenthesis. *, **, *** shows that the results are significant at 10%, 5% and 1% significant respectively.			
	CARs (-2,+2)	CARs(-1,+1)	CARs(-2,+1)
BOD meeting date	-0.0130** (-2.322)	-0.0163*** (-3.460)	-0.0117** (-2.255)
Shareholders' meeting date	-0.0061 (-1.055)	-0.0078* (-1.831)	-0.0058 (-1.180)
CSRC approval date	-0.0030 (-0.348)	-0.0006 (-0.095)	-0.0055 (-0.707)
Public announcement date	-0.0075 (-1.435)	-0.0094** (-2.022)	-0.0016 (-0.317)
Issuance date	-0.0247*** (-3.447)	-0.0230*** (-4.066)	-0.0255*** (-3.751)

Results show that on board of directors (BOD) meeting date market responded negatively about 1.6% in three days event window (-1,+1) and it is significant at 1%. On shareholders' meeting date SEOs announcement effects are insignificantly negative except for three days event window

when it is significantly negative at 10%. As for as CSRC approval date of SEOs is concerned, this study do not find any significant decline on it. While very less negative response (-0.9%) is observed on public announcement date of SEOs. In addition, stock price declines with the SEOs issue date are significantly highly negative approximately 2.5%. Korwar (1983) reports the same decline in US seasoned equity issue but around the announcement date however this study find the same decline on issuance date instead of announcement date. In order to check that on which date price decline is more as compared to others, this study runs a mean difference analysis among three sets of dates. We do not include shareholders' meeting date and CSRC approval date, as we could not find significant price drop around such dates. Rest of the three event dates i.e. Board of directors meeting date (BOD), public announcement data and Issue dates' cumulative abnormal returns are compared in table 2.

Table 2: Comparison around different dates

		Mean difference	T statistics on difference
The table reports mean difference between CARs of firms around three different event dates i.e. Board of directors meeting date (BOD), public announcement date (Announcement date) and issue date. t-values are presented in parenthesis. *, **, *** shows that the results are significant at 10%, 5% and 1% significant respectively.			
1	BOD, Announcement date	-0.0110	-1.395
2	BOD, issue date	0.0148	1.659*
4	Announcement, issue date	0.0258	2.974***

Table 2 shows that price decline on SEOs issue date is significantly more as compared to board of directors meeting date and public announcement date. In addition, more price decline is observed on Board of directors meeting date as compared to public announcement date but the difference is insignificant. Therefore, we can conclude that out of all five announcement dates involved in SEOs process the negative response of market is extreme on SEOs issue date as compared to others.Figure 1 and 2 also show the behavior of AARs during event window on different announcement and issuance date.
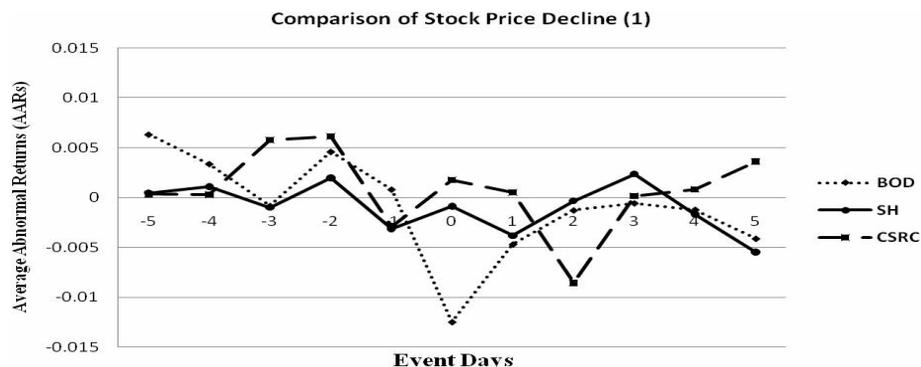
Figure 1: Graph showing that on BOD meeting date highest stock price decline is observed while on shareholders meeting date very less negative reaction is observed and on CSRC approval date we could not find any negative response.

Comparison of Stock Price Deline (2)
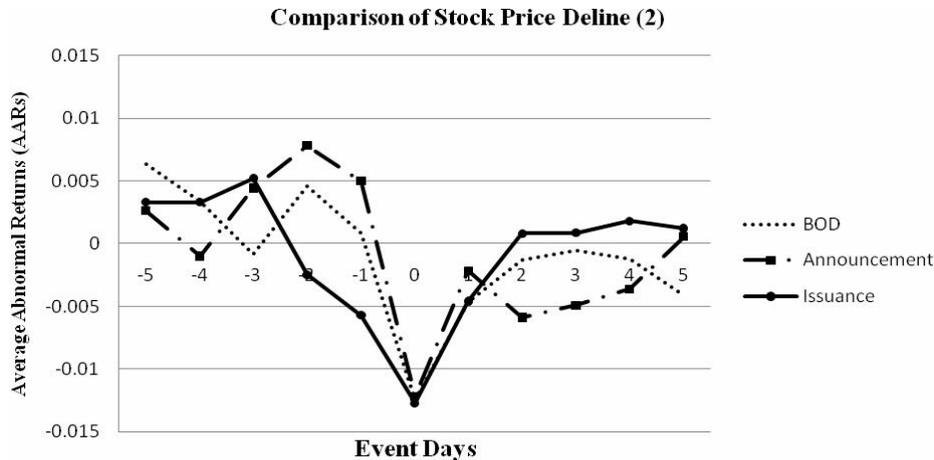
Figure 2: Graph showing that on issuance date highest stock price decline is observed while on BOD meeting date and announcement date also negative response is observed but it is less than issuance date.

In addition we observe that two days before issuance date and sudden price decline is observed, the reason behind this may be that for many SEOs it is the announcement date, so it cause a price decline on -2 day. Same is the case for announcement date, that on 2nd day of announcement date there is a further decrease in stock price which again support the reason that in our sample many firms have issuance date on that day which cause a price drop.

4.2 Behavior of Information Asymmetry

Assuming all other things equal stock volatility will help us to measure that weather information asymmetry is reduced after each announcement date as compared to previous announcement date. This study choose a short period of time (2 weeks) before the each announcement in order to measure the stock volatility because the effect of each announcement is not long lasting on information asymmetry because information of firm reveal by equity issue is small as compared to manager specific information which market does not have. Another reason is the time involved between two announcement dates is very short, which will cause error in calculations if longer period is used.

Table 3 compares the market adjusted residual variance of all the firms involved in SEOs issue process around different announcement dates. W could not measure the residual variance for SEOs issuance date as the time involved between the public announcement date and issuance date is very short form two to three days. So if we calculate the stock volatility in pre issuance date it will cause duplicate bias results by observing the effects of public announcement dates. Results show that residual variance is significantly higher before BOD meeting date as compared to after BOD meeting date. In addition, before Board of directors meeting date residual variance is significantly higher than before public announcement date. Further, before shareholders' meeting date residual variance is significantly higher than before public announcement date. Results also show that before BOD date and CSRC approval date residual variance is insignificantly higher than before shareholders meeting date and before public announcement date respectively. Summing up, by using stock volatility (measured in term of residual variance)

as a measure of information asymmetry, findings in table 3 show that before BOD meeting date information asymmetry is high which become less with the subsequent announcement dates (shareholders' meeting date, CSRC approval date and public announcement date).

Table 3: Information Asymmetry Before and After Announcement

	After BOD date	Pre-Shareholders meeting date	Pre-CSRC approval date	Pre-Public announcement date
This table reports the difference in residual variance among different announcement dates. Column 2 represents the difference in post BOD announcement date and rest of pre announcement dates. Column 3 compares the residual variance pre-shareholders' meeting date and other dates. Column 4 and 5 represent the same for Pre-CSRC approval and public announcement dates. T-values are presented in parenthesis. *, **, *** shows that the results are significant at 10%, 5% and 1% significant respectively.				
Pre-BOD date	0.0003** (1.978)	0.0000 (0.150)	0.0004 (1.163)	0.0004** (2.264)
Pre-Shareholders meeting date			0.0003 (1.341)	0.0003*** (2.796)
Pre-CSRC approval date				0.0002 (1.268)

4.3 Stock Price Response on Issuance Date

In order to check that either higher stock price decline on issuance date is due to selling pressure exerted on market due to supply of additional share table 4 shows the market reaction around issue date by dividing the sample into three groups based on equity issue size and turnover.

Table 4: Buying and Selling Pressure

	Small	Medium	Large
The table reports CARs for SEOs firms divided in three groups i.e. small, medium and large on basis of equity offer size and stock turnover. Small group contains the firms having smaller equity size and low turnover, medioum contain the medium turnover and equity size while large having larger equity size and high turnover. t-value is presented in parenthesis while *, **, *** shows that the results are significant at 10%, 5% and 1% respectively			
Equity offer Size	-0.0126 (-1.343)	-0.0241*** (-2.770)	-0.0326*** (2.964)
Turnover	-0.0289*** (-3.836)	-0.0110 (-1.157)	-0.0278*** (-2.388)

Results in table 4 shows that those firms, which are having large issue, size they face high significant negative abnormal returns on issue date. But the firms having small issue size they face insignificant negative abnormal returns. As far as stock trading is concerned results show

that both type of firms having low and high stock turnover face significantly negative abnormal returns around issue date but the magnitude of abnormal returns is less for those firms having high stock trading as compared to low one. Behavior of issue size and trading of stock is same as for buying and selling phenomena that if the SEO size is large these will be more selling pressure and stock prices will fall on issue date. As for as turnover is concerned it also support the hypothesis that turnover is positively related to CARs, that high stock trading either decrease the information asymmetry or it absorb the selling pressure. This study also runs a multivariate regression analysis in order to check the true reason in decline in stock prices on announcement as well as on issuance dates. It will also help to check that turnover is a determinant of information asymmetry of buying and selling phenomena.

4.4 Cross Sectional Tests

In order to robust test that either information asymmetry is reason of price drop on announcement date and selling pressure on issuance date, assuming all other things equal this section tries to find out either information asymmetry could explain the stock price decline associated with announcement date and buying and selling hypothesis could explain price decline on issuance date. Multivariate regression are run between the abnormal return observed at the different announcement and issuance date and empirical proxies for IA and buying and selling hypothesis.

Results of multivariate regression analysis show that on board of directors meeting date turnover is positive and significantly related to 3 days CARs as dependent variable. Higher the stock trading more the information about the firm are available to market and lesser the abnormal returns on announcement would be. Here we do not consider turnover as a measure of buying and selling hypothesis the reason behind this is that on BOD meeting date there is no increase in supply of shares. So here, turnover will merely works as a proxy of IA.

On public announcement date firm size is negative and significantly related to CARs which is consistent with the findings of Rajan and Zingales (1995) that larger firms have higher level of information asymmetries because of its complex organization. In addition, market to book value is also negatively and significant in relation to CARs. Which is consistent with the finding of Baker & Wurgler (2002) that firms time to issue the equity when their stock is overvalued resulting in a negative relation between the announcement period price decline and MBV.

On issuance date, SEOs issue size is negative and highly significant at 1%. Indicating that higher the issue size more negative the price response on issuance date which fit well in our hypothesis that additional equity exerts selling pressure on market causing a price drop on SEOs issuance date.

Table 5: Multivariate Regression Analysis

The table reports the results of following regression model for CARs around BOD meeting date (column 2), public announcement (column 3) and Issuance date (column 4) as dependent variable and different proxy variables as independent to represent information asymmetry and buying and selling hypothesis.

CARs i (-t,+t) = β 0+ β1 Lnta i +β2 ROPD i +β3 turnover +β4 Issue size i +β5 MBV i +μi

Where β1 shows the coefficient estimate of firm size (Lnta), β2 coefficient estimate of relative offer price discount (ROPD), β3 shows the coefficient estimate of turnover, β4 shows the coefficient estimate of equity issue size while β5 coefficient estimate of Market to book value of equity (MBV). T-values are presented in parenthesis. *, **, *** show that the results are significant at 10%, 5% an d 1% significant respectively.

	Board of directors Meeting date	Public announcement date	Issuance date
Constant (β_0)	-0.138 (-1.136)	0.229* (1.886)	0.058 (0.411)
Firm size (β_1)	0.104 (1.002)	-0.201* (-1.922)	-0.050 (-0.456)
Relative offer price discount (β_2)	-.100 (-1.053)	0.086 (0.905)	-0.053 (-0.516)
Turnover (β_3)	0.174** (2.059)	-0.024 (-0.277)	0.008 (0.094)
SEO size (β_4)	-0.081 (-0.954)	-0.084 (-0.989)	-0.282*** (-3.115)
Market to book value (β_5)	-0.020 (-0.186)	-0.200* (-1.806)	0.009 (0.082)
R^2	4.7%	3.3%	10.2%

5. Conclusion

Lot of research has been carried out in context of announcement effects of seasoned equity issues. In US, researchers also try to find out the reason for stock price decline on SEOs announcement as well as on issuance date. All the studies report negative announcement and issuance period abnormal returns of SEOs. As far as emerging markets are concerned, it is not clear from the existing literature whether in emerging markets the announcement and issuance stock price effect are driven by different forces. In particular, if the negative information associated with equity issuance has been conveyed by the announcement, why would stock price fall further on the issuance date? It is also important to examine whether informational asymmetries are resolved around the announcement dates or they persist around the actual issuance dates. This study uses China stock market as it is one of the best examples of emerging markets. China's capital market in less than two decades has the extraordinary expansion and rapid growth, which have already initiated a large amount of research of Chinese stock markets. Previous studies have explored the announcement and issuance date puzzle on right issue, but there is a gap on research about the public announcement (SEOs) effects on different announcement dates, also how Chinese SEOs'

firms announcement effects differ from the other world. Due to the different regulatory nature, several announcement dates are available in China SEOs .i.e. board of directors meeting date, shareholders meeting date, CSRC approval date, announcement to the public, and issuance date. Results show that among all the four announcement dates i.e. Board of directors meeting date, shareholders meeting date, CSRC approval date and public announcement date, highest negative abnormal returns are observed on board of directors meeting date. In addition, more stock price decline is found on SEOs issuance date as compared to BOD meeting date. Secondly, level of information asymmetry decreases with subsequent announcement date. Overall our results support the hypothesis that stock price decline on SEOs announcement dates is due to information asymmetry, which decreases on subsequent announcement date Also this study finds the evidence that higher stock price decline on SEOs issuance date is due to selling pressure exerted on market due to supply of additional shares.

6. References

1. Alastair Marsden, 2000, "Shareholder wealth effects of rights issues: Evidence from the New Zealand capital market", Pacific-Basin Finance Journal 8, pp 419–442.

2. Asquith, P., Mullins, D.W., 1986, "Equity issues and offerings dilution", Journal of Financial Economics 15, pp 61–89.

3. B. Espen Eckbo, Ronald W. Masulis, 1992, "Adverse Selection and the Rights Offer Paradox", Journal of Financial Economics 32(3), pp 93-332

4. Barclay, M.J. and Litzenberger, 1988, "Announcement Effects of New Equity Issues and the Use of Intraday Price Data", Journal of Financial Economics, 21, pp 71-99.

5. Bohren, O., Espen Eckbo, B., Michalsen, D., 1997, "Why underwrite rights offerings? Some new evidence", Journal of Financial Economics 46, pp 223–261.

6. Carlson, M., Fisher, A., & Giammarino, R., 2006, "Corporate investment and asset price dynamics: implications for SEO event studies and long-run performance", Journal of Finance, 61, pp 1009−1033.

7. Chao Chen, Xiao Chen, 2007, "The information content of rights offerings in China", Research in International Business and Finance, 21, pp. 414–427.

8. Ching, K., Firth, M., Rui, O., 2006, "The information content of insider trading around seasoned equity offerings", Pacific-Basin Finance Journal, 14, pp 91–117.

9. Dierkens, Nathalie, 1991, "Information Asymmetry and Equity Issues", Journal of Financial and Quantitative Analysis, 26(2), pp 181-199

10. Do, Quynh-Nhu, 2009, "Leverage, Growth Opportunities and Stock Price Response to New Financing", International Journal of Business and Management September 4(4), pp 35-49.

11. Hei Wai Lee, 1997, "Post Offering Earnings Performance of Firms that Issue Seasoned Equity: The Role of Growth Opportunities", The Quarterly Review of Economics and finance, 37(1), pp 97-114

12. Hess, Alan C. and Peter A. Frost, 1982, "Tests for price effects of new issues of seasoned securities", Journal of Finance, 36, pp 11-25.

13. J. Cai, T. Loughran, 1998, "The performance of Japanese seasoned equity offerings, 1971–1992" Pacific-Basin Finance Journal 6, pp 395–425.

14. Jean-François Gajewski, Edith Ginglinger, 2002, "Seasoned Equity Issues in a closely held market: Evidence from France", European Finance Review 6(3), pp 291-319.

15. Kevin C.W. Chen, Jiwei Wang, 2007, "Accounting-based regulation in emerging markets: The case of China's seasoned-equity offerings", The International Journal of Accounting 42, pp 221–236

16. Kooyul Jung, Yong-Cheol Kim, Rene M. Stulz, 1996, "Timing, investment opportunities, managerial discretion and the security issues decision", Journal of Financial Economics 42, pp 159-185.

17. Korwar, A.N., 1983, "The effect of new issues of equity: An empirical investigation", working paper (University of Iowa, Iowa City, IA).

18. Lease, R.C., Masulis, R.W., Page, J.R., 1991, "An investigation of market microstructure impacts on event study returns", The Journal of Finance 46 (4), pp 1523–1535.

19. Majed R. Muhtaseb, George C. Philippatos, 1995, "Shareholder Wealth Effects Of Common Stock Offerings", Global Finance Journal 6, pp 175-193.

20. Malcolm Baker and Jeffrey Wurgler, 2002, "Market Timing and Capital Structure", The Journal of Finance, 57(1), pp. 1-32.

21. Manjeet S. Dhatt, Yong H. Kim, Sandip Mukherji, 1996, "Seasoned equity issues: The Korean experience", Pacific-Basin Finance Journal 4, pp 31-43

22. Marsh, P.R. 1979, "Equity rights issues and the efficiency of the U.K. stock market", Journal of Finance 34, pp 839.-862.

23. Odrigo Aens and Duardo Andoval, 2005, "Measuring security price performance using Chilean daily stock returns: the event study method", Cuadernos De Economia, 42, pp. 307-328.

24. Raghuram G. Rajan; Luigi Zingales 1995, "What Do We Know about Capital Structure? Some Evidence from International Data" The Journal of Finance, 50 (5), pp. 1421-1460.

25. Raj Aggarwal, Xinlei Zhao, 2008, "Significant issuance date returns in seasoned equity offerings: An options-based resolution of a puzzle", International Review of Financial Analysis 17, pp 793–804.

26. Rezaul Kabir, Peter Roosenboom, 2003, "Can the stock market anticipate future operating performance? Evidence from equity rights issues", Journal of Corporate Finance, 9, pp. 93– 113.

27. Robert A. Korajczyk, Deborah Lucas, Robert McDonald, 1988, "The effect of information releases On the pricing and timing of equity issues: Theory and evidence", Working Paper No. 2727, National Bureau Of Economic Research 1050 Massachusetts Avenue Cambridge.

28. Ronald W. Masulis, Ashok N. Korwar, 1985, "Seasoned Equity Offerings: An Empirical Investigation", Journal of Financial Economics, 14, pp 165–194.

29. Simona Mola and Tim Loughran, 2004, "Discounting and Clustering in Seasoned Equity Offering Prices." Journal of Financial and Quantitative Analysis; 39, pp 1-23.

30. Singh, A., 1997, "Layoffs and underwritten rights offers", Journal of Financial Economics 43, pp 105– 130.

31. Smith, C., 1977, "Alternative methods for raising capital: rights issues versus underwritten offerings", Journal of Financial Economics 5, pp 273– 307.

32. Stewart C. Myers, Nicholas S. Majluk, 1984, "Corporate finance and investment decisions when firms have information the investors do not have" Working paper, National bureau of economic research Cambridge, No. 1396.

33. Tsangarakis, N., 1996, "Shareholder wealth effects of equity issues in emerging markets: evidence from rights offerings in Greece", Financial Management 25, pp 21– 32.

34. Wayne H. Mikkelson and M. Megan Partch, 1986, "Valuation effects of security offerings and the issuance process", Journal of Financial Economics 15, pp 31-60.

35. Yingxue Cao, Philip H. Dybvig, Joseph Qiu, 2007, "Money Grab in China", Working Paper, School Of Economics and Management, Tsinghua University, Bejing, China