

**Financial Performance, Capital Structure, and Firm's Value: The Moderating Role of Dividend Policy****N Rusnaeni<sup>1</sup>, Hari Gursida<sup>2</sup>, Hendro Sasongko<sup>2</sup>, Dani Rahman Hakim<sup>1</sup>**<sup>1</sup>Universitas Pamulang, <sup>2</sup>Universitas Pakuan, Indonesia

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**Abstract**

This study examines the effect of financial performance and capital structure on firm value with dividend policy as a moderating variable. The sample in this study was 13 property and real estate sector companies from 2011 to 2020, with a total of 130 observations. This study found that financial performance and capital structure positively affect firm value. Meanwhile, this study finds that dividend policy cannot moderate the effect of financial performance and capital structure on firm value. The results of this study indicate that property and real estate investors still prioritize the firm's financial performance. Investors are relatively more cautious in investing in property and real estate sector companies even though the dividends offered are pretty high. Thus, property and real estate sector companies need to be more creative in improving their financial performance and obtaining resources to develop their business.

**Introduction**

Global uncertainty has slowed down the growth of the property and real estate sector in Indonesia. At the beginning of 2022, the real estate sector companies listed on the Indonesian stock exchange were depressed by 4.85%. This condition shows that people's purchasing power has not fully recovered from the Covid 19 pandemic. The depressed real estate firm shares will impact the firm's value. The low value of these shares may make the Indonesian property and real estate sector hard to develop.

Apart from the Covid-19 pandemic, the weakening of Indonesia's real estate sector was also assessed because the price of building raw materials was getting higher. This condition resulted in higher construction costs. The increase in these costs results in the firm's financial performance becoming lower. However, can the financial performance of the property and real estate sector companies affect the firm's value? This research attempts to answer this question.

Regarding the effect of financial performance on firm value, the signaling theory of Lintner (1956) indicates that stock prices will be determined by financial performance. The signaling theory states that financial performance is one of the signals given by the firm to investors. The higher a firm's financial performance, the higher its share price is considered.

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Meanwhile, stock prices and firm value also have a similar relationship. The higher the stock price, the higher the value of the firm. The stock price itself has been used as a measure to determine stock prices. In other words, the stock price can measure a firm's value. By using this signaling theory, several researchers proved that financial performance affects firm value.

Studies conducted by [Rizqia et al. \(2013\)](#), [Wahyuni et al. \(2013\)](#), [Pangulu \(2014\)](#), [Isidro & Sobral \(2014\)](#), [Nagaraja & Vinay \(2016\)](#), [Marsha & Murtaqi \(2017\)](#), [Dewi & Abundanti \(2019\)](#), [Sari & Ardiansari \(2019\)](#), [Kartika & Utami \(2019\)](#), [Santosa et al. \(2020\)](#), [Utami & Hasan \(2021\)](#), [Kristi & Yanto \(2020\)](#), [Lukman & Tanuwijaya \(2021\)](#), [Rusnaeni et al. \(2022\)](#), and [Markonah et al. \(2020\)](#) stated that financial performance affects firm value positively. However, these studies use different proxies in measuring financial performance. For instance, [Sari & Ardiansari \(2019\)](#) found that financial performance positively affects firm value if measured by ROE. On the other hand, if ROE measures financial performance, it does not affect firm value.

In addition to financial performance, another aspect that determines the firm's value is the capital structure. Several studies such as [Hermuningsih \(2016\)](#), [Natsir & Yusbardini \(2017\)](#), [Uzliawati et al. \(2018\)](#), [Setiawanta et al. \(2019\)](#), [Hirdinis \(2019\)](#), [Markonah et al. \(2020\)](#), [Purwanti \(2020\)](#), [Sari & Sedana \(2020\)](#), [Suzulia et al. \(2020\)](#), and [Suzulia et al. \(2020\)](#) found a positive effect of capital structure on firm value. Most studies measure capital structure with debt to equity ratio (DER). However, many studies also used other measurements, such as the debt-to-asset ratio (DAR).

The relationship between financial performance and capital structure on firm value is not always robust. Some other studies, such as those conducted by [Mai \(2013\)](#) and [Velnampy et al. \(2014\)](#), found that financial performance negatively affected firm value. Besides, [Siahaan \(2013\)](#) found no evidence that capital structure affects firm value. Therefore, this study attempts to fill these gaps by using a dividend policy to moderate the effect of financial performance and capital structure on firm value in Indonesian construction and real estate companies. As far as we know, no studies specifically employed dividend policy to moderate the effect of financial performance and capital structure on the firm value of Indonesian property and real estate sector companies.

This study employed dividend policy as a moderating variable because of the possibility that investors will no longer use financial performance and capital structure as a signal. If not accompanied by dividend policy, the amount of financial performance and capital structure is considered less able to affect the firm value. In this context, when referring to [Baron & Kenny \(1986\)](#), the moderator variable changes the strength in the relationship between the independent variable and the dependency. Therefore, the moderator variable in the context of this study is dividend policy which is considered to maximize or minimize the effect of financial performance and capital structure on firm value.

## **Literature Review Financial performance and firm value**

Studies on financial performance and firm value are not far from signaling theory. Signal theory was introduced by [Lintner \(1956\)](#), which states that the firm's stock price will change when there is a change in dividend payments. Increasing the dividends provides information (signs) for investors that the firm has good prospects. Signaling theory is also an action taken by the firm's management that will provide instructions for investors about how management views the firm's prospects. On that basis, financial performance is one of the firm's main signals for potential investors.

Referring to the signaling theory of [Lintner \(1956\)](#), the firm's financial performance will determine stock prices. In this context, financial performance is one of the signals the firm gives to investors and potential investors to determine their investment decisions. Based on this, the firm's value is related to the stock price. The higher the stock price, the higher the value of the firm. The stock price itself has been used as a measure to determine stock prices. In other words, the stock price can measure a firm's value. Based on this,

[Vasconcellos & Criso \(2011\)](#) stated a reasonably strong relationship between financial performance and firm value.

According to [Sujoko & Soebiantoro \(2007\)](#), firm value can be understood as investors' perceptions of the firm's level of success regarding its share price. The measure of management success will ultimately lead to the stock price and, of course, the firm's value. On that basis, it is still essential to study stock prices and firm value. Many studies have examined the determinants of firm value, whether in Indonesia or various countries in other parts of the world.

However, although many studies have examined firm value, there are still inconsistencies between the results. By referring to the signaling theory of [Lintner \(1956\)](#), several studies have found that firm value is affected by financial performance. Some researchers such as [Rizqia et al. \(2013\)](#), [Wahyuni et al. \(2013\)](#), [Pangulu \(2014\)](#), [Isidro & Sobral \(2014\)](#), [Nagaraja & Vinay \(2016\)](#), [Marsha & Murtaqi \(2017\)](#), [Dewi & Abundanti \(2019\)](#), [Sari & Ardiansari \(2019\)](#), [Kartika & Utami \(2019\)](#), [Santosa et al. \(2020\)](#), [Utami & Hasan \(2021\)](#), [Kristi & Yanto \(2020\)](#), [Lukman & Tanuwijaya \(2021\)](#), [Rusnaeni et al. \(2022\)](#), and [Markonah et al. \(2020\)](#) proves the effect of financial performance on firm value.

Some of the most widely used proxies to test the effect of financial performance on firm value are return on assets (ROA) and return on equity (ROE). Several studies, such as [Pangulu \(2014\)](#), [Pamburai et al. \(2015\)](#), and [Marsha & Murtaqi \(2017\)](#), succeeded in proving that ROA has a positive effect on firm value. Meanwhile, several researchers, such as [Sari & Ardiansari \(2019\)](#), [Cahyaningrum & Antikasari \(2017\)](#), and [Putri & Rachmawati \(2018\)](#), used ROE to examine the effect of financial performance on firm value. However, some other studies state something different. The research of [Velnamby et al. \(2014\)](#), [Mai \(2013\)](#), and [Santosa et al. \(2020\)](#), for example, actually mentions that profitability harms firm value. Therefore, the effect of financial performance on firm value needs to be re-evaluated according to the characteristics of the firm's sector

### Structure capital and financial performance

Agency theory from [Jensen & Meckling \(1976\)](#) indicates that a firm with a higher capital size will have a higher agency cost. One of the most abundant sources of capital is debt. More capital is financed by debt, and it can affect firm value. In this context, the effect of capital structure can be positive or negative on firm value. If the size of the capital structure financed by debt can promote better supervision, the effect will be positive. Meanwhile, suppose a better supervisory system does not balance the size of the capital structure financed by debt. In that case, it can negatively affect firm value.

The size of the capital structure allows the firm to improve its financial performance. In addition, the size of the capital structure is also considered to make it easier for companies to innovate and provide positive input for investors. However, on the other hand, if the capital structure comes from too large liabilities, it may increase the burden of paying dividends. However, the magnitude of the level of the capital structure obtained from debt always affects the number of dividend payments. If management can provide certainty to investors, the capital structure owned will be reused to increase firm profits.

Several studies use DER as a proxy for measuring capital structure. For example, research by [Rizqia et al. \(2013\)](#), [Natsir & Yusbardini \(2017\)](#), [Simorangkir \(2019\)](#), [Markonah et al. \(2020\)](#), [Purwanti \(2020\)](#), [Hasanudin et al. \(2020\)](#), [Agung et al. \(2021\)](#), and [Bahraini et al. \(2021\)](#) found the effect of capital structure proxied through DER on firm value. Some other studies, for example, those conducted by [Sari & Ardiansari \(2019\)](#), [Salim & Susilowati \(2020\)](#), [Handayani \(2020\)](#), and [Putri & Rahyuda \(2020\)](#), did not find

any effect of DER on firm value. On the contrary, research by [Kristi & Yanto \(2020\)](#) found that capital structure harms the firm value.

### **The moderating role of dividend policy**

Dividend policy in practice requires the role of firm management. Management has the power to make decisions related to firm activities, usually done by forming strategic decision-making ([Papadakis et al., 1998](#)). According to the signaling theory, a dividend policy determines the firm's stock price and value. The size of the dividend policy will generate interest for investors to invest in a firm. The increasing demand for firm shares can be the driving force for the increase in firm value.

Funding owned by the firm can encourage an increase in firm value ([Lukman & Tanuwijaya, 2021](#)). Several studies, including those conducted by [Ardiansari \(2016\)](#), [Muhammad \(2016\)](#), [Suffah & Riduwan \(2016\)](#), and [Achmad & Amanah \(2014\)](#), found that dividend policy variables as measured by DIVPR had a positive effect on firm value. The positive effect of DIVPR on firm value opens up opportunities for the use of DIVPR as a moderating variable. It is because, when referring to [Baron & Kenny \(1986\)](#), moderator variables logically and theoretically need to have a direct relationship to the dependent variable. The moderator variable will be able to modify the effect of the independent variable on the dependent, either maximizing or minimizing it.

In this study, DIVPR is used as a moderating variable because the financial performance and capital structure will not be optimal in attracting investors if it is not balanced by dividend policy. However, on the other hand, if the firm lacks financial performance and adequate capital structure, then the moderating role can become less meaningful. Research by [Qodir et al. \(2016\)](#) has attempted to examine the moderating role of dividend policy in property and real estate companies. However, [Qodir et al. \(2016\)](#) did not include the capital structure in their research model. The firm's capital structure is considered very important in determining firm value. Based on this, this study seeks to fulfill it.

### **Method**

This study uses panel data from 13 property and real estate sector companies from 2011 to 2020 with 130 observations. The sampling method was carried out purposively, considering the availability of data in the financial statements. In this study, the dependent variable to be tested is the firm value measured using Tobin's Q (TOBIN) ratio. The explanatory variables in this study are financial performance and capital structure. Meanwhile, this study uses dividend policy as a moderating variable. Financial performance in this study is proxied by return on assets (ROA) and return on equity (ROE). Structure capital is proxied by debt to equity ratio (DER), while dividend policy is through dividend payout ratio (DIVPR).

Tobin's Q in this study was obtained using the following formula:

$$\text{TOBIN} = (\text{MVS} + \text{D}) / \text{TA} \quad (1)$$

where, TOBIN is the value of Tobin's Q, which is the market value of the firm's assets and the replacement value of those assets. MVS is the market value of all outstanding shares, while TA is the total assets. As for D, it is the debt obtained from the accounting value of the current firm liabilities (AVCL) minus the accounting value of the current firm assets (AVCA) plus the accounting value of the firm long-term debt (AVLTD), while TA is the total assets.

Furthermore, the measurement of ROA and ROE in this study are as follows:

$$\text{ROA} = \frac{\text{NIAT}}{\text{TA}} \times 100\% \quad (2)$$

where, NIAT is Net Income After Tax while TA is total assets Then,

ROE is calculated as follows:

$$\text{ROE} = \frac{\text{NP}}{\text{SE}} \times 100\% \quad (3)$$

where, NP is Net Profit, while SE is Shareholder Equity or shareholder equity.

This study also uses capital structure as an explanatory variable proxied by DER. The calculation is as follows:

$$\text{DER} = \frac{\text{TD}}{\text{SE}} \times 100\% \quad (4)$$

where, TD is Total Debt, while SE is Shareholder Equity

The dividend policy as a moderating variable in this study is calculated as follows:

$$\text{DIVPR} = \frac{\text{DD}}{\text{EAT}} \times 100\% \quad (5)$$

where, DD stands for distributable dividend, while EAT stands for earnings after tax

The regression model built in this study is as follows:

$$\begin{aligned} \text{TOBIN}_{it} = & \alpha + \beta_1 \text{ROA}_{it} + \beta_2 \text{ROE}_{it} + \beta_3 \text{DER}_{it} + \beta_4 \text{DIVPR}_{it} + \beta_5 (\text{ROA}_{it} * \\ & \text{DIVPR}_{it}) + \beta_6 (\text{ROE}_{it} * \text{DIVPR}_{it}) + \beta_7 (\text{DER}_{it} * \text{DIVPR}_{it}) + \varepsilon \end{aligned} \quad (6)$$

where,  $\alpha$  stands for constant, while  $\beta_{1-7}$  is the regression coefficient from each explanatory variable on sample  $i$  at year  $t$ .

This study composites financial performance variables with principal component analysis of ROA and ROE proxies to obtain more convincing results. One new variable emerged from the results of this PCA, namely PCAFP (principal component analysis of financial performance). Thus, the second model to be analyzed in this study is as follows:

$$\begin{aligned} \text{TOBIN}_{it} = & \alpha + \beta_1 \text{PCAFP}_{it} + \beta_2 \text{DER}_{it} + \beta_3 \text{DIVPR}_{it} + \beta_4 (\text{PCAFP}_{it} * \text{DIVPR}_{it}) + \\ & \beta_5 (\text{DER}_{it} * \text{DIVPR}_{it}) + \varepsilon \end{aligned} \quad (7)$$

where,  $\alpha$  is constant, while  $\beta_{1-5}$  stands for regression coefficient from each explanatory variable at sample  $i$  and year  $t$ .

Because this study employed panel data, three regression models will be generated if referring to Baltagi (2005). The first regression model is pooled OLS or known as the common effect model (CEM), the second model is the fixed effect model (FEM), and the third model is the random effect model (REM). This study uses the Chow, Hausman, and Breusch Pagan tests to determine the best regression model that will be used to test the hypothesis.

## Results

Table 1. Descriptive Statistics

	<b>DER</b>	<b>DIVPR</b>	<b>INST</b>	<b>MACA</b>	<b>ROA</b>	<b>ROE</b>	<b>TOBIN</b>
Mean	0.810	0.158	0.654	0.220	0.056	0.152	0.611
Median	0.712	0.120	0.632	0.222	0.046	0.109	0.549
Maximum	2	1.740	1	0.249	0.259	1.075	2.829

Minimum	0.056	0.001	0.297	0.174	-0.049	-0.378	-0.364
Std. Dev.	0.455	0.217	0.195	0.017	0.047	0.199	0.495
Skewness	0.557	3.819	0.193	-0.923	0.929	2.892	1.257
Kurtosis	2.497	24.73	1.780	3.708	4.94	13.497	6.319
Jarque-Bera	8.104	2873.613	8.876	21.174	39.071	778.171	93.882
Probability	0.017	0	0.012	0	0	0	0
Sum	105.336	20.531	85.049	28.563	7.276	19.81	79.409
Sum Sq. Dev.	26.739	6.098	4.91	0.035	0.289	5.113	31.634
Observations	130	130	130	130	130	130	130

Before analyzing the data using multiple regression, this study describes the condition of the data using descriptive statistical analysis. The results are as follows:

Notes: All variable units are ratio numbers. MACA is the market capitalization, and INST is the percentage of institutional shareholder ownership. These two variables will only be used as control variables in the robustness test

Table 1 shows that the firm value of property and real estate sector companies is below 1. This condition indicates that the firm's shares are undervalued or undervalued in the eyes of investors. The low value of Tobin's Q also indicates that the firm's asset management is less effective and can hamper investment growth. This condition is in line with the low ROA, or the rate of return on assets which is only 0.056 points, and the ROE, or the rate of return on capital which is only 0.152 points. Because of this, the firm's value and the financial performance of the property and real estate sector companies are still low.

Before estimating the model using the multiple regression method, it is necessary first to ascertain the possibility of multicollinearity problems. For this reason, this study correlates all independent variables as follows:

**Table 2. Correlation Matrix**

	ROE	ROA	MACA	INST	DIVPR	DER
ROE	1					
ROA	0.259	1				
MACA	-0.056	0.316	1			
INST	0.020	0.076	0.034	1		
DIVPR	-0.075	-0.074	0.014	0.094	1	
DER	-0.072	-0.01	0.214	-0.096	0.163	1

Notes: None of the proxies has a correlation value of more than 0.70, so the model built in this study can be stated to be free from multicollinearity problems.

Furthermore, the results of the multiple regression analysis of model 1 in this study are as follows:

**Table 3. Multiple Regression Results Model 1**

	CEM	FEM	REM
Constant	0.017 (0.108)	-0.175 (0.157)	-0.002 (0.114)
ROA	4.001*** (0.901)	5.572*** (1.224)	4.255*** (0.941)
ROE	-0.184 (0.242)	-0.120 (0.244)	-0.172 (0.238)

DER	0.568*** (0.100)	0.677*** (0.148)	0.573*** (0.105)
ROA x DIVPR	1.670 (5.169)	-0.764 (6.133)	1.025 (5.239)
ROE x DIVPR	-1.230 (1.287)	-1.334 (1.342)	-1.285 (1.272)
DER x DIVPR	-0.266 (0.360)	-0.107 (0.367)	-0.226 (0.356)
DIVPR	-0.078 (0.479)	-0.046 (0.490)	-0.074 (0.472)
R-squared	0.399	0.483	0.381
S.E. of regression	0.394	0.385	0.387
F-statistic	11.574 (0.000)	5.421	10.750
Durbin-Watson stat	0.763	0.986	0.795
Jarque Bera	32.612 (0.000)	57.050 (0.000)	30.365 (0.000)
Chow	-	1.500 (0.134)	-
Hausman	-	-	8.673 (0.277)
Breusch Pagan	2.881 (0.089)	-	-

Notes: \*significant at 0.10, \*\*significant at 0.05, \*\*\*significant at 0.01. Dependent Variable = Tobin's Q. Standard errors are in parentheses

Table 3 shows that the best-selected regression model for this model 1 is CEM or pooled OLS. From the pooled OLS model, it can be seen that if it is proxied through ROA, financial performance is proven to have a positive and significant effect on firm value. The capital structure proxied through DER also has a positive and significant effect on firm value. Explanatory and other variables such as ROE and DIVPR are not proven to affect firm value. Meanwhile, table 3 also does not show the role of DIVPR in moderating the effect of ROA, ROE, and DER on firm value. If referring to [Baron & Kenny \(1986\)](#), if the multiplication result between the independent variable and the moderator variable does not significantly affect the dependent variable, then there is no moderating role.

The results of the multiple regression analysis for model 2 in this study are as follows:

**Table 4. Multiple Regression Results Model 2**

	REM		
	CEM	FEM	REM
Constant	0.188 (0.100)	0.117 (0.148)	0.188 (0.099)
PCAFP	0.114** (0.041)	0.117** (0.051)	0.114** (0.040)
DER	0.609*** (0.107)	0.706*** (0.161)	0.609*** (0.106)
PCAFP x DIVPR	-0.202 (0.330)	-0.427 (0.272)	-0.202 (0.205)
DER x DIVPR	-0.415 (0.283)	-0.337 (0.396)	-0.415 (0.382)
DIVPR	-0.103 (0.810)	-0.256 (0.473)	-0.103 (0.428)
R-squared	0.295	0.281	0.295

S.E. of regression	0.423	0.419	0.423
F-statistic (Prob)	10.412 (0.000)	3.969 (0.000)	10.412 (0.000)
Durbin-Watson stat	0.688	0.756	0.688
Jarque Bera (Prob)	25.099 (0.000)	19.828 (0.000)	23.012 (0.000)
Chow	-	1.200 (0.291)	-
Hausman	-	-	8.034 (0.154)
Breusch Pagan	14.013 (0.000)	-	-

Notes: \*significant at 0.10, \*\*significant at 0.05, \*\*\*significant at 0.01. Dependent Variable = Tobin's Q. Standard errors are in parentheses

Table 4 shows that the best regression model is REM. Based on the REM model, PCAFP, a composite of financial performance variables, positively affects firm value. Likewise, the capital structure also has a positive effect on firm value. However, DIVPR in model 2 is also not proven to play a role in moderating the effect of financial performance and capital structure on firm value.

### Discussion The effect of financial performance on firm value

This study found a positive effect between financial performance on firm value. However, only the ROA proxy has been shown to affect firm value positively. Meanwhile, if viewed from table 4, financial performance using composite variables from ROA and ROE is proven to affect firm value. This result strengthens the indication that investors in the property and real estate sector tend to make the firm's financial performance a top priority. Suppose the firm is less than optimal in converting its assets into profit. In that case, investors will view the firm less well, even if the value of the firm's assets is high.

The findings in this study strengthen the relevance of [Lintner's \(1956\)](#) signaling theory which indicates that financial performance signals investors to increase firm value. The higher the financial performance of the firm, the value of the firm will be higher, along with the increasing demand for the firm's shares. The findings in this study also tend to support the argument of [Freeman \(2010\)](#), which states that the firm's high financial performance is part of efforts to establish good relationships with stakeholders.

The findings of this study are relatively in line with previous research conducted by [Rizqia et al. \(2013\)](#), [Wahyuni et al. \(2013\)](#), [Pangulu \(2014\)](#), [Isidro & Sobral \(2014\)](#), [Nagaraja & Vinay \(2016\)](#), [Marsha & Murtaqi \(2017\)](#), [Dewi & Abundanti \(2019\)](#), [Sari & Ardiansari \(2019\)](#), [Kartika & Utami \(2019\)](#), [Santosa et al. \(2020\)](#), [Utami & Hasan \(2021\)](#), [Kristi & Yanto \(2020\)](#), [Lukman & Tanuwijaya \(2021\)](#), [Rusnaeni et al. \(2022\)](#), and [Markonah et al. \(2020\)](#). They explicitly mention that financial performance has a positive effect on firm value. On that basis, the firm's financial performance is still the primary consideration for investors in investing in a firm, especially property and real estate sector companies.

The findings of this study also tend to be in line with the research conducted by [Martha et al. \(2018\)](#), [Susanti & Restiana \(2018\)](#), [Haryono & Paminto \(2015\)](#), [Sucuahi & Cambarihan \(2016\)](#), [Mudjijah et al. \(2019\)](#), and [Pratiwi et al. \(2020\)](#). A positive effect on financial performance shows that investors still prioritize a firm's profitability in investing. Moreover, investors are more careful in making investment decisions during the current pandemic and economic uncertainty. Investors tend to examine the firm's financial condition more deeply, especially its profitability.

### **The effect of capital structure on a firm's value**

This study succeeded in proving the effect of capital structure on firm value. This positive effect, so an increase in the capital structure can encourage an increase in firm value. The capital structure is proxied by DER so that the size of the capital structure indicates the amount of liability. The size of the capital structure derived from this liability can increase investor interest. In other words, the amount of this liability is not directly proportional to the firm's profitability. The firm can still generate commensurate profits even though the amount of its capital structure comes from liabilities.

The effect of capital structure on firm value in this study indicates that the greater the liability owned triggers better control from shareholders. It is related to agency theory which states that the larger the firm and the higher the capital structure, the higher the control and agency costs. The existence of better control makes the firm more effective in generating profits. The findings of this study tend to be in line with the study conducted by [Rizqia et al. \(2013\)](#), [Natsir & Yusbardini \(2017\)](#), [Simorangkir \(2019\)](#), [Markonah et al. \(2020\)](#), [Purwanti \(2020\)](#), [Hasanudin et al. \(2020\)](#) [Agung et al. \(2021\)](#), and [Bahraini et al. \(2021\)](#). They found the effect of capital structure on firm value.

### **The moderating role of dividend policy**

This study finds that dividend policy does not have a moderating role in moderating the effect of financial performance and capital structure on firm value. Referring to [Horne & Wachowicz \(2021\)](#), a dividend policy is a financial function that cannot be separated from the firm's funding policy. That is, the amount of dividends results from the size of the financial performance and capital structure. Moreover, the optimal dividend policy in a firm is a policy that creates a balance between current dividends and future growth to maximize share prices.

This study strengthens the findings of [Vedy et al. \(2016\)](#), who found that DIVPR harmed firm value. In other words, dividend policy is no longer the central aspect affecting investors' decisions. Investors who invest in property and real estate sector companies tend to consider aspects of the firm's financial performance. If referring to the findings of [Ariyanto & Wahyudin \(2016\)](#), dividend policy can moderate the free cash flow of debt policy. That is, dividend policy can affect the capital structure, not the other way around.

This study tends to support the findings of [Qodir et al. \(2016\)](#) that dividend policy cannot moderate the effect of financial performance on firm value. This condition further

strengthens the assumption that the value of the firm and the share price of companies in the property and real estate sectors tend to be more determined by the economic situation. On that basis, property and real estate sector companies must prioritize achieving their financial performance by increasing firm value.

### Robustness Checks

This study checks robustness by including firm size, the covid 19 pandemic, and institutional ownership as control variables in the research model. Firm size is proxied through market capitalization (MACA), while the percentage of institutional shareholders represents institutional ownership. Covid 19 is measured categorically by giving code 1 in 2020. The results of the robustness test are as follows:

**Table 5. Multiple Regression Results Model 1 With Control Variables**

	CEM	FEM	REM
Constant	-0.287 (0.521)	-1.191 (1.091)	-0.340 (0.597)
ROA	3.500** (1.018)	5.016** (1.503)	3.771** (1.112)
ROE	-0.089 (0.270)	-0.035 (0.281)	-0.083 (0.270)
DER	0.525*** (0.103)	0.686*** (0.158)	0.537*** (0.119)
DIVPR	-0.124 (0.490)	-0.056 (0.503)	-0.129 (0.489)
ROA * DIVPR	0.847 (5.242)	-1.423 (6.263)	-0.048 (5.426)
ROE * DIVPR	-0.779 (1.334)	-0.799 (1.445)	-0.845 (1.339)
DER * DIVPR	-0.188 (0.374)	-0.079 (0.382)	-0.136 (0.373)
INST	-0.247 (0.182)	0.010 (0.269)	-0.217 (0.197)
MACA	2.370 (2.329)	4.643 (4.825)	2.410 (2.695)
PAND	-0.128 (0.167)	-0.082 (0.645)	-0.123 (0.168)
R-squared	0.416	0.489	0.389
S.E. of regression	0.393	0.388	0.386
F-statistic	8.488 (0.000)	4.661 (0.000)	7.581 (0.000)
Durbin-Watson stat	0.796	0.941	0.825
Jarque Bera	46.323 (0.000)	71.480 (0.000)	52.124 (0.000)
Chow	-	1.275 (0.243)	-
Hausman	-	-	5.190 (0.636)
Breusch Pagan	3.526 (0.060)	-	-

Notes: \*significant at 0.10, \*\*significant at 0.05, \*\*\*significant at 0.01. Dependent Variable =

Tobin's Q. Standard errors are in parentheses

Table 5 shows that the best regression model is CEM. This result follows the estimation of the primary model of this study. Based on table 5, ROA and ROE have a positive effect on firm value. Therefore, the effect of ROA and ROE can be stated as robust after controlling for institutional ownership, firm size, and the covid 19 pandemic. Table 5 shows an increase in the value of  $R^2$  in the CEM model compared to this study's primary model. An increase in the value of  $R^2$  shows that after controlling for firm size, institutional ownership, and the covid 19 pandemic, the model built has more goodness of fit.

### Conclusion

This study finds a positive effect of financial performance on firm value if the financial performance is proxied through ROA. This study also found a positive and significant effect of capital structure proxied through DER on firm value. The effect of ROA and DER on firm value in this study is robust after controlling for firm size, institutional ownership, and the Covid 19 pandemic. However, this study failed to find a role for dividend policy in moderating the effect of financial performance and capital structure on firm value. The results of this study indicate that property and real estate sector investors still prioritize the firm's financial performance. Investors are relatively more cautious in investing in property and real estate sector companies even though the dividends offered are pretty high. It is because Indonesia's property and real estate sector tends to be unstable due to people's purchasing power, which has not fully recovered after facing the Covid 19 pandemic. Thus, property and real estate sector companies need to be more creative in improving their financial performance and obtaining funding to develop their business. This research's main weakness is that the data is not normally distributed, even though the best regression model chosen is pooled OLS. On that basis, this study failed to meet the BLUE (best linear unbiased estimator) assumption. However, not a few studies ignore this assumption in panel data. The reason is that it is challenging to find normally distributed data in a panel format, especially if the data is measured using ratio numbers. One effort that can be used to anticipate this is to use dynamic panel analysis. Therefore, further study is expected to improve the weaknesses of this study.

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