



## The Influence of Price to Book Value on Capital Structure and Profitability of Health and Pharmaceutical Companies in Indonesia

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### Abstract

This study aims to know and analyze the influence of price to book value on capital structure and profitability of health and pharmaceutical companies in Indonesia during the period 2012-2019. The population in this study was 12 companies at health and pharmaceutical sub-sector companies in Indonesia during the period 2012-2019. The sampling technique was done using the *purposive sampling method*. Based on the sample criteria, there were 8 companies that matched the sample criteria. The data analysis techniques used in this study were descriptive analysis and analysis of Structural Equation Modeling (SEM) with AMOS 21. The results showed (1) PBV variable had a positive and significant influence on capital structure of health and pharmaceutical companies in Indonesia during the period 2012-2019. (2) PBV variable had no significant influence on profitability of health and pharmaceutical companies in Indonesia during the period 2012-2019. (3) Capital structure variable had no significant influence on profitability of health and pharmaceutical companies in Indonesia during the period 2012-2019.

**Keywords:** Price to Book Value; Debt Equity Ratio; Return on Asset

## 1.0 INTRODUCTION

In Indonesia, the investors view the company's shares through the Indonesia Stock Exchange (IDX). IDX also plays an important role in the Indonesian economy. Health and pharmaceutical subsectors are also listed on the Indonesia Stock Exchange (IDX). Health and pharmaceutical sectors are actually interrelated because health services definitely require the availability of drugs. In terms of the health and pharmacy business prospects will be attractive in the future because of several factors that encourage the share of health services, namely public awareness of the importance of their health, the level of community income tends to increase. So health and pharmacy are a necessity now that is still needed by every society.

Looking at the position of Indonesia's foreign debt which consists of government debt and private debt, private debt tends to increase every year compared to government debt, starting from 2012 to 2019, then went down in 2018, and went up again in 2019. The phenomena explain that companies in Indonesia still rely on external sources of financing in the form of debt for company operations. Indonesia's high debt can certainly have an impact on the profits of health and pharmaceutical companies in Indonesia.

The company's profitability is a comparison between the company's net income and the company's total assets. The higher the company's profitability, the higher the company's financial performance will increase. The ups and downs of profitability are of course many factors that can influence it, one of which is the capital structure and company value. The capital structure factor is important for the company to be used to finance the company's fixed assets by guaranteeing the debt that the company has incurred. The higher the capital structure owned by the company is very risky to the company's financial performance. But the company without undertaking debt is considered not productive in generating company's profitability. Likewise, PBV factor is important for the company to describe market confidence in the company's development. PBV shows the extent to which the company is able to create company value on the amount of capital invested. PBV has a positive relationship with ROA, but PBV has a negative relationship with the company structure. Where the greater the firm value, the more the company's profitability will increase and it can reduce the company's capital structure. Some of the previous studies related to the research conducted by Lindayani and Dewi (2016), Haryanti (2016) Salawu and Awolowo (2009) Chisti, et.

al. (2013) and Chechet and Olayiwola (2014) found that the different results of the factors affecting the company's profitability. Considering the important factors and differences in the results of previous studies, it is necessary to carry out further research on the influence of price to book value on capital structure and profitability of health and pharmaceutical companies in Indonesia during the period 2012-2019.

This study aims to know and analyze the influence of price book value on capital structure and profitability of health and pharmaceutical companies in Indonesia during the period 2012-2019.

## 2.0 LITERATURE REVIEW

### Return on Asset (ROA)

Kasmir (2012), Return on assets (ROA) is a ratio that indicates the results (returns) on the total assets used in the company. In addition, ROA provides a better measure of the company's profitability because it shows the effectiveness of management in using assets to generate income.

Another opinion regarding return on asset (ROA) expressed by Suyono (2017), ROA is used to determine the amount of net profit that can be obtained from the company's operations by using all of its assets. Meanwhile, according to Mardiyanto (2009), return on asset (ROA) is a ratio used to measure a company's ability to generate profits from investment activities. According to Riyadi (2012), the formulation used to find the return on asset (ROA) ratio is as follows:

$$ROA = \frac{EAT}{Total Asset} \times 100$$

### Debt Equity Ratio (DER)

Debt Equity Ratio (DER) is a solvency ratio that describes the company's ability to fulfill its obligations, which is indicated by several parts of its own capital (equity) that are used to pay debt. This ratio measures the percentage of use of funds originating from creditors. Widayanti (2009), a creditor prefers a low debt ratio, because the lower the debt ratio, the greater the protection the creditor receives. Debt Equity Ratio is a ratio that measures the extent to which debt can be owed by its own capital. This ratio can be calculated using the following formulation:

$$\text{Debt Equity Ratio (DER)} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

### Price to Book Value (PBV)

According to Anthanasius (2012), price to book value is a ratio that shows how high a stock is purchased by an investor compared to the book value of the stock. Where the smaller the PBV, the lower the stock price of a company will be. Damodaran (2012), PBV can be measured using the formulation:

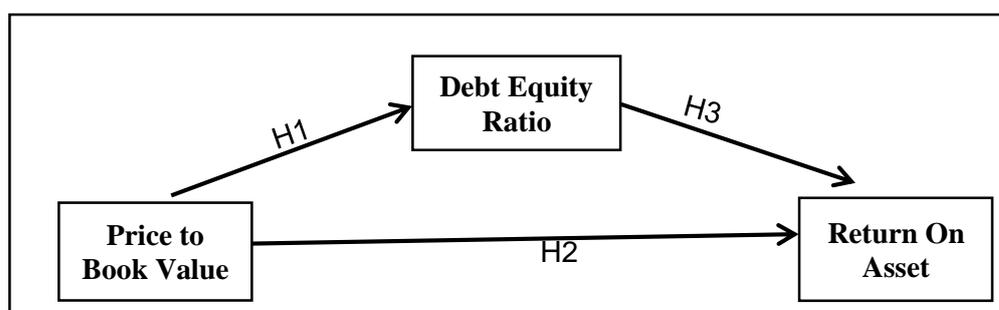
$$PBV = \frac{\text{Market Price per Share}}{\text{Book Value per Share}}$$

### Previous Studies

Previous researches in this study are used to support the results of the research that has been carried out. There are several previous researches used in this study, namely researches conducted by Lindayani and Dewi (2016), Suyono, et. al. (2017), Haryanti (2016) Salawu and Awolowo (2009) Chisti, et. al. (2013) and Chechet and Olayiwola (2014) found that the factors affecting the company's profitability.

### Research Framework and Hypothesis

Based on the formulation and research objectives and the support of the theories in this study, the research framework in this study is shown in Figure 1.



Source: Processed Data, 2020

Figure 1. Research Framework

- Hypothesis 1 : PBV has a significant influence on DER of health and pharmaceutical companies listed on the Indonesian Stock Exchange during the period 2012-2019.
- Hypothesis 2 : PBV has a significant influence on ROA of health and pharmaceutical companies listed on the Indonesian Stock Exchange during the period 2012-2019.
- Hypothesis 3 : DER has a significant influence on ROA of health and pharmaceutical companies listed on the Indonesian Stock Exchange during the period 2012-2019.

### 3.0 METHODOLOGY

#### Place and Time of Research

This research was conducted at health and pharmaceutical sub-sector companies on the Indonesia stock exchange with a time span from 2012 to 2019. This research was conducted from 2019 to 2020.

#### Definition of Operational Variable

Table 1 shows the definitions of all operational variables.

Table 1. Definition of Operational Variable

Variables	Definition	Indicators	Measurement Scale
Return On Asset (ROA)	The comparison of net income to total assets of health and pharmaceutical companies in Indonesia.	$ROA = \frac{EAT}{Total\ Asset} \times 100$ Source : Riyadi (2012)	Ratio
Debt Equity Rasio (DER)	The comparison of total company debt to total equity of health and pharmaceutical companies in Indonesia.	$DER = \frac{Total\ Debt}{Total\ Equity}$ Source : Kasmir (2012)	Ratio
Price Book Value (PBV)	A ratio that shows how high a stock is purchased by an investor compared to the book value of the stock at health and pharmaceutical companies in Indonesia.	$PBV = \frac{Market\ Price\ per\ Share}{Book\ Value\ per\ Share}$ Source : Anthanasius (2012)	Ratio

#### Population and Sample

The population in this study was 12 health and pharmaceutical sub-sector companies on the IDX during the period 2012-2019. Meanwhile, the sampling technique was done using the purposive sampling method. The criteria in the research used were (1) Health and pharmaceutical companies that have completed financial reports during the observation period. (2) The company was not delisted and merged. Based on the sample criteria, there were 8 companies that matched the sample criteria. The list of research sample companies for the period 2012-2019 is shown in Table 2.

**Tabel 2. List of Sample Companies**

No	Code	Company Names	IPO date
1	DVLA	Darya Varia Laboratoria Tbk	November 11, 1994
2	INAF	Indofarma (Persero)	April 17, 2001
3	KAEF	Kimia Farma (Persero) Tbk	July 04, 2001
4	KLBF	Kalbe Farma Tbk	July 30, 1991
5	MERK	Merk Indonesia Tbk	July 23, 1981
6	PYFA	Pryidam Farma Tbk	October 16, 2001
7	SCPI	Merk SDP Tbk (Schering Plough Indonesia)	June 08, 1990
8	TSPC	Tempo Scan Pasific Tbk	January 17, 1994

Source: [www.idx.co.id](http://www.idx.co.id)

### Data Collection Techniques

The technique of collecting data is by visiting the capital market websites on the Indonesian Stock Exchanges including the sites [www.idx.co.id](http://www.idx.co.id), [www.sahamok.com](http://www.sahamok.com), [www.yahoofinance.com](http://www.yahoofinance.com). Further, data collection techniques are through library studies by reading and quoting books, journals, articles, mass media, and previous journals related to the research carried out.

### Data Analysis Techniques

#### Descriptive Analysis

Descriptive analysis regarding the average value, highest value, minimum value and standard deviation of the research data that had been carried out.

#### Structural Equation Modeling Analysis

Structural equation modeling analysis in this study is used SEM-AMOS so that in this analysis the equation can be made as follows:

$$Y1 = \beta X + e1$$

$$Y2 = \beta_1 X_1 + \beta_2 Y_1 + e2$$

#### Information:

Y2 = ROA

Y1 = DER

X = PBV

$\beta_1 - \beta_2$  = Regression Coefficient of Each Variable

e = Confounding

### Hypothesis Testing

The hypothesis used in this study is the significance of the PLS regression analysis. Hypothesis testing is intended to see the influence of the independent variable on the dependent variable. The testing criteria for the significance test of this study, where by looking at the significance value of the alpha value. If the significance value is smaller than alpha (0.01 \*\*\*, 0.05 \*\* and 0.10 \*), it indicates that exogenous variable has a significant influence on endogenous variable. Conversely, if the significance value > alpha (0.01 \*\*\*, 0.05 \*\* and 0.10 \*), then the exogenous variable does not have a significant influence on the endogenous variable.

## 3.0 RESULTS AND DISCUSSION

The research results can be explained in the form of descriptive analysis, model structure analysis and hypothesis testing analysis. Based on the results of data processing that has been done, the results of this study can be presented as follows:

### Descriptive Analysis

Descriptive analysis in this study is used to see a real describe of the financial performance of the company which is studied. The results of descriptive analysis in this study can be presented in Table 3.

Table 3. Descriptive Analysis

No	Variables	Minimum	Maximum	Mean	Std. Deviation
1	PBV(X)	-108,76	41,00	2,79	15,94
2	DER(x)	-17171,03	22,13	-268,96	2146,34
3	ROA%	-20,30	25,10	7,1572	7,95

Source: Processed Data from SPSS, 2020

Based on the results of the descriptive analysis in this study, it can be explained that 1) PBV variable of health and pharmaceutical companies in Indonesia during the period 2012-2019 had an average value of 2.79, with the lowest PBV value was -108.76 and the highest PBV value during the research period was 41.00. (2) The company's capital structure in the form of DER had an average value during the period 2012-2019 of -268.96 with the lowest value was -17171.03 and the highest DER value during the study period was 22.13. (3) The profitability of health and pharmaceutical companies in the form of ROA on average during the study period showed a value of 7.95 with a minimum value was -20.30, the highest ROA during the period 2012-2019 was 25.10.

### Structural Equation Modeling Analysis

Structural equation modeling analysis in this study is used to see the direct relationship between exogenous variable and endogenous variable. The higher the value of these variables, the better the results of this study. The results of SEM-Amos test in this study can be presented in Table 4.

Table 4. Structural Equation Modeling

No	Variables	Estimate	Conclusion
1	PBV => DER	0,889	Positive Influence
2	PBV => ROA	0,370	Positive Influence
3	DER => ROA	-0,266	Positive Influence

Source: Processed Data from Amos V-21, 2020

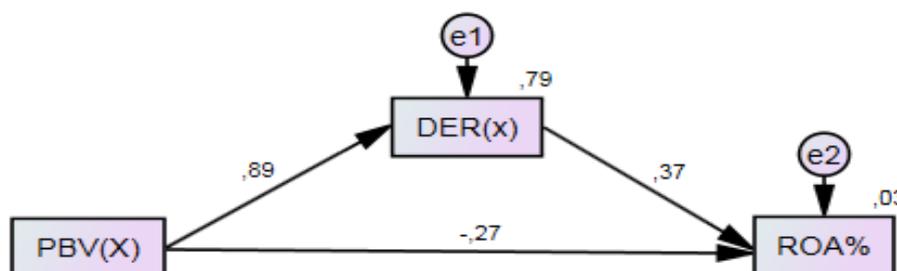


Figure 2. Research Framework

Structural Equation:

$$Y_1 = 0.889_{PBV} + e_1$$

$$Y_2 = 0.370_{PBV} - 0.266_{DER} + e_2$$

Based on the structural equation, it can be explained that (1) PBV variable has a positive influence on the capital structure with a path coefficient of 0.889. If it is assumed that other factors are fixed or zero, the company's PBV of can increase the company's capital structure by 88.9%. (2) PBV variable has a positive influence on ROA with a path coefficient of 0.370. If it is assumed that other factors are fixed or zero, the company's PBV can increase the company's ROA by 37%. (3) Capital structure variable has a negative influence on ROA with a path coefficient of -0.266. If it is assumed that the factors that affect ROA have a fixed or zero value, so it can reduce the company's ROA by 26.6%.

### Hypothesis testing

Hypothesis testing in this study is used to see the influence of exogenous variable on endogenous variable. Hypothesis testing uses Amos software version 21. The test results can be shown in Table 5.

Table 5. Hypothesis Testing

No	Variables	C.R.	P <sub>value</sub>	Conclusion
1	PBV => DER	0,889	***	Accepted
2	PBV => ROA	-0,266	0.326	Rejected
3	DER => ROA	0,370	0.172	Rejected

Source: Processed Data from Amos V-21, 2020

Based on the results of the table above it can be concluded (1) PBV variable has a positive and significant influence on the company's capital structure. Because P-value of PBV variable on DER is 0.000 \*\*\* or less than alpha 0.05, it means that the hypothesis is accepted. (2) PBV variable has no significant on company's profitability. This is indicated by P-value of PBV variable on ROA of 0.326 or greater than 0.05. It means that the hypothesis is rejected. (3) capital structure variable has no significant influence on ROA. This can be shown in the results of data processing indicating the P-value of DER to ROA of 0.172. It means that the hypothesis is rejected.

Based on these results, it can be explained that the smaller P-value in the processed data, the more significant the exogenous variable has the effect on the endogenous variable.

### Discussion of Research Results

Based on the results of descriptive analysis, structural equation modeling analysis and hypothesis testing in this study, a research discussion can be made, namely (1) The influence of PBV on the capital structure of health and pharmaceutical companies in Indonesia during the period 2012-2019 indicates that a high PBV has an impact on improving capital structure of health and pharmaceutical companies in Indonesia. The results shows that there is a positive and significant influence between PBV on company's DER. (2) The influence of PBV on ROA of health and pharmaceutical companies in Indonesia during the period 2012-2019 indicates that high or low PBV value has no impact on company's profitability. It means that the company's high PBV does not always increase the company's profitability, it could be another factor that can increase profitability of health and pharmaceutical companies in Indonesia during the period 2012-2019. (3) Capital structure has no significant influence on profitability of health and pharmaceutical companies in Indonesia during the period 2012-2019. It means that the company's high capital structure does not guarantee that it can increase the company's profitability. The capital structure is certainly not a trigger factor for the increase or decrease in profitability of health and pharmaceutical companies in Indonesia during the period 2012-2019. This is supported by the results of research conducted by Salawu and Awolowo (2009) and Haryanti (2016), but contrary to the results of research conducted by Chisti, et.al (2013), Lindayani and Dewi (2016), Suyono, et. al (2016) and Chechet and Olayiwola (2014).

## 4.0 CONCLUSION

Based on the discussion of the research results, it can be concluded that (1) PBV variable had a positive and significant influence on the capital structure of health and pharmaceutical companies in Indonesia during the period 2012-2019. (2) PBV variable had no significant influence on profitability of health and pharmaceutical companies in Indonesia during the period 2012-2019. (3) Capital structure variable had no significant influence on profitability of health and pharmaceutical companies in Indonesia during the period 2012-2019. Based on the conclusion of the research results, the suggestions can be addressed to (1) The companies, it is recommended to consider the factors of the price book value company because it can increase profitability. It means the higher PBV of the company, the higher the company's profitability increases. (2) The investors, in making investment decisions in health and pharmaceutical companies, must consider PBV factors from the results of this study. Due to the fact that PBV can increase company's profit. The high PBV will get a high return. (3) Further the researchers, it is suggested to add other variables outside the research model which has become a trigger factor for the company's capital structure and profitability.

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