

# **DOES COMPANY WARRANT CREATE VALUE FOR MALAYSIAN RIGHT ISSUE?**

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## **ABSTRACT**

This study examines whether right issue with warrant in Malaysia seasonal equity offering create value to firms. Our sample consists of 121 listed firms that have right issue on the Main Market of Bursa Malaysia from January 2006 to December 2012. We documented that investors react more favourably to right issue with warrant and the announcement period return for the right issue with warrant is higher compared to right issue without free detachable warrant. We further investigate the determinants of the right issue performance under the self-selection bias adjusted methodology and our result shows that announcement period return is attributable to firm growth, risk profile, market conditions and under writer reputation. The result is consistent with the economic profile of Malaysia as a growth economy in the South East Asian region and investor reacts favourably to high growth firm, supporting the information signaling theory of Chemmanur and Fulghieri's (1997) that states growth firms with good prospect will likely use warrant to indicates its superiority from their peers.

**Keywords:** Company warrant; Right issue; Announcement; Signaling; Underpricing

**JEL classification:** G14, G32

## **1. INTRODUCTION**

In this paper we analyze the announcement effect of right issue of firms that include free detachable warrant and right issue of firms that did not include free detachable warrant. Right issue is an offering of common stock to existing shareholders. The existing shareholders are given the right to make the purchase first before new investors in order to avoid stake dilution. The existing investors could choose to subscribe to the new issue or sell the rights in the open market. Warrant is a derivative instrument that allows the investor to purchase the underlying shares of the firm at a pre-specified price. The pre-specified price, which is also known as the exercise price, is usually set higher than the current market value of the firm.

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As shown in Table 1, 64.5% of the Malaysian firms include free detachable warrant in their right issue. Given that Malaysian is still a developing economy with many young firms, this observation is consistent with Chemmanur and Fulghieri's (1997) information signaling model which predicts that younger and smaller firms will have warrant in their seasonal equity offering. Another observation is that big firms will not offer warrant in their right issue, as shown by the intended right issue proceed in Table 1. Warrant is used to entice investors in colder period due to poorer investor sentiment post subprime crisis in 2008. During this period, there are less new listings and warrant has to be issued to encourage the right issue subscription.

**Table 1:** Right issue by year and intended proceed

Year	With Warrant	Total intended proceed (million MYR)	Without Warrant	Total intended proceed (million MYR)	Total (million MYR)
2006	1	28.14	0	0	29.140132
2007	13	883.96	8	1,797.31	904.9636065
2008	11	1,276.51	5	2,078.97	1292.514097
2009	6	801.65	8	13,659.1	815.6498328
2010	16	727.02	12	10,755.11	755.020282
2011	18	1,608.02	5	5,647.19	1631.021029
2012	13	531.19	5	534.53	549.1855497
Total	78	5,856.49	43	34,472.20	5977.494528

From past literature (see Salamudin et al, 1999), right issue is linked to significant positive announcement period return in Malaysia. The positive return is linked to good new hypothesis which explained that return is positive because investors expect the funds raised will be used for profitable venture. Inclusion of warrant in IPO in the Hong Kong market (see Mazouz et al, 2008) and in seasoned IPO in the French market (see Gajewski et al, 2007) were examined previously. Mazouz et al (2008) postulated that IPO firms that include warrant managed to reduce their IPO underpricing, which is the observed first-day return of the IPOs. This study will examine if the same behavior applies to Malaysian right issuers. Specifically, this study intends to compare the performance between right issuers that includes warrant and right issuers that did not include warrant.

The information signaling model of Chemmanur and Fulghieri (1997) predicts that inclusion of warrants is used by high-quality firms to distinguish themselves from low-quality firms. It predicts that smaller, high growth and riskier firms are more likely to use warrant in their equity issue. It also posits that warrant is more likely to be issued by less reputable underwriter and during period when market sentiment is weak. This study examines whether these factors contribute towards announcement period abnormal return in right issue and company warrant.

Given that capital is scarce in a developing country like Malaysia, the motivation for undertaking the research on right issues, specifically the performance of right issue with warrant is to find a better capital allocation strategy in a growing economy like Malaysia. By identifying the firm characteristics that could help to separate the chafe from the wheat, this study could help investor to identify the better growth firms.

The rest of the paper is organized as follows. Section 2 discusses the theoretical work on right issue and warrant, with a special emphasis on determinants of right issue performance. It also lists down the hypotheses of this study. Section 3 describes the data and methodology. Section 4 reports the summary statistics, announcement effects of right issue for firms with and without warrant as well as the self-selection bias adjusted OLS result. Section 5 summarizes the study and provides some concluding remarks.

## 2. HYPOTHESES DEVELOPMENT

From past literatures, it can be concluded that right issue is viewed differently in developed (mainly Western) and developing (mainly Asian) market. In developed market, right issue is viewed negatively while the investor fraternity's response in developing market is mixed. Right issue has a better performance record in selected market such as China (Wang, et al. 2006), Korea (Kim et al. 1995), Singapore (Ariff et al., 2007; Tan, et al. 2002) and Malaysia (Salamudin et al., 1999). These literatures attribute the positive announcement period returns to the economic factors, shareholding structure, positive news flow and a strong regulatory framework. Given that all these favourable factors also applies in Malaysia, this study expects that

*H1:* Right issue in Malaysia should incur positive announcement period abnormal return.

Chemmanur and Fulghieri (1997) posits that the good firm could price their firm equity below its true information value while simultaneously reduce their holdings in the firms. Issuing warrants differs as a signaling device from under pricing equity. Both signaling devices impose dissipative costs on the firm. Warrants however, provide a way to incur some of these cost only selectively, in the higher realizations of the firm's future value, as the exercise price of the warrant is usually set higher than the current equity value. Following the signaling theory, warrant is an additional tool to entice the investors, this study predicts that

*H2:* Right issuing firms with warrant will incur higher right issue announcement period return than right issuing firms without warrant.

Schultz(1993) documents IPOs with warrant are associated with smaller firms. Smaller firm size tends to have higher capital cost because banking institutions are less willing to provide debt capital to these firms. Other than the fact that the smaller firms tend to have shorter operating histories, it also has less asset to act as collateral. It could also be concentrated in speculative industries, which has high growth but with highly volatile operating revenue. Warrant will be especially attractive to these firms' management because of its ability to provide sequential financing as postulated by Schultz(1993). Smaller firms that predicted higher growth could capitalize on the warrant call option like characteristics to raise additional equity should its investment strategy pans out. Naturally, investor will expect higher under pricing considering the investment risk into such firms. Therefore, for right issuing firms with warrant,

*H3:* Firm size is negatively related to right issue announcement period abnormal return. Bigger firm size will incur lower right issue announcement period abnormal return.

Beatty and Ritter (1986) suggest that underpricing is related to the ex ante uncertainty regarding the value of the firm going public, especially uncertainty in the future cash flow of the firm's business. These uncertainty or volatility is caused by multiple sources which include among other, uncertainty arises from agency cost, as postulated by Jensen (1986). Cash flow uncertainty could also be caused by accounting irregularities. Teoh, et al. (1998) reported that issuers who adjust discretionary current accruals to report higher net income prior to the offering have lower post-issue long-run abnormal stock returns and net income. The study attributed the negative performance in investors' extrapolation of the future profits based on the current accounting performance. Finally, the uncertainty could also be the cause of the misappropriation of funds by firm managers. Using a large sample of seasoned equity offerings (SEOs), Lee and Masulis (2009) posit that poor accounting information quality is associated with higher flotation costs in terms of larger underwriting fees, larger negative announcement effects and a higher probability of SEO withdrawals. Consequently, the bad firms would experience negative abnormal return should it announce to have a right issue as this might be taken as a distress signal that the firm can no longer operate without fresh capital. Therefore, this study predicts that for right issuing firms with warrant

*H4: Uncertainty is negatively related to right issue announcement period abnormal return. Right issuer with higher uncertainty will incur lower announcement period abnormal return.*

Schultz (1993) postulated that warrant is usually chosen by younger and riskier firm, whose investment project will have a higher cash flow variance. In other words, warrant is an equity instrument suitable for high growth companies. Relationship between equity performance and economy growth is also observed in the study by Cai and Loughran (1998) in Japanese equity. In this study which covered 1389 seasoned equity offerings in Japan during 1971–1992, Japanese public firms significantly underperform various benchmarks over a subsequent 5-year period. Given that the Japan economy is suffering the consequence of the asset bubbles in the late 1980s, economic factors as observed by (Ariff, et al. 2007; Salamudin, et al., 1999) could probably be used as one possible explanation. Therefore, this study postulates that for right issuing firms with warrant

*H5: Growth is positively related to right issue announcement period abnormal return. Right issuer with higher growth will incur higher right issue announcement period abnormal return.*

Chemmanur and Fulghieri (1997) propose a signaling model which focuses on the interaction of asymmetric information and managers' risk aversion. Signaling mechanism is a method to overcome asymmetric information between firm managers and equity investor. A firm manager with better information about the firm may issue a warrant in an attempt to differentiate itself in a crowded market. In a study by Marisetty et al. (2008) in Indian companies in the period from 1997 to 2005, firm performance was significantly more negative for firms with a family group affiliation compared to firms with no family group affiliation. The study suggested that family owned firms might expropriate the funds raised from the right issue for personal benefits. Ching et al. (2006) reported similar problem in the Hong Kong market. This study will be relevant in the Malaysian market since many of the listed firms on Bursa Malaysia are family owned conglomerate. Additionally, Malaysia, Hong Kong and India are formerly English colonies, and the current legal and common law is an adaptation of English Common Law. One approach that could be used by this type of firm is to hire an investment bank to manage the offering and certify that the offering price is consistent with inside information. Underwriter acts as a sort of sponsor

for the new issue, and it will perform the due diligence on the right issue. A less reputable under writer is more willing to take the project from such companies and it will also have less resource to examine the accounts. Therefore, this study predicts that

*H6:* Under writer reputation is negatively related to right issue announcement period abnormal return. Right issuers with more reputable under writer will incur lower right issue announcement period abnormal return.

Bayless and Chaplinsky (1996) provide evidence that there are windows of opportunity (hot markets) when companies prefer to come to the market to raise funds. During these periods, information asymmetry is likely to be low, reducing the risk for an investor of being misinformed in acquiring issued shares (see Booth and Chua, 1996). Consistent with this observation, this study predicts that for right issuing firms with warrant.

*H7:* Market condition is negatively related to right issue announcement period abnormal return. The colder the market condition (more information asymmetry), the higher is the right issue announcement period abnormal return.

### 3. DATA AND METHODOLOGY

The sample of the study is public listed firms in Bursa Malaysia from 2006 to 2012 that perform a right issue with new ordinary shares. Firms selected must not have included any other corporate exercise such as bonus issue in the same announcement. If there is more than one right issue during the study period, only the first right issue is selected. There are 121 firms in total in the final sample. We use the standard event study methodology to examine firm performance during the right issue announcement period and the self-selection bias adjusted OLS regression to examine the relationship between announcement period abnormal return and the corresponding determinants.

#### 3.1. Event Study Methodology

The event study methodology is used to estimate the average abnormal returns (AAR) and cumulative abnormal returns (CAAR) of the right issuing firms. The excess return on a particular firm equity price during the event period of interest is calculated first, then averaged in cross-sectional to determine the average abnormal return (AAR). Then the average abnormal return (CAAR) is cumulatively added over time to detect any abnormal price pattern during the announcement period. Abnormal return of a company,  $A_{it}$  is the difference between actual share return and expected return as in:

$$A_{it} = R_{it} - E(R_{it}) \quad (1)$$

where  $A_{it}$  is the excess return or residual of security  $i$  for day  $t$ ,  $t$  the day measured relative to the event of interest,  $R_{it}$  the actual return on security  $i$  at day  $t$ , and  $E(R_{it})$ , the expected return on security  $i$  for day  $t$  is

$$E(R_{it}) = \alpha_t + \beta_t R_{mt} \quad (2)$$

where  $R_{it}$  is the return on firm  $i$  on day  $t$ ;  $R_{mt}$  is return on the FBM KLCI on day  $t$ ; and  $\beta_t$  is the beta of the market model generated from a 240 days estimation period, beginning from 300 days through to 61 days before the right issue announcement date, as adopted from Salamudin et al. (1999).

In this research, the market adjusted return method is used where it is assumed that the expected return on security  $i$  at day is equivalent to the return on the market portfolio. The value-weighted Bursa Malaysia Composite Index is used to approximate the market portfolio to estimate the expected return.

The abnormal returns are then averaged across the firms which have made a right issue from year 2006 to 2012 to get the daily average abnormal returns over the period from day -60 to day +20, as in

$$AAR_t = \frac{1}{N} \sum_{i=1}^N A_{it} \quad (3)$$

To study the impact of the announcement over an event window, the cumulative average abnormal returns (CAARs) is calculated by summing the daily average abnormal returns over days  $K$  to  $L$  in the event window as follows

$$CAAR_{(K,L)} = \sum_{t=K}^L AAR_t \quad (4)$$

To evaluate the firm right issue performance, the cumulative average abnormal returns (CAARs) return from -60 to +20 relative to announcement date from N. Salamudin et al (1999) is used.

A cumulative abnormal return covering different event window periods will also be investigated to detect the existence of announcement period abnormal return. This will cover CAAR(-1,0), CAAR(-1,+1), CAAR(-30,-1), CAAR(-20,-1), CAAR(-10,-1), CAAR(0,10), CAAR(0,20), CAAR(-60 to 20), CAAR(-60 to -1), CAAR(-60 to -9), CAAR(-8 to +1) and CAAR(0 to +1). A t-test will be conducted to see if the effect is statistically significant.

### 3.2. Self-Selection Adjusted OLS Regression

This study intends to compare the announcement period abnormal return for right issuing firm that does and does not include free detachable warrant. It must be determined what the abnormal return *would have been* had the warrant had not been used in the right issue. This is similar to what Dunbar (1995) faces in deciding whether to adjust for self-selection in his study. Therefore, the same self-selection adjusted OLS methodology is used to study the relationship between the abnormal return and its determinants. A simultaneous equation model similar to Heckman (1976) and Dunbar (1995) is used. To test whether the underpricing is related to the firm-specific characteristics, underwriter reputation and market conditions, we estimate with the following equation:

$$Unit_{choice} = Z_i \lambda + \varepsilon_i \quad (5)$$

$$CAR_{with\ warrant,i} = Z_i \beta_1 + v_{with\ warrant,i} \quad (6)$$

$$CAR_{without\ warrant,i} = Z_i \beta_2 + v_{without\ warrant,i} \quad (7)$$

where the vector  $Z_i$  includes: under writer reputation (*Reputation*) indicated in a dummy variable, number of other of right issue offering during t-3 month of the right issue offering (*HotIssue*), natural logarithm of intended right issue proceed by the right issue firm in millions of Malaysian Ringgit [ $\ln(Proceed)$ ], standard deviation of earnings is the standard deviation of revenue three years prior to the right issue ( $\sigma_{EARNINGS}$ ), and book-to-market (BM) as an inverse measure of growth, where book value is total assets and market value is the sum of market value of equity and book value of liabilities.

Equation (5) refers to the offer choice equation and Equation (6) and (7) are the cumulative abnormal return equations for Right issues with warrants and Rights without warrants, respectively.  $Unit_{choice}$  is the latent variable representing the firm's decision to have Right issues with warrants ( $Unit_{choice} = 1$ ) or Right issues without warrants ( $Unit_{choice} = 0$ ).  $CAR_{with\ warrant}$  and  $CAR_{without\ warrant}$  are the cumulative return 0-day return associate with right issues with warrants and right issues without warrants, respectively.  $Z_i$  is a vector of variables that might affect both the decision to include warrants in the offerings and the level of performance.

The self-selection regression model allows the residual of the offer choice equation to be correlated with the residuals of the firm performance equations, so that the unobserved or missing variables in the offer choice equation are allowed to affect the level of announcement period abnormal return. The covariance matrix of the residual terms  $\varepsilon_i$ ,  $v_{with\ warrant}$ , and  $v_{without\ warrant}$  is assumed to be trivariate normally distributed, and the conditional mean of  $v_{with\ warrant}$  and  $v_{without\ warrant}$  can be shown as follows

$$\begin{aligned} E[v_{with\ warrant} | \varepsilon_i < Z_i \lambda] &= E[cov(v_{with\ warrant}, \varepsilon_i) | \varepsilon_i < Z_i \lambda] \\ &= cov(v_{with\ warrant}, \varepsilon_i) \left[ -\frac{\vartheta(Z_i \lambda)}{\vartheta(Z_i \lambda)} \right] \end{aligned} \quad (8)$$

$$\begin{aligned} E[v_{without\ warrant} | \varepsilon_i < Z_i \lambda] &= E[cov(v_{without\ warrant}, \varepsilon_i) | \varepsilon_i < Z_i \lambda] \\ &= cov(v_{without\ warrant}, \varepsilon_i) \left[ -\frac{\vartheta(Z_i \lambda)}{1 - \vartheta(Z_i \lambda)} \right] \end{aligned} \quad (9)$$

where  $\vartheta$  is the cumulative distribution of the standard normal distribution function, and  $\vartheta$  is the density function of  $\vartheta$ . The terms  $\left[ -\frac{\vartheta(Z_i \lambda)}{\vartheta(Z_i \lambda)} \right]$  and  $\left[ -\frac{\vartheta(Z_i \lambda)}{1 - \vartheta(Z_i \lambda)} \right]$  are the inverse Mills ratios used to correct of the self-selection bias in Equation (5) and (6), respectively.  $\left[ -\frac{\vartheta(Z_i \lambda)}{\vartheta(Z_i \lambda)} \right]$  is defined as the inverse Mills ratio for right issue with warrant while  $\left[ -\frac{\vartheta(Z_i \lambda)}{1 - \vartheta(Z_i \lambda)} \right]$  is defined as the inverse Mills ratio for right issue without warrant.

The self-selection methodology is employed as follows. In the first stage, we estimate the offer choice equation for the total sample, which includes right issues with warrants and right issues without warrants, using the probit model (Equation (5)). The estimated value of  $Z_i \lambda$  is then used to generate the inverse Mills ratios for right issues with warrants and right issues without warrants separately.

Next, we estimate the regression model of announcement period abnormal return using the same explanatory variables from equation (5) plus the inverse Mills ratio (IMR) for firms with warrants and firms without warrant separately. The inverse Mills ratio adjusts the non-zero conditional error terms. The final equation is shown in equation (10).

$$CAR_{\text{with warrant},i} = Z_i\beta_1 + \text{cov}(u_{\text{with warrant}}, \varepsilon_i) \left[ -\frac{\phi(Z_i\hat{\lambda})}{\vartheta(Z_i\hat{\lambda})} \right] + \omega_{\text{with warrant},i} \quad (10)$$

$$CAR_{\text{without warrant},i} = Z_i\beta_2 + \text{cov}(u_{\text{without warrant}}, \varepsilon_i) \left[ -\frac{\phi(Z_i\hat{\lambda})}{\vartheta(Z_i\hat{\lambda})} \right] + \omega_{\text{without warrant},i} \quad (11)$$

The OLS estimation of equation (10) and (11) provides a consistent estimation of  $\beta_1$  and  $\beta_2$ , since the inclusion of the inverse Mills ratios in the right-hand side of the equation corrects for a non-zero expectation of errors.

## 4. RESULTS AND DISCUSSIONS

### 4.1. Summary Statistics of Malaysian Stock Market and Right Issuers

Table 2 reports the value of the mean, standard deviation, maximum, minimum and the number of observations of the firm variables for right issuing firms with warrant and without warrant.

The proceed of the right issue ranges from 10.1 million to 6090 million Malaysian Ringgit for firms without warrant and 3.506 million to 611 million Malaysian Ringgit for firms with warrant. This indicates that right issue is done by both the small firms and big firms in Malaysia. This also indicates that the right issue proceed is a good proxy for firm size, as bigger firm size tends to raise more fund during a right issue. The standard deviation of earnings for the right issue recorded an average of 37.44 million Malaysian Ringgit for firms without warrant and 8.92 million Malaysian Ringgit for firms with warrant during the study period. That firms without warrant should incur higher variance in firm earnings is not in congruent with the expectation of this study, considering firms without warrant are considered less risky and should have more consistency in its operating earnings. The average book-to-market value as recorded in this study is 1.32 for firms without warrant and 2.01 for firms without warrant. There are several observations worth noting. First, this is much higher than the observation by Byoun and Moore (2003) on the US Market of around 0.31. This implies that many right issuers in Malaysian are very much undervalued during the study period, as investors are not willing to pay a fair price for the firms' equity. In terms of under writer reputation, most right issues are underwritten by reputable investment banks in Malaysian based on the definition by Gajewski et al. (2007), as indicated by the mean readings of 0.98 for firms without warrant and firms without warrant in Table 4. In terms of market condition as proxied by the variable *HotIssue*, this study reported a mean value of 5.49 for firms without warrant and 4.9 for firms with warrant. The minimum value of 0 indicates that there is some cold period during the study period, where there is no right issue reported for 3 months consecutively. Similarly, the maximum value of 13 indicates that there is window of opportunity where firms goes to market for fresh funds, as postulated by Bayless and Chaplinsky (1996).



**Table 2:** Descriptive Statistics of Firm Variables from 2006 To 2012

Firm variable (without warrant)	Obs	Mean	Median	Standard Deviation	Min	Max
Cumulative Abnormal Return (-1,0)	43	0.51	0.00	4.00	-7.56	17.62
<i>Reputation</i>	43	0.98	1.00	0.15	0.00	1.00
<i>HotIssue</i>	43	5.49	6.00	2.42	0.00	9.00
<i>Proceed</i>	43	802	130	1480	10.1	6090
$\sigma_{EARNINGS}$	41	37.44	0.70	229.66	0.03	1472.0
<i>BM</i>	43	1.32	1.20	0.94	-0.73	4.35
Firm variable (with warrant)	Obs	Mean	Median	Standard Deviation	Min	Max
Cumulative Abnormal Return (-1,0)	78	-0.68	-0.21	4.81	-	18.44
<i>Reputation</i>	78	0.97	1.00	0.16	0.00	1.00
<i>HotIssue</i>	78	4.90	5.00	2.25	0.00	13.00
<i>Proceed</i>	78	75	32	110	3.506	611
$\sigma_{EARNINGS}$	75	8.92	1.35	49.35	0.08	422.36
<i>BM</i>	78	2.01	1.27	5.71	-5.88	50.00

*Notes:* Cumulative Abnormal Return (-1,0) is The cumulative abnormal return of right issue on 1 day before and on announcement data, as proposed by Byoun and Moore (2003). *Reputation* is the dummy variable acting as proxy for under writer reputation, adopted from Gajewski et al. (2007). *HotIssue* is the number of other of right issue offering during t-3 month of the right issue offering. *Proceed* is the intended right issue proceed by the right issue firm in millions of Malaysian Ringgit.  $\sigma_{EARNINGS}$  is the standard deviation of revenue three years prior to the right issue. *BM* is the book-to-market as an inverse measure of growth, where book value is total assets and market value is the sum of market value of equity and book value of liabilities

#### 4.2. Right Issuers by Industry

Table 3 summarizes the industry the right issuing firm in this study operates in. Consistent with Mazouz et al. (2008)'s observation of the Hong Kong IPO market, firms that perform right issue in Malaysia is not clustered into specific industry. Some of the industry such as building construction, business services or engineering services firms can hardly be classified as speculative industry as suggested by Schultz (1993). In Hong Kong as well as Malaysia, firms that include warrant are coming from the construction or other basic infrastructure industry because such industry still provide many opportunities for growth and therefore, the firms still require significant investment from its investors. In the Malaysian case, it is observed that industry such as building construction and Electronic, Electrical Equipment & Components and business services performs right issue with warrant. Incidentally, these industries also contribute significantly to the Malaysian GDP. This is consistent with the observation that warrant is most likely issued by growing firms in a growing economy. For firms without warrant, Table 3 also reported some depository institution sells equity in the study period. In Malaysia, depository institutions are very well capitalized and normally need not go to the market for additional financing.

However, it is to be noted that the study period encompasses the economy recession in 2009, which might explain why some established firm might want to raise additional equity funding from their

investors. Additionally, given that firms should only raise equity if it has a positive growth projects, the high number of right issuers in the building construction industry could be a sign of the government's pump priming activities during the economic recession. Another observation is that the Malaysian economy is still very resource based with firms in agricultural production – Crops and Lumber and Wood raising equity during the study period.

**Table 3: Right issue firm by industry**

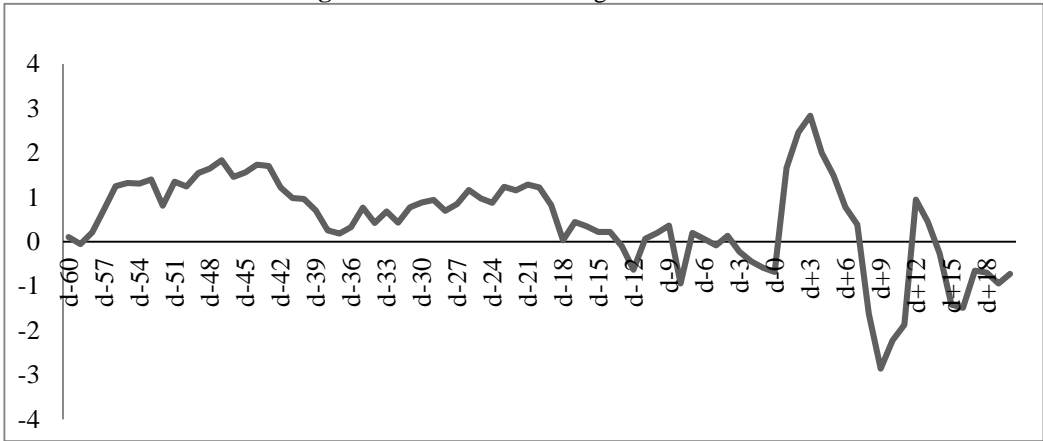
<b>Industry</b>	<b>Right issue with warrant</b>	<b>Right issue without warrant</b>	<b>Total</b>
Agricultural Production - Crops	2	2	4
Agricultural Production - Livestock and Animal Specialties	1	1	2
Amusement and Recreation Services	1	0	1
Apparel and Accessory Stores	1	0	1
Building Construction - General Contractors & Operative Builders	6	3	9
Business Services	8	1	9
Chemicals and Allied Products	1	2	3
Communications	0	1	1
Depository Institutions	1	4	5
Eating and Drinking Places	2	0	2
Electronic, Electrical Equipment & Components, Except Computer Equipment	5	2	7
Engineering, Accounting, Research, Management & Related Services	1	0	1
Fabricated Metal Products, Except Machinery & Transport Equipment	4	0	4
Food and Kindred Products	2	0	2
Forestry	0	1	1
Furniture and Fixtures	1	1	2
Health Services	1	0	1
Heavy Construction, Except Building Construction - Contractors	3	1	4
Holding and Other Investment Offices	1	0	1
Home Furniture, Furnishings and Equipment Stores	1	0	1
Hotels, Rooming Houses, Camps, and Other Lodging Places	0	1	1
Industrial and Commercial Machinery and Computer Equipment	3	1	4
Insurance Carriers	0	1	1
Local, Suburban Transit & Interurban Highway Passenger Transport	1	0	1
Lumber and Wood Products, Except Furniture	3	2	5
Miscellaneous Manufacturing Industries	0	1	1
Motor Freight Transportation	1	0	1
Non depository Credit Institutions	1	0	1

<b>Industry</b>	<b>Right issue with warrant</b>	<b>Right issue without warrant</b>	<b>Total</b>
Oil and Gas Extraction	4	3	7
Primary Metal Industries	4	2	6
Printing, Publishing and Allied Industries	1	1	2
Real Estate	4	3	7
Rubber and Miscellaneous Plastic Products	3	2	5
Security & Commodity Brokers, Dealers, Exchanges & Services	1	1	2
Services, Not Elsewhere Classified	1	0	1
Stone, Clay, Glass, and Concrete Products	3	0	3
Textile Mill Products	0	1	1
Transportation by Air	0	2	2
Water Transportation	2	1	3
Wholesale Trade - Durable Goods	4	1	5
Wholesale Trade - Nondurable Goods	0	1	1
	78	43	121

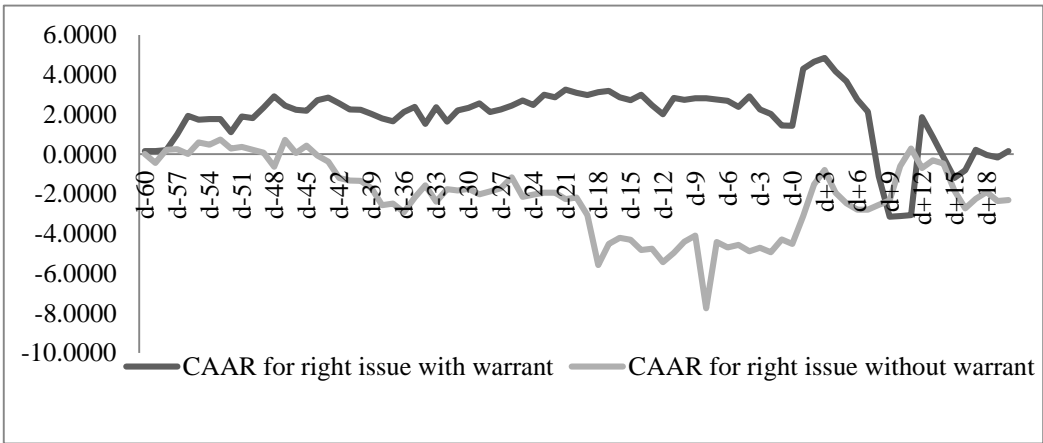
#### **4.3. Announcement Period Abnormal Return**

Table 4 reports the cumulative average abnormal return for all firms, firms with and without warrant. Contrary to the observation by Myers and Majluf (1984) which reports that firm management will sell equity when it is overvalued, right issue in Malaysia during the study period did not exert positive performance prior to the announcement, as shown in Figure 1. This is because the result for right issue without warrant during the study period reports negative performance prior to the right issue especially 10 days prior to the right issue announcement at - 4.39%. This trend can be observed in Figure 2.

**Figure 1. CAAR For All Right Issue Firms**



**Figure 2. CAAR for right issuer with and without warrant**



For right issuing firms with warrant, equity price does perform positively before the right issue announcement day and the rising trend continue until 3 days after the announcement date when the share price went into a down trend as shown in Figure 2. However, since the announcement period abnormal return for right issue with warrant is not significant, the findings should be treated with caution.

As postulated in this study, firms that offer right issue without warrant is often established business deemed stable by the market. When such firms perform a right issue, it could be perceived as a sign of trouble in the firm, and will be used by the market as indication of operating and financial difficulty. The financial crisis in 2008 also explains why that significant positive performance was not observed for the right issue during this study period, consistent with Chemmanur and Fulghieri's (1997) postulation that the market is less receptive of investment opportunity during times of uncertainty. This is also consistent with the cold period observation made earlier.

The fact that the price decline accelerates in the days before the announcement suggests that the leaking effect prior to the event. The nearer the event the bigger the selling which exacerbate the negative returns.

Salamudin et al (1999) reported 14.88% pre-announcement return over days -60 to +20 during favourable economic conditions and -0.46% during unfavourable economic conditions. This study reported -2.19% for right issues without warrant and 0.09% for right issues with warrant over the same period. It is not consistent with the hypothesis that right issuing firms with warrant will incur positive return. However, both the cumulative abnormal average return for right issues with warrant and without warrant are not significant from -60 to +20 days, suggesting that the abnormal return could have happened by chance.

**Table 4:** CAAR For All Right Issue, Right Issue with Warrant and Without Warrant Based on Different Event Window

	<b>all firms (N=121 )</b>		<b>Without Warrant (N =43 )</b>		<b>With Warrant (N =78)</b>	
CAAR(-1,0)	-0.2388	(1.44)	0.5786	(0.34)	-0.6894*	(1.79)
CAAR(-1,+1)	2.1063	(0.004)	1.8965	(0.04)	2.2219	(0.03)
CAAR(-30,-1)	-1.3635	(1.58)	-2.1288*	(1.73)	-0.9416	(1.31)
CAAR(-20,-1)	-1.876*	(1.82)	-2.7082*	(1.70)	-0.947	(1.29)
CAAR(-10,-1)	-0.6558	(1.59)	-4.3862*	(1.88)	-0.5907	(1.18)
CAAR(0 to +1)	-0.4955	(1.12)	1.1135	(0.08)	2.87858	(0.01)
CAAR(0,10)	-1.6337*	(1.71)	3.5858	(0.12)	-4.5111**	(1.98)
CAAR(0,20)	-0.1318	(1.03)	1.8611	(0.36)	-1.2304	(1.20)
CAAR(-60 to 20)	-0.7221	(1.14)	-2.1908	(1.53)	0.0876	(0.99)
CAAR(-60 to -1)	-0.5903	(1.22)	-4.0519*	(1.90)	1.318	(0.66)
CAAR(-60 to -9)	-2.856*	(1.74)	-3.6761*	(1.89)	2.5868	(0.36)
CAAR(-8 to +1)	1.2999	(0.18)	0.7377	(0.34)	1.6098	(0.27)

*Notes:* Figure in the parenthesis is the t-value \*, \*\*, \*\*\* indicate that the value is significantly different from zero at 10%, 5% and 1% level, respectively.

#### 4.4. Comparison Between Right Issue with Warrant and Right Issue Without Warrant

Table 5 presents the difference between the CAAR for right issuers with warrant and without warrant. The 1-tailed test is significant at 1% level, indicating that the result does not happen by chance statistically. The result indicates that right issue with warrant is better received by the investors. This is evidenced from the higher announcement period abnormal return accorded to right issues with warrant.

**Table 5:** CAAR Difference Between Right Issuers with Warrant and Without Warrant

	CAAR with warrant	CAAR without warrant
Mean	1.8920	-2.1205
Variance	2.3495	3.4373
Pearson Correlation	-0.2628	
t-Statistic for Mean Difference	13.3837	
t critical one-tail	1.6641	
t critical two-tail	1.9901	

#### 4.5. Determinants of Right Issue Performance

Table 6 reports the self-selection adjusted OLS result of right issue performance and firm factors. The dependent variable is announcement period abnormal return, which is cumulative average abnormal return for day (-1,0), based upon the study by Byoun and Moore (2003). To assess the firm factors on right issue performance, this study adjust for the self-selection bias, which regress the firm performance on firms factors as described in past literatures (Byoun and Moore, 2003; Mazouz et al., 2008; Gajewski et al.,2007).

The coefficients of firm factors for right issuers without free detachable warrant are listed in column 3 of Table 6, while the coefficients of firm factors for right issuers with free detachable warrant are listed in column 4 of Table 6.

For firms with warrant, *Proceed* and *BM* are significantly negative, implying firm right issue abnormal return is higher for smaller firms with high growth. However,  $\sigma_{EARNINGS}$  is significantly positive at 1% level, suggesting firm right issue performances are higher for firms with higher uncertainty. Meanwhile, *Reputation* is significantly negative, in congruent with past literature which suggests that firm abnormal return is lower for firms with more reputable under writer. Finally, *HotIssue* significantly negative indicating warrant will be used during cold period to increase return. The inverse mills ratio is significantly positive, indicating self-selection bias.

**Table 6:** Estimation model of announcement period abnormal return

Factors	Probit	Right issuers without warrant	Right issuers with warrant
Constant	9.4503*** (0.0000)	-28.5278** (0.0179)	20.9865** (0.0324)
<i>Reputation</i>	0.3437 (0.6431)	-0.2785 (0.8163)	-2.1416*** (0.0082)
<i>HotIssue</i>	-0.1170** (0.0489)	0.0654 (0.6894)	-0.5359*** (0.0007)
ln( <i>Proceed</i> )	-0.4826*** (0.0000)	1.5132** (0.0349)	-1.1285* (0.0569)
$\sigma_{EARNINGS}$	0.0047 (0.8453)	0.6162*** (0.0000)	0.0561*** (0.0000)
<i>BM</i>	-0.0092 (0.8492)	1.4331*** (0.0000)	-0.0758*** (0.0094)
Inverse Mills ratio		-2.9519 -0.196	6.5516*** (0.0091)

Factors	Probit	Right issuers without warrant	Right issuers with warrant
Number of firms*	114	40	74
R <sup>2</sup>		0.2174	0.0432

*Notes:* Figures in the parenthesis is the probability value; \*, \*\*, \*\*\* indicate that the value is significantly different from zero at 10%, 5% and 1% level, respectively. \* The observation included in the regressions is less than the total sample as reported in Table 2 because there are missing value in explanatory variables. For example in Table 4, the minimum number of firms without warrant is 41 based on  $\sigma_{EARNINGS}$ , however, in the estimation model with missing data, only 40 firms have full set of data, there is one firm with  $\sigma_{EARNINGS}$  do not have value for BM. Simlary for the case of firm with warrant.

#### 4.6. Offer Day Return and Under Pricing

Byoun and Moore (2003) examines the offer day return and under pricing on the US market and offer positive offer day return and negative under pricing. The study concludes that the result is in congruent with the sequential and signaling hypothesis. The same study is replicated in the Malaysia, albeit with a different formula. Byoun and Moore (2003) defines offer day return as the 1-day return on the offer day, which is the percentage difference from the last trade price of common share on the day before the offer day to the last trade price of common share on the offer day. Under pricing is defined as the percentage difference between the last trade price on the offering date and the offer price. In Malaysia, right issue offer price is often set lower than market price in order to entice the investors to part with their capital. Therefore, a better analysis will entail using the opening price of the security as it will reflect the actual market valuation of the security after the new equity issue. Additionally, as there is more share units, market will adjust accordingly and this is reflected in the opening price.

As shown in Table 7, firms with warrant exert positive offer day return at 0.3182 percentage compared to firms without warrant at 0.0705. The same observation is found on underpricing. This is consistent with the sequential financing and signaling theorem, since right issuers with warrant offers higher return for investors.

**Table 7: Offer Day Return and Under Pricing**

Offer day return	All	With Warrant	Without Warrant	p value for mean (median) difference
Offer Day Return (%)	0.2956	0.3182	0.0705	0.7483(0.6900)
*Observation	107	71	36	
Positive (%)	45.79	46.48	41.67	
Under pricing	All	With Warrant	Without Warrant	p value for mean (median) difference
Under pricing (%)	-0.0726	0.0169	-0.3215	0.6362 (0.4469)
*Observation	108	71	37	
Positive (%)	28.1	26.92	35.14	

*Note:* Offer day return is the 1-day mean return on the offer day, defined as the percentage difference from the opening price on the offer day to the last trade price of common share on the offer day. Under pricing is defined as the percentage difference between the last trade price on the offering date and the opening price. The average of the reported bid and ask prices is taken as the last trade price. \* Due to missing value in either the opening price, closing price or both on the offer day, the observation reported in this table are less than those in the other tables.

## 5. CONCLUSION

This study tested the right issue abnormal performance and explores the impact of warrant on right issue performance. We collected 121 listed firms that has right issue announcement in the Main Market of Bursa Malaysia from January 2006 to December 2012. In general, our empirical evidences supports the signaling theory of Chemmanur and Fulghieri (1997). Our findings imply that right issue with warrant is a value creation to listed firm in Malaysia, as it imparts positive outperformance signal, so firms intending to raise additional equity though right issues should consider include warrant to signal their capability to create additional value to their investors. This will ensure the success of this corporate financing exercise. Retail investors thus can appreciate that right issue with warrant is a correct signal that the firms is of better quality from its peers. Last but not least, our study can be extended to private placement, another form of seasoned equity offering which offer for sale the firm's equity to a group private investor. This should provide further insights into signaling theory of seasoned equity offering in this part of the world.

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