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Capital Structure, Investment Growth, and Liquidity Effects on Automotive Companies' Financial Performance

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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) from 2018 to 2022.

Methodology: The study used multiple regression analysis with data obtained from annual financial reports. A purposive sampling technique selected 15 automotive companies as the sample.

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

Conclusions: This study concludes that capital structure significantly improves financial performance, while investment growth and liquidity do not have a significant effect on automotive companies' performance. Effective capital management is essential for enhancing financial outcomes.

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

Contributions: This study provides empirical evidence on financial factors affecting automotive companies' performance and offers insights for investors, creditors, and financial managers.

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

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1. Introduction

Indonesia has potential for high economic growth in Asia. Economic growth in Indonesia is positive for the progress of all existing sectors. The automotive sector is strongly influenced by economic progress. The automotive sector is one of the main sectors of the national economy and can make a significant contribution to the Indonesian economy. The existence of government support in this sector will provide very positive results for the progress of the automotive sector because progress in this sector has a broad impact on society ([Purwasih, Suhardi, & Makrus, 2024](#)). 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, down by 50% from normal. This is due to the limited mobility of the automotive industry. The continuity of the company is, of course, 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 innovation.

According to [Brigham and Houston \(2006\)](#), funding can improve a company's financial performance, as reflected in its profit. The optimal composition of capital structure has an impact on positive financial performance. This is in line with previous research conducted by [Bita, Hermuningsih, and Maulida \(2021\)](#) 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 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 ([Rahmah & Erdawati, 2023](#)). Financial managers' funding decisions certainly affect changes in investment from capital ownership. Research has also been conducted on investment changes using asset structures. One of them is research conducted by [Pramono and Susilo \(2022\)](#), 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 total equity (current liabilities) of the company. Research on capital structure, investment, and liquidity in financial performance is important. 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 buy new assets ([Pramono & Susilo, 2022](#)). 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 companies. Based on this exposure, the researcher considers the importance of further analysis of 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 and Hypothesis/es Development

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 achieved by a company in a certain period that reflects the health level of the company. There are several views of experts regarding financial performance theory. [Askani and Densi \(2018\)](#) define financial performance as a company's ability to generate substantial profits for shareholders. [Putri and Puspitasari \(2022\)](#) state that financial performance is a company's ability to achieve 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 in achieving good financial performance, which is reflected in the company's health level for a certain period ([Marlina, Pinem, & Hidayat, 2020](#)). 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 ([Fauziah & Haryono, 2018](#)). ROA measures the percentage of net income generated by a company relative to the total assets used. ROA provides an overview of how efficiently a company uses its assets to generate profits. The higher the ROA, the more efficient is the company in generating profits from its assets. ROA also provides information about the management's ability to manage a company's assets and maximize its use.

2.2 Capital Structure

The capital structure of a business organization is very important. It is said to be important because to maximize profits in a company, funding decisions are needed that 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 risks borne by shareholders. [Nini, Patrisia, and Nurofik \(2020\)](#) 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 in the midst of 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 the operating profit. The greater the capital structure ratio, the greater the number of long-term loans, so that a greater part of operating profit is used to pay fixed interest expenses, and more cash flow is used to pay loan installments, as a result, the company will receive less net profit after tax ([Riswan & Martha, 2023](#)).

2.3 Investment Growth

Investment is the most important decision of all in relation to increasing firm value. Investment growth refers to an increase in the 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 ([Samber, Mollet, & Hutajulu, 2026](#)). Investment growth can arise from several factors. Among them are 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 ([Irwan, Marlissa, & Sanggrangbano, 2026](#)). Thus, investment decisions involve the use of long-term funds. Investment decisions refer to the process of selecting assets that the company will invest in, 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, 2006](#)).

2.4 Liquidity

Liquidity is the effectiveness or ease with which an asset can be converted into money without affecting its market price ([Wijayanti & Salim, 2020](#)). The more liquid an asset is, the easier it is to cash out whenever needed. Liquidity is closely related to a company's financial performance. A healthy level of liquidity can have a positive impact on financial performance, whereas low or inadequate liquidity can be a source of problems ([Fajriaty, Marlissa, & Hutajulu, 2026](#)). Ability to pay liabilities, such as good liquidity allows a company to pay its maturing obligations in a timely manner. If the 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 is able to manage its cash cycle well, it can collect receivables quickly and manage inventory efficiently. This can accelerate cash flow and improve liquidity. Sufficient liquidity can support a company's ability to invest and grow. 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 for discussion in the field of corporate finance. Capital structure refers to the composition and proportion of debt and equity firms use to finance their operational 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 produced mixed findings. Some studies show a positive relationship between debt use and financial performance. One of them is the research conducted by [Niar \(2019\)](#), who found a positive influence between capital structure and 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 to be tested:

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 have a significant impact on a company's financial performance. Investment decisions involve the allocation of company funds to investment projects that are expected to generate cash flow in the future. Smart investment decisions can drive a company's revenue growth ([Darmawan & Roba, 2022](#)). 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 has a positive impact on a company's financial performance. Additionally, good investment decisions can increase profitability. Investments that generate positive cash flows sufficient to overcome investment costs and the cost of capital required will increase the company's profits. This can be seen from the increase in gross profit margin, net profit margin, and other profitability ratios. Investments aimed at updating, improving, or automating operational processes can improve 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 operational efficiency. Thus, good investment decisions can increase firm value. Investments that generate sustainable cash flow and have a positive Net Present Value (NPV) increase company value. This is certainly in line with the research conducted by [Lestari and Asyik \(2023\)](#), where there is a significant positive influence between investment decisions and financial performance.

H₂: There is a significant relationship between investment growth and financial performance in automotive companies and components listed on the Indonesia Stock Exchange (IDX)

2.7 Liquidity Relationship with Financial Performance

The liquidity ratio shows the capability of using current assets to pay in full any maturing debt owned 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 operational activities ([Nawang Sari & Tasrim, 2024](#)). Good liquidity ensures that the company has sufficient cash and other liquid assets to meet its short-term obligations. This is important for the continuity of company operations and the maintenance of financial stability. When a company meets its short-term obligations on time, it affects its overall financial performance. 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 the net profit generated. On the other hand, 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 the company's capability to utilize free cash flow to obtain profits. Previous findings conducted by [Akbar and Fahmi \(2020\)](#) stated that the liquidity variable has a significant and positive influence on the firm value variable.

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

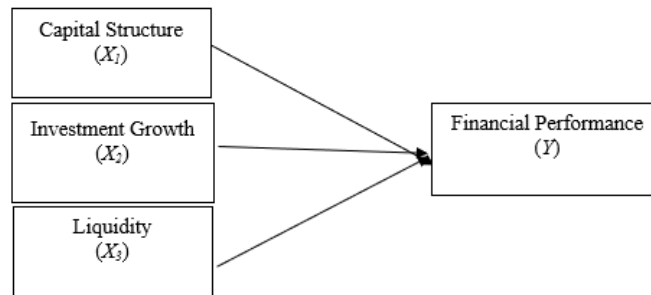


Figure 1. Research paradigm

Figure 1 shows the relationship between the independent variables and the dependent variable. capital structure (X_1), investment growth (X_2), and liquidity (X_3) are positioned as independent variables that are hypothesized to influence financial performance (Y) as the dependent variable. The arrows indicate the proposed direct effects of each independent variable on financial performance. This model aims to examine whether changes in capital structure, investment growth, and liquidity can explain variations in the financial performance of automotive companies.

3. Methodology

3.1 Population and sample

The population in this study consisted of automotive companies and their components listed on the Indonesia Stock Exchange (IDX) during the 2018–2022 period. The population criteria included companies that published complete annual reports, including annual reports and financial statements for the 2018–2022 period, and were registered as issuers on the IDX. The research sample represents a subset of the population selected as the subject of analysis and must reflect the characteristics of the population to ensure reliable and valid results (Pramono & Susilo, 2022). This study employed a saturated sampling technique, in which all members of the population were included as samples. Based on these criteria, 16 automotive subsector companies and their components were selected as the research sample.

3.2 Operational Variables

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

3.2.1 Financial Performance

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

$$ROA = \frac{NetProfit}{TotalAssets} \times 100 \quad (1)$$

Formula (1) shows ROA measures the company's ability to generate profits from the assets it owns. This ratio indicates the efficiency of asset utilization in producing net income, where a higher ROA reflects better financial performance.

3.2.2 Capital Structure

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 personal capital ([Susianti, 2018](#)).

3.2.3 Investment

This formula is used to calculate the difference or change in the investment amount from the initial time 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, 2006](#)).

$$InvestmentChange = \frac{InvestmentChange}{InitialInvestment} \times 100 \quad (2)$$

Formula (2) shows the percentage increase or decrease in investment value compared to the initial investment. This ratio indicates the company's investment growth rate and reflects changes in the allocation of funds for business development.

3.2.4 Liquidity

Liquidity is the ability of an asset or financial instrument to be sold or converted into cash quickly without 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 market prices.

$$CurrentRatio = \frac{CurrentAssets}{CurrentDebt} \quad (3)$$

Formula (3) shows the company's ability to meet its short-term financial obligations using its current assets. This ratio indicates the level of liquidity, where a higher current ratio reflects a stronger ability of the company to fulfill its current liabilities.

3.3 Descriptive Statistics

3.3.1 Classical Assumption Test

The classic assumption test must be met so 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:

3.3.1.1 Normality Test

The normality test is a statistical procedure used to test whether the data provided are normally distributed. According to [Ghozali \(2016\)](#), the normality test aims to test whether the dependent variable (bound) and independent variable (free) contribute to the regression model. One method that is widely used to test normality is the Kolmogorov-Smirnov test. Data were considered normal if the significance value was above 5% (0.05).

3.3.1.2 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 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 the analysis. According to [Ghozali \(2016\)](#), a multicollinearity test is conducted to test whether a correlation exists between the independent variables in a regression model. Multicollinearity testing can be observed from the Variance Inflation Factor (VIF) and tolerance. Tolerance measures the other independent variables. Therefore, the low tolerance value is the same as the $VIF = 1/\text{tolerance}$ value. The cut-off value commonly used to indicate the presence of multicollinearity is tolerance <0.10 , or equal to $VIF >10$, with the following criteria, such as if the tolerance value >0.10 or VIF value <10 , then the data is not identified as multicollinearity. If the tolerance value is <0.10 , or VIF value >10 , then the data are identified as multicollinearity.

3.3.1.3 Heteroscedasticity Test

A heteroscedasticity test is conducted to test whether an inequality of variance exists in the regression model from the residuals of one observation to another [Ghozali \(2016\)](#). A good regression model is one that has variance from the residuals of one observation to another. Decision basis for heteroscedasticity test, such as the graphical method usually involves examining the plot graph between the predicted value of the dependent variable and its residual value, the statistical method used in this study was the Glejser test. 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.

3.3.1.4 Autocorrelation Test

The autocorrelation test is a statistical procedure used to test whether there is a correlation between the errors (residuals) in a regression model. Autocorrelation occurs when there is a systematic correlation pattern in the regression model errors, violating the assumption of error independence. According to [\(Ghozali, 2016\)](#) the autocorrelation test aims to test whether in a linear regression model there is a correlation between confounding errors in period t and confounding errors in period $t-1$ (previous). 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, if $DW < dL$, the correlation coefficient is greater than zero, and there is a positive autocorrelation, if $DW > (4-dL)$, the correlation coefficient is less than zero, and negative autocorrelation occurs, and if $(4-dU) < DW < (4-dL)$, 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 analysis. Multiple linear regression analysis was used to test the effects of two or more independent variables on one dependent variable [\(Ghozali, 2016\)](#). The multiple linear regression model used in this study is as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e \quad (4)$$

Formula (4) shows a multiple linear regression model used to examine the effect of several independent variables on a dependent variable. Y represents the dependent variable, a represents the

constant (intercept), b_1 – b_4 represent the regression coefficients that indicate the direction and magnitude of the influence of each independent variable, X_1 – X_4 represent the independent variables included in the model, and e represents the error term or residual value that accounts for other factors outside the regression model.

Table 1. Description multiple regression variables

Variables	Description
Y	dependent variable (financial performance)
X_1	independent variable one (capital structure)
X_2	independent variable two (investment)
X_3	independent variable three (liquidity)
A	constant value
b_1	regression coefficient value X_1
b_2	regression coefficient X_2
b_3	regression coefficient value X_3
E	Standard error

Table 1 shows Y represents the dependent variable, which is financial performance. X_1 represents the first independent variable, namely capital structure, while X_2 represents the second independent variable, namely investment. X_3 represents the third independent variable, namely liquidity. A represents the constant value or intercept, indicating the value of the dependent variable when all independent variables are equal to zero. b_1 , b_2 , and b_3 represent the regression coefficients of each independent variable, indicating the magnitude and direction of their influence on financial performance. Meanwhile, e represents the standard error or error term, which captures the influence of other factors not included in the regression model.

3.4 Hypothesis Testing

3.4.1 Simultaneous Hypothesis Test (F Test)

The F-test is used to test the significance level of the effect of the independent variables simultaneously on the dependent variable (Ghozali, 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 results of the ANOVA section data processing. The basis for the F statistical test was as if $F_{\text{count}} < F_{\text{table}}$, then H_a is rejected and H_o is accepted, meaning that there is a simultaneous influence and insignificance between the independent variables on the dependent variable. If $F_{\text{count}} > F_{\text{table}}$, then H_a is accepted and H_o is rejected, meaning that there is a simultaneous influence and significance between the independent variables on the dependent variable. Effect of the independent variables simultaneously on the dependent variable.

3.4.2 Partial Effect Significance Test (T Test)

According to Ghozali (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 $H_a: b_1 \neq 0$, meaning that the independent variable influences the dependent variable. $H_o: b_1 = 0$, meaning that the independent variable had no influence on the dependent variable.

To test the hypothesis partially, it can be done based on the comparison of the calculated t-value with the t-table value with a significance level of 5% (0.05). The criteria used to determine whether the hypothesis is accepted are as follows $t_{\text{count}} > t_{\text{table}}$ or probability < significance level (0.05), H_a is accepted and H_o is not accepted, and the independent variable has an effect on the dependent variable. $t_{\text{count}} < t_{\text{table}}$ or probability > significance level (0.05): H_a is not accepted, H_o is accepted, and the independent variable has no effect on the dependent variable.

3.4.3 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, if $R^2 = 0$ indicates that there is no total variance explained by the independent variables of the regression equation, both X_1 , X_2 , and X_3 . The classic assumption test is a series of statistical tests used to test the basic assumptions in a regression analysis (Ghozali, 2016). This classic assumption must be met for the regression results to be valid and reliable.

4. Results and Discussion

4.1 Classical Assumption Test

4.1.1 Normality Test

The normality test is a statistical procedure used to test whether the data provided are normally distributed. According to (Ghozali, 2016), the normality test aims to test whether the dependent variable (bound) and independent variable (free) contribute to the regression model. One method that is widely used to test normality is the Kolmogorov-Smirnov test. Data were considered normal if the significance value was above 5% (0.05). A probability value of $\alpha=5\%$ is used. The basis for decision-making is probability, such as if Probability ≥ 0.05 , then the data are normally distributed and if Probability < 0.05 , then the data are not normally distributed.

Table 2. Normality test results One-Sample Kolmogorov-Smirnov test

N		66
Normal Parameters	Mean	0.00
	Std. Deviation	3.88
Asymp. Sig.	Asymp. Sig.	0.74

Table 2 shows the normality test was conducted to determine whether the residual data in the regression model follows a normal distribution. Based on the test results, the number of observations (N) was 66, with a mean value of 0.0000000 and a standard deviation of 3.87639153. The Asymp. Sig. value of 0.074 is greater than the significance level of 0.05, indicating that the residual data is normally distributed. Therefore, the regression model meets the assumption of normality and can be used for further analysis.

4.1.2 Multicollinearity Test

The Multicollinearity test aims to test whether the regression model found a correlation between the independent variables (Independent). If the independent variables are correlated, these variables are

not orthogonal. Orthogonal variables are independent variables whose correlation value between fellow independent variables is zero [Ghozali \(2016\)](#). To find out whether multicollinearity occurs, it can be seen from the VIF value contained in each variable as shown in Table 3 below:

Table 3. Multicollinearity test results

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Tolerance	VIF
	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	0.008	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

Table 3 shows, 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.

4.1.3 Autocorrelation Test

The autocorrelation test can be performed using the Durbin-Watson (DW) test to determine whether autocorrelation exists in the regression model. The decision criteria indicate that if $dU < DW < (4 - dU)$, the correlation coefficient is equal to zero, meaning that there is no autocorrelation. If $DW < dL$, the correlation coefficient is greater than zero, indicating the presence of positive autocorrelation. Meanwhile, if $DW > (4 - dL)$, the correlation coefficient is less than zero, indicating negative autocorrelation. However, if $(4 - dU) < DW < (4 - dL)$, no definitive conclusion can be made 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

Table 4 shows the Durbin-Watson statistical value was 1.720 ($DW = 1.720$). The DW value was then compared with the critical values in the Durbin-Watson table at a significance level of $\alpha = 0.05$, with $k = 3$ independent variables and $n = 66$ observations. The obtained values were $dL = 1.5079$, $dU = 1.6974$, $(4 - dL) = 2.4921$, and $(4 - dU) = 2.3026$. Based on these results, the DW value falls between dU and $(4 - dU)$, indicating that there is no autocorrelation problem in the regression model. This can be expressed as $dU < DW < (4 - dU)$ or $1.6974 < 1.720 < 2.3026$, meaning that the residuals in the regression model are independent and the model satisfies the autocorrelation assumption.

4.1.4 Heteroscedasticity Assumption Test

The heteroscedasticity test is conducted to determine whether there is an inequality of variance in the residuals between one observation and another within the regression model (Pamungkas, Ghozali, Achmad, Khaddafi, & Hidayah, 2018). A good regression model is one that does not experience heteroscedasticity, meaning that the variance of the residuals remains constant across observations. In this study, the Glejser test was used to examine the presence of heteroscedasticity.

The decision criterion is based on the significance probability value; if the significance value is greater than the 5% confidence level (0.05), the regression model is considered free from heteroscedasticity. Conversely, if the significance value is less than 0.05, the regression model is considered to have heteroscedasticity.

Table 5. Glesjer test results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
Constant	2.023	0.868		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					

Table 5 shows it can be concluded that there are no symptoms of heteroscedasticity in the regression analysis. This is indicated by the significant value (p-value) 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 confidence level of 5% (0.05). Furthermore, after testing the four assumptions, we test the effect of the debt-to-equity ratio (DER), investment change, and current asset ratio on return on assets (ROA).

4.2 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, Ghozali, Achmad, Khaddafi, & Hidayah, 2018). The multiple linear regression model used in this study is as follows:

Table 6. Multiple linear regression analysis results

Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	
(Constant)	6.095	2.267	
Capital Structure	0.319	0.105	0.422
Investment Growth	0.008	0.019	0.050
Liquidity	0.591	0.950	0.086

Table 6 shows the regression coefficient results show the influence of each independent variable on financial performance. The constant value is 6.095, indicating the estimated value of financial performance when all independent variables are equal to zero. The capital structure variable has a positive regression coefficient (B=0.319) with a standardized coefficient (β =0.422), indicating that an increase in capital structure tends to improve financial performance. The investment growth variable has a positive but relatively small coefficient (B=0.008; β =0.050), indicating a weak positive relationship with financial performance. Meanwhile, the liquidity variable has a positive coefficient (B=0.591; β =0.086), suggesting that higher liquidity is associated with an increase in

financial performance, although its contribution is relatively limited compared to capital structure. From the above table, a linear regression equation is formulated as follows:

$$Y = 6,095 + 0,319X_1 + 0,008X_2 + 0,591X_3 \quad (5)$$

Formula (5) shows the constant value of 6.095 represents the estimated value of financial performance when all independent variables are assumed to be zero. The coefficient of capital structure (X_1) is 0.319, indicating that an increase in capital structure by one unit will increase financial performance by 0.319 units, assuming other variables remain constant. The coefficient of investment growth (X_2) is 0.008, which shows that investment growth has a positive but relatively small effect on financial performance. Meanwhile, the coefficient of liquidity (X_3) is 0.591, indicating that an increase in liquidity by one unit will increase financial performance by 0.591 units, with other variables held constant. Therefore, all independent variables in the model have a positive relationship with financial performance.

4.3 Research Results (Hypothesis Test)

4.3.1 Coefficient of Determination

The coefficient of determination measures the model's ability to explain variations in the dependent variable. An R^2 value close to one means that the independent variables provide almost all the information needed to predict variations in the dependent variable (Ghozali, 2016). The results of the calculation of the coefficient 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	3.969

Table 7 shows the coefficient of determination/square is 0.233 or equal to 23.3%. This figure indicates that the capital structure (X_1), investment growth (X_2), and current ratio (X_3) variables simultaneously (together) affect financial performance (Y) by 23.3%. The rest (100%–23.3%=76.7%) are influenced by other variables outside this regression equation or variables that have not been studied.

4.3.2 F test

The criterion for testing the hypothesis using the F statistic is that if the significant value of $F < 0.05$, then hypothesis H_0 is rejected, which states that all independent variables simultaneously significantly affect the dependent variable (Ghozali, 2016).

Table 8. F test results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	297.048	3	99.016	6.285	0.001

Table 8 shows calculated F value was 6,285, and the sig value was 0.001. 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 $F\text{-count} > F\text{-table}$ ($6.285 > 2.753$) 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.

4.3.3 The t-test

The data on the annual financial statements of automotive industry companies and their components are then analyzed by the regression method and calculated using the SPSS program.

4.4 Discussion

4.4.1 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 [Susianti \(2018\)](#) 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 debt, reducing its profitability and overall financial performance. The findings of this study align with the research conducted by [Bita, Hermuningsih, and Maulida \(2021\)](#), who demonstrated that capital structure has a significant positive impact on financial performance, but are not consistent with the findings of [Putri and Puspitasari \(2022\)](#), who suggest that capital structure has no significant impact on financial performance.

4.4.2 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. 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 has 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 impairment 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 seen.

4.4.3 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, proxies 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, H_3 , which asserts that liquidity significantly influences financial performance, cannot be accepted or rejected. 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 research findings indicate that capital structure has a significant positive impact on financial performance. This finding suggests that the Debt-to-Equity Ratio (DER) plays an important role in determining changes in Return on Assets (ROA). The effect of DER on ROA indicates that automotive companies and their components listed on the Indonesia Stock Exchange have effectively and efficiently managed their capital structures to support profitability and achieve better financial performance. Meanwhile, investment growth does not have a significant effect on financial performance, implying that investment growth does not contribute significantly to changes in financial performance. Therefore, investment growth cannot be used as a primary indicator to assess whether companies with higher fixed assets are able to generate higher returns. Furthermore, liquidity also does not have a significant effect on financial performance, indicating that the Current Ratio (CR) does not significantly influence changes in ROA. Thus, a high level of liquidity cannot necessarily be considered a benchmark for companies to achieve higher financial performance, as excessive current assets may not always contribute directly to profitability.

5.2 Research Limitations

This study has several limitations that should be considered when interpreting the findings. First, the research focuses only on automotive companies and their components listed on the Indonesia Stock Exchange (IDX) during the 2018–2022 period, resulting in a limited scope of analysis and making the findings less generalizable to other industries or companies in different economic sectors. Second, this study only examines three independent variables, namely capital structure, investment growth, and liquidity, while financial performance may also be influenced by other internal and external factors, such as profitability, company size, corporate governance, macroeconomic conditions, and market factors. Third, the research uses secondary data obtained from annual financial reports, which may not fully capture qualitative aspects of managerial decisions and strategic considerations affecting company performance. Therefore, future studies should address these limitations to provide broader and more comprehensive insights into the determinants of financial performance.

5.3 Suggestions and Directions for Future Research

Future research is encouraged to expand the scope of the study by involving companies from different industrial sectors or extending the observation period to obtain more comprehensive results. Researchers may also consider incorporating additional variables that potentially influence financial performance, such as profitability, firm size, corporate governance mechanisms, Return on Equity (ROE), Debt to Asset Ratio (DAR), Investment Opportunity Set (IOS), and other liquidity

indicators such as the Quick Ratio. Furthermore, future studies may employ alternative analytical approaches, such as panel data regression or comparative analysis, to provide deeper insights into the relationship between financial factors and corporate performance. Expanding the research model and methodology is expected to improve the understanding of factors influencing financial performance and provide more valuable implications for managers, investors, and other stakeholders.

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