

Determination of Company's Value: A Study with Investment Opportunity as a Moderator Variable



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ABSTRACT: This research focuses on the state of a company's valuation, which is always changing. The utilized variables to estimate firm value include free cash flow and interest rates, both of which have a positive relationship with company's value. The second purpose is to investigate the current situation of investment opportunities in industrial companies that are similarly highly volatile. The availability of free cash flow indicates the interest rate has a positive relationship with the investment opportunity set. An explanatory research design is used in this study, which aims to examine the correlation between variables. The manufacturing companies that were listed on the Indonesia Stock Exchange between 2013 and 2018 are the focus of this study. Thus, data were collected from 612 units using a purposive sampling technique. The findings reveal that whereas free cash flow has a strong positive indirect effect on company value via mediating the investment opportunity set, interest rates have a negative and minor indirect effect on firm value via mediating the investment opportunity set.

KEYWORDS: Firm Value, Investment Opportunity Set, Free Cash Flow, Interest Rate, Dividend Policy, Managerial Ownership

I. INTRODUCTION

For investors, firm value is an important term because it is used by the market to appraise the company as a whole. Company's value and investor confidence are always in line. This is because the high stock price reflects investors' positive views of the company's future prospects. Shareholders can be rewarded with constantly rising stock prices if a company's stock price is consistently rising.

The rise and fall of stock prices on the stock market is a fascinating subject to be discussed recently. The global economic crisis of 2008 had a substantial influence on Indonesia's capital market, as seen by a 40-60% drop in stock values from their peak in 2008 (Kompas, 2008). The act of releasing shares by foreign investors in need of liquidity triggered this phenomenon, which was amplified by the participation of domestic investors who also released shares in groups. This condition is thought to have an impact on the company's worth.

Meanwhile, company management sometimes tends to give dishonest reports if the company does not achieve high profits as expected [1]. Shareholders and managers are at odds as a result of this situation. This conflict of interest emerges as a result of asymmetric information, in which managers have complete access to financial data while shareholders have not. Agency costs are sustained by the company due to conflicts of interest caused by asymmetric information [2].

The objective of this study is to emphasize the state of a company's value, which is constantly changing. Free cash flow and interest rates, which have a positive link with company value, are among the variables used to determine firm value. The second goal is to look into the state of the investment opportunity set in manufacturing firms that are also subject to variations. This is indicated by the presence of free cash flow, and the interest rate has a positive link with the investment opportunity set. With this study, it is believed that shareholders will have more complete information to assess a company's ability to make profits. In order to attract more investors and increase the company's performance, the company should also focus more on what variables can boost the company's success.

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II. LITERATURE REVIEW

A. *Corporate Values: Concepts and Theories*

The worth of the company (value of the firm) is a condition that a company has reached as an indication of public faith in the company after passing through a series of actions over several years, from the company's inception to the present. Increasing the company's worth is a success that fulfills the wishes of the owners, because as the company's value rises, so does the owners' well-being.

Firm value is critical since it reflects a firm's performance and can influence investors' perceptions of that company. A strong company value will lead the market to believe in the business's current situation or future prospects [3]. The price of shares traded on the stock exchange is a measure of company value for companies that issue shares in the capital market. The higher a company's stock price, the higher its value, which has an impact on the owner's financial well-being. The greater a company's stock price, the higher its value, which has an impact on the company's owner's wealth. Tobin'Q can be used to determine the value of a company.

The main indicator of a company's worth can be measured from a variety of perspectives. When examined from a certain perspective, this signifies that the company's value is regarded to be good. Free cash flow, interest rate, investment opportunity set, dividend policy, and managerial ownership are all indicators of firm value. Dividend policy and managerial ownership both have a moderating effect.

B. *Free Cash Flow and Investment Opportunity Set*

After the company has invested all of its cash in fixed assets, new products, and working capital required for corporate operations, free cash flow is cash flow that is available for distribution to all principals and debt owners. The term "cash flow" refers to the amount of money that is really available for distribution to investors. Increasing a company's cash flow is one approach for management to make it more valuable [4]. Investment alternatives provide potential for expansion, but organizations may not always take use of them. Companies who do not take advantage of investment possibilities incur higher costs than the value of the opportunity lost. Free cash flow has a considerable impact on the number of investment alternatives available [5]. The following hypothesis is presented based on this explanation:

H1: Free Cash Flow's Impact on the Investment Opportunity Set

C. *Interest Rate and Investment Opportunity Set*

Interest rate changes cause minor changes in investment demand. As interest rates rise, the projected return on an investment falls significantly. However, if variables other than the interest rate change, investment demand is predicted to shift. The relationship between interest rates and investment is negative, indicating that the lower the interest rates, the more investments will be made, and the higher the interest rates, the fewer entrepreneurs will invest [6]. The following are the hypotheses offered in this study:

H2: The interest rate has an impact on the selection of investment opportunities.

D. *Free Cash Flow and Company Value*

The company's free cash flow offers a lot of advantages when it comes to increasing the company's value. These advantages include boosting the welfare of shareholders and managers through dividend distribution and using firm operational financing as a source of internal capital. A study shows that free cash flow has a significant positive effect on firm value [7]. The results of Muhardi's research are in accordance with the results which show that free cash flow has a negative and significant effect on firm value [9]. However, some studies have shown different results that free cash flow has a significant negative effect on stock prices, because the availability of high free cash flow allows moral hazard to management, so it can reduce firm value [8]. The findings of this study back up the agency theory, particularly the free cash flow theory, which states that larger free cash flow has a negative influence on company value and increases the risk of corporate cash flow abuse. The company's strong free cash flow will imply that it is healthier, since it has free cash on hand, showing that it is in good shape. Free cash flow has a considerable beneficial effect on firm value [10] [11]. The following are the hypotheses offered in this study:

H3: Free cash flow has an impact on the value of a company.

E. *Dividend Policy Plays a Moderate Role in the Effect of Free Cash Flow on Company Value*

Free cash flow, on the other hand, might create a conflict of interest between shareholders and managers [12] [13]. To increase the link between free cash flow and firm value, dividend policy is required. A signaling function is the role of dividend policy in efforts to reduce conflict between principal and agent. The following hypothesis is formed based on the findings of prior studies in accordance with agency theory:

H3.1: The link between Free Cash Flow and Firm Value is strengthened by dividend policy.

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F. Managerial Ownership Moderates the Effect of Free Cash Flow on Company Value

The existence of a conflict of interest between shareholders and managers as well as asymmetric information causes agency costs to be incurred by the company so that in the long term it reduces the company's financial performance. This information inequality causes moral hazard and adverse selection by management. Management assumes that the contract they entered into with the company did not work as expected. This condition creates asymmetric information between managers and shareholders regarding the use of free cash flow so that it has the potential to cause a conflict of interest and have an impact on company performance. Efforts to reduce conflicts between principals and agents are by having a role in the managerial ownership structure as a monitoring function. The role of managerial ownership is expected to increase firm value.

H3.2: Managerial Ownership strengthens the relationship between Free Cash Flow with Company Value

G. Interest Rate and Firm Value

Research shows that high interest rates affect the present value of the company's cash flows, so that existing investment opportunities are no longer attractive [14]. This makes investors no longer interested in investing which results in a decrease in stock prices and a decrease in company value. This study is in line with the interest rate variable that has a negative and significant effect on firm value [15]. Rising interest rates will encourage people to save and be lazy to invest in the real sector. The increase in interest rates will also be borne by investors, namely in the form of an increase in interest costs for the company. People do not want to risk making investments with high costs, as a result investment will not develop. Many companies experience difficulties in maintaining their lives, and this causes the company's performance to decline. The decline in company performance can result in a decrease in stock prices, which means the value of the company will also decrease. Thus interest rates have a significant effect on firm value. [16]

H4 : There is an influence of interest rates on firm value

H. Dividend Policy plays a role in moderating the effect of interest rates on firm value

If interest rates increase, investors are more interested in investing their funds in the banking sector and reduce investors' interest in investing their funds in the capital market [17]. So if the demand for shares decreases, the share price decreases and the company value also decreases, as a signal for investors to invest. Therefore, dividend policy and managerial ownership are needed to strengthen the relationship between interest rates and firm value. The hypothesis that is built based on previous research and signaling theory is formulated as follows:

H4.1: Dividend Policy strengthens the relationship between Level Interest Rate with Firm Value

I. Managerial Ownership Moderates the Effect of Interest Rates on Firm Value

Increasing managerial ownership helps to link the interests of managers and shareholders towards better managers making decisions and increasing firm value [18][19]. With managerial ownership, managers in managing the company are more careful in making decisions because they share the consequences of the decisions taken when they want to increase the value of the company. The hypotheses built based on previous research and monitoring theory are formulated as follows:

H4.2: Managerial Ownership strengthens the relationship between Interest Rates and Firm Value

J. Free Cash Flow, Investment Opportunity Set and Firm Value

Free Cash Flow reflects the company's discretion to invest, excess retained earnings are invested in the future. Investor confidence in the company, which is accompanied by investment decisions, gives a positive signal for the company's growth in the future. This increases the value of the company. The hypothesis that is built based on previous research is formulated as follows:

H5: There is an indirect effect of Free Cash Flow on Company Value

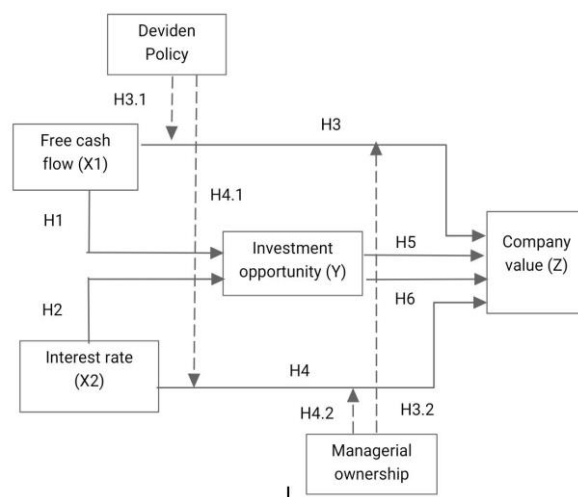
K. Interest Rate, Investment Opportunity Set and Firm Value

The interest rate has a role as a controller for investors to set investment opportunities. When interest rates are high, it influences investors to invest their funds in stocks that provide high returns with low risk. Conversely, when interest rates are low, it influences investors to invest funds in the form of shares to provide higher yields even with a high level of risk. High interest rates increase the cost of capital borne by the company and cause the return on an investment to increase [20]. The hypothesis is as follow:

H6: There is an indirect effect on interest rates to Company Value

The following empirical research model is presented to determine the direct or indirect effect of free cash flow, interest rate on firm value moderated by dividend policy, and managerial ownership, based on the theoretical basis and empirical studies regarding firm value, free cash flow, interest rates, investment opportunity sets, dividend policy, and managerial ownership, as well as previous studies. As a result, the empirical research model is as follows:

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L. Research empirical model

III. METHODOLOGY

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A. Research Design

This study employed an explanatory research design, which tries to evaluate a theory or hypothesis in order to enhance or even refute the existing research theory or hypothesis. This quantitative approach tries to collect information, data, and knowledge about topics that are not quite known.

B. Population and Sampling Procedure

Manufacturing companies that have been listed on the Indonesia Stock Exchange (IDX) for six years, from 2013 to 2018, are the population of interest, with purposive sampling being employed to obtain a representative sample.

C. Analysis Techniques

Panel data regression is the analysis technique utilized in this work, which combines time series data with cross section data to create panel data, which consists of numerous individual units observed over a period of time. There were 102 cross sections (manufacturing enterprises) in this study, with the same time series (from 2013 to 2018) or 6 (six) periods.

D. Robustness Test

Normality, multicollinearity, heteroscedasticity, and autocorrelation tests are used to examine the conventional assumptions in the first stage. The empirical data used in this study reveals that the research model met all of the assumptions, allowing for the interpretation of the panel data regression equation.

E. Hypothesis testing

The F test was performed to examine if the independent variables (X) had a significant effect on the dependent variable (Y) at the same time. Meanwhile, a t test was employed to assess the significance of the independent variables' (X) influence on the dependent variable (Y). Multiple regression analysis is used to determine whether there is a relationship between the three independent variables (X1), Market Capitalization (X2), Company Size (X3), Free Cash Flow (X3), Dividend Policy (X4), and Interest Rate (X5), and the non-independent variable (Y), the company's value.

Hypothesis test	Coefficient	Std. Error	t value	Sign
Constant	0.2823	0.007652	36.89638	0.0000
X1	- 0.0002	1.89E-05	- 8.391543	0.0000
X2	0.0490	0.013167	3.719586	0.0002
X1*M1	-7.70E-05		- 0.315349	0.7526
X1*M2	0.000831		2.211168	0.0275
X2*M1	-7.70E-05		- 0.315349	0.7526
X2*M2	0.000831		2.211168	0.0275
R Square	0.4067			

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Adjusted R Square	0.2864			
F Statistic	3.3807			
F statistic significance	0.0000			

a. Dependent Variable: TOBINS'Q

Based on statistical parameters, the t-statistics of free cash flow (X1) is 8.391543, which is greater in the t-table of 1.645 at a significance of 0.05 or a significant probability value of 0.00 is smaller at 0.05, indicating that the decision H01 is rejected, clearly showing that free cash flow has a significant effect on the value company. Meanwhile, the interest rate (X2) has a t-statistic of 3.719586, which is bigger in the t-table of 1.645 at a significance of 0.05 or a significant probability value of 0.00 is smaller at 0.05, rejecting the decision H04, means that interest rates have a significant impact on company value.

When the effect of free cash flow and interest rates is moderated by dividend policy (M1) and managerial ownership (M2), the t-statistic of dividend policy (M1) is 0.315349, which smaller on the t-table of 1.645 at a significance of 0.05 or a significant probability value of 0.7526 greater than 0.05, thus the decision H3.1 is accepted, indicating that the dividend policy does not moderate the relationship between Free Cash Flow and Firm Value. The decision H3.2 is rejected because the t-statistic of managerial ownership (M2) is 2.211168, which is greater in the t-table of 1.645 at a significance of 0.05 or a significant probability value of 0.0275 is smaller at 0.05, implying that managerial ownership moderates the relationship between Free Cash Flow and the company's value. Similarly, the influence of interest rates on business value when regulated by dividend policy and management ownership.

Hypothesis test	Coefficient	Std. Error	t value	Sign
Constant	- 0.0891	0.153967	- 0.57873	0.5630
X1	0.0405	0.020164	2.00954	0.0450
X2	- 0.0649	0.072053	- 0.90081	0.3681
Y	- 0.3527	0.067437	- 5.22956	0.0000
R Square	0.8442			
Adjusted R Square	0.8122			
F Statistic	26.4143			
Significance F Statistic	0.0000			

a. Dependent Variable: TOBINS'Q

Table 2 shows that free cash flow has a considerable positive effect on firm value via the intervening variable, namely the set of investment opportunities. As a result, the collection of investment opportunities can be used as an intervening variable to examine the impact of free cash flow on company value.

Table 2 shows that the interest rate has no substantial effect on company value because of the intervening variable, namely the collection of investment alternatives. Furthermore, the investment opportunity set variable has a negative impact on firm value. As a result, using the set of investment options as an intervening variable to examine the impact of interest rates on firm value is ineffective.

IV. RESULTS AND DISCUSSION

Six points became the findings in this investigation, and they addressed all of the hypotheses that had been created previously. The findings are explained in the following way:

1. Free cash flow has a strong negative impact on the investment opportunity set (IOS), which implies that it limits investment opportunities and makes it difficult to forecast the company's growth after growing with the IOS. High debt is used to balance the occurrence of agency costs that come with high free cash flow, especially for enterprises with poor investment prospects. High debt is used to offset the occurrence of agency expenses that come with high free cash flow.
2. Because of the high cost of capital to invest, interest rates have a large positive effect on the investment opportunity set (IOS). High rates boost investment opportunities. Interest rate changes cause minor changes in investment demand. As the interest rate rises, the expected return on an investment falls rapidly. However, if variables other than interest rates change, investment demand is predicted to shift. The interest rate on the loan is the most important component in determining the cost of investment. The higher the loan's interest rate, the more expensive the investment.
3. The impact of free cash flow on the value of a company. Free cash flow has a significant negative impact on company value, implying that unhealthy free cash flow is used in manufacturing companies, resulting in a decrease in company value. This is

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because each and economizing on operating cash and cash investment carried out on target in accordance with the budget and work program that has been determined by each department on operating cash in the form of cash receipts and cash disbursements, as well as investment cash and financing cash, can improve the effectiveness of cash management. High free cash flow promotes agency conflict and lowers company value, indicating that it has a major negative impact on firm value.

When the relationship between free cash flow and firm value is regulated by dividend policy, the association between free cash flow and firm value does not improve. This suggests that when the dividend policy is regulated, the magnitude of the Free Cash Flow of manufacturing businesses in Indonesia from 2013 to 2018 cannot boost the company's worth. This is because a company's dividend policy determines whether profits are given as dividends to shareholders or are maintained in the form of retained earnings for future investment financing. If profits are distributed as dividends, the company's retained earnings will be reduced, as would the overall sources of internal funds or internal financing.

When free cash flow is tempered by managerial ownership, the relationship between free cash flow and firm value is strengthened. This suggests that the magnitude of manufacturing businesses' free cash flow in Indonesia from 2013 to 2018 can boost the company's value. This managerial ownership acts as a company's internal monitoring function, reducing agency expenses and minimizing conflicts between management and shareholders.

4. Rates of interest have a substantial beneficial impact on the value of a company. This means that the interest rate isn't a direct determinant in investors' decisions to put their money into equities. Other aspects that investors consider while deciding whether or not to invest in a firm. Investors believe that the high interest rate will keep inflation at a distance. Interest rates have a strong beneficial effect on business value, according to the findings of this study. The interest rate is not a direct issue that investors should consider when deciding whether or not to invest in equities. If they put their money in the company, investors look at other variables that can be a good predictor. Investors are more concerned about the company's long-term viability. This contradicts the idea that interest rates have a substantial negative influence on company value because high interest rates lead investors to move their capital to other instruments such as bonds and other securities, allowing firm value to continue to be used to measure market performance. As a kind of return, investors are awarded shares and returns on a variety of assets.

When interest rates are regulated by dividend policy, the effect of interest rates on company value is negligible. This means that when the high interest rate of manufacturing businesses in Indonesia from 2013 to 2018 is regulated by dividend policy, the company's worth is not increased since dividend policy cannot be utilized to encourage investment activities of companies with a positive net present value. Managerial ownership has a large effect on business value, which moderates the effect of interest rates on company value.

5. The availability of a model update based on the study framework's findings, specifically the indirect effect of Free Cash Flow on Firm Value with the Investment Opportunity It has a considerable favourable effect when used as a mediating variable. When a corporation has made all of the necessary investments and capital to maintain the continuity of its operations, the company's free cash flow is given to investors.
6. With the investment opportunity set as a mediating variable, the indirect influence of interest rates on firm value is examined. According to the conclusions of this study, the indirect influence of interest rates on company value has a negligible negative impact on firm value. People are more likely to save when interest rates rise, and they are less likely to invest in the actual economy. The expense of rising interest rates is passed on to investors in the form of higher interest charges for the company. People do not want to take the danger of making high-risk investments, thus they do not develop.

V. CONCLUSION

The company's Free Cash Flow employed for investment opportunities has no limitations, according to the conclusions of this study. The company's condition is very dynamic, and its growth is good because global economic growth is also good at 4.8 percent, and the nature of Free Cash Flow as an alternative source of funds for investment opportunities, so the indirect effect of Free Cash Flow through the Investment Opportunity Set is significant positive for the company. Free Cash Flow that would otherwise be distributed as dividends to shareholders is diverted for investment opportunities. Instead, stockholders will get a "stock dividend," which will improve their ownership status.

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