Factors Affecting Firm Value in Indonesian Manufacturing Companies

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ABSTRACT : The objective of this research is to obtain an empirical evidence about the effect of sales growth, firm size, leverage, and profitability on firm value. The object of this research is manufacturing companies listed in the Indonesia Stock Exchange during 2018-2020. The sample was selected using a purposive sampling method with the criteria that companies listed on the Indonesia Stock Exchange are included in the manufacturing sector and prepare audited financial statements for the year ending December 31 using the rupiah currency; companies that do not include stock splits, reverse stock splits, rights issues, or buybacks and companies should actively trade; the company has positive profits in a row and has successive sales growth. The secondary data was analyzed by using descriptive statistics, normality test, classical assumption tests, and hypothesis testing. The results of this study are (1) sales growth (SG) has no effect on firm value (PBV), (2) firm size (FS) does not affect firm value (PBV), (3) leverage (DER) does not affect firm value. (PBV), (4) profitability (ROA) has a significant positive effect on firm value (PBV). Sales growth, firm size, leverage, and profitability simultaneously have a significant effect on firm value.

KEYWORDS - firm size, firm value, leverage, profitability, sales growth

I. INTRODUCTION

The manufacturing sector has the largest contribution to Indonesia's Gross Domestic Product during 2018-2020, which is 19.86%, 19.70%, and 19.87% in 2018, 2019, and 2020. According to Central Bureau of Statistics in 2022, the contribution of the manufacturing sector is the largest compared to other sectors, so this industry is interesting to study. According to [1], Price to Book Value ratio describes how much the market appreciates the book value of shares in a company. The higher the PBV ratio of a company indicates the market is more confident in the company's prospects. Based on the PBV ratio, it can be seen that the company's value is good when the PBV value is above one (overvalued), i.e. the market value is greater than the company's book value. The higher the PBV, the more successful the company is in creating value or prosperity for shareholders. The prosperity obtained for shareholders is in the form of returns obtained from their investment activities.According to [2], sales growth is an increase in the number of sales compared to the previous year. The higher the sales growth of the company, supported by efficient expenses, will increase profitability. Higher profitability, will cause retained earnings to increase so that the possibility of high dividends will entice investors to buy company's stock. The increase in stock prices that exceeds the increase in book value will increase PBV. [3] research stated that sales growth having a significant positive effect on firm value.

The size of the company can be seen by calculating how much assets the company has. A large company size indicates that the company is developing and has more resources [4]. The size of the company in this study is calculated by using the natural logarithm of total assets. The larger the size of a company, it indicates that the assets owned by the company are also large. Large total assets can be used to generate high profits. With profitability, it will cause retained earnings to increase, therefore high dividend distribution is probable, and attract investors to buy the shares. The increase in stock prices that exceeds the increase in book value causes the company's price to book value (PBV) to be higher. [2] stated that company size has a positive and significant effect on firm value.Leverage is defined a company's ability to pay off its financial obligations both in the short term and in the long term [4]. Leverage in this study is proxied by Debt to Equity Ratio (DER). DER is used because it reflects how much the company's ability to pay off its obligations from its capital [5]. The lower the DER level of a company, it shows that the company using more funding from equity than debt. The maximum use of equity will generate profit. With the high net profit, the higher the retained earnings (R/E) will be and it can later be used for high dividend distribution. This will attract investors to buy shares and increase the stock market price. The increase in stock prices that exceeds the increase in book value causes the company's price to book value (PBV) to be high. [4] and [1] researches show that leverage has a negative effect on firm value.

[1] stated that ROA is a measure of the company's ability to generate profits with all assets owned by the company. A high ROA ratio shows the efficiency and effectiveness of good asset management. The higher the ROA, the higher the company's ability to generate profits from company assets. Higher profitability will cause retained earnings to increase so that later the potential for dividend distribution is also high and will later attract investors to own shares of the company. It will increase the stock market price. The increase in share price is higher than the increase in book value causing the company's price to book value (PBV) to be higher. [1] stated that profitability has a positive effect on PBV.

Based on the research background, the research problems are as follows:
1. Does sales growth have a positive effect on firm value?
2. Does firm size have a positive effect on firm value?
3. Does leverage as proxied by DER have a negative effect on firm value?
4. Does profitability as proxied by ROA have a positive effect on firm value?

II. LITERATURE REVIEW

Signalling Theory: This theory was first put forward by Spence in 1973, which suggests how a company gives signals to users of financial statements. The signal can be in the form of information about what management has done to realize the owner's wishes. Signal theory is used to explain that information can be used by companies to give positive or negative signals to the user. [6] states that signals are used by investors for investing decision. If the information given is positive, then the company is in good financial condition.

Firm Value: The value of the company is often associated with stock prices. If the stock price increases, it means that the value of the company increases. The increase in stock prices shows public confidence in good companies, so that people are willing to pay higher, this is in line with people's expectations to get high returns [7]. In this study, firm value is calculated by using Price to Book Value (PBV).

Sales Growth: Sales growth is an increase in the number of sales compared to the previous year. This sales growth is also an indicator of the company's growth which is a measure of the company's success. This success becomes an investment benchmark for future growth [2]. [3] said that sales growth indicates the success of investment in the past period and can be used as a prediction in the future marked by increasing stock prices so that it can attract investors and can increase the percentage growth of sales figures in the company. In a study conducted by [8] showed that sales growth having a positive effect on company value, but opposite result is shown in [9]. Based on the theory, the hypotheses proposed is:

Ha$_1$: Sales growth has a positive effect on firm value.

Company Size: Company size is a scale where the size of the company can be grouped according to various ways, including by total assets, market value, stock value, etc. Company size is divided into three categories, namely large-scale, medium-scale, and small-scale companies [4]. [2] stated that the larger the size of the company, the greater the tendency of investors to own these shares, resulting in an increase in stock prices. The increase in stock prices causes an increase in the price to book value (PBV) or the value of the company. In a study conducted by [10], firm size has a positive effect on firm value. However, research conducted by [11] showed that size of the company has no significant effect on the value of the company. Based on the theory, the hypotheses proposed is:

Ha$_2$: Firm size has a positive effect on firm value.

Leverage:[11] stated that leverage is used to measure how much the company is financed with debt. In this study leverage is proxied by the Debt to Equity Ratio (DER). Debt to Equity Ratio is a ratio that compares total debt with total equity. According [11] leverage has a negative effect on firm value, because high leverage indicates that firms tend to use debt as their capital structure. In research conducted by [3], leverage have a significant negative effect on firm value. However, research conducted by [9] and [12] shows that leverage has a positive and significant effect on firm value. Based on the theory, the hypotheses proposed is:

Ha$_3$: Firm size has a negative effect on firm value.

Profitability: Profitability in this study is proxied by Return on Assets (ROA). According to [13] ROA is a ratio that measures the overall profitability of assets. [14] states that high profitability will provide a positive signal

for investors that the company produces in favorable conditions. This will attract investors to own company shares. In a study conducted by [15] profitability has a positive and significant effect on firm value, but different result in showed in [9]. Based on the theory, the hypotheses proposed is:

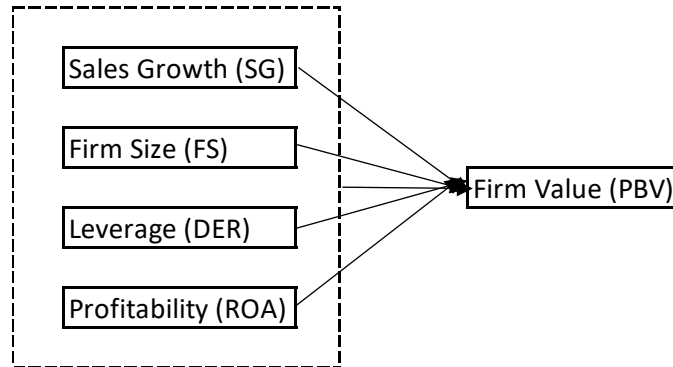Ha$_4$: Profitability has a positive effect on firm value.

Research Model

Figure 1. Research Model

III. RESEARCH METHODOLOGY

Research object: The object of research used in this study is a manufacturing company listed on the Indonesia Stock Exchange (IDX) during 2018-2020 period. The research method used in this study is a causal study. The data used in this study is secondary data, namely the financial statements of manufacturing companies listed on the Indonesia Stock Exchange for the 2018-2020 period which have been audited by independent auditors.

Research Variables : Firm Value: The dependent variable used in this study is firm value. Firm value is a description or assessment made by investors of the company's success in managing its resources. In this study, firm value is proxied through Price to Book Value (PBV). According to [16] PBV can be formulated as follows:

$$Price\ to\ Book\ Value\ = \frac{Share\ price}{Book\ value\ per\ share}$$

Sales growth: The first independent variable is sales growth. Sales growth is the percentage increase in sales from the current year to the previous year. According to [3], sales growth can be formulated as follows:

$$Sales\ Growth = \frac{Net\ sales\ t - Net\ sales\ t - 1}{Net\ sales\ t - 1}$$

Firm Size: The second independent variable is firm size. Firm size is the size of a small, medium, or large company seen from how many assets it has. According to [11] company size can be measured using the natural logarithm of total assets, which can be formulated as follows:

$$Firm\ size = Ln\ (total\ assets)$$

Leverage: The third independent variable is leverage. Leverage is a comparison of the amount of debt financing to equity financing. In this research, leverage is proxied by using the Debt to Equity Ratio (DER). According to [11], DER can be formulated as follows:

$$Debt\ to\ Equity\ Ratio = \frac{Total\ debt}{Total\ equity}$$

Profitability: The forth independent variable is profitability. Profitability is the company's ability to earn a profit or profit through its operational activities. In this study, profitability is proxied through Return on Assets (ROA). The formula that can be used to measure ROA according to [13] is:

$$Return\ on\ Assets = \frac{Net\ income}{Average\ total\ assets}$$

Data analysis: In this paper, multiples regression analysis is used to analyze the data. The equation of the multiple regression is as follows:

$$PBV = SG + FS - DER + ROA$$

IV. RESULTS AND DISCUSSION

Data used in this study is secondary data from manufacturing companies listed on IDX during 2018-2020. Sample is selected using purposive sampling method as follows:

Table 1. Sample Selection

Manufacturing companies listed in IDX during 2018-2020	153
Manufacturing companies that publish financial statements have been audited, closed their books at the end of the year, and used the rupiah currency for the period January 1, 2018 to December 31, 2020, respectively.	119
Manufacturing companies that do not carry out stock splits, reverse stock splits, rights issues, or buybacks during the period January 1, 2018 to December 31, 2020 in a row.	107
Manufacturing companies that are actively traded and not suspended during the period January 1, 2018 to December 31, 2020, respectively.	93
Manufacturing companies that have positive profits during the period 2018 to 2020 in a row.	62
Manufacturing companies that have sale growth during the period 2018 to 2020 in a row.	14
Companies selected as sample	14

The final data used in this research is 42 firm-years observations. The data used in this study has passed the normality and classic assumptions test. The coefficient of determination (R^2) test aims to measure how far the model's ability to explain dependent variation [17]. The coefficient of determination (adjusted R^2) is 0.375. This shows that Sales Growth (SG), Firm Size (FS), Debt to Equity Ratio (DER), and Return on Assets (ROA) can explain the Price to Book Value (PBV) variable of 37, 5% and the remaining 62.5% is explained by other variables outside the regression model which were not tested in this study.

The results of the F statistical test show the F value of 7.153 with a significance value of 0.000. A significance value of less than 0.05 indicates that the independent variables, namely Sales Growth (SG), Firm Size (FS), Debt to Equity Ratio (DER), and Return on Assets (ROA)) simultaneously have significant influence on Price to Book Value (PBV). This research is in line with [14], [11], and [12].

The results of t-test is as follows:

Table 2. T-test Results
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2,898	3,056		-,948	,349
	SG	-1,359	1,550	-,119	-,877	,386
	FS	,123	,111	,159	1,110	,274
	DER	,374	,547	,111	,684	,498
	ROA	15,320	4,372	,588	3,504	,001

a. Dependent Variable: *PBV*

Based on Table 2, sales growth has a t value of -0.877 with a significance value of 0.386 which is greater than 0.05. The level of significance that is greater than 0.05 shows that sales growth has no effect on firm value, so Ha$_1$ is rejected. This shows that the sales growth as measured by the increase in sales compared to the previous

year's sales has no effect on the value of the company as proxied by PBV. The results of this study are in line with those of [11] and [14] which state that sales growth has no effect on firm value. In this study, there are 42 observational data and 25 observations have sales growth below average. Of the 25 observations, there are 20 observations that have an increase in selling expenses below the average. This shows that the company can suppress or reduce the company's selling expenses. Of the 20 observations, there are 19 observations with an increase in the Cost of Good Sold (COGS) below the average. Although the observation results show that sales growth is below the average, but because expenses have been successfully suppressed, the company still generates positive net income. Of the 19 observational observations, there are 12 observations that have an increase in net income. Because the company managed to create an increase in net income, the company can distribute dividends to shareholders. A total of 12 observations can distribute an average dividend of Rp84 per share to shareholders. With the distribution of dividends, 7 observations experienced an increase in stock prices by 22.30%, while the average increase in book value increased by 12.84%. Due to the increase in the share price which was higher than the increase in the book value of the stock, the average Price to Book Value (PBV) increased by 7.52%. Thus, even when sales growth is low, the company can still increase on firm value.

Firm Size (FS) shows that the t value is 1.110 with a significance value of 0.274 which is greater than 0.05. The level of significance that is greater than 0.05 can be concluded that firm size has no effect on firm value, so Ha_2 is rejected. This shows that firm size as measured by the natural logarithm of total assets has no effect on firm value as proxied by PBV. The results of this study are in line with those carried out by [4] with the results of firm size having no effect on firm value. In this study there are 42 observational data belonging to large-scale companies with 32 observations having total assets below the average. The average current assets owned by the 32 observations is Rp. 1,891,171,397,742, while the non-current assets owned are Rp. 1,384,701,463,011. This high current asset is dominated by receivables which shows that there are still many credit sales made by the company, while non-current assets are dominated by fixed assets which is used by the company to increase production results and support company operations. The average increase in receivables from the 32 observations is 21.75%. Judging from the average A/R Collection of 46.41 days which indicates that the company can collect its receivables quickly. Receivables that have been collected, will increase the company's cash. The average increase in cash obtained from the observations is 7.18%. Because the cash obtained has increased, the company can distribute profits to shareholders in the form of cash dividends with an average of Rp12 per share. The dividends distributed will attract investors and the company's stock price will increase, with average increase of 8.24%. Because the company earns a net profit even though it is below the average, this net profit will increase the company's equity so that the book value owned by the company also increases by an average of 6.76%. The increase in share price which is 8.24% greater than the increase in book value of 6.76% will cause the value of the company as proxied by PBV to also increase.

Debt to Equity Ratio (DER) or leverage variable shows that the t value is 0.684 with a significance value of 0.498 which is greater than 0.05. The level of significance which is greater than 0.05 can be concluded that leverage has no effect on firm value, so Ha_3 is rejected. This shows that leverage as measured by the ratio of total debt to total equity has no effect on firm value as proxied by PBV. The results of this study are in line with those conducted by [10] and [3] which state that leverage has no effect on firm value. In this study there are 42 observational data and 25 observations have DER value below the average. The DER value below the average indicates that the company uses a lot of its own capital sources compared to the use of debt. Of the 25 observational observations, there are 22 observations that have an increase in financial burden below the average. Although the DER owned is below average and the financial burden has been successfully suppressed, from the 22 observations, there are 16 observations that have sales growth below the average. Due to below-average sales growth, as many as 11 observations still have a below-average net profit increase. Even though the increase in net income was still below the average, the company still distributed profits to shareholders in the form of cash dividends with an average of Rp33 per share, lower than the overall average of Rp 159 per share. With the distribution of cash dividends that are lower than average to shareholders, 8 out of 11 observations have an average increase in share prices below the average of 2.13%. The increase in share prices was also followed by an average increase from the average book value increase of 8.97%. Because the increase in book value was greater than the stock price, the average increase in Price to Book Value (PBV) decreased by 6.17%. Therefore, even when a company has low DER, it still cannot maximize the low debt to increase its firm value. Return on Assets (ROA) or profitability variable shows that the t value is 3.504 with a significance value of 0.001 which is smaller than 0.05. The level of significance which is smaller than 0.05 can be concluded that profitability has an effect on firm value, so Ha_4 is accepted. The results of this study are in line with [1], [14] which give the result that profitability has a positive and significant effect on firm value.

Based on the results of the t-statistical test in Table 2, the following regression equation was obtained:

$$PBV = -0{,}119\,SG + 0{,}159\,FS + 0{,}111\,DER + 0{,}588\,ROA$$

Explanation:
PBV: Firm Value (Price to Book Value)
SG: Sales Growth
FS: Firm Size
DER: Leverage (Debt to Equity Ratio)
ROA: Profitability (Return on Assets)

Sales growth variable has a regression coefficient of -0.119. This shows that every 1 unit increase in sales growth will cause a decrease of 0.119 in the value of the company as proxied by Price to Book Value (PBV). The firm size variable calculated by the natural logarithm of total assets has a regression coefficient of 0.159. This shows that each increase in sales growth of 1 unit will cause an increase of 0.159 in the value of the company as proxied by Price to Book Value (PBV). The leverage variable proxied by the Debt to Equity Ratio (DER) has a regression coefficient value of 0.111. This indicates that every increase in sales growth of 1 unit will cause an increase of 0.111 in the firm value as proxied by Price to Book Value (PBV). The profitability variable as proxied by Return on Assets (ROA) has a regression coefficient of 0.588. This shows that every 1 unit increase in sales growth will cause an increase of 0.588 in the value of the company as proxied by Price to Book Value (PBV).

V. CONCLUSION

Based on the results above, only profitability has a positive and significant result on Price to Book Value, while sales growth, firm size, and leverage have no effect on firm value. This study implied that profitability has a significant positive effect on firm value. Thus, the company can optimize the use of its assets so as to increase productivity which in turn can increase net profit. When net income increases, it will increase retained earnings balance. The retained earnings balance itself can later be used as a source of reserve funds, business and business development capital, help pay debts, and become further investment capital of the company. In addition to being used for retained earnings, the net income obtained by the company can also be used for cash dividend distribution to the company's shareholders. There are several limitations in this study. First, this study only uses manufacturing companies listed in IDX during 2018-2020, therefore the results can't be generalized for all sectors. Second, adjusted R^2 is only 37.5%, which means 62.5% of variable in PBV is explained by other factors not studied in this research. For future research, other sectors such as property or trade and services can be used, as well as other variables such as current ratio or ownership structure.

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