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THE INFLUENCE OF CAPITAL STRUCTURE AND PROFITABILITY ON COMPANY VALUE IN PHARMACEUTICAL SUBSECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE (IDX) FOR THE PERIOD 2020-2023

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Abstract

The purpose of this research is to: (1) determine and analyze the effect of capital structure on company value, (2) determine and analyze the effect of profitability on company value, and (3) determine and analyze the effect of capital structure measured by the debt to equity ratio, and profitability measured by return on assets on company value measured by price book value. The population in this study is the pharmaceutical industry companies listed on the Stock Exchange, totaling 13 companies, with a sample of 6 companies over 4 years of observation. The data collection technique in this study uses documentary techniques. The data analysis technique employs panel data regression. Data processing in this research uses Eviews 12. Based on the research results, it shows that capital structure does not have a significant effect on company value, profitability has a significant effect on company value, and both capital structure and profitability have a significant effect on company value.

Keywords: *Capital Structure, Profitability, and Firm Value*

Introduction

In the current era of globalization, the capital market is beginning to be observed by investors who want to invest their funds in publicly listed companies in the Indonesian capital market. Competition demands companies to position themselves in a stable position and be ready to compete in order to increase the company's value and become a special consideration for investors in investing their capital (Suliastawan, I. W. E., & Purnawati, 2020).

The pharmaceutical industry in Indonesia has shown significant growth in recent years, one of the sentiments driving the increase in the pharmaceutical sector is the improvement in people's purchasing power. Currently, there are around 13 pharmaceutical issuers registered on the Indonesia Stock Exchange (IDX). This industry is part of the healthcare sector along with hospitals, laboratories, and medical equipment suppliers that have opportunities to grow. Of these issuers, there are 6 companies with pharmaceutical stocks that have higher potential, including DVLA (PT Darya-Varia Laboratoria Tbk), KAEF (PT Kimia Farma Tbk), KLBF (PT Kalbe Farma Tbk), PEHA (PT Phapros Tbk), SIDO (PT Industri Jamu dan Farmasi Sido Muncul Tbk), TSPC (PT Tempo Scan Pacific Tbk).

The main purpose of the establishment of the company is to maximize the company's value because maximizing the company's value will maximize the welfare of the company's owners. The company's value is defined as the way investors view the company, which usually invests based on its stock price (Fitriyah, 2021). The company's value can be measured using Price to Book Value (PBV). Price Book Value (PBV) represents the relationship between the stock price and the book value per share (Sari, M., Jufrizen, J., & Sinaga, 2021).

According to (Fahmi, 2020), the formula for Price to Book Value (PBV) is as follows:

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

The increase in the value of the company is influenced by several factors, one of which is the capital structure. The capital structure is the ratio of funding between long-term debt of the company and the company's own

capital (Yanti, I. G. A. D. N., & Darmayanti, 2019). The capital structure can be measured by calculating the ratio of total debt to equity through the Debt to Equity Ratio (DER) analysis. The DER is a ratio that compares the amount of liabilities to the size of the owner's equity (capital). This ratio can indicate the position of debt and equity in funding a company.

According to (Fahmi, 2019), the Debt to Equity Ratio (DER) can be calculated using the following formula:

$$\text{DER} = \frac{total\ debt}{total\ equity} \times 100\%$$

In addition to the capital structure factor, there is also the profitability factor (Atmikasari, D., Indarti, Ii., & Aditya, 2020); (Niyas, N., & Kavida, 2022). A higher profitability value indicates the company's ability to generate larger profits (Fahmi, 2019). Furthermore, profitability reflects the company's financial position, and this is a primary concern for investors when measuring the return on investments made (Suliastawan, I. W. E., & Purnawati, 2020). Profitability ratios consist of Return On Asset (ROA). ROA is a financial ratio that measures a company's ability to generate profit using all available assets. The higher the ROA value, the better and more effective the company is in utilizing its assets.

The formula used in measuring Return On Asset (ROA) is as follows:

$$\text{ROA} = \frac{profit\ after\ tax}{total\ assets} \times 100\%$$

Methods

This study uses a quantitative method with a causal associative form. According to (Sugiyono, 2019), quantitative methods are research methods that use numerical data to test hypotheses. Meanwhile, causal associative research asks about the cause-and-effect relationship between two or more variables. This study aims to describe the performance of company values in the Pharmaceutical Subsector companies listed on the Indonesia Stock Exchange (IDX) for the period 2020-2023.

The researcher used literature study methods and secondary data in this research, as well as two additional methods to obtain the necessary data, namely documentation study and website observation.

In this study, data analysis was conducted quantitatively. According to (Sugiyono, 2019), the quantitative method can be considered a scientific method because it meets several scientific requirements, such as being objective, concrete or empirical, measurable, rational, and systematic. It uses numerical calculations to test and analyze data, and then draws conclusions with the specified testing tools. However, in practice, the data of this research was processed using a statistical program with Eviews.

The selection of panel data regression is due to the fact that this research uses time series data and cross-sectional data. The use of time series data in this study spans a period of 4 years, from 2020 to 2023. Meanwhile, the use of cross-sectional data in this study involves 6 companies in the pharmaceutical sub-sector registered on the Indonesia Stock Exchange (IDX).

The estimation models used include the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). The selection of the best model is performed through the Chow Test, Hausman Test, and Lagrange Multiplier Test. Furthermore, classical assumption tests are conducted to ensure the model is free from violations of normality, multicollinearity, heteroscedasticity, and autocorrelation.

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Results and Discussions

Figure 1
Chow Test

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	28.662803	(5,16)	0.0000
Cross-section Chi-square	55.158923	5	0.0000

Source: *Output Eviews 12*

Based on the results of the Chow test in Figure 1, it shows that the prob. cross-section F and chi-square values are 0.0000 (< α = 0.05), thus H0 is rejected. Therefore, it can be concluded that the more appropriate model to use is the Fixed Effect Model, followed by the Hausman test.

Figure 2
Hausman Test

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	10.381129	2	0.0056

Source: *Output Eviews 12*

Based on the results of the Hausman Test in Figure 2, it shows that the prob. value of the cross-section random is 0.0056 (< α = 0.05) so H0 is rejected. It can be concluded that the more appropriate model to use is the Fixed Effect Model.

After conducting the Chow Test and the Hausman Test, both have the same results indicating that the Fixed Effect Model (FEM) is more appropriate for performing panel data regression, so the testing is usually stopped here and does not need to be continued with other tests to choose the best model.

Test of Classical Assumptions

Figure 3

Multikolinieritas Test

	X1	X2
X1	1.000000	-0.337175
X2	-0.337175	1.000000

Source: *Output Eviews 12*

Based on the results of the multicollinearity test in Figure 3, it shows that the correlation coefficient value is -0.337175 (< α = 0.90). It can be concluded that in this study, there is no multicollinearity

Figure 4
Heteroskedastisitas Test

Dependent Variable: ABS(RESID)
Method: Panel Least Squares
Date: 05/07/25 Time: 15:38
Sample: 2020 2023
Periods included: 4
Cross-sections included: 6
Total panel (balanced) observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.533872	0.755976	-0.706202	0.4902
X1	1.335424	1.054025	1.266975	0.2233
X2	0.004614	0.014557	0.316961	0.7554

Source: *Output Eviews 12*

Based on the results of the heteroskedasticity test in Figure 4, it shows that X1 has a prob. value of 0.2232 (> α = 0.05). Whereas for X2, the prob. value is 0.7554 (> α = 0.05). Therefore, the prob. results of both variables are greater than the significance level, so it can be concluded that in this study, heteroskedasticity does not occur.

Panel Data Regression Model

Figure 5
Panel Data Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.868231	1.401698	0.619414	0.5444
X1	2.866475	1.954328	1.466732	0.1618
X2	-0.080129	0.026990	-2.968831	0.0090

Source: *Output Eviews 12*

Based on the test results shown in Figure 5, the regression equation for the panel data can be expressed as follows:**Y = 0,868 + 2,866*X1 - 0,080*X2 + [CX=F]**

Hypothesis Test

Figure 6
t test (Partial)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.868231	1.401698	0.619414	0.5444
X1	2.866475	1.954328	1.466732	0.1618
X2	-0.080129	0.026990	-2.968831	0.0090

Source: *Output Eviews 12*

Based on the t-test results on the DER (X1) variable, the calculated t value is 1.466732 < the critical t table value of 2.073873 and the significance value of 0.11618 > α = 0.05. Therefore, Ha is rejected and H0 is accepted, meaning that the DER variable does not have an effect on PBV in pharmaceutical companies listed on the Indonesia Stock Exchange (IDX) for the period 2020-2023. This indicates that changes in the debt to equity ratio will not significantly affect stock prices or company value.

Based on the t-test results on the ROA (X2) variable, the calculated t-value is 2.968831 > the t-table value of 2.073873 and the sig. value of 0.0090 < α = 0.05. Therefore, H0 is rejected and Ha is accepted, meaning that the ROA variable has an impact on PBV in Pharmaceutical Companies listed on the Indonesia Stock Exchange (BEI) from 2020 to 2023. This indicates that companies that are able to generate larger profits tend to have a higher company value.

Figure 7
f test (Simultaneous)

Cross-section fixed (dummy variables)			
R-squared	0.929542	Mean dependent var	2.717500
Adjusted R-squared	0.898717	S.D. dependent var	2.223120
S.E. of regression	0.707509	Akaike info criterion	2.407070
Sum squared resid	8.009112	Schwarz criterion	2.799754
Log likelihood	-20.88484	Hannan-Quinn criter.	2.511249
F-statistic	30.15506	Durbin-Watson stat	2.001244
Prob(F-statistic)	0.000000		

Source: *Output Eviews 12*

Based on the results of the F test, the F-statistic value obtained is 30.15506 > F table which is 3.4668 and the prob. value of 0.000000 < α = 0.05. This means that the Debt to Equity Ratio (X1) and Return On Asset (X2) have a significant effect on Firm Value (Y) jointly or simultaneously.

Figure 8
Coefficient of Determination

Cross-section fixed (dummy variables)			
R-squared	0.929542	Mean dependent var	2.717500
Adjusted R-squared	0.898717	S.D. dependent var	2.223120
S.E. of regression	0.707509	Akaike info criterion	2.407070
Sum squared resid	8.009112	Schwarz criterion	2.799754
Log likelihood	-20.88484	Hannan-Quinn criter.	2.511249
F-statistic	30.15506	Durbin-Watson stat	2.001244
Prob(F-statistic)	0.000000		

Source: *Output Eviews 12*

Based on the results of the determination coefficient test in Figure 4.13, the Adjusted R-square value obtained is 0.898717 or 89.8717%. This determination coefficient value indicates that the independent variables consisting of Debt to Equity Ratio (DER) and Return On Asset (ROA) can explain the Price Book Value (PBV) variable of pharmaceutical companies listed on the Indonesia Stock Exchange (BEI) by 89.8717%. Meanwhile, the remaining 10.1283% (100 - Adjusted R-square value) is explained by other variables that are not included in this research model.

The Influence of Capital Structure (Debt to Equity Ratio) on Company Value (Price Book Value)

The Debt to Equity Ratio (DER) variable does not partially affect the Company Value measured by Price Book Value (PBV) in Pharmaceutical Companies listed on the Indonesia Stock Exchange (BEI) for the period of 2020-2023. The results of this study are consistent with previous studies by (Jihan Hasan & Rinny Meidiyustiani, 2023), (Luthfiani Azhari Zain & Bida Sari, 2024), and (Fahmi Adrian Wira Wicaksana & Suwarno, 2024), concluding that Capital Structure measured by Debt to Equity Ratio (DER) does not affect Company Value measured by Price Book Value (PBV).

The Influence of Profitability (Return On Asset) on Company Value (Price Book Value)

The Return On Asset (ROA) variable partially affects the Company Value measured by Price Book Value (PBV) in Pharmaceutical Companies listed on the Indonesia Stock Exchange (IDX) during the period 2020-2023. The results of this study are consistent with previous research by (Jihan Hasan & Rinny Meidiyustiani, 2023), (Itra, Romansyah Sahabuddin, Andi Mustika Amin, Anwar Ramli, & Nurman, 2023), and (Luthfiani Azhari Zain & Bida Sari, 2024) concluding that Profitability measured by Return On Asset (ROA) has an effect on Company Value measured by Price Book Value (PBV).

The Influence of Capital Structure (Debt to Equity Ratio) and Profitability (Return On Assets) on Company Value (Price Book Value)

Variabel *Debt to Equity Ratio* (X1), dan *Return On Asset* (X2) berpengaruh signifikan terhadap Nilai Perusahaan (Y) secara bersama-sama atau simultan pada Perusahaan Farmasi yang terdaftar di Bursa Efek Indonesia (BEI) periode 2020-2023. Hasil penelitian ini sejalan dengan hasil penelitian terdahulu oleh (Itra, Romansyah Sahabuddin, Andi Mustika Amin, Anwar Ramli, & Nurman, 2023) menyimpulkan bahwa *Debt to Equity Ratio* (DER) dan *Return On Asset* (ROA) berpengaruh signifikan terhadap Nilai Perusahaan pada Perusahaan Farmasi yang terdaftar di Bursa Efek Indonesia (BEI) Periode 2020-2023.

Conclusion

1. Capital structure has no effect on the Value of the Company in Pharmaceutical Companies listed on the Indonesia Stock Exchange (IDX) for the period 2020-2023.
2. Profitability affects the Value of the Company in Pharmaceutical Companies listed on the Indonesia Stock Exchange (IDX) for the period 2020-2023.
3. Capital structure and Profitability have a significant joint or simultaneous effect on the Value of the Company in Pharmaceutical Companies listed on the Indonesia Stock Exchange (IDX) for the period 2020-2023.

Suggestions

1. The company's research results indicate that changes in the level of debt do not directly affect the company's value. The company should increase its focus on key determinants of corporate value, in order to enhance the company's value such as profitability, dividend policy, company size, and market sentiment.
2. The research results show that the company is unable to generate profits from its total assets. Therefore, the company needs to implement cost efficiency, including evaluating fixed and variable cost structures.
3. It is expected to add independent variables with other variables besides those that have been studied, such as company size, dividend policy, company growth, and other ratios.

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