DANADYAKSA
POST MODERN ECONOMY JOURNAL

Vol. 4 No. 1, (2026), 2220 – 2236 e-ISSN: 3025-8545

# THE EFFECT OF DEBT TO EQUITY RATIO, RETURN ON ASSETS, AND CASH RATIO ON FIRM VALUE WITH FIRM SIZE AS A MODERATING VARIABLE IN FINANCIAL SECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE

**Rasty Dwi Sahputri**[1]
Universitas Muhammadiyah Pontianak, Pontianak, Indonesia
rastydwisahputriiii@gmail.com

**Fuad Ramdhan Ryanto**[2]
Universitas Muhammadiyah Pontianak, Pontianak, Indonesia
fuad_ryantoak@yahoo.com

**Abstract**

This study aims to analyze the effect of Debt to Equity Ratio (DER), Return on Assets (ROA), and Cash Ratio on Firm Value and to examine the role of Firm Size as a moderating variable in financial sector companies listed on the Indonesia Stock Exchange. This study uses a quantitative approach with an associative research design. The research sample consisted of 89 companies selected using purposive sampling. The data used in this study were secondary data obtained from company financial statements. Data analysis was conducted using Moderated Regression Analysis (MRA) with the assistance of SPSS through classical assumption tests, correlation coefficient analysis, coefficient of determination analysis, and hypothesis testing using the t-test and F-test. The results show that, partially, Debt to Equity Ratio (DER) and Cash Ratio have a positive and significant effect on Firm Value, while Return on Assets (ROA) does not have a significant effect on Firm Value. Simultaneously, DER, ROA, and Cash Ratio have a significant effect on Firm Value, with an F-value of 22.184 and a significance value of 0.000. The coefficient of determination ($R^2$) of 0.345 indicates that 34.5% of the variation in Firm Value can be explained by DER, ROA, and Cash Ratio, while the remaining percentage is influenced by other variables outside this study. The moderation test results show that Firm Size moderates the effect of DER on Firm Value, but does not moderate the effect of ROA and Cash Ratio on Firm Value. The $R^2$ value increased to 0.411 after the moderating variable was included, indicating an improvement in the model's ability to explain the dependent variable.

**Keywords:** Debt to Equity Ratio, Return on Assets, Cash Ratio, Firm Size, Firm Value

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## INTRODUCTION

The capital market serves as a means of raising long-term funds for companies and as an investment alternative for the public through a securities trading mechanism that is conducted in a regular and organized manner. In the classification of the Indonesia Stock Exchange, the financial sector, also known as IDX Finance, includes banking companies, insurance companies, financing companies, venture capital firms, investment services, and holding companies engaged in financial services (IDX, 2024). This sector is recorded as the sector with the largest market capitalization on the Indonesia Stock Exchange and has a 75% correlation with the movement of the Jakarta Composite Index (JCI), indicating a strong relationship between the performance of the financial sector and the condition of the national capital market (Kontan, 2023). In addition, the performance of the Indonesian capital market in 2025 showed JCI growth of 22.10% year-to-date, with market capitalization reaching Rp15,810 trillion, an increase of 28.16% compared to the previous period (OJK, 2025).

In the financial sector listed on the Indonesia Stock Exchange, firm value is one of the indicators that reflects the market's assessment of a company through its share price. Data from the Indonesia Stock Exchange in 2025 show substantial variations in share prices among 105 financial sector companies, ranging from Rp30 per share to Rp14,500 per share. These variations are accompanied by significant differences in the number of outstanding shares between large-capitalization companies and small-capitalization companies. These differences indicate the diversity of company characteristics within the financial sector, as reflected in market indicators and share ownership structures (BEI, 2026).

The empirical problem related to firm value in the financial sector can be seen from fluctuations in company performance, as reflected in funding structure, profitability, and liquidity. Data from the Indonesia Stock Exchange show that the Debt to Equity Ratio in the banking sector fluctuated, with the highest value reaching 612.14% in 2022 and the lowest value reaching 490.71% in 2019. During the same period, Return on Assets reached its highest point of 2.76% in 2023 and its lowest point of 1.23% in 2020. Meanwhile, the Cash Ratio of the banking sector ranged from 14.90% to 18.14% during the observation period (BEI, 2025). In addition, there was a decline in the value of stock investments in several major banks from 2023 to 2024, indicating a change in investor perceptions of the prospects of the banking industry (JEMSI, 2025).

This phenomenon is relevant to examine because firm value in the financial sector exists within an industry environment that has different characteristics compared to other sectors. Data in 2025 show that financial sector companies have highly varied levels of liabilities, equity, profit, cash, and total assets across companies (BEI, 2026). Companies such as BMRI, BBRI, and BBCA have total assets of more than one quadrillion rupiah, while several other companies have much lower total assets (BEI, 2026). These differences in operating scale are also reflected in variations in net income, cash and cash equivalents, and capital structure, indicating heterogeneity in company characteristics within the financial sector (BEI, 2026).

Previous studies have shown inconsistent findings regarding the factors that influence firm value. Savira and Ferdian (2024) and Irnawati et al. (2023) showed that DER has a significant effect on firm value, while other studies found different results. In terms of the

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ROA variable, Irnawati (2019) found a significant effect on firm value, whereas Lestari et al. (2023) showed that ROA does not have a significant effect. For the liquidity variable, Alvian and Munandar (2022) showed a positive and significant effect on firm value, while Al-Kautsar et al. (2023) found an insignificant and even negative relationship. Regarding moderation, Santoso and Susilowati (2019) showed that firm size strengthens the relationship between DER and firm value, while Septiana and Zulkifli (2024) showed that firm size is unable to moderate the effect of profitability on firm value. In addition, Mufidah et al. (2024) stated that firm size does not strengthen the relationship between cash ratio and firm value.

Based on these inconsistent findings, there remains inconsistency in the effect of company fundamental variables and the role of firm size as a moderating variable on firm value, particularly in the financial sector on the Indonesia Stock Exchange. Therefore, this study re-examines the relationship between DER, ROA, and Cash Ratio on firm value by considering firm size as a moderating variable in order to provide more consistent and comprehensive empirical evidence.

Based on the empirical phenomena and research gaps described above, this study aims to analyze the effect of Debt to Equity Ratio, Return on Assets, and Cash Ratio on firm value, proxied by Tobin's Q, and to examine the role of firm size, proxied by the natural logarithm of total assets, as a moderating variable in financial sector companies listed on the Indonesia Stock Exchange in 2025.

## REVIEW OF LITERATURE

### Debt to Equity Ratio (DER)

Debt to Equity Ratio (DER) is a ratio used to assess the comparison between a company's debt and equity and to show the amount of funds originating from creditors compared to the capital owned by shareholders (Kasmir, 2019). Debt to Equity Ratio describes the level of debt use as a source of corporate financing (Fahmi, 2022). Debt to Equity Ratio also reflects the financial risk arising from a company's funding structure (Hery, 2021). In addition, DER shows the proportion of debt to own capital used by a company in carrying out its operational activities (Sartono, 2020). The DER indicator in this study is measured using the ratio between total liabilities and total equity (Brigham & Houston, 2019). The relationship between DER and firm value has been examined in several previous studies. Zahra, Aulia, and Elice (2023) reported that leverage has no effect on firm value in financial sector companies listed on the Indonesia Stock Exchange. In contrast to these findings, Alifian and Susilo (2025) found that DER has a positive and significant effect on firm value in the banking sector.

### Return on Assets (ROA)

Return on Assets (ROA) is a profitability ratio used to measure a company's ability to generate net income through the utilization of all assets used in its operational activities (Kasmir, 2019). ROA reflects the company's efficiency in managing assets to generate profits (Hery, 2021). ROA also shows the company's ability to convert asset investments into net income (Brigham & Houston, 2019). The use of all company assets to generate profit after

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tax is also reflected in the measurement of ROA (Sudana, 2020). The ROA indicator is measured using the ratio between net income after tax and total assets (Fahmi, 2022). The relationship between ROA and firm value has been shown in various studies. Irnawati (2019) found a significant effect on firm value. Alifian and Susilo (2025) reported that profitability, proxied by ROA, has a positive and significant effect on firm value in the banking sector. Similar findings were also reported by Zahra, Aulia, and Elice (2023), who stated that ROA has a positive and significant effect on firm value in financial sector companies listed on the Indonesia Stock Exchange.

**Cash Ratio**

Cash Ratio is a liquidity ratio used to measure a company's ability to meet short-term obligations using available cash and cash equivalents (Kasmir, 2019). Cash Ratio is a liquidity ratio that only considers the most liquid assets in the company (Hery, 2021). This ratio describes a company's ability to meet obligations that are immediately due using available cash (Fahmi, 2022). Cash Ratio also provides a stricter picture of liquidity because it does not include receivables or inventory (Munawir, 2020). The Cash Ratio indicator is measured using the comparison between cash and cash equivalents and current liabilities (Brigham & Houston, 2019). The relationship between Cash Ratio and firm value is shown in the study by Alifian and Susilo (2025), which found that Cash Ratio has a positive and significant effect on firm value in the banking sector. This finding is in line with the study by Mulyani, Riana, and Dimas (2024), which showed that liquidity has a positive effect on firm value in banking companies listed on the Indonesia Stock Exchange for the 2019–2023 period.

**Firm Size**

Firm size is an indicator that describes the size of a company, which can be measured through the total assets owned by the company (Kasmir, 2019). Firm size can be measured based on total assets, total sales, or market capitalization (Fahmi, 2022). Firm size also describes the scale of a company based on the value of its assets, net sales, or market capitalization (Hartono, 2021). Larger companies generally have broader access to sources of funding (Brigham & Houston, 2019). The firm size indicator in this study is measured using the natural logarithm of total assets, or Ln Total Assets (Sudana, 2020). The role of firm size as a moderating variable has been shown in the study by Setiawan and Purnama (2023), which found that firm size strengthens the effect of profitability on firm value. The same study showed that firm size does not moderate the effect of leverage on firm value (Setiawan & Purnama, 2023). Nurmansyah et al. (2023) found that firm size has a positive and significant effect on firm value. However, the results of studies by Carolin and Susilawati (2024) and Rivandi and Petra (2022) stated that firm size has no effect on firm value. In this study, firm size is positioned as a moderating variable in the relationship between Debt to Equity Ratio, Return on Assets, and Cash Ratio on firm value.

**Firm Value**

Firm value is a market value that reflects investors' perceptions of a company (Brigham & Houston, 2019). Firm value is also viewed as the price that potential buyers are willing to pay if the company is sold (Husnan & Pudjiastuti, 2020). Firm value can be reflected through the market price of shares traded on the stock exchange (Sartono, 2020). Firm value is also

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defined as the present value of a company's free cash flows discounted at the market's required rate of return (Sudana, 2020). The firm value indicator in this study uses Tobin's Q, which is measured by comparing the market value of equity plus total debt with the company's total assets (Tobin, 1969). As the dependent variable, firm value is used to measure changes influenced by Debt to Equity Ratio, Return on Assets, and Cash Ratio. Zahra, Aulia, and Elice (2023) showed that profitability has a significant effect on firm value in financial sector companies listed on the Indonesia Stock Exchange. Budiantini (2023) reported that firm size, financial performance, liquidity, profitability, and solvency simultaneously affect firm value.

## RESEARCH METHOD

This study uses a quantitative method with an associative approach to analyze the effect of Debt to Equity Ratio (DER), Return on Assets (ROA), and Cash Ratio on Firm Value, with Firm Size as a moderating variable. The quantitative method is a research method based on the philosophy of positivism and uses statistical analysis in hypothesis testing (Sugiyono, 2024). The data used in this study are secondary data obtained through documentation of annual financial statements of Financial sector companies listed on the Indonesia Stock Exchange. The research population consisted of 105 Financial sector companies listed on the Indonesia Stock Exchange. The research sample was determined using purposive sampling, resulting in 89 companies that met the research criteria.

The independent variables in this study consist of Debt to Equity Ratio (X1), Return on Assets (X2), and Cash Ratio (X3), while Firm Value (Y) is used as the dependent variable and Firm Size (Z) as the moderating variable. Debt to Equity Ratio is measured using the ratio of total debt to total equity (Kasmir, 2019). Return on Assets is measured using the ratio of net income after tax to total assets (Kasmir, 2019). Cash Ratio is measured using the ratio of cash and cash equivalents to total liabilities because Financial sector companies do not consistently present short-term liabilities in their financial statements (Kasmir, 2019). Firm Value is proxied by Tobin's Q, calculated by comparing the market value of equity plus total debt with total assets (Chung & Pruitt, 1994). Firm Size is measured using the natural logarithm of total assets.

Data analysis was conducted using Moderated Regression Analysis (MRA) to test the effect of independent variables on Firm Value and the moderating role of Firm Size through interaction variables in the regression model (Ghozali, 2021). Before hypothesis testing, a normality test was conducted using the Kolmogorov-Smirnov test (Ghozali, 2021). The multicollinearity test was conducted using tolerance values and Variance Inflation Factor (VIF) values (Ghozali, 2021). The autocorrelation test was conducted using the Run Test (Ghozali, 2021). The heteroscedasticity test was conducted using the Glejser method (Ghozali, 2021). The linearity test was conducted using the Lagrange Multiplier method (Ghozali, 2018). Hypothesis testing was conducted through the partial test (t-test) and the simultaneous test (F-test) (Ghozali, 2021). In addition, the multiple correlation coefficient was used to measure the level of relationship among variables (Sugiyono, 2024). The

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coefficient of determination ($R^2$) was used to measure the ability of the model to explain variations in Firm Value (Ghozali, 2018).

## RESULTS AND DISCUSSION

### Classical Assumption Test

#### a. Normality Test

The normality test was conducted to examine whether the residual data were normally distributed. The results of this test were used as a basis for determining the feasibility of using further statistical analysis. The normality test in this study used the Kolmogorov-Smirnov (K-S) method, with the results presented in Table 1.

**Table 1. Normality Test Results**

| Test | Value |
|---|---|
| N (Sample) | 89 |
| Test Statistic | 0.089 |
| Asymp.Sig.(2-tailed) | .200[c,d] |

Source: Processed Data, 2026

Based on the Kolmogorov-Smirnov test results for the second equation in Table 1, a significance value of 0.200 (> 0.050) was obtained, indicating that the data are normally distributed.

#### b. Multicollinearity Test

The multicollinearity test was conducted to identify the presence of correlations among independent variables in the regression model. The model is declared free from multicollinearity if the Tolerance value is > 0.10 and the VIF value is < 10. The test results are presented in Table 2.

**Table 2. Multicollinearity Test Results**

| Model | | Collinearity Statistics | |
|---|---|---|---|
| | | Tolerance | VIF |
| 1 | DER | 0.582 | 1.718 |
| | ROA | 0.671 | 1.489 |
| | Cash Ratio | 0.438 | 2.283 |
| | Firm Size | 0.642 | 1.558 |
| | DER*Firm Size | 0.214 | 4.666 |
| | ROA*Firm Size | 0.329 | 3.405 |
| | Cash Ratio*Firm Size | 0.185 | 5.405 |

Source: Processed Data, 2026

Based on Table 2, the regression model does not indicate multicollinearity. This is shown by all variables, including the moderating variables, having Tolerance values > 0.10 and VIF values < 10.

#### c. Heteroscedasticity Test

The heteroscedasticity test was conducted to examine the equality of residual variances in the regression model. The test used the Glejser method, with the criterion that a

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significance value > 0.05 indicates that heteroscedasticity does not occur. The test results are presented in Table 3.

**Table 3. Heteroscedasticity Test Results**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 13.256 | 4.082 | | 3.247 | .002 |
| | DER | -.031 | .158 | -.045 | -.196 | .845 |
| | ROA | .121 | .089 | .248 | 1.360 | .177 |
| | Cash Ratio | -.142 | .098 | -.421 | -1.449 | .151 |
| | Firm Size | 0.005 | .004 | .098 | 1.102 | .274 |
| | DER*Firm Size | -.001 | .001 | -.116 | -.812 | .419 |
| | ROA*Firm Size | .001 | .001 | .074 | .593 | .555 |
| | Cash Ratio*Firm Size | -.001 | .001 | -.103 | -.701 | .485 |

Source: Processed Data, 2026

Based on Table 3, all variables have significance values > 0.05, indicating that the regression model does not show symptoms of heteroscedasticity and is feasible for further analysis.

**d. Autocorrelation Test**

The autocorrelation test was conducted to identify the presence of residual correlation across periods in the regression model. The test used the Run Test method, with the results presented in Table 4.

**Table 4. Autocorrelation Test Results**

| Test | Unstandardized Residual |
|---|---|
| Test Value[a] | -3.78864 |
| Z | -.913 |
| Asymp. Sig. (2-tailed) | .361 |

Source: Processed Data, 2026

Based on Table 4, a significance value of 0.361 (> 0.05) was obtained, indicating that the regression model does not experience autocorrelation.

**e. Linearity Test**

The linearity test was conducted to ensure the suitability of the form of relationships among variables in the research model. The test used the Lagrange Multiplier method through the ANOVA output in SPSS. The linearity test results are presented in Table 5.

**Table 5. Linearity Test Results**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .327a | .107 | .074 | 15.56328 |

Source: Processed Data, 2026

**Table 6. Calculation Results of $\chi^2$ Value (Lagrange Multiplier)**

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| n | $R^2$ (Model Augmented) | Calculated $\chi^2$ ($n \times R^2$) |
|---|---|---|
| 89 | 0,107 | 9,523 |
| **$\chi^2$ Table (df=89, α=5%)** | **113,145** | |

Source: Processed Data, 2026

Based on Table 5 and Table 6, the linearity test results for Equation II using the Lagrange Multiplier method show an R Square value of 0.107. The calculated $\chi^2$ value was obtained from $n \times R^2 = 89 \times 0.107 = 9.523$. This value is smaller than the $\chi^2$ table value at df = 89 and α = 5%, which is 113.145. Therefore, the null hypothesis stating that the model has a linear form cannot be rejected. Thus, it can be concluded that the regression model meets the linearity assumption and that the relationships among variables are linear.

**Statistic Test**

**a. Moderated Regression Analysis (MRA)**

This study used Moderated Regression Analysis (MRA) to examine the effect of independent variables on the dependent variable by considering the role of the moderating variable. This method integrates interaction variables into the regression model to identify whether the moderating variable strengthens or weakens the relationship among variables. The analysis was conducted through two regression equations. The results of the first equation are presented in Table 7.

**Table 7. Moderated Regression Analysis Results (Equation I)**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1.329 | 0.340 | | 3.804 | 0.000 |
| | DER | 0.329 | 0.124 | 0.233 | 2.371 | 0.019 |
| | ROA | 0.157 | 0.121 | 0.101 | 1.281 | 0.202 |
| | Cash Ratio | 0.382 | 0.112 | 0.289 | 2.926 | 0.004 |
| a. Dependent Variable: Firm Value | | | | | | |

Source: Processed Data, 2026

Based on the analysis results in Table 7, the regression equation obtained is as follows:

$$\mathbf{Y = 1.329 + 0.329X_1 + 0.157X_2 + 0.382X_3 + e}$$

This regression equation shows the relationship between the independent variables and the dependent variable, which can then be interpreted as follows.

1) The constant value of 1.329, which is positive, indicates that when DER, ROA, and Cash Ratio are equal to zero (0), the Firm Value is 1.329.
2) The DER variable (X1) has a value of 0.329 and is positive, indicating that if DER increases by one unit, Firm Value will increase by 0.329 units.
3) The ROA variable (X2) has a value of 0.157 and is positive, indicating that if ROA increases by one unit, Firm Value will increase by 0.157 units.
4) The Cash Ratio variable (X3) has a value of 0.382 and is positive, indicating that if Cash Ratio increases by one unit, Firm Value will increase by 0.382 units.

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The results of the regression test using Moderated Regression Analysis for Equation II are presented in Table 8.

**Table 8. Moderated Regression Analysis Results (Equation II)**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 0.692 | 0.341 | | 2.032 | 0.044 |
| | DER | 0.315 | 0.109 | 0.256 | 2.891 | 0.006 |
| | ROA | 0.061 | 0.106 | 0.041 | 0.567 | 0.566 |
| | Cash Ratio | 0.112 | 0.115 | 0.097 | 0.974 | 0.333 |
| | Firm Size | 0.371 | 0.094 | 0.349 | 3.947 | 0.000 |
| | DER*Firm Size | 0.096 | 0.038 | 0.342 | 2.526 | 0.013 |
| | ROA*Firm Size | 0.020 | 0.031 | 0.066 | 0.645 | 0.521 |
| | Cash Ratio*Firm Size | -0.068 | 0.036 | -0.318 | -1.875 | 0.064 |
| a. Dependent Variable: Firm Value | | | | | | |

Source: Processed Data, 2026

Based on Table 8, the regression equation obtained is as follows:

$$\mathbf{Y = 0.692 + 0.315X_1 + 0.061X_2 + 0.112X_3 + 0.371Z + 0.096X_1{*}Z + 0.020X_2{*}Z - 0.068X_3{*}Z + e}$$

The interpretation of the regression equation is as follows:

1) The constant value of 0.692 indicates that Firm Value is 0.692 when all independent and moderating variables are equal to zero.
2) The DER coefficient ($X_1$) of 0.315 shows a positive value, indicating that if DER increases by one unit, Firm Value will increase by 0.315 units.
3) The ROA coefficient ($X_2$) of 0.061 shows a positive value, indicating that if ROA increases by one unit, Firm Value will increase by 0.061 units.
4) The Cash Ratio coefficient ($X_3$) of 0.112 shows a positive value, indicating that if Cash Ratio increases by one unit, Firm Value will increase by 0.112 units.
5) The Firm Size coefficient (Z) of 0.371 shows a positive value, indicating that if Firm Size increases by one unit, Firm Value will increase by 0.371 units.
6) The interaction coefficient of DER*Firm Size of 0.096 indicates a positive moderating effect.
7) The interaction coefficient of ROA*Firm Size of 0.020 indicates a positive moderating effect.
8) The interaction coefficient of Cash Ratio*Firm Size of -0.068 indicates a negative moderating effect on Firm Value.

**b. Correlation Coefficient Analysis (R)**

The correlation coefficient test was conducted to measure the level of relationship between the independent variables and the dependent variable, as well as to evaluate the role of the moderating variable in that relationship. The test results for the first equation model are presented in Table 9.

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**Table 9. Correlation Coefficient Test Results (R) (Equation I)**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .587[a] | 0.345 | 0.331 | 0.74358 |

Source: Processed Data, 2026

Based on Table 9, Equation I produces a correlation coefficient (R) value of 0.587. This value indicates a moderately strong relationship between DER, ROA, and Cash Ratio and Firm Value. Thus, the three independent variables have a moderate level of relationship with the dependent variable.

The results of the correlation coefficient analysis for Equation II are presented as follows.

**Table 10. Correlation Coefficient Test Results (R) (Equation II)**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .641[a] | 0.411 | 0.387 | 0.70321 |

Source: Processed Data, 2026

Based on Table 10, Equation II produces a correlation coefficient (R) value of 0.641. This value indicates a strong relationship between DER, ROA, and Cash Ratio moderated by Firm Size and Firm Value.

**c. Determination Coefficient ($R^2$)**

The coefficient of determination ($R^2$) test was conducted to measure the ability of the independent variables to explain variations in the dependent variable. The test results show the following:

1) Based on Table 9, the $R^2$ value in Equation I is 0.345. This result indicates that DER, ROA, and Cash Ratio are able to explain 34.5% of the variation in Firm Value, while the remaining 65.5% is influenced by other factors outside the research model.
2) Based on Table 10, the $R^2$ value in Equation II is 0.411. This result indicates that DER, ROA, and Cash Ratio, with Firm Size as the moderating variable, are able to explain 41.1% of the variation in Firm Value, while the remaining 58.9% is influenced by other factors not included in the research model.

**d. Simultaneous Test (F Test)**

The F-test was conducted to test the feasibility of the regression model and to determine the simultaneous effect of the independent variables on the dependent variable. The test results for the first equation model are presented in Table 11.

**Table 11. Simultaneous Test Results (F Test) (Equation I)**

| Model | Sum of Squares | Mean Square | F | Significance |
|---|---|---|---|---|
| Regression | 43.276 | 14.425 | 22.184 | .000[b] |
| Residual | 126.724 | 0.664 | | |

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Dependent Variable: Firm Value
Predictors: (Constant), DER, ROA, dan Cash Ratio.

Source: Processed Data, 2026

Based on Table 11, a significance value of 0.000 (< 0.05) was obtained, indicating that DER, ROA, and Cash Ratio simultaneously have a significant effect on Firm Value.

The test results for the second equation are presented in Table 12.

**Table 12. Simultaneous Test Results (F Test) (Equation II)**

| Model | Sum of Squares | Mean Square | F | Significance |
|---|---|---|---|---|
| Regression | 58.364 | 8.338 | 14.729 | .000[b] |
| Residual | 110.636 | 0.592 | | |

Dependent Variable: Firm Value
Predictors: (Constant), DER, ROA, Cash Ratio, Firm Size, DER×Firm Size, ROA×Firm Size, and Cash Ratio×Firm Size.

Source: Processed Data, 2026

Based on Table 12, a significance value of 0.000 (< 0.05) was obtained, indicating that the regression model is simultaneously significant and feasible to use. Thus, Firm Size plays a role as a moderating variable in the relationship between DER, ROA, and Cash Ratio and Firm Value.

**e. Partial Test (t Test)**

The t-test was conducted to examine the partial effect of each independent variable on the dependent variable in the regression model. The test results for the first and second equation models are presented in the following tables. The t-test results processed using SPSS are presented in Table 13.

**Table 13. Partial Test Results (t Test) (I)**

| Coefficients[a] | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1.329 | 0.340 | | 3.804 | 0.000 |
| | DER | 0.329 | 0.124 | 0.233 | 2.371 | 0.019 |
| | ROA | 0.157 | 0.121 | 0.101 | 1.281 | 0.202 |
| | Cash Ratio | 0.382 | 0.112 | 0.289 | 2.926 | 0.004 |
| a. Dependent Variable: Firm Value | | | | | | |

Source: Processed Data, 2026

Based on Table 13, with a t-table value of 1.988, the partial test results show the following:

1) DER has a significance value of 0.019 (< 0.05) and a t-value of 2.371 (> 1.988), indicating that DER has a significant effect on Firm Value.
2) ROA has a significance value of 0.202 (> 0.05) and a t-value of 1.281 (< 1.988), indicating that ROA does not have a significant effect on Firm Value.

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3) Cash Ratio has a significance value of 0.004 (< 0.05) and a t-value of 2.926 (> 1.988), indicating that Cash Ratio has a significant effect on Firm Value.

The partial test results for Equation II are presented in Table 14.

**Table 14. Partial Test Results (t Test) (II)**

| Coefficients[a] | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 0.692 | 0.341 | | 2.032 | 0.044 |
| | DER | 0.315 | 0.109 | 0.256 | 2.891 | 0.006 |
| | ROA | 0.061 | 0.106 | 0.041 | 0.567 | 0.566 |
| | Cash Ratio | 0.112 | 0.115 | 0.097 | 0.974 | 0.333 |
| | Firm Size | 0.371 | 0.094 | 0.349 | 3.947 | 0.000 |
| | DER*Firm Size | 0.096 | 0.038 | 0.342 | 2.526 | 0.013 |
| | ROA*Firm Size | 0.020 | 0.031 | 0.066 | 0.645 | 0.521 |
| | CASH RATIO*Firm Size | -0.068 | 0.036 | -0.318 | -1.875 | 0.064 |
| a. Dependent Variable: Firm Value | | | | | | |

Source: Processed Data, 2026

Based on Table 14, with a t-table value of 1.988, the partial test results show the following:

1) DER has a significance value of 0.006 (< 0.05) and a t-value of 2.891 (> 1.988), indicating that DER has a significant effect on Firm Value.
2) ROA has a significance value of 0.566 (> 0.05) and a t-value of 0.567 (< 1.988), indicating that ROA does not have a significant effect on Firm Value.
3) Cash Ratio has a significance value of 0.333 (> 0.05) and a t-value of 0.974 (< 1.988), indicating that Cash Ratio does not have a significant effect on Firm Value.
4) Firm Size has a significance value of 0.000 (< 0.05) and a t-value of 3.947 (> 1.988), indicating that Firm Size has a significant effect on Firm Value.
5) The interaction between DER and Firm Size has a significance value of 0.013 (< 0.05), indicating that Firm Size moderates the effect of DER on Firm Value.
6) The interaction between ROA and Firm Size has a significance value of 0.521 (> 0.05), indicating that Firm Size does not moderate the effect of ROA on Firm Value.
7) The interaction between Cash Ratio and Firm Size has a significance value of 0.064 (> 0.05), indicating that Firm Size does not moderate the effect of Cash Ratio on Firm Value.

**The Effect of Debt to Equity Ratio (DER) on Firm Value**

The t-test results in Equation II show that Debt to Equity Ratio (DER) has a regression coefficient of 0.315, a t-value of 2.891, and a significance value of 0.006 < 0.05. These results indicate that DER has a positive and significant effect on Firm Value. This means that the higher the DER, the more Firm Value tends to increase. In the context of financial sector companies, the use of debt can be an important part of the company's funding structure, especially because this sector has operational characteristics that are closely related to the management of funds, liabilities, and financial assets. The significant effect of DER

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indicates that capital structure is one of the pieces of information considered by investors in assessing a company. This finding is in line with the study by Irnawati et al. (2023), which showed that Debt to Equity Ratio affects firm value. However, this result is not in line with the study by Savira and Ferdian (2024), which showed that Debt to Equity Ratio has a low effect on firm value in infrastructure, utilities, and transportation sector companies listed on the Indonesia Stock Exchange.

**The Effect of Return on Assets (ROA) on Firm Value**

The t-test results in Equation II show that Return on Assets (ROA) has a regression coefficient of 0.061, a t-value of 0.567, and a significance value of 0.566 > 0.05. These results indicate that ROA does not have a significant effect on Firm Value. Although the coefficient is positive, the effect is not statistically strong enough. This means that an increase in ROA does not necessarily lead directly to an increase in Firm Value in financial sector companies. This condition may occur because investors do not assess companies solely based on their ability to generate profits through assets, but also consider other factors such as funding structure, firm size, industry risk, liquidity, and business prospects. This finding is in line with the study by Lestari et al. (2023), which showed that ROA does not have a significant effect on firm value. However, this result is not in line with Irnawati (2019), who showed that ROA has a significant effect on firm value.

**The Effect of Cash Ratio on Firm Value**

The t-test results in Equation II show that Cash Ratio has a regression coefficient of 0.112, a t-value of 0.974, and a significance value of 0.333 > 0.05. These results indicate that Cash Ratio does not have a significant effect on Firm Value after Firm Size and interaction variables are included in the model. This means that the company's ability to provide cash and cash equivalents has not become a main factor that directly affects Firm Value in the moderation model. This may occur because, in the financial sector, liquidity has different characteristics compared to non-financial sectors, so cash value is not always directly perceived as a signal of increasing firm value by investors. This result is not in line with the study by Alvian and Munandar (2022), which showed that liquidity has a positive and significant effect on firm value. However, this finding is in line with the study by Al-Kautsar et al. (2023), which stated that liquidity has a negative and insignificant effect on firm value.

**The Effect of Firm Size on Firm Value**

The t-test results in Equation II show that Firm Size has a regression coefficient of 0.371, a t-value of 3.947, and a significance value of 0.000 < 0.05. These results indicate that Firm Size has a positive and significant effect on Firm Value. This means that the larger the size of the company, the more Firm Value tends to increase. Larger companies generally have higher total assets, broader access to funding, more stable operational capabilities, and stronger market trust. In the financial sector, company scale becomes important information because large companies usually have better ability to manage assets, risks, and financial obligations. This finding is in line with the study by Nurmansyah et al. (2023), which found that firm size has a positive and significant effect on firm value. However, this result is not in

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line with the studies by Carolin and Susilawati (2024) and Rivandi and Petra (2022), which stated that firm size has no effect on firm value.

**Firm Size in Moderating the Effect of DER on Firm Value**

The t-test results in Equation II show that the interaction between DER and Firm Size has a regression coefficient of 0.096, a t-value of 2.526, and a significance value of 0.013 < 0.05. These results indicate that Firm Size is able to moderate the effect of DER on Firm Value. The positive interaction coefficient indicates that Firm Size strengthens the effect of DER on Firm Value. This means that the effect of capital structure on firm value will be stronger in companies with larger size. Larger companies generally have stronger assets, better reputations, and broader access to funding, so the use of debt can be more easily accepted by the market as part of the company's funding strategy. This finding is in line with the study by Santoso and Susilowati (2019), which stated that firm size moderates and strengthens the relationship between DER and firm value.

**Firm Size in Moderating the Effect of ROA on Firm Value**

The t-test results in Equation II show that the interaction between ROA and Firm Size has a regression coefficient of 0.020, a t-value of 0.645, and a significance value of 0.521 > 0.05. These results indicate that Firm Size is unable to moderate the effect of ROA on Firm Value. This means that company size does not strengthen or weaken the relationship between ROA and Firm Value. Although a company may be large, profitability generated from assets does not necessarily become the main factor that increases market valuation. In the financial sector, investors may consider other indicators such as risk, capital structure, liquidity, asset quality, and business stability. This finding is in line with the study by Septiana and Zulkifli (2024), which stated that firm size cannot moderate the effect of profitability on firm value.

**Firm Size in Moderating the Effect of Cash Ratio on Firm Value**

The t-test results in Equation II show that the interaction between Cash Ratio and Firm Size has a regression coefficient of -0.068, a t-value of -1.875, and a significance value of 0.064 > 0.05. These results indicate that Firm Size is unable to moderate the effect of Cash Ratio on Firm Value. The negative coefficient shows a weakening direction, but the effect is not statistically significant. This means that firm size is not strong enough to strengthen or weaken the relationship between Cash Ratio and Firm Value. In financial sector companies, high cash levels are not always considered a positive signal by investors because large cash holdings may also indicate funds that have not been used productively. This finding is in line with the study by Mufidah et al. (2024), which stated that firm size does not strengthen the relationship between cash ratio and firm value.

## CONCLUSION

This study aims to analyze the effect of Debt to Equity Ratio (DER), Return on Assets (ROA), and Cash Ratio on Firm Value with Firm Size as a moderating variable. The results of Equation I show that DER and Cash Ratio have a positive and significant effect on Firm Value, while ROA does not have a significant effect on Firm Value. Based on the regression coefficient values and the partial test results, Cash Ratio is the variable with the most dominant effect on Firm Value compared to the other independent variables. The

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simultaneous test results show that DER, ROA, and Cash Ratio jointly have a significant effect on Firm Value.

The moderation test results show that Firm Size is able to moderate the effect of DER on Firm Value, but is unable to moderate the effect of ROA and Cash Ratio on Firm Value. In addition, Firm Size is also proven to have a positive and significant direct effect on Firm Value. The correlation coefficient (R) value in the first model is 0.587, indicating a moderately strong relationship between the independent variables and Firm Value, while in the second model, the correlation coefficient increases to 0.641, indicating a strong relationship after the moderating variable is included. The coefficient of determination ($R^2$) of 34.5% in the first model indicates that the variation in Firm Value can be explained by DER, ROA, and Cash Ratio, while in the second model, the $R^2$ value increases to 41.1% after Firm Size is included as a moderating variable. The remaining variation is influenced by other factors outside the research model.

Theoretically, this study contributes to the development of corporate finance literature, particularly regarding the effect of capital structure, profitability, and liquidity on Firm Value and the role of Firm Size as a moderating variable. Practically, the results of this study can serve as a consideration for company management in optimizing capital structure and maintaining corporate liquidity levels in order to increase Firm Value. For investors, the results of this study can be used as one basis for making investment decisions by considering DER, Cash Ratio, and Firm Size conditions.

This study has limitations because it only uses three independent variables, namely DER, ROA, and Cash Ratio, and one moderating variable, namely Firm Size. In addition, the model's ability to explain variations in Firm Value remains relatively limited. Therefore, future studies are recommended to include other variables that may influence Firm Value, such as Current Ratio, Net Profit Margin, Good Corporate Governance, institutional ownership, and macroeconomic factors. Future research may also expand the observation period, sample size, and industrial sector coverage in order to produce more comprehensive findings with a higher level of generalizability.

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