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**The Dividend Puzzle: A Corporate Action for  
Signal of High Prospect Companies In Indonesia**

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**ABSTRACT**

*This study was designed to examine the dividend policy variable as a moderating variable on stock prices. As a moderating variable, dividend policy will weaken or strengthen a series of other variables such as PBV, PER and EPS which are used to predict that there is a signal for a company's growth to increase stock prices as a signal that investors respond to. This research was conducted by running a simple regression to test the direct relationship of DPR with stock prices, multiple regression without DPR to examine the interaction of stock prices with market signal variables, and multiple regression to test the consistency of the significance of DPR's influence as a moderating variable with market signal variables and stock prices, then moderating regression or MRA to test the moderation between market signal variables and DPR as a moderating variable with stock prices. The results show that there is a direct significant effect between DPR and stock prices without involving other variables, but if you include market signal variables, PER becomes an insignificant variable. This means that PER does not affect stock prices. Furthermore, by placing DPR along with other variables, it appears that the positive relationship in the simple regression becomes insignificant. Therefore, a moderation regression was carried out where the results of the moderation regression showed that there was a pure moderating relationship between PBV and DPR, a moderating homologizer between PER and DPR, and quasi moderation between EPS and DPR. By looking at this relationship, it can be assumed that DPR as a moderating variable strengthens market signal variables in influencing stock prices. This also shows that the signal given by the company can be responded to by dividend policy.*

**Keywords:** Dividend Policy, Signalling Theory, Stock Price

**INTRODUCTION**

DeAngelo & DeAngelo (2006) state that the dividend conundrum is not a puzzle because it is rooted in the mistaken notion that the MM irrelevance theorem holds for payout/retention decisions, when it does not. Meanwhile, Vishwanath (2007) reveals that shareholders love it, bondholders hate it, managers find it obvious, and financial economists find it confusing. Dividend policy is also stated to involve various decisions to pay income or withhold to be reinvested in the business. Vernimmen et al (2017) then review the external aspects of distribution policies and how stock values are directly related to dividends. Various studies were conducted on the topic of dividend policy where Graham & Kumar (2006) documented certain behaviors of investors that older and lower-income investors have the behavior to buy shares after the dividend announcement. Correspondingly, stock price reactions to tax cuts indicate that dividend replacement for repurchases may have been anticipated, supporting the agency conflict that occurred in the company (Brown et al., 2007). Managerial decisions in determining dividend policy according to Daniel et al (2008) have the following tendencies: 1) Companies that pay

dividends tend to manage earnings upward when their earnings will be far from the expected dividend level, 2) There are findings that imply that managers treat the expected dividend rate as an important earnings threshold. So, it can be observed that dividend policy is influenced by both external and internal factors of the company itself. Research by Denis & Osobov (2008) shows that there are differences in dividend policy in the United States and outside the United States, whereas for countries outside the United States there is little evidence of a systematic positive relationship between the relative prices of companies that pay and do not pay dividends and the tendency to pay dividends. Overall, these findings cast doubt on the signaling, customer, and catering theory, this study supports the agency cost-based life cycle theory. About the life cycle theory, Skinner & Soltes (2011) revealed the results of their research that most companies that only pay dividends no longer exist. Buybacks are increasingly being used as a substitute for dividends, even for companies that continue to pay dividends, it is further stated that repurchases are now the dominant form of payment for dividend policy implementation. In contrast to the two previous studies, Chen et al (2009) examined that dividend policy was used to tunnel not solely to signal or distribute free cash flow in China. Referring to the differences in research results in various countries as in the previous review, this study aims to find out the answer to the dividend puzzle in Indonesia, whether dividend policy in Indonesia is used as a signal for investors, or is there something else.

## **LITERATURE REVIEW**

Dividend policy means how much cash is distributed to shareholders. Dividend policy can be determined through two important elements, the first is the decision to pay dividends to shareholders and the second is to maintain profits to be reinvested in future projects. Companies are responsible for balancing the need to maximize the wealth of their owners with the need to provide sufficient funds to finance growth projects, which is a significant role acting as a mechanism to control administrative opportunism. Companies carry out many activities through which they seek to achieve profit. A company finds itself with two choices for the funds it acquires, either to distribute a portion of its profits to investors (dividends) or to keep a portion of the profits to be reinvested at a later date for expansion and growth purposes, considering that the decision to distribute profits is very important for the company. owners, there is a missing link between distribution and growth, and the dividend payout policy can be determined by balancing the rate of distribution and the rate of growth. Since growth is one of the components of the distribution model, the distribution problem is considered based on choosing between the current cash distribution after an evaluation of the company's current situation and its ability to exploit profits in expansion projects and opportunities for growth. The decision to distribute dividends is one of the strengths of the Board of Directors, which is influenced by several factors. The most important factors for controlling the proportion of distribution include the financial capability of the company, its aspirations for the future and the wishes of investors.

The amount of distribution is important to both the corporation and its investors; thus, there are a series of factors that can influence dividend policy:

- a. Legislation Law: Rules of law and legislation differ between countries and affect profit distribution policies, usually based on four main rules: net profit rules, weak capital rules, insolvency rules, and tax penalties. These rules are considered binding constraints for institutions when setting the framework for dividend policy.
- b. Profitable Investment Opportunities: If the institution does not have profitable investment opportunities, it distributes the profits to its shareholders. But if the institution has a profitable investment opportunity, it will use the profits earned to fund the opportunity.
- c. Current Shareholders' Needs (Preferences): Current shareholder preferences are considered one of the most important determinants of dividend policy. In institutions where ownership is limited to a small number of individuals, there is a clear tendency to capture a high percentage of profits and distribute a small portion to shareholders, as shareholders today prefer to secure corporate financing needs through these profits (retained earnings) rather than through issuance of new

shares. The issuance of new shares leads to an influx of new shareholders, and current shareholders do not want to lose control or borrow until they bear the cost (interest) of the loan.

- d. Availability of Cash Liquidity: This is considered an important indicator as the distributed profits represent external cash flows. Therefore, the better the position of the institution in terms of liquidity, the greater its ability to pay dividends.
- e. Growth and Expansion Projects: Agencies going through a growth stage need to have the financial resources available to fund growth projects. Relying on self-financing sources may be preferable to using external sources of financing (borrowing), and this requires institutions to withhold profits as this will save on interest costs generated from borrowing.
- f. Factors Relating to Owners and the Capital Market: Dividend policy is influenced by the desires and needs of owners. In addition, it is influenced by the capital market through the implementation of a low dividend payout ratio.

The theory explains Dividend Policy as an important strategic financial decision and is subject to several considerations in its determination. Many theories try to explain the behavior of investors towards dividend policy, and these theories differ between supportive and neutral on the impact of dividend policy on the company's financial performance. The most important theories that attempt to explain distribution policy are:

- a. Neutral Theory (Dividend Policy), the credit for the discovery of this theory goes to two M&M economists (Miller & Modigliani, 1961). According to this theory, profit-sharing decisions have no effect on the stock price in the market or the market value of the company. In contrast, the value of the company is only affected by the profits achieved and the risks to which the assets or investments of the corporation can be exposed. Thus, the market value of a corporation is affected only by the income generated from asset management and not by how this income is divided among shareholders through cash distributions or retained earnings. These authors assert that investment efficiency is a major determinant of shareholder wealth; they also find that investors do not differentiate between raising cash through distribution or reinvesting company profits to achieve growth, which, in turn, leads to an increase in owner wealth. They further said that the concept of capital gains is based on an increase in the market price of the shares held before announcing the distribution of dividends; if the corporation has earned profits and decides to distribute a portion of it, the market value of the stock will decrease by the amount of the dividends, and if the corporation has decided to hold the earnings as retained earnings, the market value of the stock will increase by the amount of retained earnings. The validity of these theories does not correspond to reality as determined from (M&M), so their theories are unrealistic and need further investigation or scientific testing.
- b. Bird-In-The-Hand Theory, the theory developed by (Gordon, 1959) refers to the first theory, namely the neutral theory of dividend policy, which states that there is no relationship between profit sharing policy and stock prices or firm value. This resulted as a critique of the previous theory (M&M theory). This theory shows that dividend policy has a direct impact on the market value of the company through its effect on market share prices because the required rate of return on owned funds decreases with increasing dividends. This is because the level of certainty of investors on obtaining capital gains realized from retained earnings is smaller than the level of certainty obtained from dividend capitalization, because the level of risk increases as a result of high uncertainty. from retaining profits and reinvesting them. This means that investors prefer to distribute profits rather than achieve capital gains in the future, because profits distributed today are more certain than the possibility of obtaining capital gains in the future.
- c. Tax Preference Theory, according to this theory, if the capital gains associated with the sale of stock are not taxed, or if the tax rate on these profits is less than the tax rate on cash dividends distributed, investors prefer that the firm does not distribute cash. dividends but retain profits in the form of undistributed profits. The lower the percentage of cash dividends at the expense of undistributed profits, the higher the shareholder wealth, keeping other factors constant.

Therefore, investors will demand that companies distribute large cash dividends with greater returns than they receive from other companies. Thus, the company distributes cash dividends to compensate the amount of tax that investors will pay.

- d. Signal Theory by (Ross, 1977) states that managers use dividend payments as a signal to communicate personal information about the company to external investors and shareholders about their profit prospects and successful performance (excellent management). Therefore, a higher distribution will signal to investors that the firm's prediction of future earnings is positive; In other words, if the distribution is less than dividends – but pays a higher percentage – investors expect the value of the company to increase and if investors expect a high dividend percentage, while the corporation pays a much lower percentage, the stock price will fall in financial markets.
- e. Client Effect Theory, this theory shows that due to changes in dividend policy, investors always make decisions depending on the dividend policy chosen by the company which can encourage investors to continue this company or transfer to other companies.
- f. Agency Theory, according to this theory, investors want to increase their cash profits with a larger profit percentage distribution, while management prefers to increase the portion of retained earnings to ensure the availability of sufficient funds for investment or expansion purposes, leading to agency conflicts.

### **Types of Dividends**

There are many ways to distribute profits to shareholders including:

1. Stable dividend policy, this mechanism includes a profit-sharing process on a regular basis (fixed rate), thereby satisfying the wishes of shareholders and overcoming the problem of profit fluctuations by always paying a minimum dividend every year.
2. Progressive dividend policy, this is a process of distributing dividends in line with the profits and increases realized in earnings per share.
3. Regular dividend policy, in accordance with this policy, regular profits are distributed to all shareholders every year. In the event that the profit is large and unreasonable, the profit is kept in retained earnings and the excess profit is not distributed to shareholders.
4. Irregular dividend policy, this mechanism uses a profit-sharing policy on an irregular basis. Companies always use this mechanism when there is no fixed level or stability in profit or there is no continuity in achieving profit or the company does not have sufficient liquidity.
5. Dividend script, this dividend is always known as liability profit and is distributed to shareholders in the form of certificates, not cash dividends. They provide the option for shareholders to earn profits at a later time or to acquire additional shares. Companies issue such profits when they do not have enough cash to pay cash dividends.
6. Non-cash dividend, in this policy, the company resorts to distributing new shares to shareholders rather than paying cash dividends. This procedure requires the company to have reserves and retained earnings along with a desire to maintain profits and reserves for future periods based on promising investment opportunities. But basically, the negative impact of this policy is a decrease in the market value of the stock, so corporations take this policy when the stock market value increases significantly, but it is feared that there will be a decrease in the number of investors who want to buy shares. Also, this type of distribution is characterized by not being taxed, and this process adjusts shareholder ownership, so that each shareholder has a larger proportion of the dividends without changing shareholder wealth.
7. Shares, this policy is another alternative to the distribution of cash dividends. This technique can be defined as a procedure that generates additional shares and leads to an increase in the number of shares by reducing the par value of the shares, usually used to create demand for

shares by increasing the number of shares in the nation's capital company. This process causes a decrease in dividends per share when the amount of dividends is fixed or the stability of dividends per share with an increase in the total amount of dividends. It should be noted that there are similarities between stock derivation and financial division of shares.

8. Share buyback (reverse stock splits), this policy is the opposite of a decrease in the number of shares. As the name suggests, this policy is based on the same principle which is the process of derivation of shares but in reverse which leads to an increase in the par value of shares. Therefore, there is no change in the company's financial structure except for the number of shares. The reverse derivation method is a policy to prevent stock prices from falling to low levels. Share repurchases (treasury shares), as corporate share repurchases, are intended to use the corporation's excess cash to purchase traded shares, which are called treasury shares. This policy actually leads to the creation of so-called cash shares and the share price is mostly higher than the prevailing market price. There is another way, called a repurchase of target shares through corporate management practices, such as negotiations with shareholders who own a large proportion of the shares, to thwart control of the corporation's stock. The company usually negotiates with several investors to the Foundation when the market share price is less than its true value. Stock repurchase policies have witnessed surprising growth in the United States and Europe.
9. Distribution of bond quality and dividends, this policy is also called quality distribution in which the management of the corporation distributes goods, real estate, investments or bonds in lieu of cash distributions. Companies use this type of distribution when they have liquidity problems (lack of required liquidity), but this type of distribution is not desired by shareholders because cash dividend distributions allow contributors greater freedom to fulfill their needs and wants.

The research conduct based on research framework below:

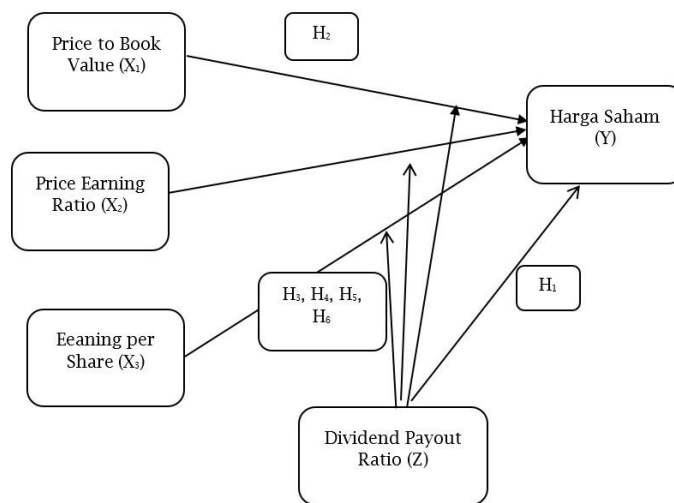


Figure 1. Conceptual Research Framework

## RESEARCH METHODS

### Types of research

The type of research conducted in this research is quantitative associative. Associative quantitative research aims to determine whether there is a cause-and-effect effect between the variables and the object under study. This study aims to determine whether there is an influence of dividend policy as a moderating variable on stock prices of companies listed on the Indonesia Stock Exchange (IDX). In order to detect the influence, several variables will be tested, which are PBV (Price Book Value); PER (Price

Earning Ratio) and EPS (Earning Per Share) as the variables aforementioned used by investor to value stocks. This research was conducted on companies listed on the Indonesia Stock Exchange (IDX) that consistently selected in LQ 45. The data accessed online through website [www.idx.co.id](http://www.idx.co.id).

### Method of Collecting Data

In this study, the data collection method used is the survey sample method. The survey sample conducted by sorting lists of company that consistently selected in LQ 45 within 2013 and 2018. The data collected through performance summary of LQ 45 that available through Indonesian Stock Exchange website. The update data and site still under reconstruction as pandemic issues arise. Therefore, there are 32 companies selected as samples in this research.

### Research variables

#### Variable Classification

##### 1. Independent Variable (X)

The independent variable is the variable that causes or affects the dependent variable. The independent variables used in this study are Price Book Value (PBV), PER (Price Earning Ratio) and EPS (Earning Per Share).

##### 2. Dependent variable (Y)

The dependent variable used in this study is the firm value which is Closed Price (stock price at closing as it already adjusted after corporate action taken).

##### 3. Moderating variable (Z)

The moderating variable is a variable that can strengthen or weaken the relationship between variables and other variables. The moderating variable used in this study is DPR (Dividend Payout Ratio).

#### Data Analysis Procedure

In this study to solve the problem of data analysis techniques used is regression analysis through these stages:

1. Stage 1, a simple regression conducted to test whether there is direct influence between dividend policy and stock prices, hence it solves  $H_1$ .
2. Stage 2, multiple regression conducted to test whether variable independent that predict to influence stock price except dividend policy has significant influence.
3. Stage 3, multiple regression conducted with Z or DPR as moderating variables as the fourth variable has influences to stock price.
4. Stage 4 a test with Moderated Regression Analysis (MRA) conducted by multiplied DPR as moderating variable with other predictor variable, and significance test conducted to test whether there are influence from moderating variable.

The equation to test hypotheses are:

To test  $H_1$ , we use equation 1:

$$Y_i = \alpha + \beta_1 X_1 + \epsilon \dots \dots \dots (1)$$

To test  $H_2$  we use equation 2

$$Y_i = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \dots \dots \dots (2)$$

To see the type of moderation, or test  $H_3$  the following equation is used:

$$Y_i = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 Z + \epsilon \dots \dots \dots (3)$$

If the results of the tests carried out show that the observed variables are moderating variables, the equations to be analysed to test  $H_4$ ,  $H_5$  and  $H_6$  are as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 Z + \beta_5 X_1 * Z + \beta_6 X_2 * Z + \beta_7 X_3 * Z + \epsilon \dots \dots \dots (4)$$

Where:

Y: dependent variable (stock price/P)

$\alpha$ : constant value

X: independent variable (PBV, PER, and EPS)

$\beta$ : regression coefficient value

Z: moderating variable (dividend policy/DPR)

e: Error

To test the existence of the moderating variable whether it is true as a pure moderator, quasi moderator, predictor moderator, or homologizer moderator, it can be observed with the following criteria (Sharma et al., 1981):

1. Pure moderator is a variable that moderates the relationship between the independent and dependent variables, where the pure moderator variable interacts with the independent variable without being an independent variable. If the effect of Z on Y in the first equation is not significant, while the interaction of  $Z * X_1$  in the second equation is significant.
2. Quasi moderator is a variable that moderates the relationship between the independent variable and the dependent variable, where the pseudo moderating variable interacts with the dependent variable as well as being the independent variable. If the effect of Z on Y in the first equation is significant and the influence of  $Z * X_1$  in the second equation is also significant.
3. Predictor moderator, if the effect of Z on Y in the first equation is significant, while the interaction of  $Z * X_1$  in the second equation is not significant. This means that this variable only acts as an independent variable in the relationship model that is formed.
4. Homologizer moderator, if the effect of Z on Y in the first equation and the effect of  $Z * X_1$  in the second equation, none of them are significant. That is, this variable does not interact with the independent variable and also has no relationship to the dependent variable.

#### Test Statistics t

Statistically t test is a test used to see how far the influence of the independent variable with the dependent variable. The t-statistical test basically shows the magnitude of the influence of an independent variable in explaining changes in the dependent variable. The significance level for this test is 0.05 ( $\alpha = 5\%$ ). Accept or reject the hypothesis with the following conditions:

- a. If the significant value is  $< 0.05$  then the hypothesis is rejected. This means that partially the independent variable has no significant effect on the dependent variable.
- b. If the significant value is  $> 0.05$  then the hypothesis is accepted. This means that partially the independent variable has a significant effect on the dependent variable

#### Interaction Test/Moderated Regression Analysis (MRA)

Moderated Regression Analysis (MRA) is a special application of multiple linear regression in which it contains elements of interaction resulting from the multiplication of two or more independent variables. Decision making is based on the influence of the relationship between the independent variable and the dependent variable, which can be seen from the significance level of 0.05:

- a. If the significant value is  $< 0.05$  then the hypothesis is rejected.
- b. If the significant value is  $> 0.05$  then the hypothesis is accepted.

## RESULT AND DISCUSSION

To find out the effect of dividend policy on stock prices, stage 1 result can be seen in a review of the following results:

**Table 1. Output SPSS for Eq. 1**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4795.830	1426.448		3.362	.001
	Z_DPR	122.727	31.721	.270	3.869	.000

a. Dependent Variable: Y\_HARGA

It shows that without the influence of other variables, as interaction between other independent variables that assume has influence on stock price, DPR as indicator for dividend policy, and independent variable has a significant positive effect on the price variable, this indicates an increase in dividend policy will increase stock prices. As the result positive and significant, it is assumed that investor react on growth signal that company sent through dividend.

**Table 2. Output SPSS for Eq. 2**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1279.584	792.677		1.614	.108
	X1_PBV	73.934	30.295	.115	2.440	.016
	X2_PER	1.100	6.413	.008	.172	.864
	X3_EPS	13.643	.863	.748	15.818	.000

a. Dependent Variable: Y\_HARGA

Table 2 shows interaction between independent variable that used to measure a company growth that perceived by investor, which are PBV, PER and EPS. The influence of these independent variable such as PBV, PER and EPS, although, it appears that PER has no effect on stock prices. All variables show positive values indicating a unidirectional change between the independent and dependent variables. As PBV shows positive and significant result, it reflects that an increase in company's value will increasing stock price, as PER did not shows significant, PER will only valuable in order of if we compare it with industry as it is a signal of relatively under pricing stock. The signal of under-pricing stock often make investor react and buy the stock.

**Table 3. Output SPSS for Eq. 3**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	609.371	1009.228		.604	.547
	X1_PBV	64.370	31.569	.100	2.039	.043
	X2_PER	.361	6.448	.003	.056	.955
	X3_EPS	13.408	.890	.735	15.071	.000
	Z_DPR	24.888	23.212	.055	1.072	.285

a. Dependent Variable: Y\_HARGA

The table above shows as dividend policy included it has no significance effect. As DPR treated being independent variable it does not show a significant effect, although in first equation it shows a significant effect.



**Table 4. Output SPSS for Eq. 4**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.377	1059.895		.002	.998
X1_PBV	-15.262	31.771	-.024	-.480	.632
X2_PER	-2.137	5.867	-.016	-.364	.716
X3_EPS	16.992	1.289	.931	13.186	.000
Z_DPR	-20.975	40.766	-.046	-.515	.608
MODERASI_1	3.998	.938	.287	4.264	.000
MODERASI_2	1.362	1.194	.111	1.140	.256
MODERASI_3	-.075	.023	-.276	-3.317	.001

a. Dependent Variable: Y\_HARGA

By including DPR as moderating variable, it appears that PBV has no significant effect on stock price. The only independent variable that consistently significance during stages of test is EPS. A growth signal from company construe by information sent by an indication there is an increased in profit gained within the year. On the other hand, PER consistently not significant, it assumed that investors are not react as it increases or decreases. The signal of under-pricing stock does not influence investors, as it assumed growth become their main concern.

The interaction relation between dividend policy as moderating variable can be stated as follows: 1) DPR as a moderating predictor for PBV, it means that it only acts as an independent variable in relationship model formed. 2) DPR as moderating variables and PER shows homologizer predictor, it does not interact with the independent variable and has no significant relationship with the dependent variable. 3) DPR and EPS shows a quasi predictor or variable that moderates the relationship between the independent variable and the dependent variable, the pseudo moderating variable interacts with the independent variable as well as being an independent variable. Although there is no variable that shows a predictor moderating relationship or by including dividend policy it can change an significant variable to be insignificant, but by looking at the existence of quasi moderation in which the EPS variable interacts with the DPR variable. It shows that there is a price response formed in the market based on two main indicators, namely EPS which gives an indication of the growth of the company and the DPR which shows an increase in the dividend policy carried out by the company.

By looking at these results, it appears that investors catch the signal given by the company by its action of dividend policy as an indication of the company's growth. Although, this signal is not entirely true, it needs a further investigation to show whether any possibility of information asymmetry applied between investors and issuers. If there is an indication of high asymmetric information applied, the company has a tendency to pay dividends although it may not reflect the growth of company (Tirole, 2006).

## CONCLUSION

From the previous discussion, it can conclude that the results of research to test dividend policy as a moderating variable in high prospect perceived company in LQ 45 index shows several patterns, which are:

1. PBV and PER at summary performance of LQ 45 index shown align with share prices, as it shows ratio that reflect how investor perceive stock price based on it EPS and book value. However, DPR and EPS located in financial data and ratios provided by IDX as it shows the number of shares available as denominator.
2. As it tested by simple regression, there is a significant effect between DPR and Stock Price, hence, as an increases on DPR results an increase on Stock Price. To test other how DPR interact with other variables another regression has been done. By excluding dividend policy, it shows that PBV and EPS has significant effect and PER irrelevant. Furthermore, by including

dividend policy as its moderating variable, significance effect that previously shown become irrelevance. If dividend is the only signal taken by investors, the results should be opposite.

3. To classify dividend policy as moderating variable, MRA regression taken an its result shows there is pure, quasi, an homologizer moderator. There is no predictor moderator that has its potential to be another intervening or independent variable. Thus, dividend policy has fulfilled its role as moderating variable.

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