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# The Relationship Between Profitability and Firm Value: Evidence From Manufacturing Industry in Indonesia

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## Abstract

This study aims to test whether profitability acts as a moderating variable that is able to moderate the influence of the company growth and capital structure on the firm value. The independent variables used in this study are company growth and capital structure, while profitability is the moderating variable.

The research sample was taken from manufacturing industrial companies listed on the Indonesia Stock Exchange (IDX) during the period 2016 - 2018. The study used panel data which is a combination of cross section and time series data, with data analysis using multiple regression.

The results showed that company growth and profitability had a positive effect on the firm value, while capital structure had does not effect. The results of the analysis show that profitability does not moderate the effect of company growth and capital structure on the firm value, the interaction of company growth and capital structure with profitability has a negative impact on the firm value.

**Keywords:** company growth, capital structure, profitability, firm value

## 1. Introduction

Every of the company tries to maximize firm value in order to exist in running its business. In this regard, management which has earned the trust of the owners strives to work hard to achieve this goal. Management will run a business by managing company assets effectively in order to be able to generate added value for the company, including in making strategic decisions.

The success of management in managing the firm cannot be separated from the role of investors as the owner of the capital who has given them confidence. Therefore, management must be able to answer this belief by working hard, increasing its performance by generating high profitability so that investors are interested in investing their funds. Investors before deciding to invest their funds in the capital market will seek information in advance about the condition of the company's financial performance (Ha and Minh 2018).

The firm performance is a representation of management policies and activities in running the company during a certain period, and can be measured by 2 indicators, namely Return on Assets (ROA) and Return on Equity (ROE). Therefore, measurement of the firm performance is generally carried out using the financial ratio approach, which is taken from financial statements, so it is often referred to as financial performance. The size of the company's performance itself depends not only on the efficiency of the company, but also on the market in which the firm operates, which in the financial field is known as financial stability. The financial performance is an analysis carried out to see the extent to which a company has implemented the rules of financial implementation properly.

The firm's performance will be used as the basis of information for investors in making investment decisions. The firms with good performance will get a positive response from investors, by being willing to pay a higher price for their shares. Thus, the firm's performance determines the stock market price, the higher the firm's performance, the higher the stock market price. With the high share price, the firm value or shareholder wealth also increases, so that in general the firm value is the market price of the firm's shares which shows the feasibility of investors' prospects.

The main objective of the company is to increase the welfare of the owner or the firm value by maximizing the market price of the company's stock. The firm value is related to business management, policies, working environment conditions, and business ethics (Miles and Covin, 2000). Business management will help manage and run the business properly and appropriately, so as to achieve the targets set. Policies related to making strategic decisions to achieve the company's business vision and mission include three important policies, namely funding, investment, and operating policies.

The working environment conditions are related to a comfortable and safe company working atmosphere, so as to create a productive, innovative and creative work spirit. The business ethics is important and indispensable in business management, business ethics is related to the procedures for conducting business activities which cover all aspects relating to individuals, companies and society. The business ethics plays an important role, because it can shape the values, norms, and behavior of employees and leaders in order to build a harmonious, healthy relationship with work partners, shareholders and the community. The decisions taken by the management are intended to improve the welfare of company owners, which is indicated by the increase in the firm value.

Business management, policies, working environment conditions, and business ethics enable the company to work effectively and efficiently resulting in high profitability, which will have an impact on the increase in stock prices above its book value. The higher stock price, the higher price to book value (PBV), and the more successful the firm in creating the value and prosperity of the owner. According to Barney (1991), the greater the price to book value (PBV), the higher the firm is valued by the relative investors compared to the funds that have been invested in the firm.

The firm value can be measured using stock price indicators, price to book value (PBV) and tobin's q. There are many factors that influence investors in assessing a company's ability to increase firm value. However, this study will only use profitability as measured by the return on equity (ROE) indicator, company growth as measured by asset growth indicators, and capital structure as measured by debt to equity ratio (DER), while firm value is measured using price to book value (PBV).

The Indonesia Stock Exchange (IDX) in 2018 listed the 5 largest manufacturing firms that go public. The following in Table 1 is the data for the 5 firms with their price to book value (PBV) growths.

Table 1. PBV of manufacturing firms for the period of 2015 – 2019

Years	ASII	INKP	BRPT	INDF	SMGR
2014	2.60x	0.20x	0.20x	1.45x	4.09x
2015	2.18x	0.14x	0.18x	1.40x	2.37x
2016	2.54x	0.19x	1.14x	1.55x	1.91x
2017	2.10x	1.38x	1.29x	1.35x	1.99x
2018	1.67x	0.87x	1.62x	1.19x	2.49x

Source: Annual Report - Indonesia Stock Exchange (IDX)

Data from the 5 companies as in Table 1 shows that Astra International (ASII), Indofood Sukses Makmur (INDF), and Semen Indonesia Persero (SMGR) have a PBV greater than 1, while Indah Kiat Pulp & Paper (INKP) only 2017, and Barito Pacific (BRPT) in 2016, 2017, and 2018.

The profitability is the company's ability to generate profits by using its resources. Profitability is also an important factor considered by investors as the main factor, because profitability is seen by investors as a guarantee of a return on their investment. Several studies related to profitability and firm value, among others were conducted by Manurung et al (2014), Arifianto and Chabachib (2016), Charumathi and Khrisnan (2016), and Data et al (2017), found that return on equity (ROE) positive effect on firm value (PBV). Thus, the companies with high return on equity (ROE) the share prices tend to increase.

The manufacturing companies in Indonesia have succeeded in processing superior raw materials, such as tobacco and minerals or natural gas. The Indonesia Stock Exchange (IDX) in 2018 as previously explained, recorded 5 manufacturing companies that went go public with the highest assets, namely Astra International (ASII), Indah Kiat Pulp & Paper (INKP), Barito Pacific (BRPT), Indofood Sukses Makmur (INDF), and Semen Indonesia Persero

(SMGR). The average asset growth of these companies over the past 5 years has fluctuated. The average ASII asset growth decreased by 10.84%, INKP increased by 1.67%, BRPT increased by 38.74%, INDF decreased by 6.19%, and SMGR increased by 0.56%. This growth in assets shows a variation of the increase and decrease in manufacturing companies listed on the Indonesia Stock Exchange (IDX). There are companies whose asset growth has increased, there are also companies whose asset growth has decreased. Research on company growth, among others was conducted by Hutabarat et al (2018), who found that asset growth had a negative effect on firm value (PBV), while the results of research from Data et al (2017) found a positive effect asset growth on firm value (PBV).

Based on the average asset growth of the 5 companies which tends to fluctuate, it can be ascertained that their capital structure is also experiencing fluctuations. Changes in the capital structure for asset financing can be done by using additional debt, namely by issuing bonds or from owner equity by issuing shares. Both the methods of financing will have an impact on changes in the company's capital structure. The hope of changing the capital structure for the owners is that it will have an impact on increasing the firm value.

Research related to capital structure was carried out by Chen and Chen (2011), Manurung et al 2014, and Rizki et al (2018), who found that capital structure (DER) has a negative effect on the firm value (PBV). However, the results of research from Charumathi and Khrisnan (2016), found a positive effect. Meanwhile, the results of research from Fajri and Surjandari (2016) found do no effect the capital structure (DER) on the firm value (PBV).

The purpose of this study is to examine the effect of company growth, capital structure and profitability on the firm value, and to examine the relationship between profitability (ROE) and firm value (PBV). Based on the phenomenon of the development of the firm value (PBV) during the last 4 years (2015-2018) which fluctuates, and the results of previous studies, so the testing this relationship places profitability (ROE) as a moderating variable in influencing the firm value (PBV). Therefore, the problem in this study is whether profitability (ROE) is a moderating variable that strengthens the effect of company growth (AG) and capital structure (CS) on the firm value (PBV).

## 2. Literature Review and Hypothesis Development

This research uses established financial theory concepts, namely capital structure theory, trade-off theory, pecking order theory, and signaling theory.

### 2.1 Capital Structure Theory

Talking about capital structure will never end. This discussion has been started since 1958, where Modigliani and Miller at that time presented their spectacular paper, which became the basis for the era of the beginning of the modern capital structure. The theory of capital structure from Modigliani and Miller (1958) is based on strong assumptions, including the assumptions that (1) perfect capital markets, there are no corporate or personal taxes, (2) transaction cost for buying and selling securities, as well as the bankruptcy cost, is nil, (3) there is a symmetry of information, (4) the cost of borrowing is the same for investors and companies, (5) there is no flotation cost, such as an underwriting commission, payment to merchant bankers, advertisement expenses, (6) there is no corporate dividend tax.

In 1958 Modigliani and Miller (MM) demonstrated their famous paper under a series of assumptions, the conclusion of this paper that capital structure has no effect on firm value. Therefore, the Modigliani and Miller Approach indicates that the value of a leveraged firm is the same as the value of an unleveraged firm if the operating profits and future prospects are same. That is, if an investor purchases stock of a leveraged firm, it would cost him the same as buying the stock of an unleveraged firm.

The paper he brought created controversy among academics and financial experts, especially on the assumption of a perfect financial market, and the irrelevant effect of income tax was related to the level of debt use on firm value. By paying attention to the criticisms from academics and evaluation, MM corrected them by publishing a new paper that was corrected in his research in 1963 (Okaegbu et al, 2014).

Modigliani and Miller (1963) in their revision loosened some assumptions that were considered unrealistic, especially the assumptions of perfect capital markets and no corporate or personal taxes. In their paper, Modigliani and Miller (1963) included the effect of taxes on the model they made, so that the theory could be closer to realistic proportions, on which their theory was based. The use of debt can lower taxes, a tax reduction can lead to a decrease in the cost of capital. However, they also concluded that companies should not take excessive tax advantage, because the use of debt that is too high can have a negative impact on the firm value in the long run. Therefore, the use of retained earnings is believed to be more relevant, especially when the restrictions imposed by lenders that affect costs are considered (Okaegbu et al, 2014).



### 2.2 Trade-off Theory in Capital Structure

Trade-Off Theory is expressed by Myers (2001), according to this theory, the firms will use debt to a certain level, where the tax savings from the additional use of debt are equal to the cost of financial distress. Financial distress is the cost of bankruptcy and agency costs that increase as a result of the decline in the company's credibility. The trade-off theory recommends using debt as the main choice in firm funding, because the use of debt can reduce tax costs which will have an impact on increasing the firm value.

### 2.3 Pecking Order Theory in Capital Structure

Another theory related to capital structure is the pecking order theory (POT). This theory was first put forward by Donalson in 1961, and Myers (1984). Donalson (1961), conducted observations and research on the behavior of corporate capital structures in the United States. The results of his research indicate that firms with high levels of profitability tend to have low debt ratios. The company's with high profitability can hold their profits as retained earnings to be used as a source of the company financing, because the costs are cheap. Specifically, the company's have an order of preference in the use of financing sources from the lowest cost order.

### 2.4 Information Asymmetry Theory and Signaling Theory in Capital Structure

This theory was proposed by Myers and Majluf (1984), according to this theory there is information asymmetry between managers and outsiders, where managers have more complete information about the condition of the company than outsiders. So, outsiders do not have the same information about the prospects and risks of the company, the outsiders are potential investors.

The further development of the model is that the use of debt is a signal that the manager sends to the market, if the manager has the belief that the company's prospects are good, so the manager will hope that the firm's stock price will increase. In this regard, the manager will communicate this to outside parties, namely investors. Managers use more debt as a more credible signal, because the company will be seen as a company that has good prospects in the long term. Investors are expected to catch these signals by being willing to pay for the company's shares at a higher price, and this will have an impact on increasing the firm value.

### 2.5 Effect of Company Growth on the Firm Value

The company growth in this study is proxied by using the asset growth as an indicator (AG). Research related to asset growth, was conducted by Hutabarat et al (2018), found a negative effect of asset growth on firm value. Meanwhile, the results of research from Data et al (2017) found that asset growth has a positive effect on firm value.

H<sub>1</sub>: Company growth has a positive effect on firm value.

### 2.6 Effect of Capital Structure on the Firm Value

The capital structure in this study is proxied by using the debt to equity ratio (DER). Research related to capital structure (CS) was carried out, among others by Charumathi and Khrisnan (2016), Hutabarat (2018), and Data (2018), who found that the capital structure (CS) has a positive effect on the firm value (FV). However, research results from Chen and Chen (2011), Manurung et al (2014), and Arifianto and Chabachib (2016), found that capital structure (CS) has a negative effect on the firm value. Meanwhile, research results from Fajri and Surjandari (2016), found do no effect of capital structure (CS) on the firm value (FV).

H<sub>2</sub>: Capital structure has a positive effect on firm value

### 2.7 Effect of Profitability as a Moderating Variable on the Firm Value

The measurement of profitability in this study uses the return on equity (ROE) indicator. Research on profitability (ROE) and firm value (PBV) has been done, including by Nuryaman (2015), and Data (2018), who found that profitability (ROE) has a positive effect on the firm value (PBV). However, the research results from Murni (2015) found that profitability (ROE) has a negative effect on the firm value (PBV).

Based on the results of previous studies, most of the research results indicate that profitability (ROE) has a positive effect on firm value (PBV). Therefore, the researcher tries to place profitability (ROE) as a moderating variable, whether profitability is able or not able to moderate the effect of company growth (US) and capital structure (CS) on the firm value.

H<sub>3a</sub>: Profitability is able to moderate the influence of company growth on the firm value.

H<sub>3b</sub>: Profitability is able to moderate the influence of capital structure on the firm value.

### 3. Methodology

#### 3.1 Research Philosophy

Philosophy, as suggested by Huijbers (1993) is intellectual activity that is methodical and systematic, reflecting on capturing the essential meaning of the whole. The philosophy of social research underlies scientific activities that seek to find the true truth of every existing social phenomenon. Solomon et al (2013) defines research philosophy as a belief about the ways and methods in which data about a phenomenon must be collected, analyzed and used.

Bhaskar (2014), explains that positivist studies generally attempt to test a theory, to increase predictive understanding of a phenomenon. Alqisie (2014) supports this proposition by stating that positivism can be applied if there is evidence of formal propositions, measurable variable sizes, hypothesis testing, and drawing conclusions about phenomena from the sample to the stated population. Based on this explanation, this research is based on the philosophy of positivism research, because it tests several quantitative hypotheses.

#### 3.2 Population and Samples

The population used in this study is the manufacturing industry sector listed on the Indonesia Stock Exchange (IDX) for the period 2016 - 2018. The data used is a panel data, with samples of various companies included in the manufacturing industry sector that still exist on the Indonesia Stock Exchange (IDX) for the period 2016 - 2018. Methods of data collection using purposive sampling, where the sample is taken according to certain criteria determined based on the needs of the researcher.

The names and measurements of the variables are described in Table 2 below:

Table 2. Measurement of variables used in research models

Variables	Variable Name	Measurement	Scale
Dependent Variable: PBV	Firm Value	Price per Share	Ratio
		Book Value per Share	
Independend Variables:	AG	Total Asset <sub>t</sub> – Total Asset <sub>t-1</sub>	Ratio
		Company Growth	
		Total Asset <sub>t-1</sub>	
CS	Capital Structure	Total Liabilities	Ratio
		Total Equity	
ROE	Profitability	Earning After Tax	Ratio
		Stockholders' Equity	

#### 3.3 Data Analysis

Data analysis using multiple regression analysis. The regression function is written as follows:

Regression Equations:

$$PBV = a + b_1AG + b_2CS + b_3ROE + b_4G*ROE + b_5CS*ROE + e$$

Where:

PBV = FirmValue

AGh = Company Growth

CS = Capital Structure

ROE= Pofitability

#### 4. Results and Discussion

##### 4.1 Description Analysis

Descriptive analysis is intended to explain the condition of the variables taken as samples from manufacturing companies listed on the Indonesia Stock Exchange (IDX), and used in the research model.

Table 3. Descriptive statistic

Variables	N	Minimum	Maximum	Mean	Std. Deviation
AG	162	-0.3285	0.8027	0.0943	0.1463
CS	162	0.0833	4.1897	0.8358	0.6818
ROE	162	0.0353	30.3792	9.3355	6.3339
AG*ROE	162	-0.0152	0.1230	0.0107	0.1199
CS*ROE	162	0.0001	0.5773	0.0772	0.0922
PBV	162	0.0701	4.3409	1.2584	0.9173
Valid N (listwise)					

Source: Results of data processing

From the Table 3, it can be explained that the average of the company growth (AG) selected as a sample is 0.0943%, with the lowest growth -0.3285% and the highest growth 0.8027%. The lowest capital structure (CS) was .0833 and the highest was 4.1897x with an average of .8358x. The lowest profitability (ROE) was 0.0353% and the highest was 30.3792% with an average of 9.3355%. Meanwhile, the lowest firm value (PBV) was .0701x and the highest was 4,3409x with an average of 1.2584x.

##### 4.2 Model Testing

Model testing can be divided into 2, namely testing the coefficient of determination and testing anova - the F significance test.

###### 4.2.1 Coefficient of Determination Test

The coefficient of determination test is intended to determine the influence of the variables in the model on firm value. The results of the coefficient of determination test can be seen in the Table 4 below.

Table 4. Coefficient of determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.861	.741	.733	4650.58298

a. Predictors: (Constant), AG, CS, ROE, AG\*ROE, CS\*ROE

b. Dependent Variable: PBV

Source: Results of data processing

The Adjusted R Square value of the test results is 73.30%, thus the variables used in the regression model are able to explain 73.30%, while the remaining 26.70% is caused by other factors.

###### 4.2.2 Anova Test – Test of Significance F

ANOVA test - the F significance test is intended to test the goodness of fit of the regression model used. The results of the ANOVA test - the F significance test can be seen in the Table 5 below.

Table 5. Anova - Test of Significance F

Model	Sum of Squares	df	Mean Square	F	Sig
Regression	9.652E9	5	1.930E9	89.251	.000 <sup>a</sup>
Residual	3.374E9	156	21627922.030		
Total	1.303E10	161			

a. Predictors: (Constant), AG, CS, ROE, AG\*ROE, CS\*ROE

b. Dependent Variable: PBV

Source: Results of data processing

Anova test results - F significance test for the regression equation model shows that the value of F = 89,251 with a significance of F (Sig-F) less than 1%. Thus, the regression model fulfills the goodness of fit requirements as required in the ordinary least square (OLS) model, so that the regression model can be used and has high accuracy.

#### 4.3 Regression Analysis

The results of the regression analysis for the regression equation model above can be seen in the Table 6 below.

Table 6. Regression results

Model	Standardized Coefficients		
	Beta	t	Sig t
AG	.192	2.575	.011
CS	-.014	-.149	.882
ROE	1.122	15.866	.000
AG*ROE	-.480	-5.530	.000
CS*ROE	-.274	-2.661	.009

Dependent Variable: PBV

Source: Results of data processing

From the Table 6, it can be seen that the value of the regression coefficient shows the effect of company growth (AG), capital structure (CS), and profitability (ROE) on the firm value (PBV). Besides that, it can also be seen that the t value and the significance of t (sig-t) which show signs that the hypothesis is accepted or rejected.

Regression Equations:

$$PBV = 0.192AG - 0.014CS + 1.122ROE - .480AG*ROE - 2.661CS*ROE$$

The regression equation model shows that company growth (AG) and profitability (ROE) have a positive effect on the firm value (PBV), capital structure (CS) has a negative effect on the firm value (PBV), but this effect is do not significant. The interaction of company growth (AG) and profitability (ROE), and the interaction of capital structure (CS) and profitability (ROE) have a negative effect on the firm value (PBV).

#### 4.4 Result of Hypothesis Test

Based on the results of regression analysis and t test or significance (sig-t) can be seen in Table 7 below.

Table 7. Significance test results t

Dependent Variable	Hypothesis	Findings	Sig-t	Conclusion
Company Growth	Positive	Positive	0.011	Accepted
Capital Structure	Positive	Negative	0.882	Rejected



Profitability (ROE)	Positive	Positive	0.000	-
AG*ROE	Positive	Negative	0.000	Rejected
CS*ROE	Positive	Negative	0.009	Rejected

Source: Results of data processing with SPSS 19.

#### 4.4.1 Effect of the Company Growth (AG) on the Firm Value

The results of the regression analysis show that the value of the company's growth coefficient (AG) is positive, with a significance of less than 1%. Thus, company growth (AG) has a positive effect on firm value (PBV). Therefore, hypothesis 1 is accepted, the higher the company growth (AG), the higher the firm value (PBV).

The results of this study are in accordance with research from Data, et al (2017), which found a positive effect of asset growth (AG) on the firm values. Unlike the results of research by Hutabarat et al (2018), which found that asset growth (AG) has a negative effect on the firm value (PBV), and also from the research results of Burhanuddin et al (2019), which did not find any effect of company growth (AG) on firm value (PBV).

#### 4.4.2 Effect of the Capital Structure (CS) on the Firm Value

The results of the analysis on the regression model show that the value of the capital structure coefficient (CS) is negative, with a significance of 88.20% or greater than 5%. Thus, the capital structure (CS) has does not effect on the firm value (PBV). Thus, the hypothesis 2 is rejected, even though there is a tendency for it to have a negative effect, this influence is do not significant in reducing the firm value (PBV). However, the results of this study are appropriate and support research from Uzliawati et al (2018), which did not find any influence of capital structure (CS) on firm value (PBV).

The results of this study are not in accordance with the trade off theory, which states that the use of debt will increase the firm value. This study also does not support the research of Chen and Chen (2011), Manurung et al (2014), and Purwanto and Agustin (2017), which found a negative effect of the capital structure (CS) on the firm value (PV). The results of this study are also inconsistent with research from Data (2018), and Hutabarat (2018), which found a positive effect of the capital structure (CS) on the firm value (PBV).

#### 4.4.3 Effect of the Profitability (ROE) as a Moderating Variable on the Firm Value

The coefficient value of return on equity (ROE) is positive with a significance of less than 1%, so that return on equity (ROE) has a positive effect on firm value (PBV). The results of this study are consistent with rearsch from Data et al (2017), which found that firm performance has a positive effect on firm value. However, results of this study are inconsistent and do not support the research of Hirdinis (2019), who found that return on equity (ROE) has negative effect on firm value (PBV).

The results of the analysis on the regression model show that the coefficient of the interaction variable between firm growth (AG) and profitability (ROE), and capital structure with profitability (ROE) is negative, with a significance level of t (sig-t) less than 1%. Thus, hypotheses 3a and 3b are rejected, which means that profitability is not able to moderate the influence of company growth and capital structure on the firm value.

#### 4.5 Moderating Analysis

The placement of profitability (ROE) as a moderating variable implies the interaction between the company growth (AG) and capital structure (CS) in influencing the firm value (PBV). Based on the results of the regression test, it shows that the interaction variable between company growth (AG) and profitability (ROE) on the firm value (PBV) is indicated by the coefficient value of -0.480 at a significance level of t (sig-t) less than 1%, while for the interaction variable between capital structure (CS) and profitability (ROE) on the firm value (PBV) is indicated by a coefficient value of -2.661 at a significance level of t (sig-t) less than 1%, it means that the interaction between company growth (AG) and profitability (ROE), and capital structure (CS) with profitability (ROE) having a negative impact in affecting the firm value (PBV).

### 5. Discussion

The findings from the results of this study are that there is a positive effect of firm growth (AG) on firm value (PBV). These findings indicate that increasing investment with the addition of assets has an impact on increasing the firm value (PBV). Investors are confident in the investment development made by the company, so they give a positive response by being willing to pay a higher price for the shares. The increase in investment provides greater

opportunities for companies to be able to achieve high profits, because the increase in the company investment will increase production capacity which has an impact on increasing of the company revenues.

The results of this study support previous research conducted by Data et al (2017) on manufacturing companies listed on the Indonesia Stock Exchange (IDX) for the period 2010-2015. Thus, the behavior of investors on the Indonesia Stock Exchange (IDX) is still consistent, that is, they are interested in investing in growing companies. This is in line with the opinion of Al- Najjar and Taylor (2008), which states that investors are more interested in investing in companies with high growth opportunities, and less interested in investing in companies with low growth.

Profitability (ROE) has a positive effect on firm value (PBV). The results of the study provide the same findings as the result of research from Data et al (2017), which means that there is consistency in the behavior of investors on the Indonesia Stock Exchange (IDX) towards their investment patterns, namely being willing to pay higher share prices to companies that get high returns. Thus, the results of this study are also appropriate and supportive, and consistent with the signaling theory, the firm's performance provides positive signals and information to investors.

There are interesting findings from this research, although the company growth (AG) and profitability (ROE) have a positive effect on the firm value (PBV). However, after being developed by interacting between company growth (AG) and profitability (ROE) in accordance with the moderation concept, the influence of the interaction variable has a negative impact on the firm value, with a significance level of  $t$  (sig- $t$ ) less than 1%. Thus, it can be said that the company growth (AG) will reduce firm value in companies that get high profitability (ROE). The results of this study are do not in accordance with the basic trade-off theory that companies with high asset growth in conditions of high profitability will have an impact on increasing firm value.

Another finding from the results of this study is that the capital structure (CS) has do not effect on the firm value (PBV). Thus, the use of debt has does not impact on the firm value (PBV), investors do not respond to the use of debt in determining investment policies for purchasing shares of manufacturing companies on the Indonesian Stock Exchange (IDX). However, the interaction variable between capital structure (CS) and profitability (ROE) in the regression test shows a negative effect with a significance level of  $t$  (sig- $t$ ) less than 1%. Thus, it can be said that the capital structure (CS) will reduce the firm value in the companies that produce high profitability (ROE).

The results of this study are not in accordance with the basic trade-off theory that companies with high capital structure (CS) in companies that produce high profitability (ROE) have an impact on the increase in firm value, even the opposite happens. As with the first finding, the second finding is also interesting, namely that after the interaction with profitability is carried out, the interaction variable has a negative effect on the firm value (PBV). This information is doing not captured as a signal that has been responded positively by investors, so that investors are do not willing to pay a higher price for their shares.

## 6. Conclusion

This study was conducted with the aim of examining whether the profitability proxied with return on equity (ROE) as a moderating variable is able to moderate the effect of firm growth (AG) and capital structure (CS) on firm value (PBV). Based on the analysts, it can be concluded that company growth (AG) and profitability (ROE) have a positive effect on firm value, while capital structure (CS) has a negative effect. However, after the interaction between company growth (AG) and capital structure (CS) with profitability (ROE), through a moderation test the results show a negative effect. Therefore, profitability (ROE) does not act as amoderating variable which strengthens the influence of company growth (AG) and capital structure (CS) on firm value (PBV).

The companies with high growth and high capital structure will reduce firm value (PBV) in companies with high prifitability (ROE). Thus, although profitability is the main factor and has a positive effect in increasing firm value (PBV), as a moderating variable it is unable to act as a moderator that affects in increasing firm value (PBV). In this regard, the growth of companies that are financed by using debt may not result in a rate of return that is higher than the cost of capital, so that it has an impact on reducing return on equity (ROE). Therefore, after being developed, return on equity (ROE) as a moderating variable that interacs with company growth and capital structure has a negative effect on firm value.

Based on the results of the analysis, the limitation of this study is that it does not separate companies with large capitalization values and companies with small capitalization values. Nevertheless, the independent variables in this study were able to provide a sizeable contibution to the increase in firm value, ammounting to 73.3%. Therefore, this research can be developed by separating companies with large and small capitalization values and expanding the scope of independent variables, such as company risk, ownership structure, and the board of directors which

conceptually also has an impact on firm value. Further research is also suggested to use return on assets (ROA) as a proxy of firm performance which is used as a moderating variable.

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