

STOCK PRICE BEHAVIOUR OF MALAYSIAN RIGHTS ISSUE ON THE ANNOUNCEMENT AND EX-RIGHT DATES

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ABSTRACT

This study examines the announcement and ex-right effect of rights issue during the period from January 1980 to December 1995. The announcement effect of Malaysian rights issue shows a significant price decline, consistent with information asymmetry hypothesis of Myers and Majluf (1984). However, the magnitude of such decline is much smaller compared to the U.S. evidence, -1.59 percent vs -3.14 percent as documented by Asquith and Mullins (1986). Upon further investigation to determine whether there is any difference in investors' behaviour based on the purpose of issuing rights, it was found that equity raised for investment purpose experiences insignificant announcement day price decline of -1.34 percent vs -2.04 percent for those under debt retirement purpose. The returns for both sub-samples differ significantly from one another, giving support to the good news hypothesis suggested for Korea (Kim and Lee, 1990). The ex-right date effect indicates that price adjustment is not efficient until after the ex-right date, contrary to the belief that such adjustment should be mechanical. The result shows that on the ex-right date investors can earn a significant positive return of 9.05 percent, consistent with findings in the Singapore and Japanese markets that report price increases of 5.7 percent and 7.1 percent respectively. This result suggests presence of profit arbitraging opportunity in the Malaysian market that would enable investors to earn a significant positive abnormal return.

1. INTRODUCTION

Equity issue to existing stockholders is made through pre-emptive offering to enable them to maintain proportionate ownership in a firm. Through rights offering, firms will be able to obtain additional external financing either for the purpose of investment or for reduction of financial leverage. A right issue is a short term warrant issued to existing stockholders on a pro-rata basis that could be exercised within a certain period of time. Shareholders can either choose to exercise their rights by purchasing additional allocated shares at the issue price or sell their rights to other investors. External financing obtained through rights issue is prevalent in Malaysia and play an important role in the capital formation process

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Asquith and Mullins (1986), Moralis and Korwar (1986), Mithalson and Petch (1986)

of the private sector. For example in 1995 alone, the total capital subscribed through rights issue amounted to RM5.3 billion as compared to RM3.48 billion in 1994, indicating a growth rate of 52 percent.¹

Previous studies on the price effects of rights issue demonstrated significant price decline upon announcement. This is particularly so in the developed markets. For example, Asquith and Mullins (1986) document a significant price decline of 3 percent for primary issues by firms listed on the American Stock Exchange (AMEX) and New York Stock Exchange (NYSE). Marsh (1979) documents a marginal decline of 0.9 percent for UK stocks upon announcement of equity offerings. However, the developing markets exhibit mixed results. A positive announcement period return has been observed for Korea and Singapore as evidenced by Kim and Lee (1990) and Ariff and Finn (1989), respectively. In Malaysia, a negative announcement return has been reported in the research by Annuar and Shamsheer (1993) and Phoon (1990). In contrast, Nur Adiana Hiau Abdullah (1997) reports a significant positive return before and after the announcement date.² The positive announcement effect has been explained in terms of the good news hypothesis where issuing firms are regarded as having profitable projects which needed external financing, invoking favourable response from investors.

In this research, we study the price behaviour of rights offerings in Malaysia from two different events – announcement and ex-right. To study possibility that the good news hypothesis is applicable in Malaysia with respect to announcement, the sample was divided into two groups according to purpose of issue. So far, one other attempt has been made to segregate sample in this manner and to measure announcement price reaction of the different samples (Yip Siew Ping 1994). Thus another objective of this paper is to see whether in a rapidly developing economy, where abundant investment opportunities are available, stock price behaviour of equity issue differs when analysed from the aspect of issue purpose.

The paper proceeds as follows. In section 2, the literature review gives theory and empirical evidence on the anomalous price behaviour of seasoned equity issue on the announcement and ex-right dates. The methodology follows in section 3 and the results given in section 4. Finally the article concludes in section 5.

¹ Bank Negara Malaysia - Annual Report 1995, page 180.

² This research did not report the announcement effect per se by using a two-day window (0, +1) as normally done by other researchers.

2. LITERATURE REVIEW

2.1 Theory on Announcement Price Behaviour of Seasoned Equity Offerings

Considerable research on equity offerings has been documented lately (especially for the developed markets of U.S. and U.K.) due to the peculiar price patterns exhibited around announcement and issue times. Announcement of rights issue refers to the day when management makes public its intention to obtain additional capital through rights offerings. Most research on announcement effect has been carried out in the U.S. market. In general, announcements of equity issues induce negative price reaction from investors.³ Among explanations suggested for this phenomena include changes in implied cash flow, changes in capital structure, unanticipated announcements, ownership changes, and information asymmetry (Smith 1986). A brief review of these explanations follows:

(i) Implied cash flow change

Miller and Rock (1985) hypothesise that investors draw inferences about expected cash flows from announcements made by firms. News of cash outflows (example: share repurchases, dividend increases and investment expenditure) impart positive signal of increases in expected cash flows and consequently value of equity rises. However news of cash inflows (in the form of security offerings, dividend decreases and reduction in investment expenditure) is regarded as bad news resulting in share price decreases. Although this hypothesis is plausible, it has its shortcomings where it is only applicable to security sales in general. It does not fully explain the differential reaction of debt against equity sales, convertible versus non-convertible issues and industrial versus utility issues.

Mikkelson and Partch (1986) show that price reaction to equity offerings and convertible debt significantly negative while insignificant price movement occurred for straight debt offerings. Asquith and Mullins (1986) found that the negative price reaction of industrial issues much larger than that of utility issues. Thus the implied cash flow change hypothesis cannot adequately explain the negative reaction upon announcement of rights issue, as there exist variations between types of offerings.

(ii) Capital Structure Change Hypothesis

This hypothesis believes that changes in capital structure influence market reaction. Two possible scenarios have been put forth for the observed price performance (DeAngelo and Masulis 1980). The first hypothesis says that equity issues cause debt to be less risky resulting in a transfer of wealth from shareholders to bondholders, causing downward price revision. While the second hypothesis says increases in equity issue raise firm's cost of capital brought about by reduction in lower cost debt, invoking unfavourable reaction from investors.

³ Asquith and Mullins (1986), Masulis and Korwar (1986), Mikkelson and Partch (1986).

(iii) Unanticipated announcements

Smith (1986) hypothesises that changes in stock prices vary inversely with the predictability of announcement since only the unanticipated component of the announcement cause prices to change. Actions of the firm that are regular and predictable, such as new debt issues to replace maturing obligations and sinking fund provisions, will not significantly affect stock prices. This hypothesis explains the differential reaction of debt versus equity issues.

(iv) Ownership changes

In a study of exchange offers, Masulis (1980) found that the two-day announcement period return associated with issuing debt to retire common stocks is a favourable 14 percent as compared to Eckbo's (1986) finding of a negative 4.2 percent when retirement of debt is made through equity issues. This evidence seems consistent with the hypothesis that announcements of events that increase ownership concentration raise share prices and vice versa (Leland and Pyle 1977).

(v) Asymmetric Information Hypothesis

Under this hypothesis there is imbalance in the possession of information between managers and outside investors, advantage being with the former. According to Ross (1977) equity issues are non-binding on firms and give negative signals of management expectations of future cash flows. That is, when management expects future cash flows to decline, equity issues are the preferred choice. In contrast, debt issues emit positive signals that future cash flows will increase and investor's reaction to such event will be less unfavourable.

Myers and Majluf (1984) hypothesise that manager's information advantage is with regards to assets in place and the knowledge will be used for the benefit of existing shareholders. Even though the market on average correctly values firms, there exist pockets of inefficiencies where individual firms are temporarily mispriced. Thus when the prevailing market price is much higher than its intrinsic value, the manager has the incentive to issue new equity. The market regards this action as conveyance of negative information whereby firms are currently overvalued and consequently causes share prices to drop. This hypothesis indicates that the greater the information asymmetry the greater the price decline.

2.2 Empirical Evidence on Announcement Price Behaviour

The number of research on U.K. rights issues is not as numerous as those of the U.S. Marsh (1979) documents large positive abnormal returns in the pre-announcement period, for rights issues from July 1962 to end of 1975, followed by significant upward trend in the post-announcement period. However,

the two-day price drop as observed in the U.S. market was not documented here as Marsh used monthly price data. Market inefficiency was not fully supported as the magnitude of abnormal return decreases when adjustment against company size was made. Marsh concludes that company size is an important factor influencing returns during this particular period of time and cautions against hasty conclusions rejecting market efficiency.

Rights issues in the Asia-Pacific region show mixed results. Australia, between 1960 and 1969, exhibited the usual price pattern of positive abnormal return in the pre-announcement period and constant cumulative return subsequent to announcement (Ball, Brown and Finn 1977). The immediate price decline upon public release of information as observed in the U.S. studies is again not documented here as monthly prices instead of daily prices were used. The cumulative average abnormal return for 12 months prior to announcement being 9.7 percent is not significantly different from zero.

Srinivasan and See (1990) researched the price behaviour of Singapore rights issues on announcement day and found that pre-announcement upward drift begins about fifteen days before. In the post-announcement period, prices drift downward till the end of the estimation period 60 days later. Again, the price behaviour shows unfavourable response towards announcement of rights offerings. However, both pre- and post-announcement abnormal returns are not statistically different from zero. Ariff and Finn (1989) observe similar price pattern for 85 Singapore rights issue announcements and individual monthly abnormal returns are not statistically significant even though cumulative residual return prior to announcement is 10 percent.

Research by Phoon (1990) on Malaysian rights issue indicates that cumulative return increases in the pre-announcement period and declines substantially upon announcement for up to a period of ten days. The difference in this result from those of the U.S. is that the price drop continues for a much longer period and in some instances is statistically significant. The result shows violation of the semi-strong version of the efficient market hypothesis where information is not accurately and efficiently impounded in share prices. This result could be due to misspecification of the model used to calculate abnormal returns.⁴

Annur and Shamsher (1993) studied Malaysian rights offerings between 1980 to 1991 and obtained an entirely different result from Phoon above. Using the market-model procedure with Dimson-Fowler-Rorke correction for non-synchronous trading bias, their finding indicates negative

⁴ Phoon used the mean-adjusted return model which Chandra, Moriarty and Willinger (1990) showed as being weaker in detecting abnormal return as compared to the market-adjusted model and the single-index market model.

abnormal return in the month prior to announcement until ten days into the post-announcement period. The price behaviour in the pre-announcement period is attributed to information leakage and insider trading. While post-announcement negative abnormal return is due to unfavourable information being disseminated regarding the use of proceeds from the rights issues. Approximately 30 percent of companies in their sample announced the purpose of offering as associated with investment and asset expansion while the rest intended to use the proceeds to reduce debt obligations and for working capital purposes. It is possible that the negative effect of debt reduction purpose overcome the positive effect of asset expansion and investment purpose. Research by Yap Siew Ping (1994) shows that the negative effect of rights issue used for leverage reduction is much larger than those used for expansion purpose. Yap also used the market model to calculate abnormal returns.

Another research is done by Nur Adiana Hiau Abdullah (1997) who shows a significant positive pre- and post-announcement cumulative return on a sample of 25 companies. This research uses the market-adjusted model to calculate abnormal returns. The cumulative abnormal returns (CAR) from $t = -40$ to $t = 0$ is significantly positive, so is the CAR from $t = 0$ to $t = +40$. However, the author did not report the usual CAR over the two-day window $(0, +1)$ announcement period. Thus, the immediate announcement effect of rights issue is not obvious in this article.

Significant announcement return is also reported for rights issue made during periods of economic expansion (Salamudin, Ariff and Annuar 1999). Periods of falling term premiums are identified as favourable for equity issues and vice versa. During favourable economic condition, the 10-days abnormal market-adjusted return over $t = -8$ to $t = +1$ is a significant 3.45 percent. However, the abnormal return over periods of unfavourable economic condition is a significant -3.04 percent. This research supports the good news hypothesis that investors perceive rights issue made during periods of falling term premiums as having better investment prospects compared to those made during periods of rising term premiums.

Investigation into the price behaviour of Korean rights offers by Kim and Lee (1990) reveals a different set of result as compared to the U.S. Price run-up of Korean issues occurs for two months prior to announcement date and continues for another two months afterwards. Insiders explain pre-announcement behaviour in terms of news leakage. While post-announcement abnormal return indicates good news that issuing firms have profitable projects that needed external funding. The good news hypothesis is attributed to the fact that Korean firms face high cost of equity financing and will only opt for such an

avenue if the return from expected investment opportunities outweighs the costs. In a cross-sectional analysis of abnormal return (± 2 months) against relative size of issue, the researches found significant positive relationship between the two variables indicating the larger the amount of funds raised, the more favourable investors reaction: providing further support for the good news hypothesis.

2.3 Ex-Rights Price Behaviour

There are very few studies on the behaviour of share prices on the ex-right day. This could be due to the belief in market efficiency whereby on the ex-right day, prices are assumed to adjust accordingly. Thus investors would not have the opportunity of gaining any abnormal return. This follows from the fact that price is information sensitive and information is disseminated to the market upon announcement of rights offerings. These information include the issue price and the purpose of raising additional capital. Any price movement, in an efficient market, should have been observed when firms first announce an impending equity issue. By the ex-right date, prices should already move in a random manner reflecting complete assimilation of released information and accord investors no profit arbitraging opportunities.

Among the dearth of studies on the ex-right price behaviour are those by Dawson (1986) on Singapore stocks, Kothare (1991) on US listed stocks and Goyal, Hwang, Jayaraman and Shastri (1994) on Tokyo Stock Exchange (TSE) stocks. According to Dawson (1986), ex-rights date return of rights offerings in Singapore showed a price increase of 5.7 percent. However, the level of significance is not reported here. Goyal *et al* (1994) report a significant positive return of 7.1 percent on the ex-date of 248 rights offerings by firms listed on the TSE over the period from 1975 to 1989. On the other hand, Kothare found that for AMEX and NYSE stocks, prices decline by 1.62 percent on the ex-right date. Both Kothare and Goyal *et al* report increased volatility after the ex-date, consistent with decreased liquidity as a result of wider bid-ask spread of the stocks concerned. Goyal *et al's* further analysis of trading volume indicates a significant increase in trading activity in the pre-ex-date (-5 days) and on the ex-date itself. This increase no longer persists into the post-ex-date period. From the evidence they conclude that there is pricing inefficiency in the Japanese market with rampant short term trading activity prior to the ex-right date.

No research is available on the ex-right price behaviour in Malaysia and the second part of this paper looks at whether inefficiency in this respect exists, similar to its neighbour, Singapore.

3. RESEARCH METHODS

3.1 The Technique

Examining price behaviour of corporate decisions requires event-study methodology developed by Ball and Brown (1968) and Fama, Fisher, Jensen and Roll (1969). The excess return on a particular security at various intervals during the event period of interest need to be calculated first, then averaged cross-sectionally and finally cumulated over time to detect any abnormal price pattern. Excess return refers to the difference between actual return and normal return. Three commonly used methods to calculate normal returns are the mean-adjusted return approach, market-model approach and market-adjusted return approach.

So far, research on Malaysian rights issue utilised the mean-adjusted return approach (Phoon 1990) and the market model approach (Annuar and Shamsher 1993, and Yip 1994). The mean-adjusted return approach allows expected return to vary across securities but not through time. The weakness of this method is that returns before announcement date may be inflated due to overvaluation (Smith 1977, Myers and Majluf 1984, and Asquith and Mullins 1986). The market model approach is usually preferred among academics but it is not adopted in this research. The reasons for this being problems of parameter instability and non-synchronous trading. Even though Annuar and Shamsher employ the Dimson-Fowler-Rourke correction method to mitigate non-synchronous bias in beta estimation, the question of which appropriate estimation period to use remains unresolved. Yip (1994) also utilised the market model to study the behaviour of rights issue investment. Yip's focus is on price behaviour under different purpose of issuing rights. Her result shows that price behaviour is negative if rights issue is used for reduction of leverage and almost zero for capital investment.

Marsh (1979) stresses the need to exercise caution when using the market model as results can differ depending on the parameter estimation period. Parameter instability, specifically systematic risk, can also result in residual bias (Larcker, Gordon and Pinches 1980). It is expected that this problem of beta instability is more acute in a volatile and small market like Malaysia. Thus, to mitigate the various problems of using the market model, the market-adjusted approach is employed instead in this particular research. The market-adjusted model is considered valid as Marsh has shown that the results for U.K. rights issue are not affected by the type of model used. Brown and Warner (1985) found that the market-adjusted model produces approximately the same number of Type I errors as the more complex market model which incorporate risk adjustment. Other studies providing further support to the market-adjusted model in anomaly studies include Dyckman, Philbrick and Stephan (1984), Chandra,

Moriarity and Willinger (1990), Korajczyk, Lucas and McDonald (1990) and Krueger and Johnson (1991). Korajczyk *et.al.* calculated the cross-sectional correlations across various methods including the market-adjusted method and found high correlations of between 0.85 to 0.99. Lease, Masulis and Page (1991) found qualitatively similar results when using the market-adjusted and market model to study market microstructure impact on seasoned issues.

The market reaction to an event is measured using daily excess return estimated by

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

where A_{it} is the excess return or residual to security i for day t , t is 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 as proxied by the return on the market index – the value-weighted KLSE Composite Index.

The average excess returns for each security are then obtained by

$$AR_t = 1/N \sum_{i=1}^N A_{it} \quad (2)$$

where AR_t is the average residual return at time t , N refers to the number of securities in the sample, and A_{it} the abnormal return of the i^{th} rights issue at time t . The cumulative average residuals denoted by $CAR_{(K,L)}$ are found by summing average excess returns over event time K to L in the test window as follows

$$CAR_{(K,L)} = \sum_{t=K}^L AR_t \quad (3)$$

Test of significance is done by calculating the t-statistics. For significance of individual event day average residual, the t-test is:

$$t = AR_t / S(AR_t) \quad (4)$$

where $S(AR_t)$ is standard deviation of average residual returns.

The t-statistics for $CAR_{(K,L)}$ is

$$t = CAR_{(K,L)} / S(CAR_{(K,L)}) \quad (5)$$

where $S(CAR_{(K,L)})$ refer to standard deviation of cumulative average residuals, calculated by

$$S(CAR_{(K,L)}) = \sqrt{T \text{var}(AR_t)} \quad (6)$$

⁵ From Brown and Warner (1985), Strong (1992).

⁶ This method was used by Asquith and Mullins.

where T equals the number of days in the CAR statistics and $\text{var}(\text{AR})$ is variance of abnormal returns.

3.2 Data

The sample comprises all rights issues from January 1980 to December 1995. The announcement dates (AD) were identified from the Investor's Digest (formerly KLSE Gazette). Only completed offerings were included. To eliminate confounding effects of other information, only pure rights offerings were selected. Mixed offerings with bonus issues announced at the same date or within the -60 to +20 days test window were excluded. This reduced the sample size to 56 companies. The ex-right dates (EXD) were also identified from the same source. Price data and the KLSE Composite Index were collected from the Securities Clearing Automated Network (SCAN) daily price tape and the *KLSE Daily Diary*. An overall analysis was conducted to observe price anomalies surrounding the announcement of rights offerings over (-60 to +20) day's window and ex-right behaviour over (+20) day's window. The sample was then divided into two groups according to purpose of issue, whether for investment purpose or for debt retirement. The information was collected from respective firms' prospectuses. Commonly stated uses of the proceeds are for debt repayment, investment and working capital purposes. In this analysis, raising fund for working capital is regarded as investment activity.⁷ Since very few observations can be neatly classified as either for debt repayment or for investment purpose, the grouping was done according to the major purpose of issue. If 50 percent or more of funds raised were used to reduce bank borrowings, then the purpose of issue is regarded as debt repayment. Otherwise it is considered as raising funds for investment purpose. When the sample was delineated in this manner, there were 20 observations with debt repayment as a major purpose and 36 observations with investment purpose.

3.3 Announcement Price Behaviour

The market-adjusted abnormal returns are calculated for the whole sample over the -60 to +20 days window. The average residuals are cumulated and divided into three sub periods relative to the announcement date (AD):

- i) pre-announcement (AD-60 through AD-1)
- ii) announcement (AD and AD+1)⁸ and
- iii) post-announcement (AD+2 through AD+20).

The price pattern obtained is tested for any abnormality using the t-test. The null hypothesis tested is whether the cumulative average abnormal return (CAR) is equal to zero.

⁷ Loderer and Mauer (1992) also regarded working capital as investment.

⁸ Actual date of announcement is recorded in the Investors Digest. These announcements appeared in the local newspapers the next day. The announcement date used here is the actual date which appeared in the Investors Digest. Research in the US used the dates announcements appeared in the Wall Street Journal as day 0 and the actual date of announcement as day - 1. Even though the notation of event days seem to differ from the US, they are actually the same.

3.4 Effect of Issue Purpose

Since the Korean experience shows that equity announcements invoke favourable reaction from investors as such announcements are associated with good news regarding firm's investment prospects, it is possible that such hypothesis is also present in the Malaysian market but is hidden by other offerings that are not investment related. The sample in Annuar and Shamsheer (1993) had a greater proportion of equity offerings being made for the purpose of debt retirement and working capital needs, while a smaller proportion devoted to raising funds for investment purposes.⁹ At this juncture, it is feasible to explore the market reaction in accordance to purpose of issue. Thus the sample is divided into two groups (refer to section 3.2). The first group has debt retirement as the purpose of raising funds and the second group is investment related.¹⁰ Price reaction for -60 to +20 days surrounding the announcement dates was measured for the two samples.

3.5 Ex-Right Price Behaviour

Using the sample for the announcement behaviour above, the ex-right dates (EXD) were identified. The average residual and cumulative average residual for 20 days surrounding the ex-right days were calculated using the market-adjusted approach given earlier.

On the ex-right day, prices are expected to adjust for the terms of issue. The ex-right price is calculated as follows

$$\frac{(\text{Shares}_{\text{RR}})(\text{Price}_{\text{RR}}) + (\text{New Shares})(\text{Price}_{\text{S}})}{(\text{Shares}_{\text{RR}}) + (\text{New Shares})}$$

where $\text{Shares}_{\text{RR}}$ is the number of shares investors must own to buy the new shares, Price_{RR} is the last price before share go ex-rights, New Shares is the number of new shares investor may buy, and Price_{S} the subscription price paid for each new share.

The actual closing price for the first trading day after ex-right is compared with the ex-right price and adjusted for market changes.

The cumulative average residuals were divided into three sub-groups:

- i) pre-ex-right (EXD-20 to EXD-1),
- ii) ex-right (EXD 0), and
- iii) post-ex-right (EXD+1 to EXD+20).

The respective cumulative average residuals were tested for market efficiency and they were all expected to be zero.

⁹ Another research that investigated this objective is by Yip (1994).

¹⁰ Funds needed for working capital are considered as investment related. Where mixed purpose are concerned, observations with less than 50 percent of the proportion in debt repayment are considered as investment related.

4. RESULTS

4.1 Announcement Price Behaviour

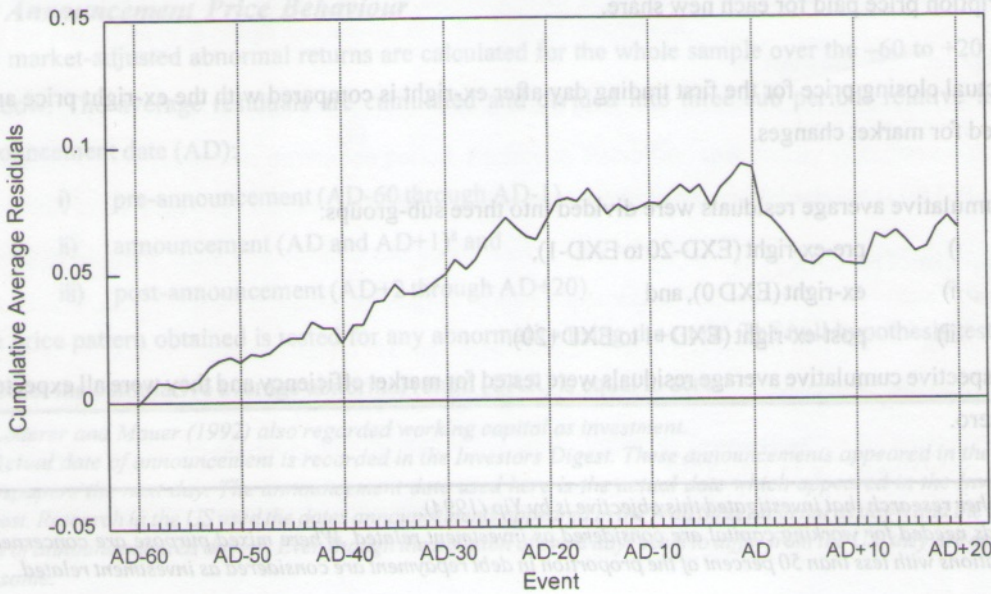
The price pattern of abnormal returns for all issues in the sample is shown in Figure 1 and Table 1 below. Prices rise in the period prior to announcement with a cumulative average excess return of 8.45 percent, statistically significant at the 5 percent level. The announcement day return (0: +1) is a significant (-1.59) percent. However, the post-announcement period return (+2: +20) is not statistically different from zero showing complete assimilation of offering information, supporting the semi-strong form of market efficiency. This result is consistent with information asymmetry where managers decide on an equity issue when shares are overvalued and investors react negatively to such announcements (Myers and Majluf 1984).

Table 1 - Cumulative Average Residual Return

| Period | CAR | t-value |
|----------|---------|---------|
| (-60:-1) | 0.0845 | 2.41** |
| (0:+1) | -0.0159 | -2.48** |
| (+2:+20) | -0.0074 | -0.38 |

** significant at 5% level

Figure 1- Announcement of Rights (All)



4.2 Effect of Issue Purpose

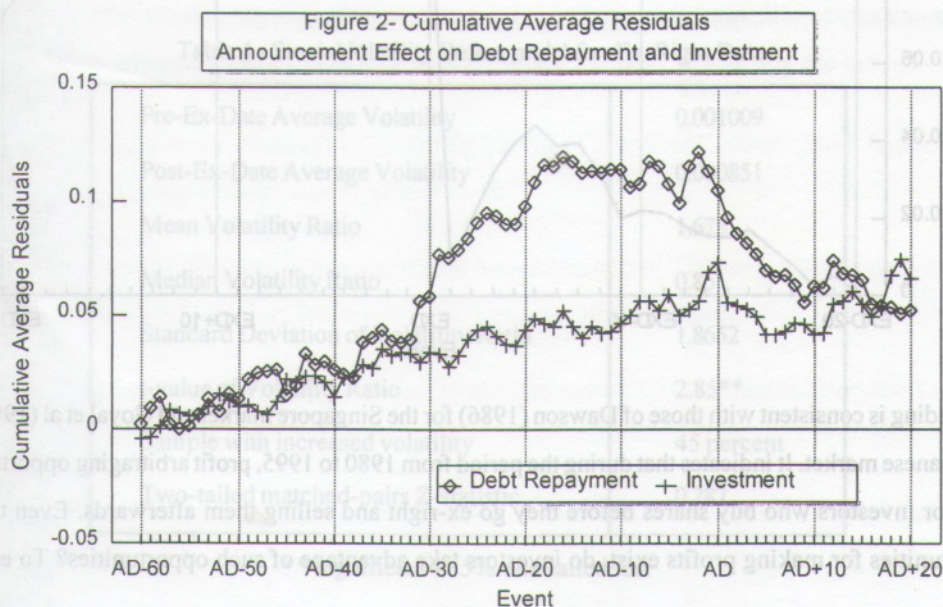
To test whether the Korean good news hypothesis is also applicable to the Malaysian stock market, the sample was divided according to purpose of issue: whether for debt repayment or for investment purpose. Result for the two groups provides some support for such hypothesis. The debt repayment group shows a significant drop of -2.04 percent and the investment group suffers a drop of -1.34 percent, the two means being statistically different from each other. The t-value for the difference between the two means is 3.02, significant at 1%. The results are as shown in Table 2 and Figure 2.

From the result, it is plausible that the good news hypothesis is applicable to the Malaysian market. Even though the result is different from Denis (1994), it is consistent with the prediction of Choe, Masulis and Nanda (1993) that the negative announcement effect will be reduced if the issuing firm has valuable investment opportunities available.

Table 2 – Announcement Effect of Debt Repayment and Investment Purpose

| Event | Debt Payment | t-value | Investment | t-value |
|------------|--------------|-----------|------------|----------|
| AD(-60:-1) | 0.1130 | 2.1789** | 0.0687 | 1.6518 |
| AD(0:+1) | -0.0204 | -2.1500** | -0.0134 | -1.7650* |
| AD(+2:+20) | -0.0406 | -1.3913 | 0.0110 | 0.4704 |

**significant at 5%, *significant at 10%



4.3 Ex-Right Price Behaviour

4.3.1 Abnormal Return Surrounding Ex-Date

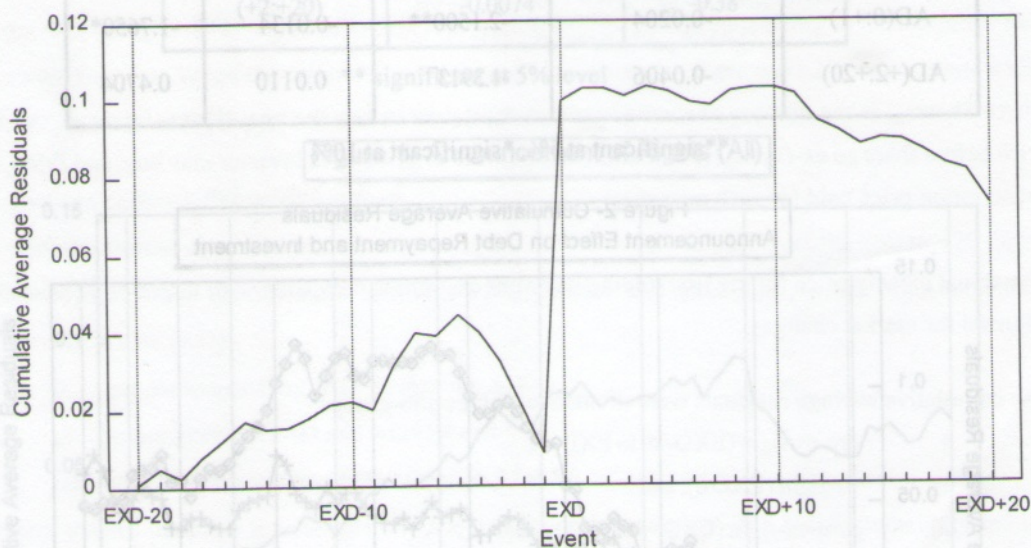
Price behaviour for ± 20 days with respect to the ex-right date is calculated and is shown in Table 3 and Figure 3. In the pre-ex-right period, pricing of securities is efficient with cumulative average residual of 0.86 percent, not significantly different from zero. Abnormal increase in return of 9.05 percent is observed on the ex-right day, being significant at 1 percent level. Return stabilises in the post ex-right period with cumulative abnormal return of -2.68 percent, again indicating market efficiency in asset pricing.

Table 3 - Cumulative Average Residual Return around Ex-Right Date

| Period | CAR | t-value |
|----------|---------|-----------|
| (-20:-1) | 0.0086 | 0.1282 |
| EXD | 0.0905 | 6.0424*** |
| (+1:+20) | -0.0268 | -0.3996 |

*** significant at 1 percent level.

Figure 1 - Cumulative Average Residual around Ex-Right Date



The finding is consistent with those of Dawson (1986) for the Singapore market and Goyal et al (1994) for the Japanese market. It indicates that during the period from 1980 to 1995, profit arbitraging opportunities exist for investors who buy shares before they go ex-right and selling them afterwards. Even though opportunities for making profits exist, do investors take advantage of such opportunities? To explore

whether there is enough evidence to indicate seizure of available opportunities for profit-making by investors, the impact on stock volatility is then measured and the result is given below.

4.3.2 Impact on Stock Volatility

To test whether stock volatility changes before and after the ex-dates, we calculated the ratio of post- and pre-ex-date variability. The variance of daily stock returns in the pre-ex-right period (-20:-1) and the post-ex-right period (+2:+20) were calculated. Then the ratio of post- to pre-ex-date variability was derived. A ratio greater than 1 indicates increase in variability after the ex-date. The result is given in Table 4.

The average volatility ratio is 1.675, significant at 5 percent level. This finding indicates two possibilities; either increases in volatility after the ex-date or decreases in liquidity brought about by a much-reduced trading activity. However, the median volatility ratio is 0.86, which makes the mean value somewhat suspicious. The distribution of ratios is positively skewed with a value of 1.874. To see whether the high mean value is due to more firms with increases in volatility rather than a few firms with high ratios causing the upward bias, a non-parametric test is then run. The null hypothesis tested is that the probability of obtaining volatility ratio of 1 or greater is 50 percent ($H_0: p^*=0.50$). Forty-five percent of the firms have ratios of 1 or greater and the matched-pairs sign test result in an insignificant Z-value of 0.7. The hypothesis that there is equal volatility of prices before and after the ex-date cannot be rejected. Thus there is no difference in trading activity before and after the ex-right date. From the findings it seems that Malaysian investors do not take advantage of profit opportunities associated with imperfect price adjustment on the ex-right date.

Table 4 - Stock Volatility Before and After Ex-Right Date

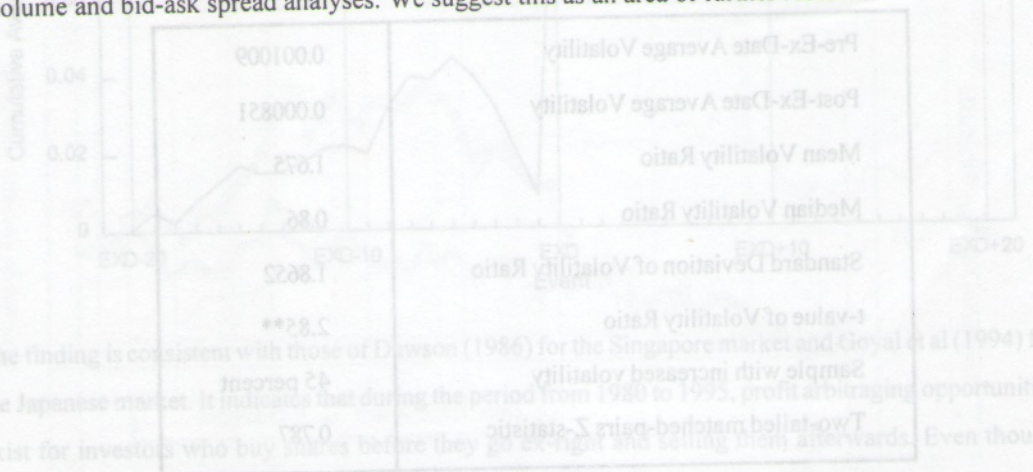
| | |
|--|------------|
| Pre-Ex-Date Average Volatility | 0.001009 |
| Post-Ex-Date Average Volatility | 0.000851 |
| Mean Volatility Ratio | 1.675 |
| Median Volatility Ratio | 0.86 |
| Standard Deviation of Volatility Ratio | 1.8652 |
| t-value of Volatility Ratio | 2.85** |
| Sample with increased volatility | 45 percent |
| Two-tailed matched-pairs Z-statistic | 0.787 |

** significant at 5% one-tailed test

5. SUMMARY AND CONCLUSIONS

This paper provides evidence on the behaviour of Malaysian rights offerings around the announcement and ex-right dates and whether purpose of issue makes any difference on the price behaviour. The overall evidence is consistent with price behaviour of rights issue in the developed markets of U.S. and U.K. Rights issue announcements are preceded by favourable price increases, supporting the information asymmetry hypothesis of Myers and Majluf (1984). This suggests that Malaysian managers do take advantage of price overvaluation situation before rights announcements are made. The negative announcement day abnormal return even though significant at -1.59 percent, is much smaller than the -3.14 percent experienced in the U.S. market as reported by Asquith and Mullins (1986). Insignificant positive post-announcement price behaviour reflects semi-strong market efficiency as the market quickly assimilates information. Another factor, which attenuates the negative effect of equity announcement, is purpose of issue. Companies that announce a greater proportion of funds for investment and working capital purpose suffered less price decline giving support to the good news hypothesis as proposed for Korea.

This paper also examines price behaviour surrounding ex-date of rights offerings in Malaysia. The result shows that there is pricing inefficiency on the ex-right date and investors can earn a significantly positive abnormal return of 9.05 percent. Price adjustment is not as mechanical as previously thought to be. This result is similar to that experienced by the Singapore market, though the abnormal return is much larger in Malaysia. Further analysis of stock volatility before and after the ex-date shows that there is no change in volatility suggesting that Malaysian investors do not take advantage of the profit arbitraging opportunity present. However this conclusion is premature at the moment without further evidence on volume and bid-ask spread analyses. We suggest this as an area of further research.



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