

## **The Effect of Profitability and Leverage on Firm Value (Basic industry and chemical sub-sector cement listed on the Indonesia Stock Exchange in 2016-2019)**

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**Abstrak.** Penelitian ini bertujuan untuk mengetahui pengaruh profitabilitas dan leverage terhadap nilai perusahaan pada sektor industri dasar dan subsektor kimia semen yang terdaftar di Bursa Efek Indonesia tahun 2016-2019. Sampel dalam penelitian ini adalah perusahaan sektor industri dasar dan subsektor kimia semen yang terdaftar di Bursa Efek Indonesia. Metode pengambilan sampel yang digunakan dalam penelitian ini adalah sampling jenuh dengan sampel 6 perusahaan pada subsektor industri dasar dan subsektor semen yang terdaftar di Bursa Efek Indonesia selama 4 tahun terakhir. Penelitian ini menggunakan metode statistik deskriptif, analisis koefisien korelasi, analisis koefisien determinasi, regresi linier sederhana, dan uji signifikansi (uji t). Penelitian ini menggunakan data laporan keuangan tahunan perusahaan subsektor dasar dan kimia semen dan komponen yang terdaftar di Bursa Efek Indonesia tahun 2016-2019. Data sekunder diolah menggunakan SPSS. Hasil penelitian menunjukkan bahwa profitabilitas dan leverage tidak berpengaruh terhadap nilai perusahaan.

**Kata kunci :** Profitabilitas, Leverage, Nilai perusahaan

**Abstract.** This study aims to determine the effect of profitability and leverage on the value of companies in the basic industry sector and cement sub-sector chemicals listed on the Indonesia Stock Exchange in 2016-2019. The sample in this study is the basic industrial sector companies and the cement sub-sector chemical listed on the Indonesia Stock Exchange. The sampling method used in this study is saturated sampling with a sample of 6 companies in the basic industrial sector and cement sub-sector listed on the Indonesia Stock Exchange for the last 4 years. This study uses descriptive statistical methods, correlation coefficient analysis, coefficient of determination analysis, simple linear regression, and significance test (t test). This study uses data from the annual financial statements of companies in the basic and chemical sub-sector of cement and components listed on the Indonesia Stock Exchange in 2016-2019. Secondary data is processed using SPSS. The results showed that profitability and leverage had no effect on firm value.

**Keywords :** Profitability; Leverage; Firm value

### **Introduction**

In the current era, the global economy is increasingly competitive, where destruction will compete with other companies to increase competitiveness in various sectors. In this case, the competition will be made as attractive as possible so that investors can invest. With investors investing in the firm, the firm will maintain investor confidence in the published financial statements and is influenced by the reliability of the information provided by the financial statements. The financial statements will be able to provide information about the performance of financial and cash flows of the entity which has benefits for the majority of users of the financial statements in making decisions of economics. In the firm's financial statements, key sources are important for investors in decisions to invest in the capital market. In addition to the financial statements, the value of the firm can be taken into consideration in investing because the value of the firm can be used as an example of the performance of the firm itself. So that it can influence investors in decision making. According to Silvia (2019), firm value is an investor's perception of the level of success of managers in managing firm resources which is often confused with stock prices. The value of the firm itself is important in order to increase the share price it will reflect the increase in the prosperity of the shareholders themselves.

Profitability is thought to be able to affect firm value. Profitability will shows the balance of income and the firm's ability to generate profits at various operating levels, so this ratio will reflect overall management effectiveness and success. If the firm does notable to generate sufficient profitability, then the firm will not able to maintain business continuity. Therefore, the firm must looking for sources of funds from outside the firm to maintain continuity his efforts. According to Achmadi and Siti (2021) profitability is the firm's ability to generate profits in managing assets, equity and sales in a certain period. One of the factors in the element of firm value is leverage. According to Hery (2016) leverage can be understood as an estimator of the risks inherent in a firm. In general, investors will avoid companies that have high leverage because the higher the leverage ratio, the higher the risk charged, especially to

companies that do not fulfill their obligations on time. Creditors will usually prefer a lower debt ratio if the lower the debt ratio means the higher the level of firm funding provided by investors so that the greater the creditor's protection against the risk of not paying off debt. In this case, if PT Tiga Pilar Sejahtera Tbk (AISA) lost Rp 551.9 billion, Tiga Pilar Corpora's share ownership was 7.19 Steps PT Tiga Pilar Sejahtera Tbk (AISA) stopped the rice business after a legal case that hit in mid-year then make the firm's performance worse. Apart from the drastic drop in revenue, the food firm, which was founded in 1992, had to suffer losses. Based on AISA's financial report as of December 31, 2017 which was released today, Friday (29divided6), AISA's financial performance fell drastically. AISA's revenue last year was only Rp 4.29 trillion, down 24.8% compared to the same period last year. The problem is, the cost of goods sold last year only decreased by 11.7% to Rp 4.3 trillion. AISA also still has to bear operating expenses of Rp 916.7 billion. Meanwhile, the financial burden increased almost 10 times to Rp 314.5 billion. As a result, until the end of 2017, AISA had to suffer a net loss of Rp 551.9 billion. In fact, as of December 31, 2016, AISA still recorded a net profit of Rp 581 billion. In an information disclosure earlier this week, AISA President Director Stefanus Joko Mogoginta admitted that after the rice business problem, the firm's financial condition was not as conducive as it used to be. Joko added that although it was not going as fast as the management wanted, efforts to sell the rice business unit were still running.

According to Joko, Joko said management believes that the firm will eventually shine again after the main issues are resolved. The value of the firm will also return slowly. "Management and founding shareholders did not run away from the firm no matter how difficult the problems faced by the firm," said Joko. However, the securities ownership report released by the Indonesian Central Securities Depository (KSEI) actually shows the opposite. After the rice case hit Tiga Pilar's rice business, PT Tiga Pilar Corpora continued to reduce its share ownership in AISA. In fact, in the past week, the controlling shareholder of AISA has again aggressively sold AISA's shares. Last Thursday (28divided6), based on KSEI data, Tiga Pilar Corpora has sold 106.9 million AISA shares. The day before, Tiga Pilar Corpora still controlled 338.42 million shares of AISA or equivalent to 10.51% of all issued and fully paid shares. As a result, Tiga Pilar Corpora's share ownership is only 231.48 million shares or 7.19%. In the last week, Tiga Pilar Corpora was recorded to have reduced its shareholding in AISA several times. At the end of May, Tiga Pilar Corpora still held 383.2 million AISA shares or 11.91%. Last Thursday (21divided6), Tiga Pilar Corpora's ownership in AISA decreased by 5.25 million shares. A day later, Tiga Pilar Corpora again released 8.23 million shares of AISA. In total, within a week, Tiga Pilar Corpora has released 151.7 million AISA shares. Tiga Pilar Corpora's holdings fell from 11.91% to 7.19%. In fact, as of the end of July 2017, Tiga Pilar Corpora still controlled 29.1 percent of AISA's shares or 936.55 million shares. Within a year, Tiga Pilar Corpora has sold around 705 million shares of AISA. "There are several facts that are used as reference regarding the founding shareholders, we convey that these are related to complex legal issues which will be resolved separately," said Joko in an information disclosure earlier this week. In addition to declining performance and suffering losses, Another challenge for Tiga Pilar is the payment of debt interest. Next month, Tiga Pilar must pay interest on the debt that will be due. The total interest owed by Tiga Pilar is Rp. 109.4 billion. Meanwhile, in mid-May, Tiga Pilar's cash position was only worth Rp 30 billion-Rp 40 billion.

## *Literatur Review*

### *Profitability*

According to Hery (2017) is the ability of a firm to get profit (profit) in a certain period. The profitability measure itself can be divided into four indicators such as operating profit, net profit, rate of return or assets and rate of return on owner's equity. In terms of profitability, it is one of the basis for assessing the condition of the firm, therefore an analytical tool is needed to assess it. The analytical tool in question itself is financial ratios. The profitability ratio itself can measure the effectiveness of management itself based on the returns obtained from the sale of investments. In addition, profitability also has an important meaning in a firm where it can maintain the survival and value of the firm in the long term this is because profitability shows the firm that has good prospect in the future or not. Thus, every firm will always try to increase its profitability because the higher the level of profitability of a firm, the survival of the business entity will be guaranteed. According to Wiratna (2017) profitability is measured by calculating financial ratios. The ratios are Gross Profit Margin = Gross Profit divide Net Sales; Net Profit Margin = Profit After Tax divide Net Sales; Earning Power Of Total Investment = Profit Before Interest and Tax divide Total Assets; Return On Equity = Net Profit After Tax divided Own Capital; Operating Income = Net Sales-Cost of Sales-General Sales divide Net Sales; Operating Ratio = Cost of Goods Sold + Costs, Sales, General divide Net Sales; Return On Assets = Net Profit After Tax divide Total Assets.

### *Leverage*

Leverage is really needed by a company to see how far the company's assets are financed by debt and compared with capitals. Leverage is also useful for the use of company assets must pay a fixed fee. and leverage is a ratio that calculates how far the funds will be provided by creditors to the company, and also as a ratio that compares

total debt to the total assets of a company, if investors see a company with high assets but the risk of leverage is also high, it is necessary to re-analyse to invest in the company. Because it will be worried about high assets obtained from debt which increases investment risk if the company cannot fulfil its obligations. There are two kinds of leverage, namely operating leverage and financial leverage. In operating leverage, the use of assets at a fixed cost expects the revenue obtained is able to cover fixed costs and variable costs. Whereas In financial leverage, the use of funds with a fixed load is expected to be able to increase earnings per share. The leverage ratio is a ratio that used to measure how much the firm's assets are financed with debt. Low leverage indicates that the company uses less debt in carrying out the company's operations. The less debt a company has then investors will think in providing funding to the company because the company's profits will be obtained which will be used more for dividends and it will greatly increase the value of the company. Companies that have debt greater than equity are said to be companies with a high level of leverage. The leverage ratio in this study is proxied by the ratio of Debt to Equity Ratio (DER) and Debt to Assets Ratio (DAR). Debt to Equity Ratio (DER) is the ratio between total debt and total equity owned by the firm.

According to Van Horne (2012) the Debt to Equity Ratio is measured only by dividing the firm's total debt (including short-term liabilities) with shareholder equity. While the Debt to Assets Ratio (DAR) simply has understanding the comparison between the total debts owned by the firm with total assets owned by the firm. "The ratio of debt to total assets is obtained by dividing the total the firm's debt with its total assets" (Van Horne, 2012). According to Weston and Brigham (1998), the characteristics of a firm that using debt financing has three important implications, namely first by increasing funding through debt, the owners of the firm or shareholders can maintain their control over the firm with limited investment. Both creditors require the existence of funds provided by the owner of the firm as a security limit, so that the higher the proportion of the amount of capital provided by the shareholders, the smaller the risk will be faced by creditors. Third, if the firm earns a profit that is greater than the interest paid, the return on the owner's capital will be greater. Companies that have a higher debt ratio will face risk greater losses in poor economic conditions (recession period), however have a higher rate of return in economic conditions that are normal. According to Weton and Brigman (1998) In contrast, companies that have low debt ratios will not face the risk of large losses during a recession, but the opportunity to increase the rate of return on equity in normal economic conditions is also low.

#### *The Value of the Firm*

According to Rinnaya (2016), where a certain condition that has been achieved by a company will be an illustration of the public's trust in the company after going through various processes of the company's journey since it was founded until it can operate until now. Increasing the value of the company is a great progress with the wishes of the owners with the increase in the value of the company, therefore the welfare of the shareholders also increases. The wealth of shareholders and companies is described by the market price of shares which is a feature of investment decisions, funding and asset management of companies. The purpose of financial management is to create value for the company or create prosperity for investors. However, behind it all, there are many problems with shareholders and creditors. If the company runs well, the value of the company's shares will also increase. Stock value can be the right reference to measure and analyze the performance of a company. That's why the purpose of financial management is set as a form of maximizing the value of the company's shares and stock prices According to an article submitted by Achmad (2014) the value of the company will have a direct impact on the prosperity of investors because if the company's stock price rises to achieve a high company value, investors will generally give their trust to managers or commissioners in the organizational structure company. Increasing the value of the company will be very important, meaning that maximizing the value of the company will also increase the prosperity of investors. The value of the company itself becomes one meaning to investors on the level of success of the company

The stock price in a company formed from buyers and sellers at the time of the transaction is said to be the market value of the company. The price on the stock market is considered a reference to the value of the company's assets. Meanwhile, high stock prices make the market believe in the current operating performance of the company and also in the company's prospects in the future. The value of the company itself is formed through the shares invested. The existence of investment opportunities can provide a good signal about the company's future journey so that it can provide the desired stock price. According to Prastuti (2016) with increasing stock prices, the value of a company will also increase. The value of the company is a reflection of the extent to which the company is recognized by the public and the value of the company can be seen from the five types of company value based on the calculation method used. First, the nominal purpose is the value that is at the formal value in the articles of association, stated in a complex manner in a company balance sheet calculation, and written on the collective share certificate. Both market values can be referred to as the exchange rate, the exchange rate is the price that occurs from the bargaining process in the stock market. This value is only obtained in the operation of buying and selling shares. The three intrinsic values are concepts that are less clear, because they refer to the real value of a company. The value of the company in this concept is not just the price of the total assets, but the value of the company that can generate profits. The fourth book

value is the value of the company which is calculated with the basic concepts of accounting. by dividing the difference between total assets and total debt by the number of shares outstanding. The fifth liquidation value is the selling value obtained from all assets owned by the company after deducting all liabilities that must be paid by the company. The liquidation value can be calculated in the same way as calculating the total book value, namely the balance sheet prepared for the target company.

## **Method**

The type of data used in this research is secondary data research. Secondary data is data that has been processed, stored, presented in a certain format or form by certain parties for certain interests (Abdillah, 2015). The secondary data in the study is the financial statements listed on the IDX. The data collection method used in the study used non-participant observation and documentation. The non-participant observation method is that researchers can make observations as data collection without being involved in the observed phenomena (Sugiyono, 2018). The population is a general area consisting of several subjects or objects that have good quality and can be concluded by the author (Sugiyono, 2018). The population in this study is cement sub-sector companies listed on the Indonesia Stock Exchange in 2016-2019. The sample is part of the number owned by the population. (Sugiyono, 2018) The sampling technique used in this paper is saturated sampling, which is a sample writing technique where all the sets in the population are used as samples. Based on the saturated sampling criteria, the number of samples used in this paper or research are 6 companies in the basic industrial sector and cement sub-sector chemicals listed on the Indonesia Stock Exchange.

The method used for data collection in this study is to use secondary data which is done by looking directly at the financial statements listed on the Indonesian stock exchange. Another way to collect data is by way of documentation from all books related to this research and by looking at and studying previous research related to this research. This study involved six chemical industry companies in the cement sub-sector which were listed on the Indonesian stock exchange in 2016-2019. Documentation is a method used to obtain documents, written numbers and pictures in the form of reports and information that can support research (Sugiyono, 2018). Data collected through non-participant observation and documentation by observing documents or records produced by other parties related to this research, such as recording, citing, and collecting data from documents found on [www.idx.com](http://www.idx.com), the website the official Indonesian Stock Exchange as well as the results of previous research and books that support the arguments of the results of this study.

Operational variables. The variables defined in this study can be classified into independent or independent variables. The independent variable or independent variable is a variable that can affect changes in the dependent variable (Sugiyono, 2018). The independent variables in this study are profitability and leverage. The dependent variable or dependent variable is a variable that can influence or be the root of the problem because of the independent variable (Sugiyono, 2018). The dependent variable in this study is firm value. The independent variables used in this research are profitability and leverage where these independent variables can affect the dependent variable, namely firm value. In this study, the independent variables can be calculated using the ratio of return on assets ( $ROA = \text{Net Income} / \text{Total Assets}$ ) and Leverage is measured using ( $\text{Debt to Equity Ratio} = \text{Total liabilities} / \text{Total equity}$ ). The dependent variable used in this study is firm value. with the formula  $PER = \text{market price per share} / \text{Earning}$  The method used in this research is descriptive statistics. Where is the statistic that analyzes the data by describing the data that has been collected whose conclusions are not necessarily applicable in general and the method of calculating the minimum value, maximum value, mean (average) and standard deviation. Based on this method, it is possible to find out how the effect of production costs on net income in the basic industry sector and the chemical sub-sector of the cement listed on the IDX and components on the IDX for the 2016-2019 period.

After testing the descriptive statistics, the correlation coefficient analysis will be tested to find out how big the relationship between production costs and net income is. Correlation coefficient analysis is also useful to determine the level of closeness of the relationship between the two variables that have been set. So that it can find out how high or low the relationship between the two variables is concerned. The coefficient of determination ( $R^2$ ) calculated how far the ability to explain the dependent variable is. A small  $R^2$  value means the ability of the independent variable to explain the variation of the dependent variable. A value that is close to the value of one means that the independent variables provide almost all the information needed for research, describing the variation in the dependent variable (Ghozali, 2016). Variable X is profitability and leverage, while variable Y is the value of the company. The formula used in this study are:

$$Kd = R^2 \times 100\%$$

Where: Information: Kd = Coefficient of determination; R = Correlation Coefficient Value

The t-test was used to determine the effect of each independent variable on the dependent variable. The t-statistical test basically shows how far the influence of one explanatory variable individually in

explaining the variation of the dependent variable (Ghozali, 2016). Testing through a significant test is carried out using a significant indicator of 0.05, if it is significant 0.05, then the hypothesis is accepted, but if it is significant 0.05 then the hypothesis is rejected. The data analysis technique used in this research is multiple linear regression analysis. This analysis aims to measure the variables in this study, while the equation model of the regression analysis of this study is as follows:

$$Y = 1X_1 + 2X_2 + e$$

Information: Y = dependent variable, namely firm value; 1 = regression coefficient; X<sub>1</sub> = independent variable, namely the use of accounting information; X<sub>2</sub> = independent variable, namely the use of accounting information; e = error term

## Result

**Table 1.**  
**Descriptive Sample Variable Research**

	<i>Mean</i>	<i>Std. Deviation</i>	<i>N</i>
PER	2.7496	8.05351	24
ROA	.0429	.03828	24
DER	.8779	.58093	24

Source: Processed data

Table 1 describes the results of descriptive statistical analysis which found an total of PER value of 2.7496 with a standard deviation of 805335. The average value of ROA is 0.0429 with a standard deviation of 0.038828. The average value of DER is 0.8779 with a standard deviation of 0.58093. Assumption of classical test, which is a test that includes a normality test, which the goal to test whether the residuals from the regression model made are normally distributed or not (Ghozali, 2016). The normality test used in this study uses statistics, namely the Kolmogorov-Smirnov Test. To test the normality used 2 test methods, namely p-plot and histogram diagram. If the data spreads around the diagonal line and follows the direction of the diagonal line, then the regression model meets the assumption of normality. If the significance value of the One Sample Kolmogorov-Smirnov Test > 0.05 then the data is normally distributed. The results from the study showed normal distribution.

Multicollinearity test was defined to measure whether the regression model found a correlation between independent variables. The correct regression model should not have a correlation on the independent variables. To see whether there is multicollinearity in the regression model, it can be searched from tolerance and VIF (Variance Inflation Factor). These two measures provide clues on which independent variable explains the other independent variables. If the tolerance value is > 0.10 or VIF 10, it shows that there is no multicollinearity (Ghozali, 2016). The results of this study did not show that there were no symptoms of the mutilinearity test. The heteroscedasticity test has the aim of testing whether the regression model has variance uncertainty from one observation to another. If the variance from the residual of one observation to another observation does not change, then it can be said that it is homoscedasticity and if it is different it is called heteroscedasticity. The correct regression model is homoscedasticity or there is no heteroscedasticity (Ghozali, 2016). There are various ways of testing for the presence or absence of heteroscedasticity, including the Glejser test. This test criteria if the significant value of the variable > 0.05 then there is no heteroscedasticity, and if the value of the independent variable is < 0.05 then heteroscedasticity is likely to occur (Ghozali, 2016). The results of the study show that there is no heteroscedasticity.

**Table 2**  
**Multiple linear regression**

<i>Model</i>	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	<i>t</i>	<i>Sig.</i>	<i>Collinearity Statistics</i>	
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>			<i>Tolerance</i>	<i>VIF</i>
1 <i>(Constant)</i>	5.918	4.229		1.399	.176		
<i>ROA</i>	-8.052	47.203	-.038	-.171	.866	.899	1.112
<i>DER</i>	-3.215	3.110	-.232	-1.034	.313	.899	1.112

Source: Processed data

Based on table 2 shows a constant value of 5.918 showing profitability and leverage is equal to 0 (zero), then the firm value is 5.918. X<sub>1</sub> is equal to -8.052 indicating that profitability has a negative effect on firm value. X<sub>2</sub> is equal to -3.215 indicating that leverage has a negative effect on firm value.

**Table 3**  
**Test t**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	5.918	4.229		1.399	.176		
ROA	-8.052	47.203	-.038	-.171	.866	.899	1.112
DER	-3.215	3.110	-.232	-1.034	.313	.899	1.112

Source: Processed data

According to Ghozali (2016) the t-test is a test that shows how far the influence of the independent variables individually on the dependent variable. The test criteria is to compare the degree of confidence level of significance (alpha) of 0.05. Table 2 above shows that the t test in this study aims to determine the effect of each X variable partially on the Y variable. The results show that the t value of the Profitability variable (X1), which is -0.171, does not exceed the t table value in the sample of this study, ie 2,080. The t value of the Leverage variable is also the same with the t value of -1.034 which indicates that these two variables partially have no significant effect on Firm Value.

**Table 3**  
**Test F**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	74.029	2	37.015	.548	.586 <sup>b</sup>
Residual	1417.727	21	67.511		
Total	1491.756	23			

Source: Processed data

Based on (F test) in Table 3 shows the F value of 0.548 with a significance value of 0.586 < 0.05. So it can be concluded that profitability and leverage have a negative effect on firm value

**Table 4.**  
**Hypothesis Test**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	55.191	64.159		-.860	.039		
ROA	-52.853	364.123		.022	.145	.045	.803

Source: Processed data

Based on the table above, the calculated t value obtained is 0.145 and the significance value is 0.045. This value is smaller than the 0.05 significance level, which means that profitability has a significant effect on profit growth. And from these results, it can be concluded through this test that H1 is accepted.

## Conclusion

Based on the description above, it can be concluded that the constant value of 5.918 shows that profitability and leverage are equal to 0 (zero), so the firm value is 5.918. Profitability is equal to -8.052 indicating that profitability has a negative effect on firm value. Leverage equal to -3.215 indicates that leverage has a negative effect on firm value. Suggestions for further researchers are expected to add independent variables such as earnings quality, firm size, capital structure and liquidity.

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