

The impact of capital structure, investment growth, and liquidity on financial performance of automotive companies and its components on the Indonesia Stock Exchange (2018-2022)

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Abstract

Purpose: This study analyzes the influence of capital, investment, and liquidity structures on the financial performance of automotive companies and their components listed on the Indonesia Stock Exchange (IDX) between 2018 and 2022.

Research methodology: Multiple regression analysis was used, and data were obtained from the company's annual financial statements from 2018 to 2022. The findings of this study are expected to provide important insights for financial managers and stakeholders in managing company finances and serve as a reference for investors and creditors in evaluating the financial performance of a company.

Results: The results show that capital structure has a significantly positive effect on financial performance, while investment and liquidity do not significantly affect it.

Conclusion: Capital structure significantly improves the financial performance of automotive companies, whereas investment and liquidity show no significant effects. Therefore, optimizing the capital structure is crucial for strengthening financial strategies in the Indonesian automotive sector.

Limitation: The study's limitation is that it focuses solely on automotive companies listed on the Indonesia Stock Exchange during the specified time frame.

Contribution: The study's contribution is that it provides empirical evidence regarding the impact of capital structure, investment growth, and liquidity on financial performance in the Indonesian automotive industry, which can inform future research and practical applications in this context.

Keywords: *Automotive Industry, Capital Structure, Financial Performance, Investment, Liquidity*

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1. Introduction

Indonesia has the potential for high economic growth in Asia. Economic growth in Indonesia is positive for the progress of all sectors. The automotive sector is strongly influenced by economic development. The automotive sector is one of the main sectors of the national economy and can make a significant contribution to Indonesia's economy. Government support in this sector will provide positive results for the progress of the automotive sector because progress in this sector has a broad impact on society. In line with the decline in the Indonesian economy from 2020 to 2021, the automotive sector experienced a significant decline in sales. Under these conditions, the automotive sector is experiencing difficult conditions. Based on data from the Ministry of Trade and Industry of the Republic of Indonesia,

in 2020, wholesale sales were only able to reach 530,000 units, a 50% decrease from normal. This is due to the limited mobility of the automotive sector. The continuity of the company is highly dependent on buyers or customers to obtain revenue and new capital owners so that the company can continue to run as it should. In this case, the automotive industry depends on technological innovations.

According to [Brigham and Houston \(2019\)](#), funding can improve a company's financial performance, as reflected in its profits. The optimal capital structure composition positively impacts financial performance. This is in line with the previous research conducted by Turyahebwa et al. (2022), which found that the capital structure with the proxy debt-to-equity ratio (DER) has a significant effect on financial performance, as measured by return on assets (ROA). In addition, research by [Anozie, Muritala, Ininm, and Yisau \(2023\)](#) shows that there is a positive influence between capital structure and the proxy debt-to-equity ratio (DER) on financial performance with the proxy return on assets (ROA). In several previous studies, researchers used the DER as a proxy for capital structure and ROA as a proxy for financial performance variables.

In automotive companies, financial managers must be able to carefully manage funds, and funds obtained from capital owners must always be able to increase profits in the form of gains or dividends. Financial managers' funding decisions affect changes in investment from capital ownership. Research has also been conducted on investment changes using asset structure. One of them is research conducted by [Pramono and Susilo \(2022\)](#); [Sherine, Wiyanto, and Budiono \(2022\)](#) states that investment affects financial performance. In addition, research on investment by [Niar \(2019\)](#) shows that investment decisions have a significant positive effect on financial performance. The variable used to examine the effect of liquidity on financial performance is the Current Asset Ratio. Current assets are a financial ratio that compares the total current assets (current assets) used for company operations with the company's total equity (Current Liabilities). Research on capital structure, investment, and liquidity in financial performance is important for several reasons. By understanding the capital structure, investment, and liquidity of a company's liquidity level, management can determine whether the company has enough liquid assets to fund investment projects, pay dividends to shareholders, or purchase new assets ([Pramono & Susilo, 2022](#); [Surya et al., 2024](#)).

This study provides a new perspective on the effects of Capital Structure, Investment Changes, and Liquidity on the financial performance of automotive companies during the Covid 19 pandemic and provides information on how far the variables of Capital Structure, Investment Changes, and Liquidity in mediating independent variables on a company's financial performance. The number of automotive companies and their components on the Indonesia Stock Exchange to be studied is 16. Based on this exposure, the researcher considers the importance of further analyzing the effects of Capital Structure, Investment Changes, and Liquidity on the financial performance of automotive companies and their components listed on the Indonesia Stock Exchange (IDX) for the period 2018-2022.

2. Literature Review

2.1 Company Financial Performance

Financial performance is an analysis carried out to determine the extent to which a company has implemented its rules properly and correctly. In addition, financial performance can be interpreted as an achievement by a company in a certain period that reflects the health of the company. There are several expert views on financial performance theory. [Brigham and Houston \(2019\)](#) define financial performance as a company's ability to generate substantial profits for its shareholders. Gitman and Zutter (2012) state that financial performance is a company's ability to achieve its desired financial goals, such as profitability, growth, liquidity, and solvency. From the above understanding, it can be concluded that a company's financial performance is an analysis carried out by the company through financial reports by assessing the extent to which the company has carried out in accordance with the rules to achieve good financial performance, which is reflected in the company's health level for a certain period.

Return on Assets (ROA) is a financial ratio used to measure the efficiency and profitability of a company by utilizing its assets to generate profits ([Brigham & Houston, 2019](#)). ROA measures the

percentage of net income generated by a company relative to its total assets. ROA provides an overview of how efficiently a company uses its assets to generate profit. The higher the ROA, the more efficient a company is in generating profits from its assets. ROA also provides information about management's ability to manage a company's assets and maximize their use.

2.2 Capital Structure

The capital structure of a business organization is important. Funding decisions are important because they help maximize profits in a company and make the company able to compete competitively in the business environment. In addition, funding decisions made by the manager affect the company's ability to pay obligations and the risks borne by shareholders. Modigliani and Miller first defined capital structure as a combination of debt and equity used by a company to run its business operations. In addition to the impact on the value of the company, a good and correct capital structure will also enable a company to survive amid intense competition. According to [Kesuma \(2009\)](#), the size of the capital structure ratio shows the amount of long-term loans rather than the capital invested in fixed assets used to obtain operating profit. The greater the capital structure ratio, the greater the number of long-term loans, so that a greater part of the operating profit is used to pay fixed interest expenses, and more cash flow is used to pay loan installments. Consequently, the company will receive less net profit after tax.

2.3 Investment Growth

Investment is the most important decision in relation to increasing firm value. Investment growth refers to an increase in investment value over time. Investment growth can be measured in terms of percentage or nominal value and reflects how the value of an entity's investment (such as a company or investment portfolio) grows over time. Investment growth can arise from several factors, including: These include increases in asset value, dividends or investment income, reinvestment of income, new contributions to the portfolio, positive performance in trading, capital gains policies, effective investment management, and improved earnings and financial performance ([Yanti, Komalasari, & Andi, 2022](#)). Investment growth can also be affected by external factors such as financial market conditions, economic conditions, and monetary policy. Risk is also an important part of investment growth, and there must be a balance between efforts for growth and protection against risks that may arise in the future. Thus, investment decisions involve the use of long-term fund. Investment decisions refer to the process of selecting assets in which a company will invest, either in the form of physical assets such as property and equipment or in the form of financial assets such as stocks and bonds ([Brigham & Houston, 2019](#)).

2.4 Liquidity

Liquidity refers to the effectiveness or ease with which an asset can be converted into money without affecting its market price ([Hizazi & Safelia, 2020](#); [Yuliansyah, 2023](#)). The more liquid an asset is, the easier it is to cash out when needed. Liquidity is closely related to a company's financial performance. A healthy level of liquidity can positively impact financial performance, whereas low or inadequate liquidity can be a source of problems. Ability to pay liabilities: Good liquidity allows a company to pay its obligations in a timely manner. If a company has sufficient liquid assets or cash available, it can meet its obligations and avoid financial problems such as default or reputational losses ([Sutarni & Maharati, 2023](#)). Good liquidity reflects a company's operational efficiency. For example, if a company can manage its cash cycle well, it can collect receivables quickly and manage inventory efficiently. This can accelerate cash flows and improve liquidity. Sufficient liquidity can support a company's investment and growth. If companies have sufficient cash reserves, they can use them to finance expansion projects, research and development, acquisitions, or other investments ([Aditia, Dharma, & Nur, 2022](#); [Wulandari, 2023](#)).

2.5. Relationship between Capital Structure and Financial Performance

The relationship between capital structure and corporate financial performance is an important topic in corporate finance. Capital structure refers to the composition and proportion of debt and equity firms use to finance their operations and investment activities. Financial performance includes various metrics that measure a firm's efficiency, profitability, stability, and value. Several theories and approaches have addressed the relationship between capital structure and financial performance.

Empirical studies examining the relationship between capital structure and financial performance have yielded mixed findings. Some studies have shown a positive relationship between debt use and financial performance. One of them is the research conducted by Niar (2019), who found a positive influence of capital structure on financial performance. The relationship between capital structure and financial performance is complex and can differ between companies and situations. Decisions regarding capital structure should be based on a careful analysis of the specific characteristics and needs of the company, as well as external factors affecting the industry and market in which the company operates. The literature review above provides the background for the following hypotheses:

H1: There is a significant relationship between capital structure and financial performance in automotive companies and components listed on the Indonesia Stock Exchange (IDX).

2.6 Investment Relationship with Financial Performance

The right investment can significantly impact a company's financial performance. Investment decisions involve allocating company funds to investment projects expected to generate cash flows in the future. Smart investment decisions can drive a company's revenue growth ([Darmawan & Roba'in, 2022](#); [Tabrani, Satriawan, & Indrawan, 2024](#)). Investments in projects that produce new products or services, expand production capacity, and enter new markets can increase a company's revenue. In the long term, sustained revenue growth positively impacts a company's financial performance. Additionally, good investment decisions can increase profits. Investments that generate positive cash flows sufficient to overcome investment costs and the cost of capital required will increase a company's profits. This can be seen from the increase in the gross profit margin, net profit margin, and other profitability ratios.

Investments aimed at updating, improving, or automating operational processes can enhance a company's efficiency. For example, investments in better information technology or more efficient machinery can reduce production costs and increase profit margins. Companies can achieve better financial performance by improving their operational efficiency. Thus, good investment decisions can increase the firm's value. Investments that generate sustainable cash flows and have a positive net present value (NPV) increase company value. This is certainly in line with the research conducted by [Lestari and Asyik \(2023\)](#), who found a significant positive influence of investment decisions on financial performance.

H2: Investment growth and financial performance in automotive companies and components listed on the Indonesia Stock Exchange (IDX) are significantly related.

2.7 Liquidity Relationship with Financial Performance

The liquidity ratio shows the capability of using current assets to pay in full any maturing debt owed by a company. High liquidity shows the percentage of current assets that the company has when compared to its current debt, so that the company is considered capable of fulfilling its operational activities ([Astuti & Yadnya, 2019](#)). Good liquidity ensures that a company has sufficient cash and other liquid assets to meet its short-term obligations. This is important for the continuity of company operations and maintenance of financial stability.

When a company meets its short-term obligations on time, it affects its overall financial performance positively. Liquidity can also affect a company's profitability. For example, a company with low liquidity may have to pay more to obtain additional financing, which may affect its net profit. Conversely, good liquidity can help a company capitalize on profitable investment opportunities and generate higher profits. Efficient utilization of free cash flow is a good sign of a company's capability to utilize free cash flow to obtain profits. Previous findings by [Akbar and Fahmi \(2020\)](#) stated that liquidity has a significant and positive influence on firm value.

H3: There is a significant relationship between liquidity and financial performance in automotive companies and components listed on the Indonesia Stock Exchange (IDX).

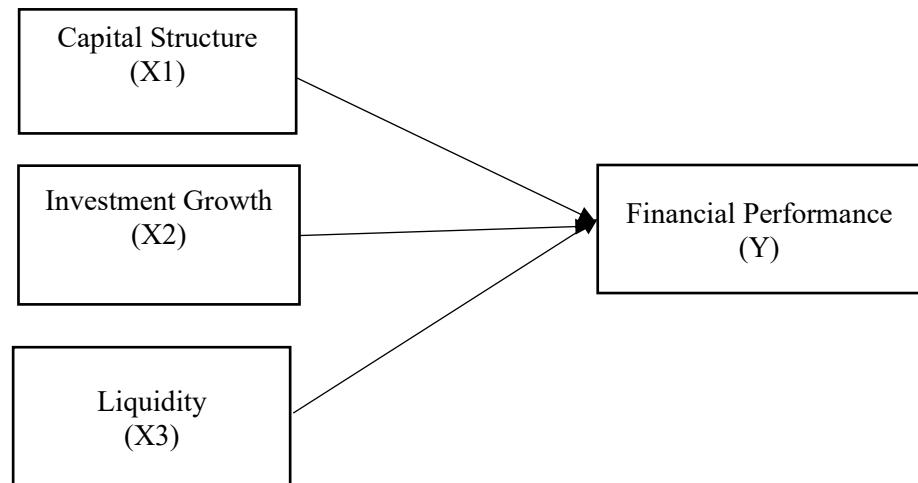


Figure 1. Research Paradigm

3. Research Methodology

3.1 Population and sample

The population in this study was automotive companies and their components listed on the Indonesia Stock Exchange in 2018, 2019, 2020, 2021, and 2022. The criteria for the population in this study were as follows.

1. Automotive companies that published complete annual reports, both annual reports and financial statements for 2018-2022.
2. Companies listed on the Indonesia Stock Exchange are the issuers.

Research samples can be defined as a part or subset of the population chosen as the subject of the research ([Pramono & Indriyani, 2019](#); [Pramono & Pratama, 2020](#); [White & McBurney, 2012](#)). Samples in research are very important because they must represent the characteristics of the population in general so that the research results are reliable and valid. Sample determination can be performed using various methods such as simple random sampling, stratified random sampling, cluster sampling, purposive sampling, and saturated sampling. Saturated sampling was performed in this study. Saturated sampling is a sampling technique in which all members of the population are used as samples ([Putra & Herawati, 2017](#); [Putra & Suprapti, 2019](#)). Thus, 16 companies in the automotive subsector and its components were selected as research samples.

3.2 Operational Variables

In this study, the independent variables are capital structure variables and investment decisions. The dependent variable in this study is financial performance. Capital structure can be measured using the debt-to-equity ratio (DER) dimension, and investment decisions can be measured by Asset Structure. Financial performance is measured using the Return on Equity (ROE) ratio.

3.2.1 Financial Performance (Variable Y)

Profitability Ratio: Return on Assets (ROA) is a financial ratio that measures how effectively a company uses its assets to generate profit. ROA illustrates a company's efficiency in generating profits from its assets. ([Susanti, 2018](#)).

$$ROA = \frac{\text{Net Profit}}{\text{Total Assets}} \times 100\%$$

3.2.2 Capital Structure (Variable X1)

Leverage Ratio: This ratio measures the ratio between total debt and own capital (equity). It is important for a company to measure this ratio because it relates to the issue of trading on equity, which can have a positive or negative effect on the profitability of the company's capital ([Susanti, 2018](#)).

3.2.3 Investment (Variable X2)

This formula is used to calculate the difference or change in the investment amount from the initial to the final time. Initial Investment refers to the amount of investment at the beginning of a specified period. Final Investment refers to the amount of investment at the end of the same period as the Initial Investment. ([Brigham & Houston, 2019](#)).

$$\text{Investment Change} = \frac{\text{Investment Change}}{\text{Initial Investment}} \times 100\%$$

3.2.4 Liquidity (X3)

Liquidity is the ability of an asset or financial instrument to be sold or converted into cash quickly, without a significant loss in value. In the context of financial markets, liquidity refers to the extent to which an asset can be traded easily in the market without significantly disrupting the market prices.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Debt}}$$

3.3 Descriptive Statistics

3.3.1 Classical Assumption Test

The classic assumption test must be met to ensure that the regression results are valid and reliable. Several classic assumption tests are commonly carried out, namely, a discussion of the assumptions that exist in regression analysis is as follows:

1. Normality Test

The normality test is a statistical procedure used to test whether the data are normally distributed. According to Ghozali (2018), the normality test aims to determine whether the dependent variable (bound) and independent variable (free) contribute to the regression model. The Kolmogorov-Smirnov test is widely used to test normality. Data were considered normal if the significance value was greater than 5% (0.05).

2. Multicollinearity Test

The multicollinearity test is a statistical procedure used to test whether there is a strong linear relationship between two or more independent variables in a regression analysis. Multicollinearity occurs when there is a high correlation between the independent variables in the regression model, which can interfere with the interpretation of the regression results and cause problems in analysis. According to [Ghozali \(2016\)](#), a multicollinearity test was conducted to determine whether a correlation existed between the independent variables in the regression model. Multicollinearity testing can be observed from the variance inflation factor (VIF) and tolerance values. Tolerance measures were used as the other independent variables. Therefore, the low tolerance value is the same as the VIF =1/tolerance value. The cut-off value commonly used to indicate the presence of multicollinearity is tolerance < 0.10 or VIF > 10, with the following criteria:

1. If the tolerance value > 0.10 or VIF value < 10, then the data were not identified as multicollinearity.
2. If the tolerance value is < 0.10 or VIF value > 10, then the data are identified as multicollinearity.

3. Heteroscedasticity Test

A heteroscedasticity test was conducted to determine whether an inequality of variance existed in the regression model from the residuals of one observation to another ([Ghozali, 2016](#)). A good regression model has a variance from the residuals of one observation to another. Decision basis for heteroscedasticity test

- a. The graphical method usually involves examining the plot between the predicted value of the dependent variable and its residual value.
- b. The Glejser test was used in this study. If the significance probability value is above the confidence level of 5% (0.05), it can be concluded that the regression model does not contain heteroscedasticity. Conversely, if the significance probability value is below the confidence level, namely 5% (0.05), it can be concluded that the regression model contains heteroscedasticity.

4. Uji Autokorelasi

The autocorrelation test is a statistical procedure used to test whether there is a correlation between the errors (residuals) in regression models. Autocorrelation occurs when there is a systematic correlation pattern in the regression model errors, violating the assumption of error independence. According to Ghazali (2018), the autocorrelation test aims to test whether there is a correlation between confounding errors in period t and confounding errors in period t-1 (previous) in a linear regression model. The autocorrelation test can be performed with Durbin-Watson (DW) to determine whether autocorrelation exists, as follows:

1. If $d_U < DW < (4-d_U)$, the correlation coefficient is equal to zero, and there is no autocorrelation in the residuals.
2. If $DW < d_L$, the correlation coefficient is greater than zero, and there is positive autocorrelation.
3. If $DW > (4-d_L)$, the correlation coefficient is less than zero, and a negative autocorrelation occurs.
4. If $(4-d_U) < DW < (4-d_L)$, no conclusion can be drawn regarding the presence or absence of autocorrelation.

3.3.2 Multiple Linear Regression Analysis

The data analysis technique used in this study was multiple linear regression. Multiple linear regression analysis was used to test the effects of two or more independent variables on one dependent variable (Ghazali 2018). The multiple linear regression model used in this study is as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$$

Table 1. Description Multiple Regression Variables

Variable	Description
Y	dependent variable (financial performance)
X1	independent variable one (capital structure)
X2	independent variable two (investment)
X3	independent variable three (liquidity)
A	constant value
b1	regression coefficient value X1
b2	regression coefficient X2
b3	regression coefficient value X3
E	Standard error

Source: Author's Process (2023)

3.4 Hypothesis Testing

1. Simultaneous Hypothesis Test (F Test)

The F-test was used to test the significance level of the effect of the independent variables on the dependent variable (Ghazali, 2016). The F test was performed by comparing the steps of the F count and F table. The calculated F value can be observed from the ANOVA section data processing results. The basis for the F statistical test is as follows:

If $F \text{ count} < F \text{ table}$, then H_a is rejected and H_0 is accepted, meaning that there is a simultaneous influence and insignificance between the independent variables and the dependent variable.

- a. If $F \text{ count} > F \text{ table}$, then H_a is accepted and H_0 is rejected, meaning that there is a simultaneous influence and significance between the independent variables and the dependent variable. Effect of the independent variables simultaneously on the dependent variable.

2. Partial Effect Significance Test (T Test)

According to (Ghazali (2016)), a t-test is used to show the influence of one explanatory variable or independent variable individually in explaining the variance of the dependent variable. The hypotheses tested were as follows:

- 1) $H_a: b_1 \neq 0$, which means that the independent variable influences the dependent variable.
- 2) $H_a: b_1 = 0$, meaning that the independent variable has no influence on the dependent variable.

To partially test the hypothesis, the calculated t-value was compared with the t-table value at a significance level of 5% (0.05). The criteria used to determine whether the hypothesis is accepted are as follows.

- 1) $t_{\text{count}} > t_{\text{table}}$ or probability < significance level (0.05), H_a is accepted and H_0 is not accepted, and the independent variable has an effect on the dependent variable.
- 2) $t_{\text{count}} < t_{\text{table}}$ or probability > significance level (0.05): H_a is not accepted, H_0 is accepted, and the independent variable has no effect on the dependent variable.

3. Coefficient of Determination (R^2)

The coefficient of determination shows the proportion of variance that can be explained by the regression equation to the total variance ([Ghozali, 2016](#)). The magnitude of the coefficient of determination is formulated as follows: The R^2 value will range from 0 to 1. The value of $R^2 = 1$ indicates that 100% of the total variation is explained by the variance of the regression equation or the independent variables, both X_1 , X_2 , and X_3 are able to explain variable Y by 100%. Conversely, $R^2 = 0$ indicates that there is no total variance explained by the independent variables of the regression equation, X_1 , X_2 , and X_3 .

The classic assumption test is a series of statistical tests used to test the basic assumptions of regression analysis ([Ghozali, 2016](#)). This classic assumption must be met for regression results to be valid and reliable. Several classic assumption tests are commonly carried out, namely, a discussion of the assumptions that exist in regression analysis is as follows:

3.5 Normality Test

A normality test is a statistical procedure used to determine whether the given data are normally distributed. The normal distribution, also known as the Gaussian distribution or Gaussian normal distribution, is a bell-shaped, symmetrical probability distribution. The purpose of a normality test is to determine whether the data follow a normal distribution pattern or whether there are deviations from that pattern. Normality tests are important because many statistical and inferential methods rely on the assumption that the data are normally distributed.

4. Results and Discussions

4.1 Classical Assumption Test

4.1.1 Normality Test

The normality test is a statistical procedure used to test whether the data are normally distributed. According to [Ghozali \(2016\)](#), the normality test aims to determine whether the dependent variable (bound) and independent variable (free) contribute to the regression model. The Kolmogorov-Smirnov test is widely used to test normality. Data were considered normal if the significance value was greater than 5% (0.05). A probability value of $\alpha = 5\%$ was used. The basis for decision-making is probability, namely:

- a) If Probability ≥ 0.05 , then the data are normally distributed.
- b) If Probability < 0.05 , then the data are not normally distributed.

This test showed normal results, and the results were as follows.

Table 2. Normality Test Results One-Sample Kolmogorov-Smirnov Test

	N	66
Normal Parameters	Mean	0,0000000
	Std. Deviation	3,87639153
	Asymp. Sig.	0,74

Source: Author's processed data, (2023)

1. Multicollinearity Test

The Multicollinearity test aims to determine whether the regression model found a correlation between the independent variables (independent). If the independent variables are correlated, they are not

orthogonal. Orthogonal variables are independent variables whose correlation value between independent variables is zero ([Ghozali \(2016\)](#)). To determine whether multicollinearity occurs, the VIF value contained in each variable is shown in Table 3 below.

Table 3. Multicollinearity Test Results

Unstandardized Coefficients		Standardized Coefficients		T	Sig.	Tolerance	VIF
Model	B	Std. Error	Beta				
(Constant)	6,095	2,267		2,689	0,009		
Capital Structure	0,319	0,105	0,422	3,056	0,003	0,649	1,540
Invests		0,019	0,050	0,444	0,658	0,986	1,014
Liquidity	0,591	0,950	0,086	0,623	0,536	0,642	1,557

Source: author's processed data, 2023

From Table 3, it can be seen that all the independent variables have a tolerance value below 1 and a VIF value far below 10. Thus, it can be concluded that there were no multicollinearity symptoms in the regression model.

2. Autocorrelation Test

The autocorrelation test can be performed with Durbin-Watson (DW) to determine whether there is autocorrelation, as follows:

- If $dU < DW < (4-dU)$, the correlation coefficient is equal to zero, and there is no autocorrelation in the residuals.
- If $DW < dL$, the correlation coefficient is greater than zero, and there is positive autocorrelation.
- If $DW > (4-dL)$, the correlation coefficient is less than zero, and there is negative autocorrelation.
- If $(4-dU) < DW < (4-dL)$, no conclusion can be drawn regarding the presence or absence of autocorrelation.

Table 4. Autocorrelation Test Results

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
0,483	0,233	0,196	3,96907	1,720

Source: author's processed data, 2023

From the output of the data processing results in Table 4, we know that

$$DW = 1,720$$

$$dL = 1,5079$$

$$dU = 1,6974$$

$$(4-dL) = 2,4921$$

$$(4-dU) = 2,3026$$

Based on the processing results, the Durbin-Watson statistical value was 1,720 ($DW = 1,720$). Furthermore, the DW value was compared with the dL and dU table values in the Durbin Watson table with an error level of $\alpha = 0.05$, $k = 3$, and $n = 66$. The dL table value was 1.5079 and dU was 1.6974. It can be concluded that there were no autocorrelation symptoms in the regression model because the DW value was between the values of $dU = 1.6974$ and $4-dU = 2.3026$. Where $(dU < DW < 4-dU)$ or $(1.6974 < 1.720 < 2.3026)$.

3. Heteroscedasticity Assumption Test

A heteroscedasticity test was conducted to test whether the regression model used has an inequality of variance from the residuals of one observation to another ([Pamungkas, Ghozali, Achmad, Khaddafi, & Hidayah, 2018](#)). A good regression model has a variance from the residuals of one observation to another. Decision basis for the heteroscedasticity test.

a) Graphical methods are typically based on a plot between the predicted value of the dependent variable and its residual value. The Glejser test was used in this study. If the probability value of significance is above the confidence level of 5% (0.05), it can be concluded that the regression model does not contain heteroscedasticity.

b) Conversely, if the significance probability value is below the confidence level of 5% (0.05), it can be concluded that the regression model contains heteroscedasticity.

Table 5. Glejser Test Results

Variable Independent	Unstandardized Corfficients		Standardized Coefficients	t	Sig.
Model	B	Std. Error	Beta		
Constant	2.023	.868		2,332	0,023
Capital Structure	0,061	0,011	0,120	0,960	0,341
Investment	0,011	0,121	0,212	1,461	0,149
Current Ratio	0,177	0,060	0,148	1,024	0,310

Dependent Variabel: Abs_res

Source: author's processed data, 2023

Based on the results of the Glejser test in Table 5, it can be concluded that there are no symptoms of heteroscedasticity in the regression analysis. This is indicated by the significant values (p-values) of Capital Structure of 0.341, investment of 0.149, and Current Ratio (CR) of 0.310. These results clearly show that the three dependent variables do not experience symptoms of heteroscedasticity because the significance value is above the 5% confidence level (0.05). Furthermore, after testing the four assumptions, we tested the effect of the debt-to-equity ratio (DER), investment change, and current asset ratio on return on assets (ROA).

4.1 Multiple Linear Regression Analysis

Multiple linear regression analysis was used to test the effects of two or more independent variables on one dependent variable ([Pamungkas et al., 2018](#)). The multiple linear regression model used in this study is as follows:

Table 6. Multiple Linear Regression Analysis Results

Unstandardized Coefficients		Standardized Coefficients Beta
Model	B	Std. Error
(Constant)	6,095	2,267
Capital Structure	0,319	0,105
Investment Growth	0,008	0,019
Model	B	Std. Error

From the above table, the linear regression equation is formulated as follows:

$$Y = 6,095 + 0,319 X1 + 0,008 X2 + 0,591 X3$$

Where:

Y = *Return on Asset* (ROA)

X1 = *Debt to Equity Ratio* (DER)

X2 = *Investment Growth*

X3 = *Current Asset Ratio* (CR)

4.2 Research Results (Hypothesis Test)

1. Coefficient of Determination

The coefficient of determination measures the model's ability to explain the variations in the dependent variable. An R² value close to one indicates that the independent variables provide almost all the information needed to predict variations in the dependent variable (Ghozali, 2013). The results of the calculation of the coefficients of determination are listed in Table 7.

Table 7. Coefficient of Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,483	0,233	0,196	3,96907

Based on Table 7, the coefficient of determination/square is 0.233, or 23.3%. This indicates that Capital Structure (X1), Investment Growth (X2), and Current Ratio (X3) variables simultaneously (together) affect Financial Performance (Y) by 23.3%. The remaining 76.7 % (100 %–23.3%) are influenced by other variables outside this regression equation or variables that have not been studied.

2. F test

The criterion for testing the hypothesis using the F statistic is that if the significant value of F <0.05, then hypothesis 0 is rejected, which states that all independent variables simultaneously significantly affect the dependent variable (Ghozali, 2016:96).

Table 8. F Test Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	297,048	3	99,016	6,285	0,001

Dependent Variable: ROA

Source: author's processed data, 2023

Based on the results of the F test in Table 8, the calculated F value was 6,285 and the sig value was 0.001. The F table at $\alpha = 0.05$, df 1 = (the number of independent variables is three) and df 2 ($n-k-1 = 66-3-1 = 62$), and the F table is 2.753. This means that F-count > F-table ($6.285 > 2.753$) and sig value <0.05 ($0.001 < 0.005$). Based on these results, it can be concluded that simultaneously the variables of capital structure, investment, and liquidity (CR) have a significant effect on financial performance variables.

3. The t-test

The data on the annual financial statements of automotive industry companies and their components were then analyzed using the regression method and calculated using the SPSS program. Table 9 shows the partial effect of the three variables, DER, Investment Change, and Current Ratio (CR), on return on assets (ROA).

4.2.1 Effect of Capital Structure on Financial Performance

The first hypothesis posits that a significant relationship exists between Capital Structure and Financial Performance, as measured by return on assets (ROA), and the results indicate that this hypothesis can be accepted. Specifically, the Debt-to-Equity Ratio (DER) has a regression coefficient value of 0.319 and a significance level of 0.003, both of which are less than 0.05, indicating that the Capital Structure variable has a significant impact on ROA.

DER is a ratio that assesses the proportion of total debt to capital ([Susanti, 2018](#)) and is a crucial metric for companies as it relates to trading on equity, which can either positively or negatively impact personal capital profitability within the company. A higher DER indicates that the company relies more heavily on debt as a financing source, which can pose a significant risk if it is unable to fulfill its obligations at maturity. Consequently, a company may need to utilize some of its capital to pay off debts, reducing its profitability and overall financial performance. The findings of this study align with the research conducted by [Ningsih \(2022\)](#), who demonstrated that capital structure has a significant positive impact on financial performance, but are not consistent with the findings of [\(Putri & Puspitasari, 2022\)](#), who suggest that capital structure has no significant impact on financial performance.

4.2.2 Effect of Investment Growth on Financial Performance

The second hypothesis postulates a significant relationship between investment growth and Financial Performance. However, the regression coefficient value of 0.008 and a significance value of $0.658 > 0.05$ indicate that the investment growth variable has no discernible impact on financial performance. Therefore, the second hypothesis could not be accepted or rejected in this study. This outcome can be attributed to a significant decline in the fixed assets of automotive companies and their components. The Covid-19 pandemic in Indonesia forced many companies to cease production, leading to suboptimal contributions from fixed assets to increased financial performance. Although companies invest in expanding production facilities, purchasing new equipment, or adopting more sophisticated technology to increase fixed assets, these assets tend to depreciate over time because of factors such as age and usage, leading to impairments in financial statements. Moreover, the return from fixed assets owned by the company cannot be realized immediately, but it takes a long time to be realized.

4.2.3 Effect of Liquidity on Financial Performance

The third hypothesis posits that liquidity, as measured by the Current Ratio (CR) proxy, exerts a significant impact on financial performance, proxied by the return on assets (ROA) proxy. The regression coefficient of liquidity is 0.008, with a significance value of $0.658 > 0.591$, indicating that the liquidity variable has no discernible effect on financial performance. Consequently, H3, which asserts that liquidity significantly influences financial performance, cannot be accepted or rejected in this study. The Current Ratio is a financial ratio used to assess a company's capacity to settle short-term liabilities using current assets that can be readily converted into cash. This ratio calculates the ratio between current assets, comprising assets anticipated to be converted into cash within one year, and current liabilities, which are obligations within the same timeframe ([Hizazi & Safelia, 2020](#)). A higher Current Ratio for a company suggests a reduced likelihood of defaulting on short-term obligations, which consequently diminishes the risk borne by shareholders. A higher Current Ratio value in a company mitigates uncertainty for investors but signals the presence of idle cash, thereby reducing company profitability. A markedly high Current Ratio indicates excess cash or other current assets beyond what is immediately required.

5. Conclusions

5.1. Conclusion

The following conclusions can be drawn based on the research and discussion.

The capital structure has a significant positive impact on financial performance. This suggests that the DER plays a role in determining fluctuations in return on assets (ROA). The effect of DER on ROA in this study indicates that companies in the automotive sector and their components have been effective and efficient in managing their capital structure to achieve profitability and deliver good financial performance.

Investment has no significant effect on financial performance. This finding implies that investment growth does not contribute to determining the value of stock return. Therefore, investment growth in this study cannot be used as a benchmark for companies with high fixed assets to generate high returns. Liquidity has no significant effect on the financial performance. This means that the Current Ratio (CR) does not contribute to determining the value of stock returns. Hence, the CR in this study cannot be used as a benchmark for companies with high current ratios to produce high returns.

5.2 Implications

Based on these conclusions, the implications of this study are as follows.

1. The debt-to-equity ratio (DER) significantly influences assets (ROA). This means that if the company wants to increase its ROA, it can pay attention to the Debt-to-Equity Ratio (DER). In addition, if investors want to learn about the automotive industry, they are expected to pay attention to the capital structure by looking at the debt-to-equity ratio (DER).
2. In this study, the investment growth ratio does not significantly affect assets (ROA). This means that in the automotive industry and its components, the investment growth ratio does not significantly influence the increase in return on assets (ROA).

3. Current Ratio (CR) in this study did not have a significant effect on assets (ROA). This means that the automotive industry and its components' Current Ratio do not significantly influence the increase in return on assets (ROA).

5.3 Suggestion

Based on the conclusions and implications, the suggestions formulated in this study are as follows.

1. Maintaining the composition of the capital structure is crucial for automotive companies and their components, as evidenced by the significant effect of the Debt-to-Equity Ratio (DER) on return on assets (ROA) in the 2018-2022 period for companies listed on the Indonesia Stock Exchange. While an increase in the use of debt can help the automotive industry recover slowly, the debt owned by the company can positively impact return on assets (ROA); thus, the company must maintain a normal debt-to-equity ratio. For future research, this study estimates and forecasts the impact of DER, investment changes, and Current Ratio (CR) and suggests adding variables such as Return on Equity (ROE), Debt to Asset Ratio (DAR), Investment Opportunity Set (IOS), or Quick Ratio to further explore the relationship between these variables.

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