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The Moderating Effect of Bird-In-Hand Theory on Dividend Policy and Stock Price Volatility: Evidence from Malaysian Non-Financial Sector

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Abstract*: Dividend policy and stock price volatility linkage is debateable issue in the capital market literature. Due to inconclusive findings, there is a worthy scope to investigate this issue, it is more focused in emerging markets due to highly volatile in nature. Therefore, this study aims to scrutinize the effect of Bird-in-Hand theory on dividend policy and stock price volatility in Bursa Malaysia for clear picture. This study measured stock price volatility by Parkinson formula. The cost of capital and rate of return were considered as proxies of Bird-in-Hand theory. This study utilized panel regression model for data analysis based on the sample of 548 non-financial listed companies in Bursa Malaysia from 2011 to 2018. These findings suggested dividend policy as the main determinant of stock price volatility. This study also found significant moderating effect of cost of capital on the relationship between dividend pay-out ratio and stock price volatility. The implications of this research could utilized by investors, policy makers, and researchers to reduce the price volatility in Bursa Malaysia.*

Keywords: Dividend Policy; Bird-in-Hand theory; Stock Price Volatility; Parkinson formula; Bursa Malaysia, Cost of Capital

1. Introduction

The issue of dividend policy and the stock price volatility relationship has generated extreme argument for many years. Furthermore, decisions about earnings distribute to shareholders or plough the money back into firm provide the opportunity to many finance scholars and professionals to examine dividend policy various effects (Bremberger et al., 2016; Qammar et al., 2017). The dividend policy articulates a practical link between a firm and the market (Baker et al., 2019). Determining an appropriate dividend policy is a difficult task due to the need in balancing potentially conflicting forces (Baker & Rob, 2015; Tsoukalas, 2005). Dividends are considered as return on the investment, the risk and return association indicates the firm to pay dividends according to the change in systematic or unsystematic risks (Camilleri et al., 2019; Desai & Khoa, 2015).

In the perfect capital market, Miller and Modigliani (1961) indicated payment of dividends is irrelevant to the firm's market value. Whereas, Agency theory states that dividend payment improves the agency conflict between the organization and investors, providing scrutiny in the capital market to investors (Jensen & Meckling, 1976, Kaźmierska-Jóźwiak, 2015; Brealey et al., 2012; Dasilas et al., 2009). Moreover, 'Signalling theory' indicated that dividend payment is a signal in the capital market on the value of a firm which increases the confidence level of investors on the firm and attracts more investors for investment purpose (Miller & Rock, 1985). Additionally, Bird-in-Hand theory established by Gordon (1963) states that companies paying higher dividend and investing less, can reduce the risk perceived by investors, which influence the cost of capital and hence, the stock prices. Moreover, the effect of firm's rate of return and cost of capital with dividend payout policy influence the firm's price per share.

The stock price is considered one of the main determinants of the market valuation of a company (Chandra, 2017; Koudijs, 2016). If the share price of a firm increases consistently over the time, it can be assumed that the firm is performing well and efficiently (Brogaard, 2016). Firms consider dividend policy as a determining factor of return volatility (Jahfer et al., 2016). The effects of dividend policy and stock price volatility are defined through four dimensions: Duration Effect, Rate of Return Effect, Arbitrage realization effect and Information effect (Shah & Umara, 2016). The 'Rate of Return Effect' and 'Duration Effect' reflect the dividends as a proxy for underlying cash flows' timings of business (Taofeek et al., 2019). Whereas, the 'Arbitrage Realization' and 'Information Effect' suggest that managers could dynamically fluctuate the stock market risk (Taofeek et al., 2019).

The Duration Effect purported companies that pay large dividends have high dividend yield, indicates near future cash inflows. Those companies which have high dividend yield have a consistent dividend policy with a shorter duration (Jitmaneeroj, 2017; Li, 2016; Baskin, 1989). Hence, companies who pay large amount of dividend have less prices fluctuation due to discount rate variation (Baskin, 1989; Hashemijoo et al., 2012). Moreover, a high dividend yield stock will be fewer sensitive to fluctuations in the discount rate, thus ought to display lower price volatility, while all other things remain the same (Zainudin et al., 2018). Duration Effect assumed a stable dividend yield as constant dividend growth and diversifiable risk as the sensitivity of the cost of capital (Allan & Rachim, 1996; Dewasiri & Weerakoon, 2015). According to Duration Effect, cost of capital can moderate the effects of dividend policy on stock price volatility.

The Rate of Return Effect prophesies that both dividend yield and dividend payout ratio vary inversely with projected future rates of return (Baskin, 1989; Taofeek et al., 2019). A firm with more future investment opportunities have lower dividend yield and low dividend payout, thus its stock prices may be fluctuated by the estimated rate of return over a distant time period as argued by Gordon (1963). At the time of market imperfection, novel equity issuance is costly and firms rely on retained earnings for equity funds (Belo et al., 2015). Hence fluctuations of stock prices depend upon the rate of return volatilities over a period of time (Gordon, 1963; Renneboog et al., 2015). The rate of return can be a moderate among dividend policy and the stock price volatility, which ignored by prior studies.

This study considers Bursa Malaysia, because in the current era, Bursa Malaysia has become one of the biggest stock markets in South-East Asia with the capitalization of approximately USD 441.24 billion (Yee et al., 2018). However, it is considered as one of the risky stock market among the emerging markets (FTSE, 2018; Arshad & Yahya, 2016; Zakariya et al., 2012) due to profound changes in the economy of Malaysia (Zakaria & Shamsuddin, 2012). The condition of Malaysia's economy became harsher after the global financial crisis in 2008, where severe volatility in capital market return incurred from 2011 to 2018 (FTSE, 2018). Moreover, despite past literature, there is a lack of researches about dividend policy and stock price volatility in Bursa Malaysia. Very few studies scrutinized the effect of dividend policy on stock price volatility in Bursa Malaysia with limited observations and few sectors.

This reminder of paper is organized as follows. Section 2 explains data collection, variable measurements and methods. Section 3 presents panel data regression results. Section 4 discusses results in the context of the volatility in Bursa Malaysia. Section 5 concludes the study.

2. Measurement of variables, Data, and Methodology

2.1. Measurement of Variables

Stock price volatility is measured by Parkinson formula (1980). This method was selected due to consideration of annual closing and opening prices. The formula is:

$$\mathrm{HL}-\mathrm{HV}\ = \frac{\sqrt{\sum_{t=1}^{n}\left(\frac{1}{4 * Ln2}\left(X_t^{HL}\right)^2\right)}}{n}$$

Here, HL= high stock price; HV is low stock price; X t HL= e HL/HV (calculated as the natural logarithm of the ratio of a high stock's price to low stock's price).

Dividend policy consists of dividend payout ratio and dividend yield. Dividend payout ratio is measured by dividing common dividends by net income minus preferred dividend requirements. Dividend yield refers to a firm's sum dividend payment divided by the company's market capitalization. It is calculated by dividends per Share for the last 12 months divided by current Market Price.

Moreover, growth in assets, financial leverage, firm size and earnings per share are the control variables used in this study. Growth in assets was calculated by current year assets value divided by last year assets value minus one. Size of the firm is a firm's characteristic, which formulated by a natural logarithm of a total assets. This study calculates financial leverage as debt to

equity ratio. Earnings per Share is another firm's characteristic which measured by earnings divided by numbers of outstanding shares.

This study utilized Bird-in-Hand theory variables including cost of capital and rate of return as moderating variables among the relationship between dividend policy and stock price volatility. Weighted average cost of capital (WACC) is used to determine the value of cost of capital (Frank & Shen, 2016). The formula for WACC is given below:

WACC= ([cost of debt*(total debt/total capital)] + [cost of preferred equity*(preferred equity/total capital)] + [cost of equity*(equity/total capital)]) * (1-tax rate)

Moreover, total capital also includes total debt, preferred equity, and equity capital. Furthermore, rate of return is calculated by return on investment.

2.2. Data Collection, Analysis tool and Technique

This study considers all ten non-financial sectors of Bursa Malaysia. The classifications of sectors on Bursa Malaysia are not the same as Thomson Reuters' classification. These non-financial sectors, namely construction, consumer product, industrial product, hotels, plantation, properties, technology, trading or services, mining and infrastructure project (IPC), included total 548 companies which listed on Bursa Malaysia. Due to the small number of the sample, this study has taken mining, hotel and IPC sectors collectively and named as 'others'. This study considered time duration of data from 2011 to 2018.

This study collected data for all variables except cost of capital from Thomson Reuter's Data Stream. The data for cost of capital (WACC) is collected from Thomson Reuter's Eikon.

This study measures the descriptive statistics of the variables. Then, it analyses the data by using panel regression analysis. Also this study checks the diagnosis tests for conditions of panel data such as Hausman test and Lagrange multiplier test which suggested by Teixeira et al. (2016), Demirgüneş (2015); and Kighir et al. (2015).

2.3. Econometric Models

According measurements of dependent variable (stock price volatility) by Parkinson formula, this study designed two main equations for analysis of data at individual sector and all non-financial sectors, which are illustrated below:

$$Y1_{it} = \beta0 + \beta1DY_{it} + \beta2DPR_{it} + \beta3SIZE_{it} + \beta4EPS_{it} + \beta5FINLEV_{it} + \beta6GROWTH_{it} + \beta7COC_{it} + \beta8ROR_{it} + \beta9COC_{it}*DY_{it} + \beta10COC_{it}*DPR_{it} + \beta11ROR_{it}*DY_{it} + \beta12ROR_{it}*DPR_{it} + \xi_{it}$$

Here,

Y1 = Stock price volatility measured by Parkinson (1980) formula

DPR = Dividend pay-out ratio

DY = Dividend yield

SIZE= Firms size

FINLEV = Financial leverage

EPS = Earnings per share

GROWTH= Growth in assets

COC = Cost of capital

ROR = Rate of return

β0 = Intercept value

β1 = Coefficient

ξ= Error term in time

i = Company

t = time

3. Results

3.1. Descriptive Statistics

Table 1 illustrates the descriptive statistics of the variables which utilized in this study. Price volatility (Parkinson) of the stock market during the period 2010 to 2017 was 0.029. The stock price volatility (Stock PV) has a maximum 0.127 and the minimum 0.001 with a standard deviation of 0.019 or 1.9%. The standard deviation represent stock price fluctuations within the year. The mean value of independent variables, including dividend yield and dividend payout ratio is 0.036 and 0.368 respectively.

Moreover, the standard deviations of the dividend yield and dividend payout ratio are 0.036 and 0.251 respectively. Among the controlling variables, the average value of firm size is 12.651, earnings per share 0.029, financial leverage 0.302 and growth (growth in assets) 0.028. Moreover, the standard deviation of controlling variables is; size 1.334, earnings per share (EPS) 0.106, financial leverage 0.225 and growth in assets 0.361.

Table 1. Descriptive Statistics of all variables

Variables	**N**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Stock PV	4384	0.001	0.127	0.029	0.019
DY	4384	0.000	0.948	0.036	0.035
DPR	4384	0.000	0.999	0.368	0.251
Size	4384	5.793	18.579	12.651	1.334
Growth	4384	-1.000	1.991	0.028	0.361
Fin Lev	4384	-1.792	0.989	0.302	0.225
ROR	4384	-0.378	1.308	0.081	0.113
EPS	4384	-0.520	1.180	0.029	0.106
COC	4384	-0.093	0.265	0.084	0.034
Valid N (list-wise)	4384				

[1] Note: "Stock PV: Stock Price Volatility; DY: Dividend Yield; DPR: Dividend Payout Ratio; Size: firm size; Growth: Growth in the asset; Fin Lev: Financial Leverage; ROR: Rate of Return; EPS: Earnings per Share; COC: Cost of Capital"

3.2. Determining Best Fit Model for Panel Data Analysis

Table 2 presents the Lagrangian Multiplier Test for random and pooled OLS estimation selection for individual non-financial

sectors of Bursa Malaysia. If the LM test generates a substantial chi-square value and indicates a low p-value less than 0.05, it means the null hypothesis is not accepted, thus pooled OLS estimation cannot be accepted. Hence, the random method is preferred estimation. If the LM test displays that probability value is not significantly different from zero, the pooled OLS estimation is the appropriate model to be applied.

The P-values are less than 0.05 for all sectors except others (hotel, mining and IPC) when volatility is measured by Parkinson formula. This illustrates that it is appropriate to select random estimation method. The results for others (hotel, mining and IPC) indicate that pooled OLS estimation is better.

Table 2. Breusch and Pagan Lagrangian Multiplier Test for Estimations

Sectors	**F-Statistics**	**Pooled OLS/Random**	**Prob.**
Construction	219.484	Random	0.000
Consumer Product	124.331	Random	0.000
Industrial product	221.178	Random	0.000
Plantation	102.579	Random	0.000
Properties	58.815	Random	0.000
Technology	23.354	Random	0.000
Trading and Services	78.184	Random	0.000
Others (hotel, mining, IPC)	2.434	Pooled OLS	0.069
Overall non-financial Sector	724.734	Random	0.000

Table 3 illustrates that the overall non-financial sectors p-value is 0.1067 which is higher than 0.05 for Stock PV (Parkinson). The sectorial results of Hausman Test are also reported in Table3. The results of stock price volatility illustrates that p-values for construction, "industrial product, plantation, and trading or services" sectors are less than 0.05, meaning that fixed effect model given better results for these sectors. Whereas, consumer product, properties, technology, mining, hotels and IPC sectors, all with p-values higher than 0.05, thus H0 cannot be accepted and random effect is selected for analysis.

Table 3. Hausman Test for Individual and Overall Non-Financial Sectors' Panel Data

Sectors	**Chi-Sq. Statistics**	**Fixed/Random**	**Prob.**
Construction	24.342	Fixed	0.018
Consumer Production	9.416	Random	0.667
Industrial Production	22.757	Fixed	0.029
Plantation	32.251	Fixed	0.001
Properties	8.343	Random	0.757
Technology	3.300	Random	0.993
Trading/Services	10.348	Fixed	0.000
Others (Hotels, Mining, & IPC)	6.923	Random	0.545

Table 4 displays the results of moderating role of proxies of Bird-in Hand theory on dividend policy and stock price volatility by using regression analysis. F-statistics demonstrate that the models are statistically significant. But the overall sectors illustrate that there is negative significant effect of dividend yield on stock price volatility. The results illustrate that dividend yield (DY) is negatively significant in construction, consumer product, industrial product, technology, trading or services, plantation and property sectors. Whereas, mining, hotels and IPC sector have insignificant effect of dividend yield on stock price volatility.

Furthermore, dividend payout ratio has positively significant results about stock price volatility for consumer product and properties sector. All non-financial sectors models have similar results. While, construction, industrial product, technology, and trading or services, plantation sectors illustrate negative significant result with dividend payout ratio.

The cost of capital displays positive significant results for consumer product, industrial product, trading or services, plantation and properties sectors . The model for all non-financial sectors also indicates that there is a positive significant influence of cost of capital. On the other side, the technology sector, mining, hotels and IPC sectors illustrated a significant negative effect. Interestingly, the construction sector indicates no association between stock price volatility and cost of capital.

All non-financial sector results also illustrate positive significant moderating effect of rate of return on stock price volatility. The rate of returns have significant positive results for constructions and properties sectors. However, the results for other sectors illustrates insignificant relationship of rate of return and stock price volatility.

Furthermore, the interaction between dividend yield and cost of capital is negative insignificant for over all non-financial sectors. Dividend yield and cost of capital interaction is also negative significant for construction, consumer product, and technology sector. It is positive significant for "industrial product, plantation and properties sectors, and trading or services sectors". However, the relationship is found to be insignificant for hotels, mining and IPC sectors.

The moderation effect of dividend payout ratio and the cost of capital is negative significant for plantation sector and positive significant for properties and technology sectors.

The other sectors have insignificant results. But all non-financial sector model reveals the positive significant effect of interaction among dividend payout ratio and the cost of capital on stock price volatility.

Moreover, the interaction of dividend yield and rate of return illustrates significantly negative results for consumer product and properties sector. It has insignificant results for construction, industrial product, technology, trading or services, hotels, mining and IPC sectors. The interaction between dividend yield and the rate of return results are insignificant for overall non-financial sectors.

The interaction between the dividend payout ratio and the rate of return illustrates negative significant effect in construction and trading or services sectors. The properties sector illustrates positive significant results. The rest of sectors including "consumer product, industrial product, plantation, technology and other (hotel, mining and IPC)" illustrate insignificant results. The overall non-financial sector model illustrates a significant result for effect of interaction among dividend payout ratio and the rate of return on stock price volatility.

The controlling variable, firm size illustrates negative significant results for construction, industrial product, plantation, technology, and others (mining, hotels, and IPC) sector. The results are similar for all non-financial sector model. However, it is insignificant for "consumer product, properties and trading or services" sectors.

Moreover, earnings per share illustrate positive significant effect in "construction, consumer product, industrial product and other (mining, hotel and IPC)" sectors. Regardless, earnings per share illustrates negative significant results for all non-financial sectors. The results for technology, trading or services, plantation, and properties sectors are insignificant.

Financial leverage illustrates positive significant results for all non-financial sectors. The results are similar for only consumer product and properties sectors. However, for construction, industrial product, plantation, technology, trading or services and others (mining, hotel and IPC), negative significant results were observed.

Table 4: Panel data regression output of moderating role of dividend policy and stock price volatility for all non-financial sectors

Variables	Construction	Consumer Product	Industrial Product	Plantation	Properties	Technology	Trading/ Services	Other Sector~	Total Non-Fin. sector
Constant	0.0394	0.0161	0.0543	0.0567	0.0217	0.0676	0.0298	0.1072	0.0258

	(0.000)*	(0.000)*	(0.000)*	(0.000)*	(0.000)*	(0.000)*	(0.000)*	(0.000)	(0.000)*
DY	-0.1011	-0.0310	-0.0065	-0.0081	-0.0109	0.0696	-0.0235	-0.0193	-0.0034
	(0.000)***	(0.009)*	(0.091)**	(0.000)**	(0.000)*	(0.006)*	(0.003)*	(0.764)	(0.044)**
DPR	-0.0029	0.0040	-0.0015	-0.0007	0.0047	-0.0061	-0.0011	-0.0165	0.0017
	(0.007)**	(0.007)**	(0.077)**	(0.004)***	(0.000)***	(0.027)**	(0.006)**	(0.081)*	(0.001)***
COC	0.0072	0.0222	0.0339	0.0391	0.0375	-0.0719	0.0441	-0.1144	0.0198
	(0.715)	(0.036)*	(0.028)*	(0.013)*	(0.008)**	(0.029)*	(0.004)**	(0.085)*	(0.001)*
ROR	0.0084	0.0029	0.0084	-0.0006	0.0117	0.0095	0.0001	-0.0088	0.0039
	(0.040)**	(0.492)	(0.112)	(0.894)	(0.017)*	(0.152)	(0.971)	(0.710)	(0.010)**
COC*DY	-2.014	-1.6302	0.8122	1.0653	1.0528	-3.5432	2.8730	1.4159	-0.1946
	(0.003)**	(0.000)***	(0.089)*	(0.020)*	(0.015)*	(0.019)*	(0.000)***	(0.533)	(0.133)
COC*DPR	-0.0334	-0.0412	-0.0001	-0.0879	0.0592	0.2677	-0.0354	0.1072	-0.0258
	(0.683)	(0.368)	(0.998)	(0.043)*	(0.063)*	(0.035)*	(0.368)	(0.743)	(0.016)*
ROR*DY	0.0244	-0.4470	-0.0872	0.1226	-0.3880	-0.7136	-0.2680	-0.2953	0.0198
	(0.893)	(0.002)**	(0.498)	(0.303)	(0.007)**	(0.392)	(0.258)	(0.722)	(0.654)
ROR*DPR	-0.0502	-0.0092	-0.0139	0.0223	0.0541	0.0099	-0.0142	0.0398	-0.0107
	(0.041)*	(0.655)	(0.376)	(0.226)	(0.000)***	(0.791)	(0.099)*	(0.109)	(0.325)
SIZE	-0.0011	0.0002	-0.0019	-0.0018	-0.0004	-0.0025	-0.0002	-0.0054	-0.0003
	(0.049)*	(0.387)	(0.014)*	(0.002)**	(0.242)	(0.000)***	(0.589)	(0.000)***	(0.008)***
EPS	0.0112	-0.0113	0.0174	0.0086	-0.0011	0.0153	0.0017	0.0763	-0.0030
	(0.048)*	(0.039)*	(0.017)*	(0.148)	(0.683)	(0.239)	(0.603)	(0.091)*	(0.041)**
FIN LEV	-0.0051	0.0089	-0.0136	-0.0254	0.0085	-0.0019	-0.0050	-0.0032	0.0042
	(0.014)*	(0.000)***	(0.002)**	(0.000)***	(0.000)***	(0.719)	(0.053)*	(0.776)	(0.000)***
GROWTH	0.0008	0.0019	0.0030	0.0022	-0.0004	-0.0037	0.0025	0.0131	-0.0002
	(0.638)	(0.043)*	(0.202)	(0.077)*	(0.631)	(0.208)	(0.000)***	(0.050)*	(0.959)
N	712	808	1064	320	544	200	520	72	4384
F-Statistics	4.5635	6.1586	7.7202	20.8924	4.0780	1.8271	21.8360	2.3627	6.2377
P-Value	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Note: "Stock PV: Stock Price Volatility; DY: Dividend Yield; DPR: Dividend Payout Ratio; Size: firm size; Growth: Growth in the asset; Fin Lev: Financial Leverage; ROR: Rate of Return; EPS: Earnings per Share; COC: Cost of Capital"
*,**,***: Significance level at 1%, 5%, 10% respectively
Other sectors: Mining, Hotel and IPC

4. Discussion

This study explored the moderating role of Bird-in-Hand theory on dividend policy and stock price volatility in Bursa Malaysia's non-financial sectors. The findings exhibited that there is negative effect of dividend yield on stock price volatility for all non-financial sectors. Similar results have found for some sectors including construction, consumer product, industrial product, plantation, properties and trading or services. On the other hand, technology sector illustrates positive effect of dividend yield on stock price volatility.

These findings aligned with results of Allen and Rachim (1996) in the Australian market, Baskin (1989) for the US market, Hussainey et al. (2011) for UK market, Dewasiri and Weerakoon (2015) for Sri Lanka market, Shah and Umara (2016) for Pakistan market, Zainudin et al. (2018), where they found a significant negative effect of dividend policy on stock price volatility. According to Baskin (1989) and Shah and Umara 2016), if 1% dividend yield reduces than 2.5% volatility decreases, hence dividend can regulate the stock price volatility. Dividend yield illustrates the positive effect on volatility, dividend announcement considered the positive signal which increase stock prices (Zainudin et al., 2018).

The construction sector, industrial sector, plantation, technology, trading or services and others sectors illustrate significant negative results of payout ratio on stock price volatility (measured by Parkinson). Also, consumer product and properties sector illustrate positive significantly dividend payout ratio impact on stock price volatility. These findings are consistent to research directed in Malaysia by Hashemijoo et al. (2012).

The moderation effect of cost of capital on DPR illustrates significant effect for plantation properties and technology sectors. The results for construction, consumer product, industrial product, trading and service, and other sectors are insignificant. Moreover, the overall non-financial sector illustrates that there is a negative significant moderating effect of cost of capital among dividend payout ratio and stock price volatility. These findings illustrates this study is complementing classical Bird-in-Hand theory.

According to Gordon (1963), the moderating role of cost of capital, high dividend payouts reduce the cost of equity or required rate of return of the equity. Investors prefer the Bird-in-Hand in the form of cash dividends instead of the "two in the bush" as future capital gains (Bremberger et al., 2016). Likewise, companies that pay no dividends have to face a higher risk in the capital market by having more variances of stock prices. The interaction of cost of capital and dividend yield is not significantly related to stock price volatility. Moreover, the interaction of cost of capital and dividend payout ratio is significant when related to stock price volatility.

The moderation of cost of capital along DY illustrates negative significant results for construction, consumer, and technology sector. Similarly, industrial, plantation, properties, trading and services sectors illustrate the significant positive moderating effect of cost of capital on the relationship between dividend yield and stock price volatility. Moreover, the overall non-financial sectors findings illustrate insignificant effect of cost of capital moderation on dividend yield and stock price volatility.

There is insignificant moderation effect of rate of return among DPR and price volatility. Construction sector, trading and services sectors illustrates negative significant effect of rate of return on DPR and stock price volatility. Only properties sector illustrates positive significant moderation effect of rate of return on dividend payout and stock price volatility. The remaining sectors including consumer product, industrial product, plantation, technology and others illustrate insignificant moderating effect of rate of return.

The moderating effect of rate of return with dividend yield indicates negative significant for consumer product, and properties sector. Moreover, "construction, industrial product, plantation, technology, trading and services and other sectors" illustrate insignificant moderation effect of rate of return. The overall non-financial sectors' findings reveal that there is no moderation effect of rate of return on dividend yield and stock price volatility.

Moreover, Baskin (1989) revealed that low dividend yield organizations have more scopes of future investment since the stock prices may change by estimated rates of return over the distant time period. It is rational approach that new equity issuances are costly and therefore, firms rely upon retain earnings for equity funds (Camilleri et al. 2019). In this situation, firms anticipate large investments and pay smaller dividends. Hence, investment opportunities with high net present values increase the stock prices and reduce the dividend yields.

5. Conclusions

Several researches conducted on debatable issue, effect of dividend policy on stock price volatility, but the findings are still inconclusive. The emerging markets have more concerned about this issue due to less efficiency and high volatility. Bursa Malaysia has been observed to be affected several times by financial crisis and other economic issues over the past decades. The purpose of this study is to investigate moderating role of Bird-in-Hand theory on the relationship between dividend policy and

stock price volatility in Bursa Malaysia. This study measured stock price volatility by Parkinson formula. Bird-in-Hand theory is measured by cost of capital and rate of return. This study utilized panel regression models for data analysis based on the sample of 548 non-financial listed companies in Bursa Malaysia from 2011 to 2018. The results illustrated significant effect of dividend policy (dividend payout ratio and dividend yield). Furthermore, this study found significant moderating effects of cost of capital on dividend payout ratio and stock price volatility. Nevertheless, the findings of this study concluded that dividend policy is a key element of stock price volatility.

This study considered cash dividends only and ignored other option such as share repurchase, bonus, right shares, and preferred stock to regular options. This study follows Bird-in-Hand theory, which indicates that stock price volatility is more affected by dividends rather than retained earnings. In real life, there might be other factors affect stock price volatility. Furthermore, this study ignores the financial sector of Bursa Malaysia.

Further researches would be possible by extending the size of the sample and time span. Also, the moderating effect of this study should be tested by other researchers to justify the findings of this study. This research has implications for investors, policy makers, and researchers to reduce the price volatility in Bursa Malaysia. Investors can make decisions by evaluating and expecting the future movement of stock prices.

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