International Journal of Research and Review
[Indexed, Peer-Reviewed Journal]
Volume 12; Issue: 6; June 2025
Website: www.ijrrjournal.com
Research Paper *E-ISSN: 2349-9788; P-ISSN: 2454-2237*

The Effect of Capital Structure, Institutional Ownership, Research and Development on Firm Value in Pharmaceutical Sub-Sector Companies Listed on the Indonesia Stock Exchange

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DOI: https://doi.org/10.52403/ijrr.20250625

ABSTRACT

This study aims to test and prove that capital structure, institutional ownership and research and development affect firm value in pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange, partially and simultaneously.

The population of this study was all pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange, totaling 13 companies. The sampling technique used purposive sampling, so the sample was five companies for 10 periods, namely 2014 - 2023. The analysis method used in this study is panel data regression analysis with the help of EViews 10 software.

The study's results indicate that only capital structure negatively and significantly affects firm value in the pharmaceutical sub-sector on the Indonesia Stock Exchange. In contrast, institutional ownership and research and development do not significantly affect firm value in the pharmaceutical sub-sector on the Indonesia Stock Exchange.

Keywords: *capital structure, institutional ownership, research and development, firm value*

INTRODUCTION

Along with the development of the era, every company is required to maintain business continuity and implement the right strategy to compete with other companies to achieve its goals. Therefore, management is expected to be able to decide and implement the right approach to increase the firm value (Yatim, Subaida, & Wahyuni, 2022). With growing stock prices, the higher the shareholder's profit, the more interesting this situation will be for investors because the increasing demand for shares will also increase the firm's value (Wahasusmiah & Arshinta, 2022). One of the factors that investors consider before investing their capital is the firm value (Putri & Trisnawati, 2022). Firm value is the result of the company's performance as reflected in the stock price on the Indonesia Stock Exchange (IDX), where this stock price is formed through the process of demand and supply in the market, which ultimately reflects investors' assessment of the company's performance (Tambunan, Sabijono, & Lambey, 2019). High stock prices are an achievement for companies that are managing their companies well. The higher the firm value, the higher the rate of return to investors (Noviarti & Stefhani, 2022). Firm value can be calculated by the market value ratio, which informs management about what investors are discussing about past performance and the

company's prospects (Dzahabiyya, Jhoansyah, & Danial, 2020).

A system that accommodates the desires and needs of stakeholders is needed to prevent agency conflict and increase firm value (Poluan & Wicaksono, 2019). Agency conflict occurs between management and owners, which affects company performance, so it is necessary to unite the interests of the two parties (Shalini, Erlina, & Raja, 2020). This failure can also be caused by the management's inaccuracy in applying several factors affecting firm value (Himawan & Andayani, 2020). A company's stock price can describe its value because it has a positive relationship with the firm's value (Suwardika & Mustanda, 2017). Price to book value is commonly used to measure firm value (Fahmi, 2018). High firm value will increase investors' trust in the company (Yanti & Darmayanti, 2019). Increasing stock prices will increase the firm value because one of the measures of the firm value is by converting the number of shares outstanding to the stock market price (Wahasusmiah & Arshinta, 2022).

In 2021, due to the high number of COVID-19 cases, pharmaceutical company stocks were moving in positive territory (CNN Indonesia, 2021). However, after the pandemic status ended, several pharmaceutical company stocks, such as PT. Kalbe Farma Tbk, PT Phapros Tbk., and PT Kimia Farma Tbk experienced a significant decline (Kontan, 2023). In 2023, the pharmaceutical industry is still facing a slowdown in product sales (Mauludi & Budiarti, 2019). The slowdown is related to the availability of raw materials for medicines and vitamins needed by hospitals and pharmacies throughout Indonesia. It is because 95% of pharmaceutical raw materials are imported, with 60-70% coming from China, while the rest, namely 30-40%, comes from India (Detama & Laily, 2021). Due to the slowdown in the supply of raw materials, the pharmaceutical business world is experiencing tight competition that requires companies to improve their performance and innovate with their products to be better known by the public (Mauludi & Budiarti, 2019). The decline and increase in the firm value make the author interested in researching this topic because the author wants to know what internal factors affect the firm value besides external factors such as the pandemic.

The capital structure is one component that influences the firm value (Ramadhani, Qomari, & Sutopo, 2021). In Agency theory, it is explained that managers will be more disciplined if the company uses debt as a source of financing rather than equity because the company will try to increase the productivity of the company's assets of the additional debt taken (Li & Cui, 2003). Institutional ownership is another factor that influences the firm's value (Dewi & Abundanti, 2019). An important role is to encourage increased supervision of more optimal management so that institutional ownership can impact the firm's value to prevent agency conflict (Amaliyah & Herwiyanti, 2019).

Research and development is one of the company's intangible assets that can increase the firm's value (Ningtyas & Kartika, 2022). Efforts are needed to improve the firm value by increasing business competitiveness, namely by optimizing Research and Development to increase product competitiveness activities (Rosidi & Qurotuaini, 2021). Conducting research and development related to products will provide a positive signal to attract investors to make investments so that they will be able to increase the firm's value (Dharmayanti & Julianto, 2024).

LITERATURE REVIEW

Firm Value

According to Gunardi, Alghifari, & Suteja (2022), firm value is a condition where a company will gain public trust with its operational activities since it was founded. Franita (2018) explains that firm value is related to investment opportunities if formed from stock market value indicators. This relationship will increase the company's growth in the future and

provide positive value so that the firm's value can increase.

Firm value is significant because it reflects the company's performance, which can influence investor perceptions of the company (Purba, 2021). The increasing return to investors explains that the company's stock price is high, so the company's goal of maximizing shareholder prosperity can be realized because the firm value is high (Franita, 2018).

Measuring firm value with Price-to-book value (PBV) is essential for investors in determining investment strategies in the capital market (Oktaviani, Rosmaniar, & Hadi, 2019). Firm value can be measured using the company's stock price because the company's stock market price reflects the overall investor assessment of each equity owned (Dewi & Abundanti, 2019). The price-to-book value (PBV) value generated by the company above indicates that the company's stock value is better than the company's book value (Himawan & Andayani, 2020). The following is the Price to Book Value (PBV) formula:

$$PBV = \frac{Share\ Price}{Book\ Value\ Per\ Share}$$

Capital Structure

Capital structure is the key to improving productivity and company performance based on comparing debt and equity (Oktaviani et al., 2019). Capital structure is essential in assessing company performance because capital structure can affect the financial condition and stock price (Harsiatun & Hidayat, 2019). It is because the company needs to explore all possible factors that will impact the firm value, one of which is the decision that company managers must face related to the continuity of the company's operations, namely the capital structure decision (Mahanani & Kartika, 2022). Using debt in the company's capital structure can increase the chances of bankruptcy because too much debt causes the chance of cash flow not being sufficient to pay interest and debt installments to increase (Utomo & Christy, 2017). Meanwhile, investors tend not to like companies with high levels of risk, which causes stock prices to decline and impact, decreasing the firm's value (Ardiana & Chabachib, 2018). The following research was conducted by Utomo & Christy (2017), Dhani & Utama (2017), Iriyanti et al. (2022), Oktaviani et al. (2019), and Lubis et al. (20170, which stated that capital structure has a negative effect on firm value.

Capital structure can be measured from the debt-to-equity ratio, called Debt to Equity Ratio (DER) (Yanti & Darmayanti, 2019). The lower the DER, the higher its ability to pay all its obligations, and the greater the proportion of debt used in the capital structure, the greater its obligations (Umdiana & Claudia, 2020). The level of risk, rate of return and company income can affect the high and low demand for shares, which can affect the firm's value (Mudjijah et al., 2019).

$$DER = \frac{Total\ Debt}{Total\ Equity}$$

Institutional Ownership

Institutional ownership is essential in monitoring management because of the increase in optimal supervision due to institutional ownership (Dewi & Abundanti, 2019). Thus, the greater the ownership by financial institutions, the greater the power of voice and encouragement to optimize the firm's value (Asnawi, Ibrahim, & Saputra, 2019). According to Dewi & Abundanti (2019), institutional share ownership is essential in terms of more optimal supervision of management so that it can suppress opportunistic behaviour that is not following the company's goals that may be carried out by management so that it can monitor in terms of company decision making. The greater the level of institutional ownership, the more optimal

the level of control carried out by external parties on the company so that the agency costs that occur in the company are reduced, and the firm value also increases (Dewi & Gustyana, 2020)

The greater the institutional ownership, the stronger the level of control carried out by external parties on the company, which can reduce agency costs and increase the firm's value (Nuryono, Wijayanti, Samrotun, 2019). It follows the Research of Amaliyah & Herwiyanti (2019), which concluded that Institutional Ownership significantly positively affects firm value. This result also follows Amaliyah & Herwiyanti (2019), Dewi & Abundanti (2019), Asnawi et al. (2019), Dewi & Gustyana (2020), and Wulandari & Rahmawati (2022) which stated that Institutional Ownership has a positive and significant effect on firm value.

$$IO = \frac{Number\ of\ Shares\ Owned\ by\ Institutions}{Total\ Shares\ Outstanding}$$

Research and Development

R&D activities involve innovation to create higher value than competitors that consumers expect not to switch to other companies' products, so in this situation, the implication is that the company's sales remain in ideal conditions and will create a firm performance (Rosidi & Qurotuaini, 2022). Although it is risky to invest in R&D, companies that are R&D intensive tend to get higher returns than expected compared to companies that are less R&D intensive, especially in competitive industries with more product market competition (Lee et al., 2019). Research and development (R&D) is a development activity that has interests related to pure scientific research and application development in the field of technology (Kurniawati & Asyik, 2017). In carrying out R&D activities, the company is considered to have made a long-term strategic investment that is used to innovate to increase the firm value (Akyunina & Kurnia, 2021). Conducting R&D related to products will provide a positive signal to attract investors to make investments so that it will be able to increase the firm's value. Innovation by companies generates royalties as company revenue due to sales of products created due to the innovation (Dharmayanti & Julianto, 2024). Product sales increase company sales, ultimately affecting the firm's value (Putri & Trisnawati, 2022). It is in line with research by Rofida & Kurnia (2023), Dharmayanti & Julianto (2024), (Ningtyas & Kartika, 2022), and Akyunina & Kurnia (2021), and Dwiyanti (2022), which states that research and development has a positive effect on firm value.

$$R\&D = \frac{Research\ and\ Development\ Expenditure}{Total\ Sales}$$

Framework

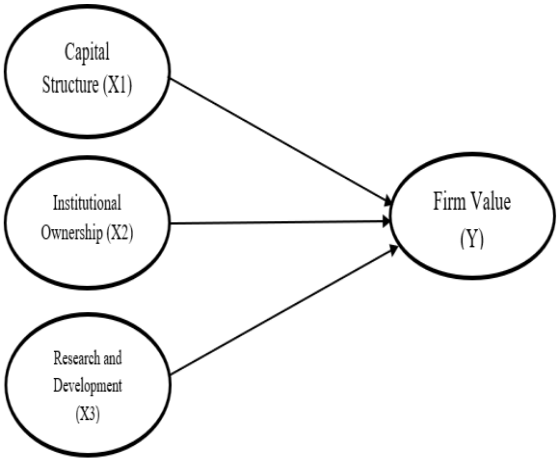

Figure 1. Conceptual Framework

H1: Capital Structure has a negative effect on Firm Value

H2: Institutional Ownership has a positive effect on Firm Value

H3: Research and Development has a positive effect on Firm Value

MATERIALS & METHODS

Researchers will use quantitative research types to obtain valid analysis data. Associative Research is a study that seeks the relationship between one variable and another, namely, symmetrical, causal and

interactive (Purba et al., 2021). This type of research aims to determine the relationship between two or more variables.

The population used in this study were pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange (IDX) during the 2014-2023 period. From the results of observations made on the website www.idx.co.id, it can be seen that there are 13 companies listed in the pharmaceutical sub-sector on the Indonesia Stock Exchange (IDX).

In the study, the sample was determined using a purposive sampling technique, which was carried out to find the expected sample based on the criteria made by the researcher. The criteria for the sample are pharmaceutical sub-sector companies with complete data on the research variables in their financial reports in 2014-2023. So, based on the sample criteria used, five (5) pharmaceutical sub-sector companies were listed on the Indonesia Stock Exchange in 2014-2023 with a total observation of 50 data.

RESULT

A. Descriptive Statistics

This study uses descriptive statistical analysis through the EViews 10 program. The results include the mean, max, min, and standard deviation of the data used in the study.

Table 1. Results of Descriptive Statistical Analysis

	Firm Value	Capital Structure	Institutional Ownership	Research & Development
Mean	3.079128	0.771601	0.755365	0.005366
Maximum	5.872834	3.615314	0.945683	0.025305
Minimum	1.866214	0.006592	0.538461	0.000152
Std. Dev.	1.012600	0.770229	0.148140	0.006022
Observations	50	50	50	50

Source: EViews Output 10, 2024

B. Panel Data Regression Model Selection

The Chow, Hausman, and Lagrange Multiplier Test can be carried out to choose the right model for managing panel data. The models selected for further research are:

a. Chow Test

The Chow test is used to determine which model is most appropriate to use between the common effect model (CEM) and the fixed effect model (FEM). The criteria used in this model are if the probability value> α 0.05. Ho is accepted, which means it is more suitable to use the common effect model (CEM) and vice versa, the probability value <α 0.05, then Ha is accepted, which means it is more suitable to use the fixed effect model (FEM). The following are the results of the Chow test:

Table 2. Chow Test Results

Effects Tests	Statistic	d.f.	Prob.
Cross-section F	6.618319	(4,42)	0.0003
Cross-section Chi-square	24.438695	4	0.0001

Source: EViews Output 10, 2024

Based on the results of the table, it can be seen that the probability value of the F-statistic is 0.0001, which is smaller than the significant value of 0.05. It shows that Ho is rejected and Ha is accepted, which means that the right model to use in the panel data regression of this study is the fixed effect model. Then continued by conducting a Hausman test.

b. Hausman Test

The Hausman test is used to determine which model is most appropriate to use between the fixed effect model (FEM) and the random effect model (REM). The criteria used in this model are if the probability value of the random cross-section <0.05, then Ha is accepted, which means it is more suitable to use the fixed effect model (FEM) in panel data regression. Meanwhile, if the probability value of the random cross section> 0.05, Ho is accepted, which means it is more suitable to use the random effect model (REM) in panel data regression. The test results of the Hausman test are as follows:

Table 3. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	25.853247	3	0.0000

Source: EViews Output 10, 2024

Based on the test results, the probability value of the random cross-section of 0.0000 is smaller than the significance value of 0.05 or 5%. It indicates that Ho is rejected and Ha is accepted, so the appropriate model is used for panel data regression between fixed effect models. Because the Chow and Hausman tests use the same panel data model, namely the fixed effect model, this study does not need to be continued with the Lagrange multiplier test (Sugiyanto, 2022). The results of panel data regression with the fixed effect model are presented in the following table:

Table 4. Panel Data Regression Results with the Fixed Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	-0.659408	0.265889	-2.480011	0.0172
X2	3.813379	3.456756	1.103167	0.2762
X3	7.738459	24.93072	0.310399	0.7578
C	0.665911	2.479796	0.268535	0.7896
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.614433	Mean dependent var		3.079128
Adjusted R-squared	0.550172	S.D. dependent var		1.012600
S.E. of regression	0.679143	Akaike info criterion		2.209677
Sum squared resid	19.37188	Schwarz criterion		2.515600
Log likelihood	-47.24191	Hannan-Quinn criter.		2.326174
F-statistic	9.561498	Durbin-Watson stat		0.818411
Prob(F-statistic)	0.000000			

Source: Data Processed with E-Views 10

C. Classical Assumption Test

Based on the results of the regression model selection, it is known that the correct regression model used is the fixed effect model. The Fixed Effect Model uses the Ordinary Least Squared (OLS) approach. It can be interpreted that the classical assumption test used is normality, heteroscedasticity, and multicollinearity. The following are the results of the classical assumption test with the fixed effect model:

a. Normality Test

The normality test determines whether the linear regression model has a normal data distribution. If the probability value> α 0.05, then it can be concluded that the data is normally distributed; if vice versa, then it can be said that the data is not normally distributed. The results of the normality test in this study can be seen in the following figure:

Table 5. Results of the Normality Test - Jarque-Beta

	Residuals
Observation	50
Jarque-Beta	3,564527
Probability	0,168257

Source: EViews Output 10, 2024

Based on the normality test table, the probability value is at 0.168257, which is above the significance value of 0.05 or 5%, which means that the data in the study is normally distributed so that the data can be analyzed further.

b. Multicollinearity Test

The multicollinearity test is carried out to test whether there is a correlation between independent variables in the regression model. A good regression model should not correlate with its independent variables. If there is multicollinearity between variables, the regression coefficient of the independent variables cannot be determined, and the standard error value will be infinite. The following is a table of the results of the multicollinearity test:

Table 6. Multicollinearity Test Results

	Firm Value	Capital Structure	Institutional Ownership	Research & Development
Firm Value	1.000000	-0.557936	-0.122986	0.059411
Capital Structure	-0.557936	1.000000	0.265159	0.174283
Institutional Ownership	-0.122986	0.265159	1.000000	-0.607159
Research & Development	0.059411	0.174283	-0.607159	1.000000

Source: EViews Output 10, 2024

Based on the table above, the results of the multicollinearity test show that the correlation coefficient value between the independent variables is not more than 0.8, meaning there is no multicollinearity problem in the regression model.

c. Heteroscedasticity Test

The heteroscedasticity test determines whether the variation is unequal in a regression model. The type of heteroscedasticity test used is the Glejser Test. The following table shows the results of the heteroscedasticity test:

Table 7. Heteroscedasticity Test Results – Glejser

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	0.035778	0.131059	0.272989	0.7862
X2	0.588997	1.703860	0.345684	0.7313
X3	-12.98764	12.28853	-1.056892	0.2966

Source: EViews Output 10, 2024

Based on the heteroscedasticity test using the Glejser Test shows that the probability value for each independent variable is above 0.05 or 5%. So, it can be concluded that in this study, there is no heteroscedasticity problem in the regression model.

D. Panel Data Regression Test Results

Based on the results of the regression model selection with Eviews 10, it is known that the correct regression model to use is the fixed effect model. The results of the calculation of moderated regression with the EViews 10 program is a fixed effect model. After the fixed effect regression model is known, multiple linear regression analysis can be carried out. Multiple linear regression is used because this study uses three independent variables against one dependent variable. Based on the regression results in Table 4 above, the regression analysis model equation can be written as follows:

$$\mathbf{Y_{it} = 0{,}665911 - 0{,}659408\ X_1 + 3{,}813379\ X_2 + 7{,}738459\ X_3}$$

The following is an explanation of the panel data regression equation above:

1. The regression equation above obtains a constant value of 0.665911. If the capital structure variable, institutional ownership, research and development or all independent variables are considered constant or fixed, the firm value is 0.665911.
2. The coefficient of this variable is known to be -0.659408 in the capital structure variable. The minus sign on the coefficient shows that the capital structure, which is an independent variable, has the opposite effect of the dependent variable, namely the firm value. So, if the capital structure value increases by 1, the firm value decreases by 0.659408, and vice versa.
3. In the institutional ownership variable, the coefficient of this variable is known to be 3.813379. The positive sign on the coefficient shows that institutional ownership, an independent variable, has an effect in the same direction as the dependent variable, namely the firm value. So, if the institutional ownership value increases by 1, the firm value increases by 3.813379, and vice versa.
4. The coefficient of this variable is 7.738459 for the research and development variable. The positive sign on the coefficient shows that research and development, which is an independent variable, influences the same direction as the dependent variable, namely the firm value. So, if the research and development value increases by 1, the firm value will increase by 7.738459, and vice versa.

E. Hypothesis Testing

Hypothesis testing is used to determine whether the hypothesis used in this study is answered by the results of the data processing that has been carried out, and hypothesis testing is carried out using the t-test, F-test and coefficient of determination. The following are the results of the hypothesis testing presented:

1. Coefficient of Determination

The coefficient of determination test determines how much ability the independent variables in this study have to explain the dependent variable. The coefficient of determination value is seen in the adjusted R squared.

Based on the panel data regression analysis results in Table 4 above, the adjusted R squared value is 0.550172. This figure shows that the independent variables in this study, consisting of capital structure, institutional ownership, research & development, can affect the firm value by 55.01%, and the other 44.99% is influenced by factors not explained in this study.

2. F Test

The F test in this study was conducted to determine whether a regression model has or does not have the influence of all independent variables simultaneously on the dependent variable.

Table 4 above shows that the F-statistic value is 9.561498, and the F-statistic probability value is less than 0.05 or 5% (0.000000 <0.05). It is concluded that capital structure, institutional ownership and research & development significantly affect firm value.

3. Partial Test

Hypothesis testing in this study uses a panel data linear regression analysis tool to test the effect of capital structure, institutional ownership, research & development on firm value.

Based on Table 4 above, it can be explained that:

1. The first hypothesis (H1) regarding the effect of capital structure on firm value produces a significance of 0.0172 <0.05 with a t value of -2.480011 and a coefficient of -0.659408. It means that capital structure has a negative and significant effect on firm value, so the hypothesis (H1) proposed by the researcher is accepted.
2. The second hypothesis (H2) regarding the effect of institutional ownership on firm value produces a significance of 0.2762 > 0.05 with a t value of 1.103167 and a coefficient of 3.813379. It means that institutional ownership has a positive but insignificant effect on firm value, so the hypothesis (H2) proposed by the researcher is accepted.
3. The third hypothesis (H3) regarding the effect of research & development on firm value produces a significance of 0.7578 > 0.05 with a t value of 0.310399 and a coefficient of 7.738459. It means that research & development has a positive but insignificant effect on firm value, so the hypothesis (H3) proposed by the researcher is accepted.

DISCUSSION

The Effect of Capital Structure on Firm Value

The first hypothesis shows that capital structure has a negative effect on firm value, so the hypothesis (H1) proposed by the researcher is accepted, meaning that if the capital structure increases, the firm value will decrease (Cahyani et al., 2024). This study shows that the capital structure obtained from loans will be accompanied by debt interest payments to debtholders. The debt interest burden will impact the company's profits and reduce investor perceptions of the company (Dhani & Utama, 2017). In the choice of funding between debt and equity, shares are the source of funds with the highest costs, so the existence of debt that is balanced with the company's needs and capabilities can reduce the company's burden due to the high cost of issuing shares, which will ultimately increase the company's value (Putri & Puspitasari, 2022).

The results of this study are following Utomo & Christy (2017), Dhani & Utama (2017), Iriyanti et al. (2022), Oktaviani et al. (2019) and Lubis et al. (2017) who said that capital structure has a negative effect on firm value. However, the results of this study are not in line with the results of research conducted by Rahayu & Utami (2023), Amelia et al. (2019), Hirdinis (2019) and Mudjijah et al. (2019), who said that capital structure has a positive effect on firm value.

The Effect of Institutional Ownership on Firm Value

The second hypothesis shows that institutional ownership positively affects firm value, so the hypothesis (H2) proposed by the researcher is accepted. The results above are per research by Ang et al. (2000), which states that ownership structure affects agency costs because institutional ownership is crucial in minimizing agency conflicts between shareholders and managers. Ismawati et al. (2019) explained that with the concentration of ownership, large

shareholders, such as institutional owners, can supervise and monitor management more effectively and increase the firm value. The results of this study are following Listiyowati & Indarti (2018), Ismawati et al. (2019), Dewi & Gustyana (2020), & Wulandari & Rahmawati (2022), who stated that institutional ownership has a positive effect on firm value. However, the results of this study are not in line with the results of research conducted by Cahyani et al. (2024), which states that institutional ownership has a negative effect on firm value.

The Influence of Research & Development on Firm Value

The third hypothesis shows that research & development positively affects firm value, so the hypothesis (H3) proposed by the researcher is accepted. This result follows agency theory, which explains that investment in R&D spending can reduce agency costs because it increases the company's profitability by helping to ensure operational efficiency. However, investment in R&D can result in high costs if unsuccessful (Rahman & Howlader, 2022). The results of this study are following research from Kuniawati & Asyik (2017), Kurnia (2016), Rofida & Kurnia (2023), and Dharmayanti & Julianto (2024), which state that research & development has a positive effect on firm value. However, the results of this study are not in line with the results of research conducted by Yatim et al. (2022), which states that research & development has a negative effect on firm value.

CONCLUSION

Based on the discussion in the previous chapters, answering the formulation of the problem research objectives and referring to the process and results of data analysis in this study, several conclusions can be drawn as follows:

1. The first test's results indicate that capital structure negatively affects firm value in pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange, so the first hypothesis (H1) is accepted. The direction of the negative regression coefficient means that the higher the capital structure, the lower the firm value and vice versa. The lower the capital structure, the higher the firm value.
2. The second test's results indicate that institutional ownership positively affects firm value in pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange, so the second hypothesis (H2) is accepted. The direction of the positive regression coefficient means that the higher the institutional ownership, the higher the firm value and vice versa. The lower the institutional ownership, the lower the firm value.
3. The results of the third test indicate that research & development positively affects firm value in pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange, so the third hypothesis (H3) is accepted. The direction of the positive regression coefficient means that the higher the research & development, the higher the firm value and vice versa, the lower the research & development, the lower the firm value.

LIMITATIONS

The limitations of this study are:

1. This study focuses on financial ratios to measure firm value. In addition to financial ratios, many factors can still affect firm value, such as economic conditions, market share control, etc.
2. The selection of variables that can still be expanded is by adding independent or dependent variables. It can be seen from the determination coefficient of 55.01% and other variables that influence the remaining 44.99% in this study.

SUGGESTION

Based on the study's results, the author realizes that no study is free from errors and deficiencies. This study still has

limitations. Therefore, the author would like to provide suggestions to overcome the limitations in this study, including:

1. This study only uses one industrial sector in the Indonesia Stock Exchange: the pharmaceutical sub-sector. It is recommended that industrial sub-sectors in the Indonesia Stock Exchange, such as primary consumer goods sector companies, be expanded.
2. It is recommended that subsequent research no longer needs to examine the relationship between Institutional Ownership variables and Firm value because the influence of Institutional Ownership Variables is the lowest.
3. To assess the firm value not only from the financial ratio, several sample criteria need to be added to help the assessment from the non-financial side, for example, the classification of companies with large market share, companies with good reputations, etc.
4. It is expected that subsequent research will take several independent variables, such as dividend policy, free cash flow, etc. or other dependent variables, such as Tobin's Q, so that it can expand and enlarge the R Square value so that it is known which variables are more dominant in influencing firm value.

IMPLICATIONS

Based on the limitations and results of this study, the implications that researchers can provide include:

1. Capital structure has a negative effect on firm value. Therefore, companies must pay attention to capital structure when assessing firm value. A high company capital structure tends to have large debt loans. It is recommended for company management who want to increase debt loans to increase equity or their capital so that later, the risk of debt payments is not too large and is expected to increase the firm value.
2. Institutional ownership has a positive effect on firm value. It can explain how the institution's monitoring actions must be optimal and appropriate to improve company performance and increase firm value. Suppose the institution is carrying out monitoring and supervision of company performance and is not optimal. In that case, it can cause a conflict of interest that causes investors not to pay attention to institutional shares so that institutional ownership does not affect the firm value.
3. Research & development has a positive effect on firm value. If research & development fails, the company does not get any benefits from the research & development costs, so it can be said that research & development does not affect the firm value.

Declaration by Authors

Acknowledgement: None
Source of Funding: None
Conflict of Interest: No conflicts of interest declared.

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How to cite this article: Lodi Salim, Azhar Maksum, Sambas Ade Kesuma. the effect of capital structure, institutional ownership, research and development on firm value in pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange. *International Journal of Research and Review*. 2025; 12(6): 202-215. DOI: *10.52403/ijrr.20250625*

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