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The Effect of Liquidity on Firm Value with Profitability as Moderating Variable

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ABSTRACT: The purpose of this study is to analyze the effect of liquidity on firm value, and the effect of profitability as a moderating variable between liquidity and firm value in the company. The population in this study are manufacturing companies in the consumer goods industry, the food and beverage sub-sectors, and also cigarette sub-sectors. The population of this study was food and beverage and cigarette sub-sector companies listed on the Indonesia Stock Exchange (IDX) in the period 2016 to 2020. The sampling technique used the purposive sampling method so that the total sample obtained was 90 companies for 5 years. The results of this study prove that liquidity affects firm value, and profitability does strengthen or weaken the effect of the firm value. Based on the results of this study proves that companies that have a high level of liquidity are able to use their current asset. So, that it will be increase their performance and it will be easier to get funding from investor and companies with high profitability are able to generate satisfying profits, so that they will get large investment opportunities and also will increase firm value.

KEYWORDS: Liquidity, Profitability, and Firm Value

I. INTRODUCTION

Every company that is established has the same goal, which is to be able to maintain the continuity of its business in the long term, get maximum profits, and be able to compete in the business world. Based on data from the Indonesia Stock Exchange (IDX) annual report, competition between public companies or those that have conducted an Initial Public Offering (IPO) has increased every year. Go-public companies have the hope of making it easier for the company to earn profits and prosper for the shareholders. The welfare of shareholders can be seen from the firm value. Firm value is an illustration of shareholder trust in the company since the company was founded until now [5]. Firm value is one of the considerations for potential investors before investing in a company. Firm value is related to stock prices. In companies that have high stock prices, the company's performance is good, thus providing a positive signal for potential investors [17]. The higher the stock price, the more profit investors will get.

Manufacturing industry companies are required to be able to prosper investors because the manufacturing industry is one of the sectors that have a major influence on economic growth in Indonesia. According to the Investment Coordinating Board (BKPM), investment in the manufacturing industry in the period from 2015 to the first quarter of 2020 reached IDR 1,348.9 trillion (www.idntimes.com). The manufacturing industry is divided into the basic and chemical industry sectors, the various industrial sectors, and the consumer goods industrial sector. The trend of stock prices in the basic and chemical industry sectors and the various industrial sectors in the 2016-2020 period tends to fluctuate increasing. The basic chemical industry sector increased by 129.88% and the various industrial sector increased by 2.17%. Meanwhile, the consumer goods industry sector has fluctuated, declining by 11.19% (www.cnbcindonesia.com). Based on data from the Central Statistics Agency (BPS), household conditions in the third quarter of 2019 only grew by 5.01%.

Firm value can be measured using Price Book Value. Price Book Value is a comparison of stock prices to book value so that it can describe how far a company is able to create firm value relative to the amount of capital invested [16]. If the Price Book Value is above one (overvalued), it means that the stock market value is greater than the book value, this shows that the company is running well. Conversely, if the Price Book Value is below one (undervalued), the company is not doing well [10]. The consumer goods industry sector is divided into the sub-sectors of pharmaceuticals, cosmetics, food and beverages, cigarettes, household goods, and household appliances. Based on data from IDX, the average Price Book Value of the pharmaceutical, cosmetics, and household goods sub-sectors has increased, while the food and beverage sub-sector has decreased Price by 11%, and the

cigarette sub-sector has experienced a decrease in Book Value. by 7%. Higher competition has caused companies in the food and beverage and cigarette sub-sectors to tend to decrease in Price Book Value each year.
Several factors that can affect firm value are liquidity and profitability. Liquidity has a positive effect on firm value. The higher the company's liquidity level, the higher the creditor's level of trust to provide loan funds [23]. The ease with which companies obtain funding in the form of loans can increase the firm value [12]. Profitability has an influence on firm value [6]. Profitability is a ratio to assess the company's ability to create profits. The higher profitability indicates that the company is able to generate large profits so that it will further increase the firm value [2].

II. LITERATURE REVIEW

2.1 Signal Theory

Signal theory is an action taken by company management to provide a signal to shareholders about how management sees the company's future [4]. Signal theory is related to the rise and fall of stock prices in the market, these stock prices can influence investor's decisions to invest in companies [7]. This signal is in the form of any information made by management in realizing the wishes of shareholders. In addition to stock prices on the market, financial reports are also a source of information needed by external parties, especially investors. The company's encouragement to provide information in the form of signals in financial reports creates information asymmetry between the company's internal parties and external parties [9]. Information asymmetry occurs due to difference in information obtained between company management and investors, company management knows more about the company's financial condition [9].

2.2 Firm Value

Firm value is the market value of outstanding shares. Firm value is an investor's view or perception of a company that is always associated with stock prices, if a company's stock price is high, investors will assume that the company has good performance, so it can provide a positive signal for investors [17]. Firm value is the price that will be paid by prospective buyers if the company is sold [20]. So, the higher the stock price of a company, the higher investor's expectations of the company for the investment that has been given.

2.3 Liquidity

The liquidity ratio is used to measure a company's ability to meet company obligations in the short term [2]. A high level of liquidity means that the company is more liquid and has a greater ability to pay off its short-term obligations. Companies with a high level of liquidity will increase creditors' trust in providing loans so that they can increase company value [12].

Profitability is a ratio that shows a company's ability to make a profit. Companies that have a high level of profitability indicate that companies can generate high profits [2]. Profitability describes the effectiveness of a company in generating profits from company assets [18]. Large company profits will attract investors because the company has a high rate of return.

2.4 Theoretical Framework and Hypotheses

2.4.1 The Effect of Liquidity on Firm Value

This ratio illustrates a company's ability to fulfill its short-term obligations by using the company's current assets [6]. Companies that have high liquidity can increase investor confidence in funding the company, and it can increase company value [12]. Some of the results of previous studies show that liquidity results have a positive effect on firm value [6], [18], and [23]; liquidity has a negative effect on firm value [1], [3], and [14]; and liquidity has no effect on firm value [19]. Based on this description, the hypothesis in this study is:
H_1: Liquidity has a positive effect on firm value

2.4.2 The Effect of Profitability in Strengthening or Weakening the Relationship Between Liquidity and Firm Value

Profitability is a ratio that shows a company's ability to earn profits. Companies that have a high profitability value indicate that the company's profit level is high [2]. This ratio describes how effective a company is in generating profits from its assets [18]. When the company's profits are large, this will attract investors because the company has a high rate of return so it can trigger an increase in the company's stock price and the company's value will also increase. This is supported by the research results of previous studies which state that profitability has a positive effect on firm value [13] and [18]. In addition, the results of previous studies indicate that profitability has a negative effect on firm value [15] and profitability has no effect on firm value [18]. Based on this description, the hypothesis in this study is:
H_2: Company profitability can strengthen or weaken the relationship between Liquidity and Firm Value.

III. RESEARCH METHOD

3.1 Population and Sample

The population in this study are manufacturing companies in the consumer goods industry sector, the food and beverage sub-sector, and also the cigarette sub-sector which are listed on the Indonesia Stock Exchange (IDX) for the 2016-2020 period as many as 90 companies. The sampling technique in this study was carried out using purposive sampling, namely samples drawn by considering certain criteria, where the criteria in this study are manufacturing companies in the food and beverage sub-sector and cigarette sub-sector that are not listed on IDX consecutively, do not publish audit reports, and do not have complete data for the period 2016-2020. The total sample obtained after the outlier data was 85 companies.

3.2 Data Sources and Data Collection Techniques

This research uses secondary data in the form of annual financial reports of food and beverage and cigarette manufacturing companies listed on the IDX for the 2016-2020 period obtained from the IDX official website and the company's website. Data collection techniques use the documentation method, namely data collection by collecting data and analyzing data related to research.

3.3 Operational Definition of Variables

The variables in this study consist of one dependent variable and two independent variables. The dependent variable of this study is a firm value (Y). Then, the independent variable (X) of this study is liquidity, and profitability as a moderating variable. Variable firm value in this study is calculated using the Price Book to Value. Price Book to Value can describe how much the market appreciates the book value of a company's shares [19]. Price Book to Value is relatively stable in representing the fair price value of shares because it is calculated based on the company's equity [1]. The Price Book to Value can also provide more detailed information and can prove how far a company is able to create relative corporate value with all the capital invested [16]. How to calculate Price Book to Value (PBV) is the market price per share compared to the book value per share [20].

$$PBV = \frac{Market\ price\ per\ share}{Book\ value\ per\ share}$$

The liquidity ratio is a ratio that can describe the relationship between company cash and other current assets with current liability [4]. In this study, the liquidity ratio is proxied by using the Current Ratio (CR). The current ratio can determine the extent to which current liabilities can be paid by current assets which are expected to be converted into cash in the near future [4]. The highest the value of the current ratio, the highest the company's ability to cover its short-term obligations [21]. The formula for calculating the value of the current ratio is [21]:

$$\mathbf{CR} = \frac{\mathbf{Current\ Asset}}{\mathbf{Current\ Liability}}$$

Profitability is the result of all policies and decisions taken by the company in assessing the company's ability to make a profit [22]. This study uses Return on Assets (ROA) as an indicator to calculate profitability. ROA can show a company's ability to generate net profit on its assets. The greater the ROA value of a company, the higher the company's effectiveness in using assets so that it will increase profits [18]. The formula for calculating ROA is as follows [2]:

$$\mathbf{ROA} = \frac{\mathbf{Earning\ After\ Tax}}{\mathbf{Total\ Asset}}$$

3.4 Data Analysis Methods

3.4.1 Descriptive Statistics

Descriptive statistics are used to provide an overview (description) of data, such as the mean value, standard deviation value, minimum value, maximum value, variance, range, and so on [11]. In this study, descriptive statistical analysis is used to describe data from independent variables which include liquidity and profitability as moderating variables on the dependent variable, namely firm value.

3.4.2 Classical Assumption Test

The purpose of normality test is to find out whether the data is normally distributed or not [8]. To fulfill the classical assumptions or avoid problems of normality, multicollinearity, heteroscedasticity, and autocorrelation tests. In this study, tests were carried out on the classical assumptions, whether there were deviations or not, so this research was feasible to use. In this study, the normality test used was the Kolmogorov Smirnov One Sample method to determine whether the data distribution was normal or not based on its significance value. If the significant value is greater than 0.05, it means that the data is normally distributed, and if the significant value is less than 0.05, it means that the data is not normally distributed [8].

3.4.3 Hypothesis Testing

Hypothesis testing in this study used the multiple linear regression method. This method is to examine the strength of the relationship between the independent variable proxied through CR and the moderating variable proxied by ROA on the dependent variable, namely PBV. If the significance value is <0.05, the independent variable partially has a significant effect on the dependent variable, and conversely, if the significance value is > 0.05, the independent variable partially has no significant effect on the dependent variable [8]. In this study, there are moderating variables so the Moderated Regression Analysis technique is needed. Moderated Regression Analysis is a data analysis technique used to maintain sample integrity and provide a basis for controlling the influence of moderator variables [8].

IV. RESULTS

4.1 Descriptive Statistical Analysis

Descriptive statistics were used to describe the research results. This analysis describes data with a minimum value, maximum value, mean value, and standard deviation. The dependent variable in this study is Firm value while the independent variable in this study is Liquidity, and the moderating variable is Profitability. This study uses annual report data from companies in the consumer goods industry sector, the food and beverage sub-sector, and the cigarette sub-sector which are listed on IDX in the 2016-2020 period. The results of the descriptive analysis can be seen in the following table:

Table 1. Summary of Descriptive Statistical Test Results

	N	Minimum	Maximum	Mean	Std. Deviation
VALUE	85	-0.33	16.13	2.9557	2.71499
CR	85	0.15	8.64	2.6943	1.88710
ROA	85	-2.13	5.37	0.7771	0.84001
Valid N (listwise)	85				

The table above shows the results of the descriptive statistical values of each variable in this study. The firm value variable has the lowest value of -0.33, the highest value is 16.13, the mean value is 2.9557, and the standard deviation value is 2.71499 which is smaller than the average value indicating that the variation in firm value in the sample companies has a small data distribution. The Liquidity variable has a minimum value of 0.15, a maximum value of 8.64, a mean value of 2.6943, and a standard deviation value of 1.88710. The standard deviation is smaller than the mean value of 1.88710 < 2.6943, this means that variations in liquidity in the sample companies have a small distribution of data. The Profitability variable has a minimum value of -2.13, a maximum value of 5.37, a mean value of 0.7771, and a standard deviation value of 0.84001. The standard deviation is less than the mean 0.84001 > 0.7771, which is greater than the mean. This means that the variation in profitability in the sample companies has a large data distribution. This study has carried out classic assumption tests, namely the normality test, multicollinearity test, heteroscedasticity test, and run test where the calculation results meet the specified criteria so that a moderate regression analysis test can be carried out as shown in the table below:

Table 2. Summary of the results of hypothesis testing

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	CR	0.788	0.096	0.646	8.174	0.00
	CR_ROA	0.710	0.277	0.202	2.559	0.012
a. Dependent Variable: VALUE						

The first hypothesis in this study is the effect of liquidity on firm value in goods and consumption companies in the food and beverage and cigarette sub-sectors listed on the IDX. Based on the results of the table hypothesis test above, the significance value is 0.00 < 0.05, so H_1 is supported. Liquidity has a positive significance; the higher liquidity will increase firm value. The second hypothesis in this study that is profitability can moderate the relationship between liquidity on firm value in goods and consumption companies in the food and beverage and cigarette sub-sectors listed on IDX. Based on the results of the

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Moderated Regression Analysis test, shows that the significance value of the moderating variable is 0.012 < 0.05 so H_2 is supported. Profitability has a positive significance; the higher profitability will increase firm value.

V. DISCUSSION

H_1 is supported indicating that if the liquidity value is high, it will increase the firm value. So, it can be concluded that liquidity affects firm value, thus H_1 is supported. The results of this study are in line with the signal theory which states that companies provide signals in the form of financial reports to influence investor's decisions. The signal given is positive or good, so it can provide good prospects for the company in the future. The greater the value of the liquidity ratio, the higher the efficiency level of the company in managing its current assets [21]. The results of this study support the research results of [6], [18], and [23] which state that liquidity affects firm value because companies with high liquidity can manage the company's current assets efficiently. If the company can manage its current assets well, then the company's performance will increase, so that it can attract investors to invest in the company. This can trigger an increase in the company's stock price so that the firm value will also increase.

H_2 is supported indicating profitability can moderate the relationship between liquidity and firm value. The results of this study are in line with the signal theory which states that companies provide signals in the form of financial reports to influence investor's decisions. High profits that are stated in the financial statements are a good or positive signal for the company and shareholders. The higher the profitability value, the more efficiently the use of assets will increase profits [18]. The results of this study support the results of research from [3], [13], [18], and [6] which prove that profitability can affect firm value. Companies with high profitability value indicate that the company can generate high profits. High company profits will create a good corporate image for investors so that investors are interested in investing their capital, this can increase firm value.

VI. CONCLUSION

The results of testing the regression analysis and moderate regression analysis state that liquidity and profitability as moderating variables affect firm value in manufacturing companies in the consumer goods industry sector, the food and beverage sub-sector, and the cigarette sub-sector, which are listed in the Indonesia Stock Exchange for the 2016-2020 period. Thus, it can be concluded that H_1 and H_2 partially are supported with positive significance. So, the higher liquidity will increase firm value and profitability can strengthen the relationship between liquidity on firm value, so the higher profitability will increase firm value. The results of the adjusted R square value for data analysis show a value of 0.550, this means that firm value can be influenced by the independent variables namely liquidity and profitability as independent variable moderation of 55%. While the remaining 45% is explained by other factors not present in this study, such as leverage, activity ratio, firm size, audit opinion, and others.

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