Stock Price Reaction to Dividend Announcements: an Empirical Study on Companies Listed in Malaysia Stock Exchange

Walid ZIRAM *

[1]Faculty of Economics, Commerce and Management Science, University of Setif1-Algeria
(Ziram Walid @univ- Sétif.dz)

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Summary: The dividend signaling hypothesis is one of the most prominent theories attempting to explain why firms distribute dividends. The purpose of this study is investigating the Malaysian stock market reactions to dividend change announcements of firms listed on the Malaysia Stock Exchange during the period of 2011 to 2018. The full sample examined is consists of 204 dividend changes announcements from 30 firms. The dividend changes in the final sample is distributed as follows; 89 dividend increases, 52 constant dividends, and 63 dividend decreases.

Results reported in this paper are obtained in terms of the event study methodology wherein the abnormal return of every company is computed thoroughly with a view to study the informational efficiency. The results of the analysis show that on the announcement date market response positively with increased dividend .For the constant dividend on the announcement date there is no new information is being convey to the market, Finally for decreased dividend on the announcement date market response positively with decreased dividend and that is against with-the information content of dividend hypothesis

Keywords: Malaysia stock exchange; dividend announcements; Stock price; event study; information efficiency.

Jel Classification Codes : G11؛E44, C22.

* Walid ZIRAM Ziram Walid @univ- Sétif.dz

I-Introduction:

The effects of a firm's dividend policy have been the subject of a majority of both empirical and theoretical research through the years**. Miller and Modigliani** (1961) were the first to conclude that dividend was irrelevant under perfect capital markets.[1] since then; the finance literature has provided several explanations, leading to numerous hypotheses regarding the effects of a firm's dividend policy. One of the most prominent hypotheses is the dividend signaling hypothesis, initially proposed by **Lintne**r (1956), and further developed by **Bhattacharya** (1979), **John and Williams** (1985), **and Miller and Rock** (1985). The dividend signaling hypothesis states that dividend announcements contain information about the management's assessment on the firm's future prospects. Hence, dividend change announcements convey important information to the

market about the firm's future prospects. This suggests that an announcement of a dividend increase/decrease should be followed by an increase/decrease in stock prices.

The purpose of this paper is to empirically test the signaling theory assumption that dividend announcements convey information to the market about firm's future profitability and to achieve that we should be examining the relationship between dividend change announcements of Malaysian firms listed at the Malaysia Stock Exchange and the stock price reaction.

Employing the event study methodology, this study seeks to answer the following question; if dividend announcements of Malaysian firms convey information to the market in line with the signaling theory?

At the same time, this study use to provide evidence on the semi-strong form of market efficiency by examining whether the Malaysian capital market is able to efficiently incorporate the dividend change announcements.

To examine the impact of the event - "Dividend announcement" (dividend signaling) – on the stock prices, we analyzed the stock price behavior of the selected companies surrounding 20 days of the date of dividend announcement.

Our null hypothesis is that dividend a change announcements doesn't have any significant impact on the stock price movement of the firms listed in Malaysia Stock Exchange.

Consistent with many studies in this domain the following hypotheses are defined**:**

H_0: AAR = 0

"The null hypothesis states that dividend change announcements are not associated with average abnormal return (AAR)".

H_1: AAR ≠ 0

"The alternative hypothesis states that the AAR is statistically different from zero, and reflects the signaling theory assumption that dividend announcements convey information to the market".

The impact of dividend announcements on stock prices has been broadly documented. **Pettit** (1972) was the first to empirically study the abnormal returns from dividend announcements. Conducting a study on 625 firms listed on NYSE * in the period January 1964 through June 1968 he discovered a strong positive relationship between dividend changes and stock price changes. In his study he showed that (positive or negative) changes in dividend lead to (positive or negative) abnormal returns, and that the size of the stock price reaction depended heavily on the size of the dividend change. His study demonstrates that announcements of dividend changes convey considerable information, and Pettit himself concludes "The result of this investigation clearly supports the proposition that the market makes use of announcements of changes in dividend payments in assessing the value of a security".[2]

Aharony and Swary (1980) used a sample of 149 U.S. listed industrial firms to investigate if quarterly dividend changes provided information beyond that already provided by quarterly earnings announcements. These authors used a naive model of expectations to measure unexpected change in dividend. The sample data were divided into three groups: favorable, unfavorable, and stable dividends. In order to isolate the dividend effect from the earnings effect, only firms where dividends were announced at least eleven trading days prior to or

* NYSE The New York Stock Exchange

after earnings announcements were considered. Similar to **Pettit** (1972) their empirical Findings suggested that cash dividend announcements convey information beyond the corresponding quarterly earnings announcements.[3]

Similar to **Aharony and Swary** (1980), **Asquith and Mullins** (1983) also employs a naive dividend forecasting model when examining the impact of dividend initiations. Asquith and Mullins (1983) investigate the impact of dividends on shareholders wealth by analyzing 168 U.S firms that either pays their first dividend or initiate dividends after a 10 years interruption. According to their findings, dividend initiation has a significant positive impact on firm's stock prices, and contributes to significant abnormal returns. Their evidence is consistent with the signaling hypothesis.[4]

Woolridge (1982) performed an empirical study to determine if investors reassessed their expectations about future profitability in reaction to unexpected dividend changes. Using the event study methodology **Woolridge** (1982) investigated unexpected dividend change announcements for a random sample of 200 firms listed on NYSE over the period 1971 to 1977. The study revealed a significant relationship between the sign of unexpected dividends and abnormal stock returns, which gave support to the proposition that dividends contain information about future earnings.[5]

The information content of dividends hypothesis was further tested by **Watts** (1973) who disputed the results of Petit (1972). Using monthly closing price of 310 firms obtained from the CRSP * tapes during June 1945 to June 1968, he tested if dividends contained information about future earnings of a firm. By conducting a regression analysis with next year's earnings on this year's dividend he discovered that while the average coefficients across firms were positive, the average t-statistics were very low. Accordingly he states that "all of the tests suggest that on average the relationship between future earnings changes and current unexpected dividend changes is positive and therefore consistent with the information hypothesis" [6].The main conclusion of his study is that in general, the information content of dividends can only be trivial.

More recent studies by **Benartzi, Michaely** and **Thaler** (1997) supports the early findings of Watts (1973), namely that dividend only contribute to a trivial change in future earnings. **Benartzi et. al.** (1997) found sparse empirical evidence for the information content of dividend hypothesis. Using a linear regression model and data for 1025 US firms listed on either NYSE or the AMEX during 1979 to 1991 they find no evidence to support the view that dividend contain information about future earnings changes. They conclude that "While there is a strong past and concurrent link between earnings and dividend changes; the predictive value of changes in dividends seems minimal" [7] According to Benartzi et. al. (1997) changes in dividend primarily tell us what has happened rather than what is going to happen.

Lonie, Abeyratna, Power, and Sinclair (1996) examined capital market reactions to joint earnings and dividends announcements for 620 UK firms. By performing an event study they identified abnormal returns in reaction to dividend announcements during the period January to June 1991. Second, they used a regression model to determine whether there existed an interaction effect between unexpected dividends and unexpected earnings. Their empirical findings confirmed the interactive effect of both unexpected announcements on stock prices. However the cross-sectional regression analysis revealed that earnings announcements had a greater impact on stock prices, [8] constituting the dominant signal to capital markets.

* CRSP :The Center for Research in Security Prices at the University of Chicago

Gunasekarage and Power (2002, 2006) performed a similar study on UK firms during the period from 1989 to 1993, and confirmed **Lonie et. al** (1996) previous results.[9]

Evidence from Germany was provided by **Amihud and Murgia** (1997) who analyzed how the German stock market reacted to dividend announcements. Unlike the US market, and similar to the Malaysian market, allocation of dividends did not impose higher taxes on shareholders in Germany at the time of the analysis. **Amihud et. al.** (1997) examined if dividend announcements made during 1988 through 1992 by the 200 most traded companies at the German stock market was associated with significant abnormal returns. The empirical results showed that dividend news in Germany generated significant stock price reactions, similar to the findings from US data, despite the tax advantage in Germany. They found support for the dividend signaling theory, and suggested that dividend changes contained information beyond that contained in earnings.[10]

In Japan, **Harada and Nguyen** (2005) examined the dividend policy of Japanese firms. In their research, they used a sample of industrial firms listed on TSE* from 1992 to 2002, constituting a total of 13 708 observations of dividend change / no change. **Harada et. al.** (2005) argued that the information content of dividends depends on the context in which the dividend change occurs. In particular, firms that increase dividends in favorable conditions (e.g., a positive earnings trend) experience a significant higher earnings growth than firms who increase dividends in unfavorable conditions (e.g. a poor earnings trend). Considering the context in which the dividend change occurs, **Harada et. al. (2005)** discovers a significant link between dividend changes and subsequent earnings changes.[11] hence, dividend announcements are reported to have information content.

Gurgul, Mestel and Schleicher (2003) examined the reaction of stock prices and trading volume on dividend changes for firms listed on the Austrian stock market between January 1992 and April 2002. Their findings support the information content of dividends hypothesis, and they conclude "We find that dividend increases induce a significant positive reaction in stock prices, whereas announced dividend decreases lead to a significant fall in stock prices".[12] In addition they found evidence that news on dividend changes was quickly incorporated into stock prices.

More recently, **Al-Yahyaee, Pham and Walter** (2011) investigated stock price reactions to dividend announcement of firms listed at the Muscat Securities Market in Oman between 1997 and 2005. Oman is an emerging market where neither dividends nor capital gains are taxed; there is a high concentration of share ownership and low corporate transparency. Al-**Yahyaee et. al**. (2011) find that dividend increase announcements are associated with increased stock prices while dividend decrease announcements are associated with decreased stock prices**.**[13] Their results provide support to the signaling hypothesis and contradict the tax-based signaling model which states that higher taxes on dividends relative to capital gains are necessary for dividends to be informative.
There is a body of literature that examines the relation between dividend announcements and market reactions. We will be try later to provide brief presentation of relevant basic theories related to market efficiency and the informational content of dividends.

I.1 The Efficient Market Hypothesis:

The efficient market hypothesis is the proposition that an assets current price fully reflects all available information. According to the efficient market hypothesis asset prices will only change when new information occurs. Because new information is unpredictable, price changes will also be unpredictable, meaning that asset prices will evolve randomly. As a result, no investor will benefit from trying to predict stock performance. Since dividend

* (TSE) The Tokyo Stock Exchange

change announcements convey new information to the market, the theory of market efficiency is relevant with regards to predicting the effects of this new information.
Eugene Fama (1970) provided a thorough description of an efficient market and defined three informational subsets of market efficiency based on the amount of information reflected in asset prices: weak form, semi-strong form, and strong form.[14]

The weak form of market efficiency states that prices reflect all information contained in historical returns. Hence, future stock price movements are independent of historical stock price movements. This implies that trend analysis is fruitless since the benefit from analyzing historical data is already reflected in the price.[15]

The semi-strong form of market efficiency asserts that prices reflect all publicly available information regarding the firm's prospects. Hence, both historical prices and fundamental data on e.g. the firm's product line, quality of management, and balance sheet composition are reflected in the price.[16]

Finally, the strong form of market efficiency in which prices even reflect information that is not publicly available such as insider's information. This version of market efficiency is considered as quite extreme since it is difficult to argue that insiders won't benefit from Trading based on insider information. According to **Fama** (1970) the strong form of market efficiency is best viewed as a benchmark

.
If the market is efficient, prices will instantly adjust to and fully reflect new available information without tendency for further increases or decreases. However, previous research has revealed price movements that are not consistent with the efficient market hypothesis. Studies by e.g. **De Bondt and Thaler** (1990) implied that markets overreact to new information, causing prices to increase/decrease dramatically beyond the true value before returning to the equilibrium price.[17]Research by **Bernard and Thomas** (1989) disclosed a delayed market reaction where prices not immediately fully respond to new information.[18]

I. 2. The Information Content of Dividends:

One of the most prominent theories attempting to explain the effects of a firm's dividend policy is the dividend signalling hypothesis. This theory was initially proposed by **Lintner** (1956) who surveyed managers from 28 US companies regarding dividends and dividend policy. **Lintner** (1956) examined a period of seven years from 1947 to 1953, and based on the findings of his study, several facts about dividend policy were established. First, according to **Lintner** (1956), managers are reluctant either to cut or to raise existing dividends. Managers only reduce dividends when they have no choice, and raise dividends only when they are certain that the new dividend level can be sustained in the future. Second, the dividend level is tied to substantial long term earnings, and finally dividend payments are smoothed over time in order to move towards a long term target dividend payout ratio.[19]

The dividend signalling theory classic models were further developed by **Bhattacharya** (1979), **John and Williams** (1985), **and Miller and Rock (**1985). According to the dividend signalling hypothesis, dividend announcements contain information about the management's assessment on the firm's future prospects. Bhattacharya states that "Cash dividends function as a signal of expected cash flows of firms in an imperfect-information setting".[20] He argued that in an imperfect-information setting where cash dividends are taxed; the size of the announced dividend will depend on how good the news is.

Under the dividend signalling models of **Bhattacharya** (1979), **John and Williams** (1985) **and Miller and Rock** (1985) it is argued that in a world of asymmetric information, insiders have a better knowledge of the firm's true worth than its shareholders. The insiders use dividends as a costly signal to convey information about a firm's real value and its economic

prospects to the market. According to this theory dividend increases signal an improvement in the firm's future situation, which should be reflected by an increase in stock prices. While dividend decreases signal deterioration of the firm's future situation and thus should be reflected by a decrease in stock prices.[21]

II– Methods and Materials:

The data which requires for this study are as follows.

- The published dates of the cash Dividend Announcements of each company.
- Closing prices of cash Dividend Announcements of each company.
- All Share Price Indexes (KLCI)*.

II– 1 Sample Design

For examining the impact of dividend announcements on stocks returns, an overall sample of companies, which made dividend announcements are selected out of, continues listed companies during sample period from 2011 to 2018 inclusive of the both years. A company will be selected as eligible for the study only when the following selection criteria are satisfied:

- The company should be listed in the Malaysia stock Exchange during the sample period mention above.
- The availability of daily closing price data in the following circumstances. Daily closing prices should be available at least 160 days before the event window and 21 days for event window.
- There are no other distribution announcements in a one-month window; otherwise, the confounding effects would contaminate the results.

II– 2 Data Collection

This study investigates the Malaysian stock markets reactions to dividend change announcements during the period of 9 February 2011 to 5 September 2018. The sample consists of 30 firms listed on the Malaysia Stock Exchange, and these firms have made total of 204 dividend change announcements were identified during the sample test period. The dividend changes in the final sample is distributed as follows; 89 dividend increases, 52 constant dividends, and 63 dividend decreases.

For each dividend announcement, data on the announced cash dividend per share (DPS) was collected from Malaysia Stock Exchange news web † after identifying the dividend announcement date and the associated DPS, the sample was divided into three subsamples of dividend change announcements.

This separation was performed prior to applying the event study methodology. In accordance with the dividend expectation model a naive dividend expectation model is employed as a proxy for expected dividend:

$\Delta DPS = DPS(it) - DPS(it_{-1})$ …… **(1)**

Based on the estimation of (1) the final sample of dividend announcements is separated according to the change in dividend. This constitutes three subsamples, dividend increases, where $\Delta DPS > 0$, constant dividend, where $\Delta DPS = 0$, and dividend decreases, where $\Delta DPS < 0$.

II– 3 Methodology

* KLCI : Kuala Lumpur Composite Index

† www.malaysiastock.biz/Company-Announcement.aspx?id

This study employs the event study methodology to examine the stock market response to dividend announcements.

In an event study, what one wants to measure is how much of the price reaction to news is abnormal return[22] . In order to isolate the impact of a selected event on stock price it is essential to distinguish between the expected returns and unexpected returns on stocks. Therefore, firstly expected returns will have to be calculated using parameters estimated from period prior to the event. Then, identify abnormal returns by subtracting expected returns from the actual returns surrounding the announcement of the selected new information regarding an event.

The abnormal return measures the magnitude of price reaction attributable to the informational event. In carrying out this methodology one has to select first an estimation period and even window. In this study an estimation period of 160 days, an event window 21 trading days is used. Returns data during the estimation period is used to predict the expected returns during both estimation period and event window.

In previous studies, researchers have used several benchmarks to calculate abnormal returns. In this study, the market model is used.

II– 3.1 Calculations of Stock Returns (Rit) and Market Returns (Rmt)

Before using the market model to calculate the actual returns during both estimation period and event period, time series of daily return for each event under consideration has to be computed since return data on the Malaysia stocks are not readily available. This study calculates daily actual returns for the sample of companies by using collected daily closing prices.

II– 3.1.1 Stock returns:

$Rit = [Pit-Pit_{-1}]/ (Pit_{-1})$ ……..... **(2)**

Where**,**

Rit = the Daily Return on stock of firm i on day t

Pt = closing stock price on day t (current date)

Pt_{-1} = closing stock price on day t_{-1} (previous trading date)

The market model is used in forecasting market returns; they are calculated using the formula given below.

II– 3.1.2 Market return:

$Rmt = [KLCI\ t - KLCI\ t_{-1}] / (KLCI\ t_{-1})$ ..... **(3)**

Where,

Rmt = Daily Market Index Return

KLCl t = KLCI t for t th day (current day)

$KLCI\ t_{-1}$ = KLCI (t_{-1}) for the day t th day (previous day)

II– 3.2 Bench Mark Model

As mentioned earlier, this study uses the market model to forecast expected returns, which require computing the abnormal returns surrounding the event. Firstly, I use the market model to estimate α and β using the data for the estimation period. The market model is estimated through ordinary least square (OLS) regression. Market returns during the estimation period are considered as independent variable while dependent variable is the returns of the firm for running the regressions. Regression analysis produces estimates of regression intercept (α – Alpha) and regression slope (β - Beta), which will be used in computing expected returns in the next step.

The market model is specified as,

Rit = **αi** + **βi** Rmt + €it**.** ..... **(4)**

Where,

Rit = the Daily Return on stock of firm i on day t

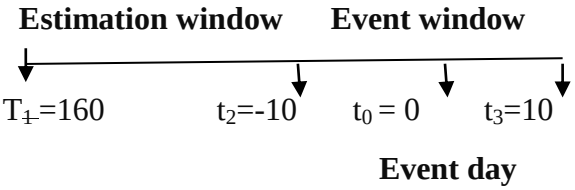
Rmt = the Daily Market Index Return (KLCI) on day t.

αi = the intercept term (alpha)
βi = the systematic risk of stock i (beta) and
€it = the regression error term.

Adjustments for Data
It was observed that stocks of selected companies had not been traded on each and every trading data of the total period of 181 days, even though the Exchange was on operation. Therefore, it is inherent by nature; the trading days of selected companies were less than that of the market. Hence the market trading days and the corresponding missing prices were replaced with the closing prices of the previous days**.**

Event Date, Event Window and Estimation Window
Before being able to estimate the market model for each security i, we need to identify the event date, and define the event window and the estimation window. The timing sequence of an event study is illustrated as follows:

Figure (2) Timeline for the Event Study



The source: Compiled by researcher

II– 3.3 Calculation of Abnormal Returns (ARs)
From estimation of the equation **3,** the expected returns for the firms are forecasted using the following equation.

$E(Rit) = \hat{\alpha}i + \hat{\beta}i\ Rmt$ …….…… **(5)**

Where,
E(Rit) = expected return on firm i on day t in the event period.
$\hat{\alpha}$ **i** = estimated regression intercept (alpha) of stock i
$\hat{\beta}$ **i** = the estimated systematic risk (beta) of stock i

Then, the abnormal returns are calculated for the event period using the following formula:
ARit = Rit – E(Rit) ..... ……..... **(6)**
Where,
ARit = abnormal return on stock the firm i during the event period
Rit = the Daily Return on stock of firm i on day t in the event period
E(Rit) = expected return on stock of firm i on day t in the event period.

II– 3.4 Calculation of Average Abnormal Returns (AARs)
After calculating the ARs for each event, the next step is to calculate the average abnormal returns for the sample of securities under consideration. That means, in a sample there are several events, then, in order to get a representative measure AAR is calculated. The ARs for each day for each event are summed up and averaged to obtain the AAR for each sample as follows;[23]

$$AARt = \frac{1}{N}\sum_{I=1}^{N} AR_{it} \quad \ldots\ldots\ldots\ldots(7)$$

Where,
AARt = average abnormal return for day t
N = number of events in the sample.

II– 3.5 Calculation of Cumulative Average Abnormal Returns (CAARs)

However, a leakage of information occurs regarding a relevant event to a small group of investors before the official announcement, the stock prices might start to increase before the event date. Then, the abnormal return on the event day will not be a powerful indicator of the total informational impact. Therefore, the better indicator would be the cumulative abnormal returns, which is simply the sum of all abnormal returns over the event period. Thus, the cumulative abnormal returns are in a position to capture the total abnormal returns for the entire window period.

Cumulative average abnormal returns are calculated using the following formula and it is used to measure the impact of changes in dividends on share price.[24]

$$CAAR_{P} = \sum_{1}^{P} AARt \quad \ldots\ldots\ldots\ldots \textbf{(8)}$$

$CAAR_P$ = cumulative average abnormal returns up to day t
P = time: number of days over which abnormal returns are cumulated
AARt = average abnormal return on day t

II– 3.6 Significance Testing (Parametric) for: AAR and CAAR

Significance of average abnormal returns (AAR) for the event period will be tested using **t-statistic**. The t-statistics are calculated as follows;

H_0: Mean of AAR = 0
Assume ARit ~ $(0, \sigma i^2)$
Where,
σi^2 = variance of AR in the event period:

$$\hat{S}^2 (ARt) = [1/ (n-1)] \sum_{i=1}^{n} (ARit - AARt)^2 \quad \ldots\ldots \textbf{(9)}$$

$$(\widehat{SE})^2 (AARt) = [1/n]\, S^2(ARt) \ldots\ldots\ldots\ldots \textbf{(10)}$$

$$(\widehat{SE})(AARt) = \sqrt{\frac{1}{n}\, \hat{S}^2(ARt)} \quad \ldots\ldots\ldots\ldots \textbf{(11)}$$

Where, n = number of event in the sample

$$T(AAR) = (AARt) / [SE (\widehat{\textbf{AARt}})] \quad \ldots\ldots\ldots\ldots \textbf{(12)}$$

Significance Testing (Parametric) for CAAR

The Significance of cumulative abnormal returns (CAARs) for the event period is tested using the t – statistics and they are calculated in the following manner;
H_0: Mean of CAAR = 0
Assume CAAR ~ $(0, \sigma t^2)$,
Then

$SE(\widehat{CAARt}) = \sqrt{P * S^2(AARt)}$ …….. ..... **(13)**

$T(CAAR) = CAARt/[SE(CAARt)]$ ..…… **(14)**

Where, P = time: number of days over which AARs are cumulated

III- Results and discussion:

Results reported in this paper are obtained in terms of the event study methodology wherein the abnormal return of every company is computed thoroughly with a view to study the informational efficiency. The study includes use of Market Model as here, the abnormal returns can be used to draw conclusion during the study period. Abnormal return means the excess of security return over the index return on a particular date.

To test the null hypothesis a two-tailed test at significance level 1%, 5% and 10% is used. The test statistic is conducted for every day relative to the announcement date for AAR and CAAR for different event windows.

III- 1 Dividend Increase

The subsample Dividend Increase consists of (89) observations. Figure (3) illustrate the daily average abnormal return and cumulative abnormal return for all observations in the subsample, 10 days prior and 10 days after the dividend increase announcement.
In Table (2) the daily AAR and CAAR relative the announcement date is presented with the daily test estimator (T-value). For the increased dividend announcements, it is expected that the market will have a positive response to the announcement.
Figure (3): Average abnormal return (AAR) and cumulative average abnormal return (CAAR) for Dividend Increase relative to the announcement date.
Note: CAAR is aggregated from day -10
The results of the analysis in Table (2) show that on the announcement date. AAR is different from zero and conveys information about how the market reacts to the announcement of increased dividend. Thus, the results show that AAR is not equal to zero at the announcement date (AAR = 0.11%) and the null hypothesis can be rejected. After day of the announcement date, there are strong significant abnormal returns with positive Signs. (AAR = 0.49%)and T-value = 3.0959). This is indicating that there are some other events that have interfered with the results.
On the event date CAAR is different from zero (CAAR=0.60%) with strong significant at level 10 % (T-value = 1.7645) and shift upward which also confirms that the market has adjusted to the news and that the information content of the announcement is incorporated in the price.

III- 2 Constant Dividend

The subsample Dividend Constant consists of (52) observations. Figure (4) illustrate the daily average abnormal return and cumulative abnormal return for all observations in the subsample, 10 days prior and 10 days after the Constant dividend announcement.

In Table (3) the daily AAR and CAAR relative the announcement date is presented with the daily test estimator (T-value).

For the constant dividend announcements, it is expected that the market will have no reaction to the dividend announcement.

Figure (4): Average abnormal return (AAR) and cumulative average abnormal return (CAAR) for Dividend Increase relative to the announcement date.
Note: CAAR is aggregated from day -10

The results of the analysis in Table (3) show that on the announcement date AAR is different from zero but it is so closer to the zero (AAR = 0.01%) that means there is no new information is being convey to the market, thus, one should expect that there are no significant abnormal stock price. (T-value = 1.0545). insignificant at level 10%, 5% and 1% respectively. and the alternative hypothesis can be rejected so the market have no reaction to the dividend announcement of constant dividend. Also for CAAR we can see that there are no significant abnormal returns on the announcement date. (T-value = 1.2927). insignificant at level 10%, 5% and 1% respectively.

III-.3 Dividend Decrease

The subsample Dividend decrease consists of (63) observations. Figure (4) illustrate the daily average abnormal return and cumulative abnormal return for all observations in the subsample, 10 days prior and 10 days after the dividend increase announcement.

In Table (3) the daily AAR and CAAR relative the announcement date is presented with the daily test estimator (T-value).
For the decreased dividend announcements, it is expected that the market will have a negative reaction to the announcement.

Figure (5) Average abnormal return (AAR) and cumulative average abnormal return (CAAR) for Dividend decrease relative to the announcement date.
Note: CAAR is aggregated from day -10
The results of the analysis in Table (4) show that on the announcement date AAR is different from zero and conveys information about how the market reacts to the announcement of decreased dividend. Thus, the results show that AAR is not equal to zero at the announcement date. (AAR=0.02%) and the null hypothesis can be rejected. That means market response positively with decreased dividend and that is against with the information content of dividend hypothesis) it is expected that the market will have a negative reaction to the announcement.) After one day of the announcement date, there are strong significant abnormal returns with negative Signs. This is indicating that the market reacted later than the actual announcement of dividend decreased. (AAR=-0.26%) with (T-value = |-1.8116|.
On the event date CAAR is different from zero (CAAR=-0.20%) with any statistical significant (T-value =|-0.5202|.

The results of the table (5) show that there is statistically insignificant AAR for the Increase Dividend group in two days of event window (-1day and 0 day) but in +1 day AAR is strongly significant and same results for (day -1 to day +1) For Constant Dividend group, on Decrease Dividend group AAR is statistically insignificant in three days of event window.

IV-Conclusion:

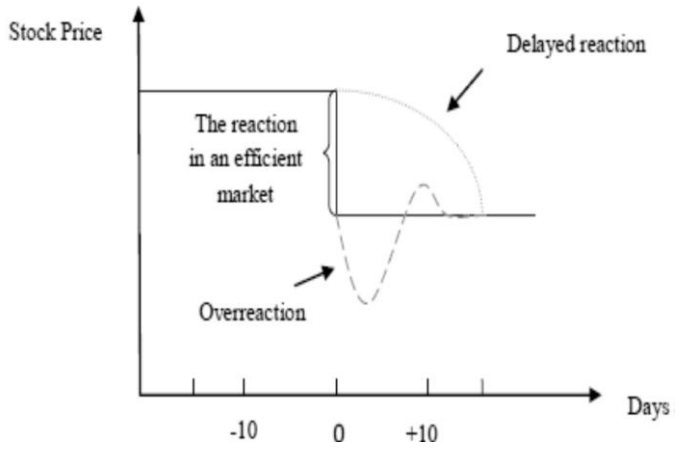
This study investigated whether the dividend announcements in the forms of final convey any information to the Malaysia Stock Exchange (Bursa Malaysia). Fulfilling the study, the cumulative abnormal returns and the average abnormal return were calculated by applying the event study analysis on daily data with market model on 204 dividend announcements of 30 firms during the period 2011 to 2018.

The results of the analysis show that on the announcement date AAR is different from zero and convey information about how the market reacts to the announcement of increased dividend, that means market response positively with increased dividend and that is agreed with the information content of dividend hypothesis) .For constant dividend on the announcement date AAR is different from zero but it is so mush close to zero that means there is no new information is being convey to the market, and that is agreed with the information content of dividend hypothesis) Finally for decreased dividend on the announcement date AAR is different from zero and convey information about how the market reacts to the announcement That means market response positively with decreased dividend and that is against with-the information content of dividend hypothesis -It is expected that the market will have a negative reaction to the announcement.

Using the event study on a three days event window surrounding the day of dividend announcement, we found a positive reaction to the dividend increases but there was no significant relation between constant dividends announcement and the stock price This finding are consistent with the information content of dividend hypothesis but no negative reaction to the decreasing dividend was found.

- Appendices:

Figure (1): illustrates the different stock market reactions to new information.



The Source: Bernard, V. L., and Thomas, J. K. (1989). Post-Earning-Announcement Drift: Delayed Price Response or Risk Premium? Journal of Accounting Research, 27, 1-36

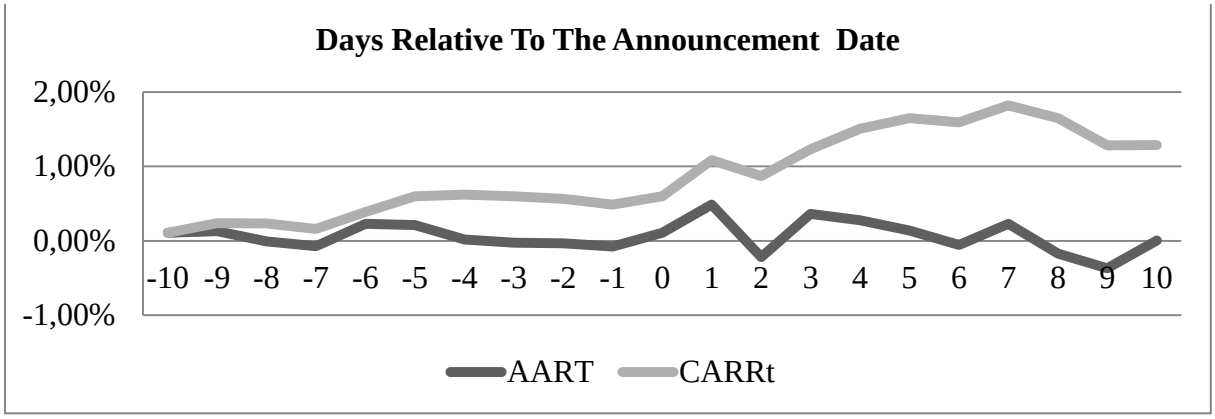
The yearly distribution of the dividend change announcements in the sample is presented in table (1)

Table (1): Yearly distribution of dividend changes

years	Dividend Increase	Constant Dividend	Dividend Decrease

2012	14	6	10
2013	18	8	4
2014	14	5	10
2015	7	11	12
2016	11	8	11
2017	15	8	7
2018	10	6	9
Total	89	52	63

The Source: Compiled and calculated by researcher



The Source: Compiled by researcher using MS-Excel and STATA/se 12)

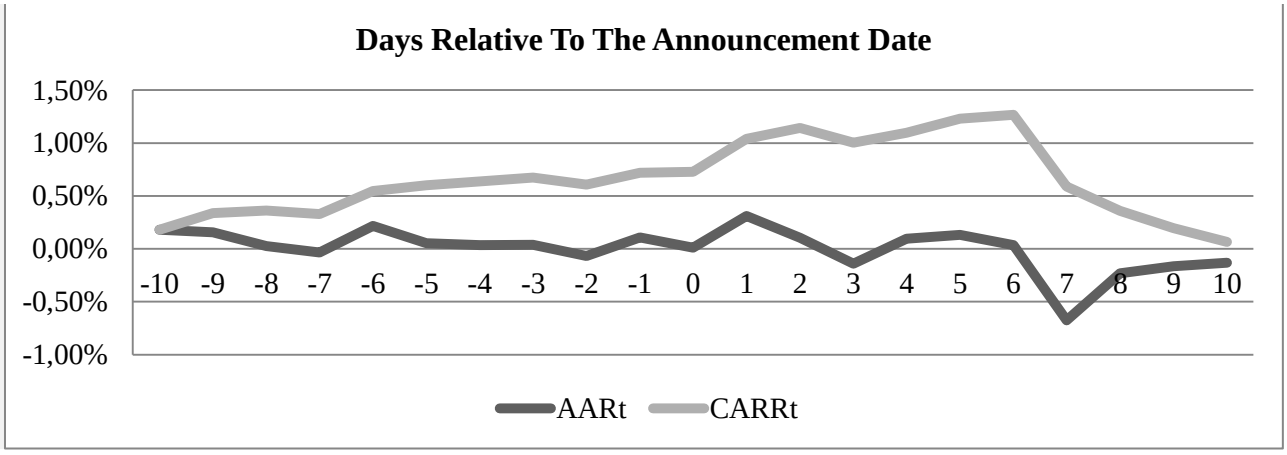
Table (2): Stock Market Reaction to Dividend Increase illustrating AAR and CAAR aggregated from day -10 and their respectively T-value.

DIVIDEND INCREASE				
EW	AAR	T -value	CAAR	T –value
-10	0,11%	0,9607	0,11%	0,9607
-9	0,13%	1,1919	0,24%	1,5804
-8	-0,01%	-0,0408	0,23%	1,1278
-7	-0,07%	-0,6287	0,16%	0,6876
-6	0,23%	2,2424**	0,39%	1,5685
-5	0,21%	1,7683*	0,60%	2,3019*
-4	0,02%	0,1857	0,62%	2,2784*
-3	-0,02%	-0,2608	0,60%	2,0760*
-2	-0,03%	-0,2584	0,57%	1,8894*
-1	-0,08%	-0,6321	0,49%	1,4347
0	0,11%	0,8415	0,60%	1,7645 *
1	0,49%	3,0959***	1,09%	3,2833 ***
2	-0,22%	-1,4670	0,87%	2,5842**

3	0,36%	2,9615***	1,23%	3,6051***
4	0,28%	1,9783*	1,51%	3,9695***
5	0,14%	1,1076	1,65%	4,0988***
6	-0,05%	-0,4665	1,59%	4,2013***
7	0,23%	1,6822*	1,82%	4,6480***
8	-0,17%	-1,0468	1,65%	4,0067***
9	-0,37%	- 2,7054***	1,28%	2,9602***
10	0,01%	0,0435	1,29%	2,8527***

*, **, ***; significant at 10%, 5% and 1% respectively

The Source: Compiled and calculated by researcher using MS-Excel and STATA/se 12)



The Source: Compiled by researcher using MS-Excel and STATA/se 12)

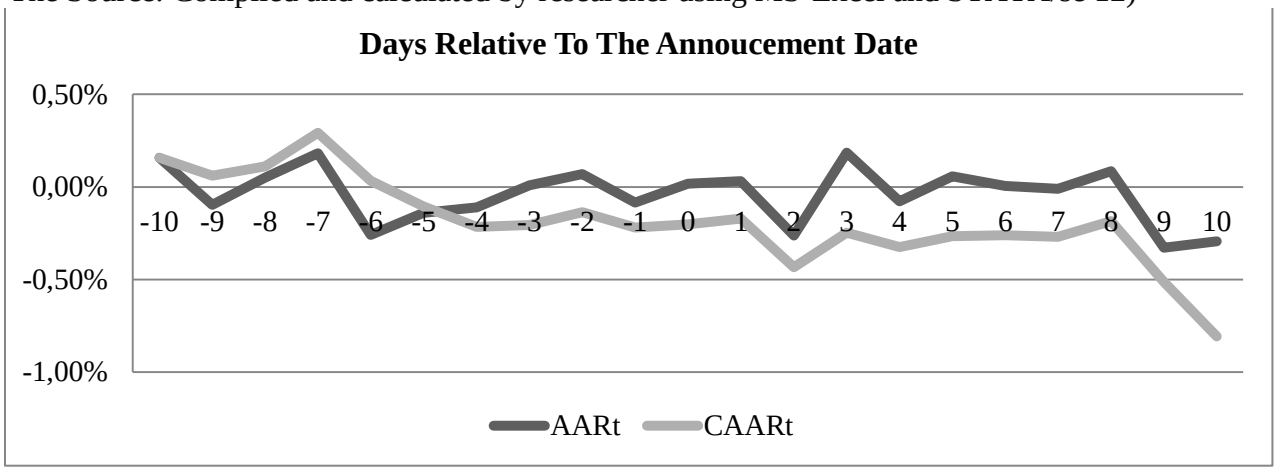
Table (3): Stock Market Reaction to Constant Dividend illustrating AAR and CAAR aggregated from day -10 and their respectively T-value.

CONSTANT DIVIDEND				
EW	AAR	T -Value	CAAR	T- Value
-10	0,18%	1,2140	0,18%	1,1414
-9	0,16%	1,6740	0,34%	1,5674
-8	0,03%	1,9616 *	0,36%	1,8118
-7	-0,03%	1,3830	0,33%	1,3430 *
-6	0,22%	1,8707 *	0,55%	1,8462 *
-5	0,05%	1,8710 *	0,60%	1,8440 *
-4	0,04%	1,7684 *	0,64%	1,6555
-3	0,04%	1,6792 *	0,67%	1,6221
-2	-0,07%	1,4737	0,61%	1,3499
-1	0,11%	1,5991	0,72%	1,4016
0	0,01%	1,5045	0,73%	1,2973
1	0,31%	2,0120 **	1,04%	1,7285 *
2	0,10%	2,1933 **	1,14%	1,8223*
3	-0,14%	1,7811 *	1,00%	1,4511

4	0,10%	1,8703 *	1,10%	1,5121
5	0,13%	1,9447 *	1,23%	1,5577
6	0,04%	1,9605 *	1,27%	1,5389
7	-0,68%	0,6401	0,59%	0,3522
8	-0,23%	0,3906	0,36%	0,0984
9	-0,17%	0,2098	0,19%	-0,0990
10	-0,13%	0,0710	0,06%	-0,2577

*, **, ***; significant at 10%, 5% and 1% respectively

The Source: Compiled and calculated by researcher using MS-Excel and STATA/se 12)



The Source: Compiled by researcher using MS-Excel and STATA/se 12)

Table (4): Stock Market Reaction to Dividend Decrease illustrating AAR and CAAR aggregated from day -10 and their respectively T-value.

DIVIDEND DECREASE				
EW	AAR	T -Value	CAAR	T -Value
-10	0,16%	0,8563	0,16%	0,8563
-9	-0,10%	-0,7190	0,06%	0,2811
-8	0,05%	0,3824	0,11%	0,4732
-7	0,18%	1,4316	0,29%	1,1500
-6	-0,26%	-2,0094**	0,03%	0,1204
-5	-0,14%	-0,8052	-0,11%	-0,3469
-4	-0,11%	-0,8863	-0,22%	-0,7179
-3	0,01%	0,0876	-0,21%	-0,6996
-2	0,07%	0,7051	-0,14%	-0,4178
-1	-0,08%	-0,5768	-0,22%	-0,5734
0	0,02%	0,1665	-0,20%	-0,5202
1	0,03%	0,1744	-0,17%	-0,4208
2	-0,26%	-1,8116 *	-0,43%	-0,9857
3	0,19%	0,9786	-0,25%	-0,4842
4	-0,08%	-0,6068	-0,32%	-0,5866
5	0,06%	0,3168	-0,27%	-0,4225
6	0,01%	0,0505	-0,26%	-0,3931
7	-0,01%	-0,0594	-0,27%	-0,3702
8	0,08%	0,4880	-0,19%	-0,2295

9	-0,33%	-2,0734 **	-0,51%	-0,6043
10	-0,29%	-1,9013 *	-0,81%	-0,9200

*, **, ***; significant at 10%, 5% and 1% respectively
The Source: Compiled and calculated by researcher using MS-Excel and STATA/se 12)

Table (5): shows the results of AAR analysis for the described three types of. Dividend announcements

	DIVIDEND INCREASE		CONSTANT DIVIDEND		DIVIDEND DECREASE	
EW	AAR	(t)	AAR	(t)	AAR	(t)
-1	-0,08%	-0.6321	0,11%	1,5991	-0,08%	-0,576
0	0,11%	0,8415	0,01%	1,5045	0,02%	0,1665
1	0,49%	3.095***	0,31%	2,012**	0,03%	0,1744

*, **, ***; significant at 10%, 5% and 1% respectively
The Source: Compiled and calculated by researcher using MS-Excel and STATA/se 12)

Referrals and references:

1. Miller, M.H., Modigliani, F. (1961). Dividend Policy, Growth, and the Valuation of Shares. The Journal of Business, 34 (4), 411-433
2. Pettit, R.R. (1972). Dividend Announcements, Security Performance and Capital Market Efficiency. Journal of Finance 27(5), 1006
3. Aharony, J., and Swary, I. (1980). Quarterly Dividend and Earnings Announcements and Stockholders' returns: An Empirical Analysis. The Journal of Finance, 35(1), 1-12
4. Asquith, P., and Mullins, D. (1983). The Impact of initiating Dividend Payments on Shareholders' Wealth. The Journal of Business, 56, 77-96
5. Woolridge, J.R. (1982). The Information Content of Dividend Changes. Journal of Financial Research, 5, 237-247
6. Watts, R.(1973). The Information Content of Dividends. Journal of Business, 46, 191-211
7. Benartzi, S., Michaely, R., and Thaler, R.H. (1997). Do Changes in Dividend Signal the Future or the Past? Journal of Finance, 52, 1031
8. Lonie, A. A., Abeyratna, G., Power, D.M., and Sinclair, C.D. (1996). The Stock Market Reaction to Dividend Announcements. Journal of Economic Studies, 23, 32-52
9. Gunasekarage, A., and Power, D.M. (2006). Anomalous Evidence in Dividend Announcement Effect. Managerial Finance, 32(3), 209-226
10. Amihud, Y., and Murgia, M. (1997). Dividends, Taxes, and Signalling: Evidence from Germany. The Journal of Finance, 52, 397-408
11. Harada, K., and Nguyen, P. (2005). Dividend Change Context and Signalling Efficiency in Japan. Pacific-Basin Finance Journal, 13, 504-522
12. Gurgul, H., Mestel, R., and Schleicher, C. (2003). Stock Market Reactions to Dividend Announcements: Empirical Evidence from the Austrian Stock Market. Financial Markets and Portfolio Management, 17, 332-350
13. Al-Yahyaee, K. H., Pham, T. M., and Walter, T. S. (2011). The Information Content of Cash Dividend Announcement in a Unique Environment. Journal of Banking & Finance, 35, 606-612
14. Eugene F. Fama.(1970) Efficient Capital Market: A Review Of Theory And Empirical Work, Journal Of Finance ,25, 383
15. Bodie, Z., Kane, A. and Marcus, A.J. (2014). Investments. McGraw-Hill, tenth edition. USA: 350-355
16. Bodie, Z., Kane, A. and Marcus, A.J. (2014). Investments. McGraw-Hill, tenth edition. USA : 350-355.
17. De Bondt, W.F.M., and Thaler, R. H. (1990). Do Security Analysts Overreact? The American Economic Review, 80 (2), 52-57
18. Bernard, V. L., and Thomas, J. K. (1989). Post-Earning-Announcement Drift: Delayed Price Response or Risk Premium? Journal of Accounting Research, 27, 1-36

19. Lintner, J. (1956). Distribution of Incomes of Corporations among Dividends, Retained Earnings and Taxes. American Economic Review, 46 (2), 97-113
20. Bhattacharya, S. (1979). Imperfect Information, Dividend Policy and the "Bird in the Hand Fallacy". Bell Journal of Economics, 10, 259-270
21. Vieira, E. F., & Raposo, C. C. (2007). Signaling with Dividends? The Signaling Effects of Dividend Change Announcements: New Evidence from Europe)
22. Pemale P. Peterson,(1989) Event Studies: A Review Of Issues And Methodology, Quarterly Journal Of Business &Economics, 28 ,37- 39
23. Brown, S. J. & Warner, J. B., (1985) Using Daily Stock Returns: The Case of Event Studies. Journal Of Financial Economics, 14, 6-8
24. .P. Kothari, Jerold B. Warner, (2006) Econometrics Of Event Studies, Handbook Of Corporate Finance: Empirical Corporate Finance, Elsevier, North-Holland 12-10;

Data Sources:

https://www.investing.com/indices/ Visited: 15/6/2018
http://www.bursamalaysia.com / Visited: 7/8/2018
https://www.malaysiastock.biz/ Visited: 6/5/2018
https://www.malaysiastock.biz/Company-Announcement.aspx?id/ Visited: 14/6/2018

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