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THE IMPACT OF DIVIDEND POLICY ON THE SHARE PRICE VOLATILITY: Malaysian Construction and Material Companies.

Zuriawati Zakaria[1], Joriah Muhammad[2] and Abdul Hadi Zulkifli[3]
[1] Ph D student, School of Management, Universiti Sains Malaysia
[2] lecturer, School of Management, Universiti Sains Malaysia
[3] lecturer, School of Management, Universiti Sains Malaysia

ABSTRACT

This study presents the results on the impact of dividend policy on the share price volatility of the Malaysian listed construction and material companies using the least square regression method after controlling for debt, firm size, investment growth and earnings' volatility. The study found only 43.43 percent of the changes in the share prices are explained by dividend yield (DY), dividend payout ratio(DPR), and investment growth(Growth), size of the firm)FZ), leverage (Lev) and earnings volatility (EV). These companies recorded 94.41 percent share price volatility during 2005 until 2010. Dividend payout ratio significantly influences the changes in share price. The greater the size of the company, the more significant impacts the volatility of share price would be. Dividend yield, investment growth and earnings volatility insignificantly influence the changes in the company's share prices. Leverage is negatively influence the movement of the share price.

Keywords: *price volatility, share price volatility, dividend yield, dividend payout and firm size.*

1.0 INTRODUCTION

Owning corporate stock is a popular investment activity (Gitman, 2006). All types of investors either large institutional or individual could see the new media for the report on the movements of the stock prices. Share prices are the most important indicators used by investors to invest or not to invest on a particular share. Their main objective of investing in the stock market is to maximize the expected return at low level of risk. There are psychological factors contributed to the price changes or volatility. Among them are investor's overreactions to earnings, dividends, or other news; waves of social optimism or pessimism; fashions or fads (Shiller, 1987). According to the efficient market hypothesis, when new information either good or bad news are available to the public, they will effect and change the company's share price. However it is difficult to use the patterns of the stock returns over weekends, holidays and different calendar periods as the news about fundamental values do not move systematically along during these periods (Thaler, 1987). Roll (1988) found that it will be difficult to rely only on systematic economic influences to predict the variation of the individual stock returns. This is because there are other factors apart from fundamentals that reflect the movement of stock prices (Cutler et al., 1989)

Dividend payment is a major component of stock return to shareholders. Dividend payment could provide a signal to the investors that the company is complying with good corporate governance practices (Jo and Pan, 2009). Good corporate governance practices are valuable for a company as it implying that the company is able to raise funds from capital market with attractive terms. By distributing dividend, it able to attract investors and indirectly increase the company share price. This sort of company could easily raise funds through new share issuance for expansion which then would increase profits and increase share price.

The most well-known study on dividend irrelevance was by Miller and Modigliani (1961; "MM"). His study has become a benchmark to other researchers in developing various models pertaining to dividend behavior of firm

values and the policies that guided the managers in setting up company payout policies. MM documented that firm value is independent on dividend policy. He argued that value is driven only by future earnings and risk of its investments. In reality investors will be paying high taxes on dividend instead of capital gains. The investors will be taxable once their shares are sold. A company that pays no dividends will be more attractive to investors than a company that gives dividends payment (Black, 1976). Thus, stock price for non-dividend paying company tend to increase. For this reason, most of companies will be tempted to eliminate dividend payments.
The objective of this study is to examine the impact of the dividend policy and dividend payout ratio of the share price of only the construction and material companies listed on the Bursar Malaysia. This paper would also address other variables that are responsible for the changes in the volatility of this construction companies share price.

2.0 LITERATURE REVIEW

2.1 Theoretical Review

Dividends signaling theory

Recently, as we could see, even well performing companies are reluctant to increase dividend payments but contrarily at the same time some companies despite experienced decreases in net income have announced constant or increase their dividend payments rather than cut them down. With the assumption of a perfect market (no taxes, no transaction costs and other market imperfections), Miller and Modigliani (1961) showed that dividends are irrelevant. Retaining earnings or paying them dividends does not affect the firms' values. Firms could pay dividends as much as they need and they also could use external sources of funds to finance their debts without affecting their firms' values. The authors stated that only future earnings and risk of investment drive the firms' values.

Prior to the Miller and Modigliani (1961) dividend theory, Lintner (1956) presented a model based on stylized yield of the specific characteristics of a 'sticky of dividend'. The author found that firms are reluctant to decrease dividends since this could lead investors to interpret poor performance and cause the stock prices to fall as well. Supporting Lintners' (1956) model, Bhattacharya (1979) and Miller and Rock, (1985) suggested that dividend announcements convey information about the future prospects of the firms. Due to the information content in dividends, dividend announcements are taken as a signal of the companies' good position that will raise the stock prices and vice versa. Investors with imperfect information about company conditions would use dividends as a clue to the prospects of the companies.

Based on the survey of S&P 500, Lazo (1999) showed that 87 percent of dividend paying companies believed the usefulness of dividends to signal information regarding the company future earnings. Brickley (1983) indicated dividend signaling could provide information when managers pay both regular dividends and occasional special dividends (extras, specials or year-ends). Different label of dividend between regular and special dividend could convey warning to shareholders since special payout most likely would not be repeated compared to the regular dividend. Investors could use the special payout announcement by company as a hedged managerial indication about future profitability.

2.2 Determinants of stock price volatility

Allen and Rachim (1996) suggest that the relationship between dividend policy and share price volatility after the inclusion of growth as a control variable would be suggestive of either the arbitrage or information effect. Debt, dividend and ownership structure significantly affects firm value (Alonso, et al., 2005). This research finding documented based on 101 non-financial Spanish companies publicly traded during 1991-1995. Firms with positive growth opportunities indicated that debt has negative influence on firm value. Debt plays active role to discipline managers in firms that do not have growth opportunities. In the absence of growth opportunities, dividend is significantly and positively related to firm's value. High retained earnings during period of no growth opportunities may result in an inefficient investment. Based on 361 non-financial Malaysian listed firms from 2002 to 2007, Abdul Rahim et al. (2010) detected a symptom of underinvestment when there was positive relationship between dividend policy and the firm's Q (firm value). The increase in firm's value was contributed by the decreased in investment, increased dividend and stagnant debt ratio. They suggested that underinvestment happens because the management cautiously chooses only secured investments and distributes the excess cash to shareholders as dividends.

Other than that, there is a potential relationship between size and volatility. Size of a firm could significantly provide explanation on the share prices (Karathanassis and Philiappas, 1988). Higher average return could be seen in smaller stocks. As the size of the firm increase, the company share price would likely to decline (Atiase, 1985). According to Benishy, (1961) and Allen and Rachim (1996), small firms are less involved in diversification activities, thus it will be less subjected to investor's scrutiny compared to large company. As a

result, stocks of small firm traded in a market, would be less informed, more illiquid and would face higher price volatility. Moh'd et al. (1995), Fama and French (2001), Truong and Heaney (2007), Adjaoud and Ben-Amar (2010) and Ramli (2010) reported positive relationship between dividend payout and firm size. From 1963 to 1967 the assets of dividend payers averaged about eight times than those of non-payers firms (Fama and French, 2001). Based on NYSE, AMEX and NASDAQ sample data, they also found that the non-payers group and the former payers' have assets 3 times the size of firms of the never paid dividends companies. However, from 1993 to 1998, the authors found the assets of dividend payers averaged more than 13 times than those of non-payers. Aivazian et al. (2006) using dividend data from 1981 until 1999 from the Research Insight database showed that size is overwhelmingly significant as a determinant that could influence firm's dividend payment decision. Smaller firms with more intangible assets are less likely to pay dividends compared with larger firms with tangible assets.

Firms having high profitability with stable earnings can afford to have larger free cash flows thus paying out larger dividends (Ahmed and Javid, 2009). Previous research made by Black Sholes (1973) showed that the greater the earning volatility, the lesser would be the probability that the management changes the dividend yield. By using Lintner regression model, Skinner (2008) proved to show that most firms substitute dividend with share repurchase because repurchase adjust quickly to earnings change. However, there is weak relationship between earnings and dividends.

2.3 Empirical reviews

During the period of 1975 to 1990 Kuala Lumpur market faced with 65.37 percent share price volatility (Mohammad and Md Nassir, 1993). With this overwhelm volatility, Malaysia has gone through few phases of difficult times, they include recessions in 1975-76 and 1985-86, crash in October 1987, few share scandals in Pan Electric crisis, the collapse of brokerage houses, Bank Bumiputera and the Hong Kong-based BMF crisis, and the Malaysian Industrial Development Finance Consultancy Services [MIDFCS] crisis. The authors found that 23 percent of the changes in the share prices were jointly affected by dividend yield, payout ratio, debt, assets growth and firm size. The company that faced with higher debt usage or have large asset growth will experience higher price changes.

Rashid and Anisur Rahman,(2008) found that there is positive but insignificant relationship between share price volatility and dividend yield for 104 nonfinancial firms listed in the Dhaka Stock exchange during the period of 1999 – 2006 Similarly, debt and growth also show positive and insignificant relationship with share price volatility. Only payout ratio and size are negative and significantly related to share price volatility. The author found that share price reaction to the earnings announcement in Bangladesh is different from other developed countries. Since Bangladesh has inefficient capital market, the influence of share price risk through dividend still unclear. Thus, the managers may not make decision and choose dividend policy to influence their stock's risk. This result contradict to Baskin's (1989) based on the US data where dividend yield is not correlated to share price volatility. The contradiction could be because of the different economic and business environments of the two countries.

Nazir et al. (2010) applied fixed effect and random effect models to test the role of corporate dividend policy in determining the volatility in the stock price for 73 firms listed in Karachi Stock Exchange (KSE-100) indexed. Contradict to Rashid and Anisur Rahman, (2008), the researcher found that the share price volatility is significantly influence dividend policy as measured by dividend payout ratio and dividend yield. Size and leverage are negative and insignificantly related to influence stock price volatility. This result supports the arbitrage realization effect, duration effect and information effect in Pakistan. These three effects also exist in Ghana (Asamoah, 2010). The researchers did find similar result like Pakistan except size is positively influenced stock price volatility. However, contradict result on dividend policy and the volatility of stock price was found in UK. According to Hussainey et al. (2011), company with higher payout ratio or dividend yield, will result in less volatile stock price. Dividend payout ratio is the main determinant of the volatility of stock price. The larger the size of the company, stock price will be less volatile. While, if company incurs high leverage, there is higher probability that stock price be more volatile. Allen and Rachim (1996) found that there is positive relationship between share price volatility and earnings volatility and leverage in the Australian listed companies during 1972 to 1985.

3.0 METHODOLOGY

This research use financial accounting data downloaded from Data-stream for all the construction and materials companies listed on the Kuala Lumpur Stock Exchange (Bursa Malaysia) from 2005 to 2010. Data-stream are used to collect information regarding dividend per share (DPS), Earnings per share (EPS), Earnings before interest and tax (EBIT), total debt, total equity, total assets and market value to book value. During the period of

the study, there are 106 construction and materials companies in Bursa Malaysia. In order to analyze the factors that influence dividend payout in the construction and material companies, we excluded the companies that do not have complete data during the period of the study. Thus, the final samples of 77 companies were examined. Firstly, we averaged out all the variables for the past 6 years and tested the impact on dividend payout on share price volatility in the construction and material companies. Secondly, we tested the impact between these variables before and after the subprime crisis. Thus, we divided the data to 3 stages starting from pre-crisis (2005 – 2006), during crisis (2007 – 2008) and post crisis (2009 – 2010). This study analyzed the data based on the least square regression method by using E-views software.

Primarily, we conduct a basic test of the relationship between share price volatility and dividend policy which is through dividend payout ratio and dividend yield. To examine the relationship between these variables the following regression equations are used:

$$PV = \alpha + \beta_1 DPR + \beta_2 DY + \varepsilon \quad (1)$$

By using only dividend payout ratio and dividend as a measure for dividend policy, multi-collinearity problem likely to arise since both variables are closely related to each other. There are other variables that could influence the dividend policy and share price volatility. Thus, the four control variables were included in the regression equation as a way to limit the problem that could occur. The following equation is used:

$$PV = \alpha + \beta_1 DPR + \beta_2 DY + \beta_3 GROWTH + \beta_4 SZ + \beta_5 LEV + \beta_6 EV + \varepsilon \quad (2)$$

Description of variables used in the study:

Share Price Volatility (PV)
PV is the dependent variable that is used for this study. Firstly we collect the monthly adjusted stock price for each year and then find the high and the lower share price for the particular year. To derive PV data, we averaged out the high and lower prices and square it. This method is said to be more accurate instead of using closing and opening prices to obtained PV (Parkinson, 1980). Most of the researchers applied this method to obtain PV data [Hussainey et al. (2011), Nazir et al. (2010), Rashid and Anisur Rahman, (2008)].

Dividend Payout Ratio (DPR)
DPR relies on an accounting measure (net income). It calculation is based on the ratio of dividend per share to earnings per share.

Dividend Yield (DY)
DY is based on the market measure (stock price) as a denominator. In order to calculate dividend yield, we followed Sulong and Mat Nor, (2008) and Schooley and Barney (1994), which is the dividend per share is divided by the average monthly share price.

Growth
Growth is measured based on market-to-book asset ratio (Opler and Titman, 1993; Barclay et al., 1995: Jung et al., 1996; Hu and Kumar, 2004; Ling et al., 2008). Market-to-book asset ratio is calculated as book value of asset minus book value of equity plus market value of equity than divided by book value of assets.

Size (SZ)
Size is one of the control variable measured by using the natural logarithm of total asset (Smith and Watts, 1992; Kouki and Guizani, 2009; Chae et al., 2009).

Leverage (LEV)
We measure leverage based on the debt to equity ratio as suggested by most of the previous research like Lev and Kunitzky (1974), Gaver, and Gaver, (1993), Gul, (1999), Kallapur and Trombley, (1999).

Earnings Volatility (EV)
In order to derive EV, initially we calculate the ratio of EBIT to total assets. After obtaining the ratio, we squared it for all the years. This method of calculation is gathered from Hussainey et al. (2011), Nazir et al. (2010), Rashid and Anisur Rahman, (2008).

4.0 FINDINGS

Table 1 provides a descriptive statistics of the variables used in the study over the period from 2005 to 2010. The share price volatility is 94.41 percent for the Malaysian construction and material companies during 2005 until 2010. The volatility is higher compared to the research findings of Mohammad and Md Nassir (1993)

where during the period 1975 to 1990 Kuala Lumpur market faced with 65.37 percent share price volatility. The share price volatility for the Australian firms is 49 percent (Allen and Rachim, 1996) and only 29.4 percent volatility recorded for UK firms (Hussainey et al. (2011). It is not surprise that the volatility is higher for the Malaysian construction and material companies during this six year because of the less occurance of crisis such as credit crisis in 2007, U.S subprime mortgage crisis 2007-2008, bankruptcy of Lehman Brother in 2008, Sime Darby scandal in 2010 and others. Dividend payout ratio recorded 18.24 percent higher than dividend yield which is only 2.2 percent. Earnings volatility recorded 5.7 percent contradicted to the result found by Nazir et al. (2010) in Pakistan where firm earnings volatility is 18.48 percent. During 2005 until 2010, this sector recorded investment growth of 45 percent and higher leverage of 63.52 percent

Table 1: Summary descriptive statistic for all variables

Variables	Mean	Median	SD
PV	0.9441	0.8933	0.4047
DPR	0.1824	0.1528	0.3021
Growth	0.4520	0.7333	4.1046
SZ	5.4700	5.3725	0.5333
Lev	0.6352	0.3625	0.8624
DY	0.0220	0.02034	0.0218
EV	0.0570	0.0423	0.0467

Table 2: Dividend Policy and Share Price Volatility

Model 1		
Independent Variables	Overall Period (2005 – 2010)	
	Coefficient	P-value
Intercept	0.7858	0.0000
DPR	0.0026	0.1274
DY	5.0648	0.0349**
Adjusted R-squared	0.1417	
F-statistic	7.1105	
P (F-statistic)	0.0015	

****, **, * indicate significance at the 10%, 5 % and 1% levels.*

Table 2 shows the result of Model 1, the relationship between share price volatility and dividend policy (DPR and DY as independent variables). The fitness of the model is only 14.17 percent explained which is small. Stock price volatility for the construction and material companies are positively related to dividend yield. DPR is positive but insignificantly related to influence stock price. Dividend yield (DY) is a better variable used rather than dividend payout ratio because DY is based on the market measure (stock price) as a denominator (Schooley and Barney, 1994). Dividend payout ratio relies on accounting measure (net income), which is based on accrued method which is easy to be manipulated. Also by using DY could avoid the difficulty that may arise when the company experiences negative net income. This could results in negative payout ratios or very high payout ratios when the firm's income comes close to zero.

Table 3: Relationship share volatility and dividend policy with control variables

Model 2		
Independent Variables	Overall Period (2005 – 2010)	
	Coefficient	P-value
Intercept	-1.8624	0.0000
DPR	0.0024	0.0831***
Growth	0.0079	0.4093
SZ	0.5020	0.0000*
Lev	-0.0012	0.0107**
DY	0.7343	0.7273
EV	1.2450	0.1750
Adjusted R-squared	0.4343	
F-statistic	10.7228	
P (F-statistic)	0.0000	

****, **, * indicate significance at the 10%, 5 % and 1% levels.*

Model 2 is used since there are other variables that might influence dividend policy and share price volatility. Table 3 shows that 43.43 percent of the changes in the share prices of the Malaysian construction and material companies as explained by dividend yield, dividend payout ratio, investment growth, size of the firm, leverage and earnings volatility. As shown in Table 3, when we include the control variable, the result shows an opposite results where DY has become insignificant and DPR is significantly influence the changes in the share price. Investment growth and earnings volatility are not significant and do not influence the changes in the company's share price. The size is significantly influence the volatility of the share price. The bigger the size, the more significant it could influence the volatility of the share price. However leverage is negatively significant and do not influence the movement of share price. As suggested by Chin (2008b), in short term, the effect of leverage can cause stock market volatility to increase as a response to bad news and decrease with good news.

5.0 CONCLUSION

The objective of this study is to examine the impact of firm's dividend policy (DY) and dividend payout ratio (DPR) on the share price of the Malaysian listed construction and material companies. The study covers for a period of six year (2005 to 2009). However there is only 43.43 percent of the variation in the changes in the share price is explained by the model. The volatility of the share price of the construction and material companies is higher with 94.41 percent. Our study differs from most of the previous researchers because their study is based on all listed companies in the exchange. The empirical result suggests there is a significant positive relationship between the DPR of a firm and share price volatility. DY is insignificant and negatively related to the movement of stock prices. This result is consistent with Baskin (1989), Rashid and Anisur Rahman, 2008 but contradict to Allen and Rachim (1996), Nazir et al. (2010). Thus, this finding suggests that, higher DPR will lead to a more volatile share prices. Among the control variables, only firm size (FZ) and leverage (LEV) showed high correlation with the changes of the firm share prices. The larger the size of the company, the greater the company needs to face with the volatility of share prices. The results show no significant influence between investment growth and earnings volatility on the changes of the company share prices.

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