REMINISCING STOCK SPLITS ANNOUNCEMENT: A MALAYSIAN CASE

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ABSTRACT

This study attempts to understands and verify the effects of stock splits on the abnormal returns of announcing companies share prices using Market Adjusted Returns (MAR) Model. Test findings reveal splits announcements in Malaysia result in positive but insignificant abnormal returns. Additional OLS test was carry out to examine the relationship between companies' cumulative abnormal returns (CAAR) and prior dividend yield (PDY). Result from uni-variate regression analysis shows there is minimal but significant positive relationship between CAAR and PDY.

Keywords: Stock-splits, Event studies, Malaysia.

1. INTRODUCTION

Stock-splits of ordinary share is a normal occurrence in most western bourses and has been a practice for nearly a century. However, this practice is seldom implement in Malaysia in the early years of Bursa Malaysia (previously known as Kuala Lumpur Stock Exchange, KLSE). Subsequently after 1993, the exercise was terminated and only resume after the implementation of the First Malaysian Capital Market Plan in September 2000. Baring in mind that this study window is prior to information technology boom, the suspension of this corporate financial actions are much ado to inside traders exploiting their informational advantages about upcoming corporate events and lack of broadly effective detection methods, similarly to findings by Bhattacharya *et al.* (2000). To date, there are numerous companies exercising it to date, nonetheless, there has not been a study focused on the market reaction to this event in Malaysian financial scenarios. The only recent study found in this area is by an anonymous undergraduate project paper (Anonymous, 2010) found over the internet. This paper that focuses on developing market data set apart from the readily available literature on stock-splits which is more focused on developed capital market. Moreover, data analysis for this study has embedded beta estimation for thin-trading as describe in Dimson and Marsh (1982) to calculate abnormal returns. It is hope that this study will spur interest in studying this event, and provides an insight into this so call "non-value added" to equity capital and yet pulls investor to trade upon its announcement.

Furthermore, this study on reminiscing a 'has been occurrence' to its relation to prior dividend yields.

1.1. Prior Studies

Though stock splits is said not to have any effect on firm value in perfect capital market, yet significant increase are always recorded on its announcement (Muscarella and Vetsuypens (1996)). This view is supports prior research by Fama *et al.* (1969), Bar-Yosef and Brown (1977), Charest (1978), Grinblatt *et al.* (1984) shows that on average share prices rises around split announcements. Although stock splits are said to be a purely cosmetic transaction, as pointed out by Muscarella and Vetsuypens (1996), share prices would increase around the event period (similarly to findings by Chan *et al.* (2012)), thus supports Grinblatt *et al.* (1984) earlier findings.

Brennan and Copeland (1988), and Brennan and Hughes (1991) address excess returns from an information effect perspective and developed a signaling models in which stock splits are presumably conveys management's inside information to the market. Studies by Ikenberry *et al.* (1996) and Byun and Rozeff (2003) suggest that the signaling explanation suggest that split decisions overcome informational asymmetries by disseminating good information that previously was known only by the firm's management causing favourable share market reaction in response to manager signaling favorable inside information as purported by Brennan and Copeland (1988). This notion is further supported in studies by McNicholas and Dravid (1990), Brennan and Hughes (1991) and later by Byun and Rozeff (2003).

Reviewing the market reaction to stock splits, Grinblatt *et al.* (1984) report the average of two days return around the split announcement to be 3.29 %, while the average two day benchmark return is 0.16 %. They suggest that because stock splits have no direct implication for the firm's investment or financing decision, the positive reaction much largely could be due to the information effect of stock splits. Dhar and Sweta (2008) studies of the Indian Market finds that 69% of the companies shows a positive returns and overall abnormal returns of 0.8% that emerging market also favours stock splits. On the other hand, as reported in Chan *et al.* (2012), Easley *et al.* (2001) study show no reduction in information asymmetry following a split and thus find no compelling evidence for managerial signaling. More recently, Lin *et al.* (2009) show evidence of declining trading costs after stock splits. Their results contradict the costly signal hypothesis proposed by Brennan and Copeland (1988). Moreover, it should be noted that Woolridge and Chambers (1983), and Peterson and Peterson (1992) studies shows that reverse splits usually causes price to drop on the announcement of reverse split.

In relation to firm's dividend, Li *et al.* (2006) find that the use of dividend changes as a signaling mechanism prior to splits have smaller price responses to the private information revealed by splits than those that do not provide such signals, consistent with the notion that dividends and splits are indeed information substitutes. Earlier study by Asquith *et al.* (1989) found that there are strong relation between earnings increases in the two years prior to the

splits, and is consistent with the hypothesis that splits announcement lead to an upward revision in investor probability assessments that pre-splits are permanent rather than transitory. They also noted that most splitting firms announce a dividend increase immediately before, simultaneous with, or immediately after the splits announcement. Moreover, Barker (1956), Asquith and Mullins (1986), Brickley (1983), Ofer and Siegel (1987), and Healy and Palepu (1993), also stress the importance of prior dividend as a primal determinant of stock splits price reaction.

Nonetheless, Fama *et al.* (1969) in their 'landmark' research, and subsequent research by Aharony and Swary (1980), and Asquith and Mullins (1983) however find that market interprets stock splits announcement as improving the probability of near term dividend increases. On the contrary, Asquith, Healy and Palepu (1993) also found that after post-splits period the firms show significant earnings increases but unrelated to stock splits.

2. DATA AND METHODOLOGY

This research covers all events on the matter for company established in Malaysia and Bursa Malaysia (BM) Board. This research includes only company that had announced its stock splits program between 1 st. January 1980 up to 31 st. December 1993 without any other major financial news within 2 months prior or after the announcements. In general, this study make full use of Microsoft Excel for all data storing, cleaning, administration, and testing. Most of the data were gathered through *Thomson's Financial Data* and additional data are extracted from Bursa Malaysia Library, Investors Digests, KLSE Daily Diary, the relevant companies' financial reports and press releases. Furthermore, split ratio and shares outstanding of related companies are collected from Bursa Malaysia Annual Companies Handbook and KLSE's Investor Digest.

Data is categorized into two (2) main groups; (i) Closing stock price of 40 days prior to announcement until 40 days after the announcement (excluding announcement date), (ii) KLSE composite indexes 81 days over the period (40 days before and 40 days after including the announcement date) on the announcement.

Market Adjusted Returns (MAR) Models is use to validate the significance of the announcement of stock splits and been used previously by other researcher such as Dennis and McConnell (1986), Mukhreji *et al.* (1996), Campbell *et al.* (1997), and Dhar and Sweta (2008). Primarily this model is chosen because it's ease of use and provides equally powerful test method tools as suggested by Brown and Warner (1985), Dennis and McConnell (1986), and Campbell *et al.* (1997). This model is use base on the assumption that differences between the return on security *i* and the return on index is equivalent to zero. Moreover, the model is use to test the following hypotheses;

Ho_1:Stock splits announcement does not provide significant abnormal returns

and,

Ho_2:There is no correlation between prior dividend yield and abnormal returns

CAR is computed based on the following procedures:

3. RESEARCH DESIGN

This study employs the use of the simplest residual analysis for ex post data. A standard event study method to identify the direction and magnitude of share price upon ESOP implementations. Dennis and McConnell (1986) MAR was used as a standard equilibrium model to estimate abnormal returns (AR);

$$AR_{f,t} = R_{f,t} - (\alpha_i + \beta_i R_{m,t}) \qquad \text{eq. 1}$$

with $R_{f,t} = \frac{(P_f - P_{f-1})}{P_{f-1}}$ and $R_{m,t} = \frac{(CI_f - CI_{f-1})}{CI_{f-1}}$. Where P is the company end of the day closing price and CI refers to market's composite index. Adjustments are made for non-trading day, where such day is treated as missing observation and a multiple-day return is used, t-T+1 are non-trading days and therefore R_{it-T+1} to R_{it-1} are considered as invalid. The resulting abnormal returns of each observation is then added and average across all the observation to obtain the AAR_t as the simple arithmetic average. Moreover, to facilitate problems of thin trading beta, this study employ the use of Dimson's Beta as illustrated in Dimson and Marsh (1982) is an aggregated coefficients estimated using the following;

$$\beta_t^{DIM} = \sum_{k=-m}^{m} \widehat{\beta_{t+k}} \qquad \text{eq.2}$$

Where $\widehat{\beta_{t+k}}$ are obtained from a multiple OLS regression of individual stock returns again lagged, contemporaneous, and leading market returns.

Next, the average returns over t = 1, …,T is calculated as;

$$CAR = \sum_{t=1}^{T} AAR_t \qquad \text{eq. 3}$$

The cumulating is done over a price reaction window consistent with other studies and tested for statistical significant.

4. FINDINGS

There are several findings that shout to be noted. They are;

4.1 Market Reaction

All test results are obtained based on the T-Statistic (t-stat) at Alpha (α) = 0.05 and α = 0.10 for a two-tailed test.

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On the whole, stock splits announcement only records a CAR of 0.000991 and CAR of 0.080282, with insignificant t-stats reading of 1.573184. Although there are visible sign of positive market reaction to the announcement especially on the announcement day until day +2, where CAAR and CAR records 0.027556 and 0.009185 respectively, it is however records to be an insignificant result of 0.984715.

All test reading and market movement concurred with earlier researcher such as Kryzanowski and Zhang (1993), Brennan and Hughes (1991), Lakonishok and Lev (1987), Lamoureux and Poon (1987), Baker and Gallagher (1980), Copeland (1979), and several other, where market react positively prior to the announcement and adjust accordingly after the announcement were made.

From test result it is clear trading on splitting shares occurs prior to the announcement rather than after the announcement was made. Although there are substantial positive returns are made after the announcement it is however tested insignificant. This indicates that market players have adequate information on trade direction and it is possibly due to market information dissemination or 'information discount', which possibly/usually leads to insider trading.

Table-1. Cumulative Abnormal Returns (CAR) and Cumulative Average Abnormal Returns (CAAR) for Companies Announcing Stock Splits in Malaysia from 1980 − 1993

Event Period	CAR	CAAR	t-Statistic		
−40 to +40	0.000991	0.080282	1.573184		
−20 to +20	0.002083	0.085416	2.061664	*	**
−40 to 0	0.001688	0.069217	2.029597	*	**
−20 to 0	0.002638	0.055410	2.343220	*	**
−10 to 0	0.002543	0.027975	1.812864	*	
−5 to 0	0.003087	0.018523	2.058189	*	
−3 to 0	0.002351	0.009404	1.124256		
−2 to 0	0.002502	0.007507	0.848365		
−1 to 0	−0.000183	−0.000365	−0.086268		
0 to +1	0.012681	0.025362	0.846585		
0 to +2	0.009185	0.027556	0.984715		
0 to +3	0.008067	0.032268	1.205837		
0 to +5	0.003516	0.021098	0.686472		
0 to +10	0.001701	0.018709	0.591616		
0 to +20	0.001319	0.027708	0.799969		
0 to +40	0.000214	0.008767	0.231145		

 * Significant at 10 % level

** Significant at 5 % level

Reported T-Statistic is based on two-tailed univariate t-test

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Figure-1. Cumulative Abnormal Returns (Daily) of Announcing Firms
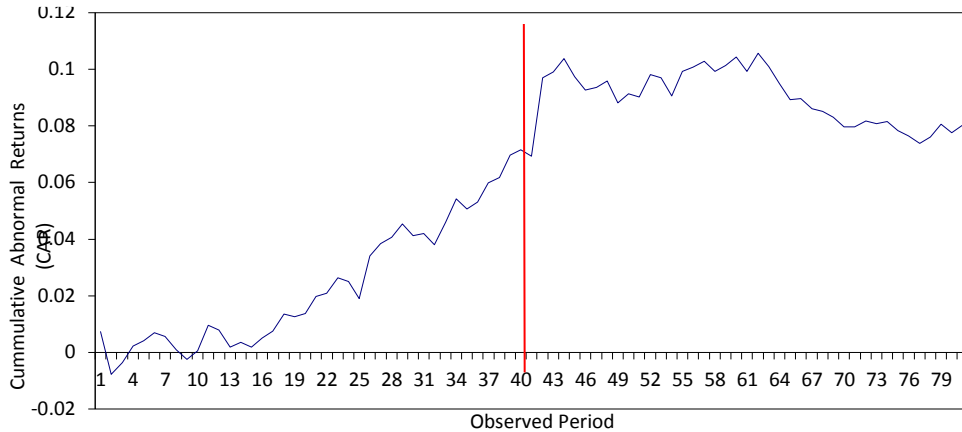
After the splits announcement, sudden hikes in CAR are noted but tested insignificant. What possibly could have trigger such hike is that market react positively on the announcement but with caution, that is investor(s) still trading actively in the market based on the assumption that the market would continue to be bullish from the announcement. Furthermore, it must be noted that companies tend to either announce a dividend rightly after, simultaneous with, or immediately after, a splits announcement. Thus, this would further enhance market activities from such event. These findings concurred with past research by Asquith and Mullins (1983), Brickley (1983), and, Healy and Palepu (1993).

4.2 Changes in Dividend

In order to investigate the relationship between dividend and CAR possibility, we regress companies' CAR obtained to the changes in announcing companies' prior dividend yield. In order to comply with acceptable level of confidence, a two-tail *Odinary Least Square* (OLS) test at $\alpha = 0.05$ was carried out. The estimate regression equation for splits announcement, with t-statistics below in the parentheses, is as follows:

$$CAR = 0.033828 + 0.0401089\,(PDY)$$
$$(-0.70012) \qquad (3.638477)$$

$$\text{Adjusted } R^2 = 0.03518$$

The coefficient of PDY is positive and significant at 5 % level (p-value: 0.002686). However, the intercept is insignificant (p-value: 0.495321). The adjusted R^2 indicates that only 3.518 % of the variations in splits announcement abnormal returns can be explain by prior dividend yield. Although, this indicates that prior dividend yield determine CAR, its effect is minimal.

(iii) Autocorrelation of Returns

In order to verify variance changes on the splits announcement, we calculate the auto-correlation of returns using close-to-close transaction prices. The results are as on Table 2. From the table, auto-correlation for splits announcement on close-to-close price is positive on the 3, 5 and 6, 8, 10 and 11, and 13. However, none of the negative auto-correlation is significant at either $\alpha = 0.05$ or $\alpha = 0.10$. These suggest and consistent with prior findings that clustering of returns do occurs on the splits announcement trading.

5. CONCLUSION AND NOTES FOR FUTURE STUDIES

This study was geared to investigate the impact of stock splits announcement on abnormal returns and instigate changes in prior dividend yield on the abnormal returns of announcing companies.

Base on test result, it found that there are no significant abnormal returns recorded during the observed period of stock splits announcement. Although there are indications that significant abnormality in return does occur prior to the announcement, but as a whole, it is tested to be insignificant. This result accepts and supports Ho1 that is; stock splits announcement does not provide significant abnormal returns. Therefore, it can be conclude that there are no associations between abnormalities in returns to stock splits announcement. Nonetheless, ever increasing CAAR prior to the announcement or implementation to stock splits indicates that there are possibilities of an information leakage and information discount occurs in the market.

Table-2. Close to Close Returns Auto-correlation Around Stock Splits Announcement

Lag	*p*	q- value
1	–0.098	0.812
2	–0.026	0.870
3	0.047	1.058
4	–0.057	1.343
5	0.223	5.728
6	0.042	5.885
7	–0.050	6.108
8	0.096	6.964
9	–0.105	7.986
10	0.118	9.302
11	0.063	9.686
12	–0.140	11.584
13	0.159	14.069
14	–0.089	14.868
15	0.060	15.233

Notes: The autocorrelation (ρ) are based on close-to-close quotes for 31 companies announcing stock splits.

Changes in prior dividend yield to stock splits announcement; it is found to correlate significantly to abnormal returns. This result rejects Ho2 that is; there is no correlation between

prior dividend yield and abnormal returns. Hence, prior dividend yield plays an important determinant to abnormal returns in stock splits announcement although stock splits are said to be a purely cosmetic transaction and does not causes any effect on firm value in perfect capital market Muscarella and Vetsuypens (1996).

Due to shortcoming of this study using old data, future rigor study should be undertaken using recent data enabling comparison of market efficiencies. Moreover, future study also should include analysis of parameters (α and β), and other factors influencing relationship between share dividend issued and abnormal returns and a comparative analysis to those of stock splits. Such study by Desai *et al.* (1998), Charitou *et al.* (2005), Guo *et al.* (2008), and Lin *et al.* (2009) could provide an invaluable insight. However, it must be forewarn that data availability is far below expectation and probable time consumes to identify actual event date.

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