The effect of dividend payouts on firm value: The moderating role of institutional investors

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ABSTRACT

This paper investigates the relationship between dividend payouts and firm value. The study also shows how this relationship is moderated by institutional investors. Our sample consists of 136 observations consisting of 34 manufacturing companies listed on the Indonesia Stock Exchange over the period 2018-2021. The results of multiple linear regression and moderating regression show that the dividend payout ratio positively affects firm value and institutional investors increase the positive effect of dividend payouts on firm value.

Keywords: Dividend signaling theory; agency problems; dividends; institutional investors; firm value

1. Introduction

The main goal of a firm according to the theory of the firm is to increase the value of the firm (Salvatore, 2005). Firm value is an investor's perception of the firm's level of success which is often associated with stock prices (Sujoko and Soebiantoro, 2007). Firm value is very important because a high firm value will be followed by high shareholder wealth (Brigham and Houston, 2011). Therefore, maximizing the value of the firm is something that must be done for the firm.

To achieve the company's goal of maximizing firm value, companies need to maintain good relations with investors as evidenced in dividend payouts (Robinson, 2006; Iturriaga and Crisóstomo, 2010; Anton, 2016). According to dividend signaling theory, dividend payouts can be considered by the market as a positive signal of the firm's future performance (Bhattacharya, 1979; Miller and Rock, 1985; Charitou et al. 2010; Skinner and Soltes, 2011). The increase in dividend payouts by the firm to investors is considered good news, because it indicates the condition and prospects of the firm are in good condition, resulting in a positive reaction by investors. Conversely, a decrease in dividends will be considered a bad signal to the firm.

Previous research has confirmed the dividend signaling theory by showing the positive effect of dividend payouts on firm value (Baker and Powell, 1999; Suranta and Machfoedz, 2003; Omran and Pointon, 2004; Rizqia and Sumiati, 2013; Giriati, 2016; Sinaga et al., 2016; Agung et al., 2021; Kim, et al., 2021). However, these results are not in accordance with the studies of Sukmawardini and Ardiansari (2018), Husna and Satria (2019), and Husain and Sunardi (2020) which did not

find the effect of dividend payouts on firm value. Based on some of these studies, it can be seen that the results of studies that examine the effect of dividend payouts on firm value still provide different conclusions. Therefore, further research is needed to explain the causal relationship between dividend payouts and firm value.

Differences in research results related to the effect of dividend payouts on firm value may be due to agency problems. According to Jensen and Meckling (1976), the agency problems normally stem from the divergence of interests of managers who run the firms and those of outside investors who supply the capital. Rather than maximise shareholders' wealth, a manager might expropriate corporate resources for his own benefits such as spending company's cash for a lavish office, setting excessive salaries, and undertaking negative Net Present Value projects in order to build empires. Therefore, a monitoring mechanism is needed in every decision taken by the manager.

According to agency theory, believing that managers will always act in the interests of shareholders is difficult, so that supervision from shareholders is needed so that agency conflicts that occur can be reduced (Copeland and Weston, 1992:20). Jensen and Meckling (1976) state that institutional investors or institutional ownership have an important role in minimizing agency conflict through an effective monitoring mechanism in every decision taken by managers. Institutional ownership can be an optimal monitoring medium for managers because institutional ownership is involved in the company's strategic decision making and operates independently of the company's internal parties. Supervisory actions on company policies by institutional investors can encourage managers to focus more on company performance, and reduce managers' opportunistic actions (Cornett et al, 2006).

This study contributes to the literature on the effect of dividend payouts on firm value. To clarify the effect of dividend payouts on firm value, we add institutional investors or institutional ownership as a moderating variable which is expected to increase the positive effect of dividend payouts on firm value. Previous studies have examined the role of institutional investors in moderating the effect of dividend payouts on firm value in India (Seth and Mahenthiran, 2022), but no study has examined this relationship in Indonesian firms.

2. Literature Review and Hypothesis Development

Dividend is a proportional distribution of profits to shareholders according to the number of shares they own (Skousen et al., 2001:757). The distribution of profits is one of the motivations for investors to invest in the capital market. Ambarwati (2010:64) defines dividends as a payment made by the company to shareholders derived from income or earnings in the form of cash or shares.

Lintner (1956) and Walter (1963) developed the bird-in-hand theory which states that "bird in hand" is better than "bird in bush". Here, birds in the hand are considered as dividends, while birds in bush are assumed to be capital gains. Investors prefer dividends because dividends are less risky than capital gains. Therefore, investors will prefer dividends over capital gains (Amidu, 2007).

The bird-in-hand theory proposes that there is a positive relationship between dividend payouts and firm value. This theory is supported by the dividend relevance theory proposed by Gordon (1959).

Dividend relevance theory states that investors prefer the certainty of dividends compared to the uncertainty of future capital gains (Gordon, 1959). Hence both theories claim that investors' behavior are affected by dividend payouts i.e. firms that provide higher dividend payout are sought by investors and subsequently command a higher market price.

The positive effect of dividends on firm value is also supported by dividend signaling theory, which states that dividends signal some personal information about firm profitability (Poterba, 1983; Poterba and Summers, 1984). According to Dividend signaling theory, high dividend payouts are considered by the market as a positive signal of the company's future performance (Bhattacharya, 1979; Miller and Rock, 1985; Charitou et al., 2010; Skinner and Soltes, 2011). On the other hand, when companies cut their dividend payout, it has a negative effect on the reputation of the company because it gives a negative signal about the company to its shareholders. Previous research has confirmed the dividend signaling theory by showing the positive effect of dividend payouts on firm value (Baker and Powell, 1999; Suranta and Machfoedz, 2003; Omran and Pointon, 2004; Rizqia and Sumiati, 2013; Giriati, 2016; Sinaga et al., 2016; Agung et al., 2021; Kim, et al., 2021). Accordingly, we propose that.

H1. Dividend payouts is positively related to firm value.

As previously explained, agency problems are difficult to avoid. Agency theory explains that agency relationships arise when one or more people (principals) hire another person (agent) to provide a service and then delegate decision-making authority to the agent (Jensen and Meckling, 1976). Managers as agents who should make decisions to maximize the wealth of owners or shareholders, do not always act in the interests of the owners because managers as human beings are likely to act based on opportunistic nature, that is prioritizing their personal interests. Shareholders do not like the personal interests of managers because what the manager does will increase costs for the company (agency cost) which can reduce company profits so that it affects stock prices which ultimately has an impact on decreasing firm value (Jensen and Meckling, 1976).

One method to reduce agency problems is for large shareholders to exert their powers to control and monitor managers. Jensen and Meckling (1976) state that institutional investors or institutional ownership have an important role in minimizing agency conflict through an effective monitoring mechanism in every decision taken by managers. Institutional ownership is share ownership by other institutions, that is ownership by other companies or institutions. Holding sizable and stable shares in a company, institutional shareholders specialize in monitoring activities and play an important role in corporate governance (Gillan and Starks, 2003; Chen et al., 2007; Starks, 2009; Gillan et al., 2010).

High institutional ownership causes a high level of supervision by institutional investors on firm management (Cholifah and Nuzula, 2018). High supervision certainly makes management more careful in carrying out their duties, thus preventing managers from acting opportunistically. According to Sindhu et al. (2016) institutional ownership has a major influence on firm policy. This is because as an institution, they have a high number of shares, which leads to a stronger voice when making decisions.
Seth and Mahenthiran (2022) show that institutional ownership is proven to strengthen the positive effect of dividend payouts on firm value. Institutional investors combined with the credibility of

dividend payouts allow stakeholders to assess the sustainability of the company. Therefore, institutional ownership can increase the positive effect of dividend payouts on firm value. Thus, we expect that.

H2. The positive effect of dividend payouts on firm value is moderated by institutional ownership.

3. Research Methodology

3.1 Sample and variables

The dividend, financial data, and ownership data are collected from company annual reports. The object of research in this study is a manufacturing company listed on the Indonesia Stock Exchange over the period 2018-2021. Manufacturing companies were chosen as research objects because they are one of the sectors that support the country's economy a lot and are in great demand by investors as a place to invest.

The sampling method used purposive sampling with the following criteria:

- The company is not a state-owned company.
- The company uses Rupiah currency in its financial reporting.
- The company has complete annual reports and financial statements from 2018 to 2021.
- The company consistently pays dividends from 2018 to 2021.

From a total population of 171 manufacturing companies, 34 companies were used as research samples. The 34 companies consist of 12 basic and chemical industrial sectors, 4 miscellaneous industrial sectors, and 18 consumer goods industrial sectors. The data used in this study is panel data, which is a combination of cross section data (34 companies) and time series data (4 years, from 2018 to 2021). Therefore, the total number of observations is 136 observations.

The dependent variable in this study is the firm value calculated using the Tobin's Q ratio. Tobin's Q developed by James Tobin is the ratio of the market value of a company's tangible assets to the replacement cost, or whether the market value of a company is equal to the cost required to replace the company. It is calculated as the total assets of the firm minus the book value of equity plus the market value of a firm's equity divided by total assets (Seth and Mahenthiran, 2022).

The reason for using the Tobin's Q ratio is because the calculation of the Tobin's Q ratio is more rational considering that the liability element is also included as the basis for the calculation. This ratio is considered to be able to provide the best information, because Tobin's Q includes elements of debt and the company's share capital, not only ordinary shares and not only company equity but also all company assets. By including all of the company's assets, it means that the company is not only focused on one type of investor, namely investors in the form of shares but also for creditors because the source of financing for the company's operations is not only from equity but also from loans provided by creditors. Thus, we choose Tobin's Q as the dependent variable and as the proxy of firm value and label it as *Tobin_Q*.

The independent variables in this study are dividend payout and institutional ownership. The dividend payout variable is the dividend to net income ratio measured as the total equity dividend scaled by profit after taxes (*Div*). The level of institutional ownership is labeled *Inst_Own*, which

is calculated as the percentage of shares owned by all institutional investors. Similar to other studies (Seth and Mahenthiran, 2022), we employ as control variables that could have an impact on firm value the following: firm size (Size, proxied by natural log of total asset) and leverage (Lev, the total of long- and short-term debt scaled by total assets).

3.2 Models

Model 1 is the base model used to test the main effects of dividend payout and institutional ownership on firm value. Model 2 tests for the incremental effect of the two-way interaction between the dividend payout ratio and the institutional ownership (*Div*Inst_Own*).

$$Tobin\_Q_{it} = \alpha_0 + \alpha_1 Div_{it} + \alpha_2 Inst\_Own_{it} + \alpha_3 Size_{it} + \alpha_4 Lev_{it} + \varepsilon_{it} \quad (1)$$

$$Tobin\_Qit = \beta_0 + \beta_1 Div_{it} + \beta_2 Inst\_Own_{it} + \beta_3 Div_{it} * Inst\_Own_{it} + \beta_5 Size_{it} + \beta_6 Lev_{it} + \varepsilon_{it} \quad (2)$$

4. Results

4.1 Descriptive Statistics Analysis

Table 1 present the descriptive statistics for all variables employed in the study. It shows that the mean value of Tobin's Q in this study is 2.553, which is higher than the mean Tobin's Q of 1.801 reported by Tahu and Susilo (2017) for manufacturing companies listed on the Indonesia Stock Exchange over the period 2010-2014. For our sample of firms, the mean value of dividend payout ratio is 0.540 and the mean value of institutional ownership ratio is 0.697.

Table 1: Descriptive Statistics of Variables

	TOBIN_Q	DIV	INST_OWN	SIZE	LEV
Mean	2.553	0.540	0.697	12.744	0.338
Median	2.006	0.463	0.755	12.586	0.310
Maximum	18.355	1.767	0.997	14.565	0.773
Minimum	0.518	0.054	0.139	11.503	0.063
Std. Dev.	2.609	0.335	0.194	0.689	0.171
Observations	136	136	136	136	136

4.2 Partial Correlation Analysis

In table 2 we present the Pearson correlations between variables. According to our expectations and to results obtained in other studies we found a positive correlation coefficient between dividend payout ratio and firm value. We also found a positive correlation coefficient between institutional ownership ratio and firm value. Firm size and leverage are positively correlated with firm value. We also found a negative correlation between leverage and dividend payout ratio, which imply that more leveraged firms are likely to pay lower dividends. Given the fact that correlations among explanatory variables are below 0.5, the multicollinearity is not a concern.

Table 2: Correlation matrix of variables

	TOBIN_Q	DIV	INST_OWN	SIZE	LEV
TOBIN_Q	1				
DIV	0.348	1			
INST_OWN	0.095	0.064	1		
SIZE	0.178	0.123	-0.248	1	
LEV	0.266	-0.092	-0.115	0.362	1

4.3 Multiple linear regression analysis

Multiple linear regression analysis was conducted to see the linear effect of independent variables on dependent variable. The results of multiple linear regression analysis can be seen in table 3.

Table 3. Multiple Regression Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.395442	4.219581	-1.041677	0.2995
DIV	2.805761	0.613675	4.572062	0.0000
INST_OWN	1.610132	1.071440	1.502773	0.1353
SIZE	0.220279	0.325971	0.675762	0.5004
LEV	4.459401	1.275516	3.496153	0.0006
R-squared	0.224535			
Adjusted R-squared	0.200857			
F-statistic	9.482725			
Prob(F-statistic)	0.000001			

4.4 Moderation Regression Analysis

Moderation regression test was conducted to see the interaction of the moderating variable on the relationship between the independent variable (dividend payouts) and the dependent variable (firm value). The moderating variable in this study is institutional ownership. The results of the moderated regression analysis can be seen in table 4.

Table 4. Moderation Regression Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.074137	4.747309	0.226262	0.8214
DIV	-2.958205	2.508097	-1.179462	0.2404
INST_OWN	-3.250431	2.307271	-1.408777	0.1613
INTERACTION	8.155052	3.444399	2.367627	0.0194
SIZE	0.063326	0.327174	0.193555	0.8468
LEV	4.246019	1.256904	3.378157	0.0010
R-squared	0.256591			
Adjusted R-squared	0.227998			
F-statistic	8.974024			
Prob(F-statistic)	0.000000			

4.5 Hypothesis Testing

4.4.1 t Test

The results of the t-test in table 3 (model 1), show that the probability value of the dividend payout variable (*Div*) < critical probability value (α = 5%) which is 0.0000 < 0.05. This shows that dividend payout (*Div*) have an effect on firm value (*Tobin_Q*). The regression coefficient of 2.805761 indicates a positive direction, meaning that dividend payout (*Div*) have a positive effect on firm value (*Tobin_Q*). Based on these statistical results, the first hypothesis proposed is accepted.

Table 3 also shows the probability value of the institutional ownership variable (*Inst_Own*) > the critical probability value (α = 5%) which is 0.1353 > 0.05. This shows that institutional ownership (*Inst_Own*) has no effect on firm value (*Tobin_Q*).

Table 4 (model 2) shows that the interaction variable between dividend payout (*Div*) and institutional ownership (*Inst_Own*) < critical probability value (α = 5%) which is 0.0194 < 0.05. The model also shows a regression coefficient of 8.155052. These results prove that the second hypothesis proposed that institutional ownership (*Inst_Own*) has a positive moderating effect on the effect of dividend payout (*Div*) on firm value (*Tobin_Q*) is accepted.

4.4.2 F Test

The value of Prob(F-statistic) for multiple linear regression analysis (Table 3) is 0.000001 and the value of Prob(F-statistic) for moderated regression analysis (Table 4) is 0.00. Both values are smaller than 0.05, which means that both regression models have been included in the fit criteria. These results can also explain that dividend payout (Div), institutional ownership (Inst_Own), firm size (Size), and leverage (Lev) together have an effect on firm value (Table 3) and on the model of moderating regression analysis, dividend payout (*Div*), institutional ownership (*Inst_Own*), the interaction between both of them, firm size (Size), and leverage (Lev) together have an effect on firm value (Table 4).

5. Discussion

5.1 Dividend payouts on firm value

Dividends are part of the profits distributed by the company to its shareholders (Sullivan and Sheffrin, 2003). Our results show that the proportion of company income distributed as dividends is positively and significantly related to the value of manufacturing companies listed on the Indonesia Stock Exchange for the 2018-2021 period. As explained by the bird-in-hand theory and dividend relevance theory, investors prefer dividend certainty over uncertainty in future capital gains (Lintner, 1956; Walter, 1963; Gordon, 1959). Therefore, both theories claim that investor behavior is influenced by dividend payouts, companies that provide higher dividend payouts are more sought after by investors and then have an impact on higher market prices.

The results of this study also confirm the dividend signaling theory which states that dividends signal some personal information about the company's profitability. Companies that pay higher

dividends are more profitable than companies that pay smaller dividends. Thus, the stock price will increase after the announcement of an increase in dividend payouts and the stock price will decrease when the company announces that the dividend payouts is lower. This result is consistent with the findings of previous research which found that dividend decisions have relevance to firm value (Baker and Kapoor, 2015).

5.2 Institutional investors as moderating variable

Table 3 shows that institutional investors or institutional ownership have no effect on firm value. However, table 4 shows that institutional investors strengthen the positive effect of dividend payouts on the value of manufacturing companies listed on the Indonesia Stock Exchange for the 2018-2021 period. This means that institutional ownership is a pure moderating variable (pure moderator). Pure moderator is a variable that moderates the relationship between the predictor variable and the dependent variable where the pure moderating variable interacts with the predictor variable without being a predictor variable.

As previously explained, institutional investors or institutional ownership have an important role in minimizing agency conflicts through an effective monitoring mechanism in every decision made by managers. The company's supervisory actions by institutional investors can encourage managers to focus more on company performance, and reduce managers' opportunistic actions (Cornett et al, 2006). Institutional investors combined with the credibility of dividend payouts allow stakeholders to assess the sustainability of the company's value. Therefore, institutional ownership strengthens the positive effect of dividend payouts on firm value.

6. Conclusion

The main objective of this study is to analyze the effect of dividend payouts on firm value with institutional ownership as a moderating variable. The sample includes 136 observations from 34 manufacturing companies listed on the Indonesia Stock Exchange during the period 2018 to 2021. The results of multiple linear regression show that dividend payouts increase firm value and the moderating regression results show that institutional investors increase the positive effect of dividend payouts on firm value.

These findings support the idea that:

- Investors prefer the certainty of dividends compared to the uncertainty of future capital gains.
- Dividends signal some personal information about a company's profitability. The stock price will increase after the announcement of an increase in dividend payouts and the share price will decrease when the company announces that the dividend payouts is lower.
- Institutional investors provide an effective monitoring role, thereby encouraging managers to focus more on company performance, and reduce managers' opportunistic actions. This can increase the positive influence of company policies, such as in the payment of dividends.

This finding has important implications from a managerial and academic point of view regarding the relationship between dividend payouts, institutional ownership and firm value in Indonesia. For policy makers and managers, they can use dividend policy to increase firm value. They can also adopt measures to improve corporate governance by attracting institutional investors to hold

a larger proportion of shares. For investors, information about the impact of institutional ownership on corporate governance and firm value can help them make better decisions about investing in the Indonesian stock market.

Lastly, some limitations of this study and recommendations for future research:

- The predictor variables of firm value tested in this study are limited to dividend payouts and institutional ownership. Future research recommendations are to add other factors or variables that may have an impact on firm value.
- This study only analyzes firms in one sector and one country over a limited period. So, the results in this study may be different in different sectors or countries. Therefore, we encourage similar studies in different sectors and different countries with a larger sample of firms.

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