https://jurnal-umbuton.ac.id/index.php/ijmp
https://doi.org/10.35326/ijmp.v4i2.

International Journal of Management Progress

Volume 6 Number 1 (February 2024)
P-ISSN: 2686-6323, E-ISSN: 2686-634X

Determination of Profit Change through Current Ratio, Debt to Equity Ratio, Return on Equity, and Total Asset Turnover in Manufacturing Companies Listed in Indonesia

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Article Info

Keywords: Financial Ratios; Profit Change; Manufacturing Companies; Regression Analysis.

Abstract: *This study analyzes the determination of profit change through financial ratios, including Current Ratio (CR), Debt to Equity Ratio (DER), Return on Equity (ROE), and Total Asset Turnover (TATO), in manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2023 period. The research aims to identify the extent to which these financial ratios influence changes in company profitability. Using a quantitative approach with an explanatory design, data were collected from 20 manufacturing companies that consistently published complete financial statements throughout the observation period. The analytical technique employed descriptive statistics and multiple linear regression analysis, supported by classical assumption tests such as normality, multicollinearity, heteroscedasticity, and autocorrelation. The results show that the regression model fulfills all classical assumptions, ensuring its validity and reliability. Empirical findings indicate that Return on Equity (ROE) and Total Asset Turnover (TATO) have a significant positive effect on profit change, while Current Ratio (CR) and Debt to Equity Ratio (DER) have a weaker but still relevant influence. The coefficient of determination (R^2) value of 0.68 indicates that 68 percent of profit variation can be explained by these financial ratios, while the remaining 32 percent is influenced by other external factors such as operational efficiency and market conditions.*

1. Introduction

The determination of profit change through financial ratios such as Current Ratio (CR), Debt to Equity Ratio (DER), Return on Equity (ROE), and Total Asset Turnover (TATO) provides a comprehensive understanding of a company's financial performance and stability. In the context of manufacturing companies listed in Indonesia, these ratios serve as key indicators for assessing how efficiently firms manage their resources to generate profits (Brigham & Houston, 2021). The Current Ratio reflects a company's ability to meet short-term obligations using its current assets, where a higher ratio generally indicates stronger liquidity. Meanwhile, the Debt to Equity Ratio measures the extent to which companies rely on debt financing compared to their equity, influencing the level of financial risk and sustainability in operations (Kasmir, 2019). Furthermore, the Return on Equity (ROE) acts

as a crucial profitability indicator, showing how effectively management utilizes shareholders' equity to generate net income (Gitman & Zutter, 2020). A consistent increase in ROE signifies efficient use of capital and strong management performance, whereas a decline may indicate operational inefficiency or excessive financial leverage. On the other hand, the Total Asset Turnover (TATO) ratio measures how efficiently a company uses its total assets to produce revenue. High asset turnover implies that the company is effectively utilizing its assets to boost sales and profitability, which is particularly significant in the manufacturing sector where asset investments are typically high (Fahmi, 2021).

In manufacturing companies listed on the Indonesia Stock Exchange (IDX), the interaction between these four financial ratios plays a critical role in determining profit changes. A balanced financial structure, marked by healthy liquidity, optimal debt management, effective asset utilization, and strong profitability can lead to sustainable profit growth (Horne & Wachowicz, 2019). Conversely, inefficiencies in any of these areas may cause fluctuations or declines in profits. Therefore, analyzing the determination of profit change through these ratios not only helps investors and stakeholders evaluate company performance but also provides valuable insights for management in formulating financial strategies that ensure long-term competitiveness in Indonesia's dynamic manufacturing industry.

Previous studies examining the effect of financial ratios on profit changes have provided valuable insights into how company performance can be predicted through quantitative financial indicators. Research by Brigham and Houston (2021) emphasized that liquidity, solvency, profitability, and activity ratios are essential in evaluating a firm's operational efficiency and financial stability. Similarly, Kasmir (2019) noted that a company's ability to generate profit depends on how effectively its assets and liabilities are managed. Studies in Indonesia, such as those conducted by Fahmi (2021) and Harahap (2020), revealed that manufacturing companies with stable liquidity and balanced capital structures tend to show higher profit growth rates, as they can optimize both short-term and long-term resources.

The influence of the Current Ratio (CR) and Debt to Equity Ratio (DER) on profitability has also been widely discussed in financial literature. Gitman and Zutter (2020) found that liquidity management directly affects a firm's ability to sustain profit margins, especially during periods of economic fluctuation. In line with this, research by Sutrisno (2021) demonstrated that a high DER often increases financial risk, which in turn can reduce profit stability. However, when managed properly, leverage can also enhance profitability through the optimal use of debt capital. Similar findings by Horne and Wachowicz (2019) confirmed that companies maintaining an optimal debt-to-equity balance experience better profit performance compared to those relying excessively on external financing.

Return on Equity (ROE) and Total Asset Turnover (TATO) have been consistently proven to have strong correlations with profit changes. Studies by Weston and Brigham (2020) and Fahmi (2021) indicated that ROE serves as a critical indicator of how efficiently management uses equity to generate income. Meanwhile, research by Riyanto (2020) found that TATO significantly contributes to profitability because higher asset utilization increases revenue and operating efficiency. These findings align with empirical evidence from manufacturing sectors in Southeast Asia, showing that companies with effective asset management and capital utilization are more resilient in maintaining profitability under competitive market conditions. In the context of the Indonesia Stock Exchange (IDX), several studies have explored similar relationships within local manufacturing industries. Research by Kurniawan and Wibowo (2022) identified that CR, DER, ROE, and TATO jointly have a

significant impact on profit changes in consumer goods manufacturing companies. Moreover, their study emphasized that ROE and TATO are the most dominant factors influencing profitability. Another study by Putri and Sari (2021) supported this conclusion, highlighting that financial ratio analysis remains an effective tool for investors and managers to evaluate company performance and predict future earnings trends. Overall, these studies collectively reinforce the view that financial ratios play a vital role in determining profit dynamics across manufacturing firms in Indonesia.

Although numerous studies have investigated the relationship between financial ratios and profit changes, there remains a notable research gap in understanding how these variables interact within the Indonesian manufacturing context. Most prior research has focused on general relationships or sectoral comparisons without exploring variations across time periods marked by economic fluctuations, such as during and after the COVID-19 pandemic. This creates a gap in longitudinal analysis regarding how financial ratios like Current Ratio (CR), Debt to Equity Ratio (DER), Return on Equity (ROE), and Total Asset Turnover (TATO) jointly influence profitability trends. Moreover, many studies emphasize individual ratio effects rather than assessing the combined predictive strength of these variables in explaining profit dynamics among Indonesia's manufacturing firms. Hence, further research is required to integrate these ratios within a unified analytical model that reflects the real financial conditions of listed manufacturing companies.

The central problem faced by manufacturing companies in Indonesia is the inconsistency in financial performance caused by fluctuations in liquidity, leverage, and operational efficiency. Several firms experience profit volatility despite having seemingly stable financial ratios, suggesting that internal management strategies and external market factors significantly affect profit determination. For instance, high debt dependency may result in financial distress during periods of low demand, while inefficient asset utilization can lead to reduced productivity and lower profit margins. These conditions demonstrate that financial ratio analysis alone may not fully capture the complexities of profit changes unless complemented by a deeper examination of managerial decision-making and market adaptation strategies. The main challenge lies in developing a robust financial analysis model that can accurately measure and predict profit changes amid dynamic industrial and economic environments. Manufacturing companies face pressure to optimize liquidity and capital structure while maintaining sustainable profitability. This requires strategic balance-ensuring that the Current Ratio reflects adequate liquidity, the Debt to Equity Ratio remains within manageable limits, and both ROE and TATO continue to improve operationally. Additionally, external challenges such as global supply chain disruptions, inflation, and regulatory shifts further complicate financial management within the manufacturing sector. Therefore, the challenge for both researchers and practitioners is to build integrated financial strategies and analytical frameworks that align financial ratio interpretation with the evolving realities of Indonesia's manufacturing industry.

2. Methodology

This study uses a quantitative research approach with an explanatory design that aims to determine the effect of financial ratios on profit changes in manufacturing companies listed on the Indonesia Stock Exchange (IDX). Quantitative research is chosen because it allows the researcher to objectively measure numerical data related to financial performance. The explanatory design seeks to explain the causal relationship between the independent variables, namely Current Ratio (CR), Debt to Equity Ratio (DER), Return on Equity (ROE), and Total Asset Turnover (TATO), with the dependent variable, which is profit change. Through this method, the research verifies theoretical assumptions using empirical data

obtained from the financial statements of companies during the 2020 to 2023 period. The research design used in this study is causal associative, which means it examines the influence and relationship between several variables. This design tests the hypothesis regarding how financial ratios affect changes in profits. The analysis model used is multiple linear regression because it allows simultaneous measurement of the impact of several independent variables on one dependent variable. The data used in this research are secondary data obtained from company financial reports, official publications of the Indonesia Stock Exchange, and supporting documents. The observation period of four years provides a clear picture of trends and fluctuations in financial performance over time.

The research variables consist of one dependent variable and four independent variables. The dependent variable is profit change (Y), which represents the difference in net profit from year to year. The independent variables are Current Ratio (X1), Debt to Equity Ratio (X2), Return on Equity (X3), and Total Asset Turnover (X4). The Current Ratio shows the company's ability to meet short-term obligations using current assets. The Debt to Equity Ratio reflects the proportion between total debt and total equity, which indicates leverage. Return on Equity measures profitability by comparing net income with shareholders' equity, while Total Asset Turnover represents how efficiently the company uses its assets to generate sales. All these ratios are obtained from audited company financial statements. The population in this study consists of all manufacturing companies listed on the Indonesia Stock Exchange during the period 2020 to 2023. The sampling technique applied is purposive sampling, which means that samples are selected based on specific criteria. The selected companies must have published complete annual financial reports during the observation period, shown profit and loss statements clearly, and not experienced delisting from the stock exchange. Based on these criteria, 20 companies were selected as samples representing the manufacturing industry sector. The selected samples are considered to provide a representative overview of financial performance and are sufficient for statistical testing purposes.

The data collection technique used is documentation. Researchers collect secondary data in the form of financial statements, balance sheets, income statements, and notes to the financial statements published by each company. The data are obtained through the official website of the Indonesia Stock Exchange, company websites, and the Indonesia Capital Market Directory (ICMD). The data are then processed and organized using spreadsheet software for further analysis. This documentation technique ensures that all the data analyzed are accurate, verifiable, and consistent with official financial information. The data analysis technique consists of descriptive and inferential statistical analysis. Descriptive statistics are used to describe the characteristics of the research data such as mean, minimum, maximum, and standard deviation of each variable. Inferential statistics are used to test the hypotheses through multiple linear regression analysis, which determines the effect of Current Ratio, Debt to Equity Ratio, Return on Equity, and Total Asset Turnover on profit change. Before regression analysis, classical assumption tests such as normality, multicollinearity, heteroscedasticity, and autocorrelation tests are conducted to ensure the model's validity. The results of hypothesis testing are analyzed using the F-test and t-test with a significance level of 0.05. Data processing and analysis are conducted using the SPSS 25.0 application to ensure accuracy and reliability.

4. Results and Discussion

4.1 Results

The results of the descriptive analysis show that the financial ratios of manufacturing companies listed on the Indonesia Stock Exchange during the 2020–2023 period varied but generally indicated stable financial performance. The average Current Ratio (CR) was above 1.5, which means that most companies were able to fulfill their short-term obligations effectively and maintained sufficient liquidity levels. The Debt to Equity Ratio (DER) ranged from 0.8 to 2.0, suggesting that the companies adopted a balanced financing structure between internal capital and external debt. The Return on Equity (ROE) showed fluctuations with an average value between 10 and 15 percent, reflecting variations in managerial efficiency in utilizing shareholders' equity to generate profits. Meanwhile, the Total Asset Turnover (TATO) recorded an average of 1.2 times, demonstrating that company assets were being used effectively to produce sales and revenue. In general, profit changes also varied from year to year, where most companies experienced positive growth, while a few showed declining profits due to the impact of global economic pressures and the dynamic conditions of the manufacturing sector.

Results of The Descry

The results of the descriptive analysis show that the average Current Ratio (CR) of manufacturing companies during the 2020–2023 period was above 1.5, indicating that most companies were able to meet their short-term obligations effectively. The Debt to Equity Ratio (DER) ranged from 0.8 to 2.0, reflecting that the companies generally maintained a balanced capital structure through a combination of internal equity and external debt. The Return on Equity (ROE) fluctuated with an average value between 10 and 15 percent, which suggests varying levels of efficiency in utilizing shareholders' equity to generate profits. Meanwhile, the Total Asset Turnover (TATO) recorded an average of 1.2 times, signifying that company assets were being used efficiently to produce sales and generate revenue. Overall, profit changes (profit change) varied from year to year, with the majority of companies showing a positive trend despite several experiencing declines due to global economic pressures and industry-specific challenges.

Table 1. Descriptive Analysis Results of Financial Ratios of Manufacturing Companies (2020–2023)

Financial Indicator	Range / Average Value	Economic Interpretation	General Description
Current Ratio (CR)	> 1.5	High liquidity; companies are capable of meeting short-term obligations.	Indicates effective management of cash and current assets.
Debt to Equity Ratio (DER)	0.8 – 2.0	Balanced capital structure between debt and equity.	Debt usage remains within a safe limit.
Return on Equity (ROE)	10 – 15%	Efficiency in utilizing shareholders' equity to generate profits.	Fluctuations observed across the study period.
Total Asset Turnover (TATO)	1.2 times	Effectiveness of assets in generating sales.	Indicates a fairly good level of asset productivity.
Profit Change	Varied (positive trend)	Reflects improvement in financial performance despite global economic challenges.	Most companies recorded stable profit growth.

Based on the results presented in Table 1, most manufacturing companies demonstrated a strong liquidity position, as shown by the average Current Ratio (CR) exceeding 1.5. This suggests that the majority of firms were able to effectively meet their short-term obligations using their current assets. The Debt to Equity Ratio (DER) ranged between 0.8 and 2.0, indicating that companies maintained a balanced capital structure and avoided excessive dependence on debt. Such financial conditions imply that manufacturing firms in Indonesia are able to manage their financing policies prudently, maintaining an optimal balance between risk and profitability. Furthermore, the Return on Equity (ROE) fluctuated between 10 and 15 percent, reflecting variations in managerial efficiency in utilizing shareholders' equity to generate profits. The Total Asset Turnover (TATO) recorded an average value of 1.2 times, showing that company assets were being used effectively to produce sales and operational revenue. Meanwhile, the profit change varied from year to year, with most companies showing a positive trend despite several experiencing a decline due to global economic pressures and industrial challenges. Overall, these results highlight that Indonesia's manufacturing companies managed to sustain solid financial performance and operational resilience throughout the 2020–2023 period.

Results Of The Classical Assumption Test Indicate

The results of the classical assumption test indicate that the research model fulfills the statistical requirements for linear regression analysis. The normality test was conducted to determine whether the residual data from the regression model were normally distributed. A significance value greater than 0.05 indicates that the data distribution does not deviate significantly from normality. This result implies that the data used in the study are suitable for regression analysis, as it meets the assumption of normal distribution. The normality of data is essential because it ensures that the estimation and interpretation of the regression coefficients are valid and unbiased. Moreover, the finding of a normally distributed dataset suggests that the financial ratios and profit change variables behave consistently across the observed sample of manufacturing companies. This means that the relationships between variables such as Current Ratio (CR), Debt to Equity Ratio (DER), Return on Equity (ROE), Total Asset Turnover (TATO), and profit change follow a predictable pattern without extreme deviations. As a result, the data reliability and accuracy in explaining the influence of financial ratios on profit changes are well maintained, providing a strong basis for further inferential analysis using multiple regression models.

Table 2. Results of the Normality Test (Kolmogorov–Smirnov Test)

No	Variable	Test Method	Sig. Value	Standard (α = 0.05)	Distribution Status
1	Current Ratio (CR)	Kolmogorov–Smirnov	0.200	> 0.05	Normal
2	Debt to Equity Ratio (DER)	Kolmogorov–Smirnov	0.156	> 0.05	Normal
3	Return on Equity (ROE)	Kolmogorov–Smirnov	0.174	> 0.05	Normal
4	Total Asset Turnover (TATO)	Kolmogorov–Smirnov	0.198	> 0.05	Normal
5	Profit Change	Kolmogorov–Smirnov	0.183	> 0.05	Normal

Table 2 presents the results of the Kolmogorov–Smirnov normality test for all research variables. Each variable, including Current Ratio, Debt to Equity Ratio, Return on Equity,

Total Asset Turnover, and Profit Change, shows a significance value greater than 0.05. This indicates that the data for each variable are normally distributed and suitable for further statistical testing. The highest significance value (0.200) was observed in the Current Ratio variable, suggesting the strongest conformity with normal distribution assumptions. These results confirm that no variable in the dataset violates the normality assumption, meaning that the regression model built for this study meets one of the essential prerequisites for multiple linear regression analysis. Since all variables follow a normal distribution pattern, the estimation of parameters and hypothesis testing can be carried out accurately. Consequently, the regression results will produce unbiased and efficient estimators, ensuring that the interpretation of the influence of financial ratios on profit change is statistically valid and reliable.

The results of the multicollinearity test indicate that the regression model is free from multicollinearity problems, meaning that there is no strong correlation between the independent variables used in the study. This test is essential in regression analysis because a high level of intercorrelation among independent variables can distort the estimation of regression coefficients and reduce the accuracy of statistical interpretations. In this study, the tolerance values for all variables were greater than 0.10, and the Variance Inflation Factor (VIF) values were below 10. These results confirm that each financial ratio variable—Current Ratio (CR), Debt to Equity Ratio (DER), Return on Equity (ROE), and Total Asset Turnover (TATO)—operates independently and contributes uniquely to explaining the variation in profit change. The absence of multicollinearity also suggests that there is no redundancy among the independent variables, and the regression model can be used to produce valid and reliable estimates. Since each financial ratio measures a distinct aspect of company performance, the results strengthen the assumption that the observed relationships are not influenced by overlapping variable effects. Consequently, the regression model built in this research is statistically robust, and the estimation results for each variable can be interpreted accurately in explaining how liquidity, leverage, profitability, and asset efficiency influence profit changes in manufacturing companies.

Table 3. Results of Multicollinearity Test

No	Variable	Tolerance Value	VIF Value	Criteria	Conclusion
1	Current Ratio (CR)	0.672	1.488	Tolerance > 0.10 and VIF < 10	No Multicollinearity
2	Debt to Equity Ratio (DER)	0.714	1.400	Tolerance > 0.10 and VIF < 10	No Multicollinearity
3	Return on Equity (ROE)	0.643	1.554	Tolerance > 0.10 and VIF < 10	No Multicollinearity
4	Total Asset Turnover (TATO)	0.697	1.435	Tolerance > 0.10 and VIF < 10	No Multicollinearity

Table 3 displays the results of the multicollinearity test for each independent variable using the tolerance and Variance Inflation Factor (VIF) indicators. The findings show that all tolerance values exceed 0.10, and all VIF values are well below 10, which fulfills the standard criteria for a regression model free from multicollinearity. The variable with the highest tolerance value is the Debt to Equity Ratio (0.714), and the lowest is the Return on Equity (0.643). These figures indicate that there is no significant correlation among the independent variables, meaning that each financial ratio contributes distinct information to the regression model. The results confirm that the data used in this study meet one of the fundamental

assumptions of multiple regression analysis. Since multicollinearity is absent, the regression coefficients are not inflated or biased, ensuring that the influence of each financial ratio on profit change can be measured accurately. This finding validates the model's stability and reliability, allowing the subsequent statistical tests—such as the F-test and t-test—to be conducted with confidence. Overall, the multicollinearity test results strengthen the credibility of the regression model in explaining the financial dynamics of manufacturing companies listed on the Indonesia Stock Exchange.

The results of the heteroscedasticity test show that the regression model meets the assumption of homoscedasticity, meaning that the variance of residuals across all observations is consistent. This test is important to ensure that the regression model does not suffer from unequal error variances, which could distort statistical inferences. In this study, the significance value for all independent variables was greater than 0.05, indicating that the residuals were randomly distributed and not systematically influenced by any specific variable. This finding confirms that the model's predictive accuracy is not affected by irregular variance patterns, ensuring that the estimation of the regression coefficients remains unbiased and efficient. The absence of heteroscedasticity also indicates that the model's assumptions are valid for inferential analysis. Since the residuals exhibit constant variance, the regression equation can be used to estimate the relationship between financial ratios and profit changes reliably. In the context of manufacturing companies, this suggests that the influence of liquidity (Current Ratio), leverage (Debt to Equity Ratio), profitability (Return on Equity), and operational efficiency (Total Asset Turnover) on profit change remains stable across various company sizes and performance levels. Thus, the regression model can be considered robust and appropriate for hypothesis testing and further financial interpretation.

Table 4. Results of Heteroscedasticity Test (Glejser Test)

No	Variable	Sig. Value	Standard (α = 0.05)	Interpretation	Conclusion
1	Current Ratio (CR)	0.182	> 0.05	No heteroscedasticity	Homoscedastic
2	Debt to Equity Ratio (DER)	0.241	> 0.05	No heteroscedasticity	Homoscedastic
3	Return on Equity (ROE)	0.167	> 0.05	No heteroscedasticity	Homoscedastic
4	Total Asset Turnover (TATO)	0.216	> 0.05	No heteroscedasticity	Homoscedastic

Table 4 presents the results of the heteroscedasticity test using the Glejser method, which examines the significance of each independent variable in relation to the absolute value of residuals. The results show that all significance values are above 0.05, confirming that there is no heteroscedasticity present in the model. This means that the residual variance across observations is constant, and the model fulfills one of the essential assumptions required for multiple linear regression analysis. The highest significance value is observed in the Debt to Equity Ratio (0.241), followed by Total Asset Turnover (0.216), both of which further validate the homogeneity of error variance. These findings imply that the regression model used in this research is statistically sound and reliable. Since no heteroscedasticity is detected, the model's residuals are evenly distributed, and the parameter estimates can be interpreted with confidence. This stability ensures that the relationship between financial ratios and profit change reflects genuine economic effects rather than being distorted by irregular variance. Consequently, the regression analysis can be effectively used to draw valid

conclusions about how liquidity, leverage, profitability, and asset utilization influence profit changes in manufacturing companies listed on the Indonesia Stock Exchange.

The results of the autocorrelation test using the Durbin–Watson (DW) statistic indicate that the regression model is free from autocorrelation problems. The DW test is conducted to determine whether there is a correlation between residuals in one observation and residuals in another. A Durbin–Watson value between 1.5 and 2.5 suggests that the residuals are independent and do not exhibit systematic patterns. In this study, the DW value falls within this acceptable range, meaning that the regression model satisfies the assumption of independent errors. This is an important condition in regression analysis because autocorrelation can bias the estimation of standard errors and lead to invalid hypothesis testing results. The absence of autocorrelation implies that the regression model has good predictive quality and that the relationships between variables—Current Ratio (CR), Debt to Equity Ratio (DER), Return on Equity (ROE), and Total Asset Turnover (TATO)—with profit change are not influenced by residual dependencies. It also confirms that the financial data used in this study are stable across time and consistent across observations. Therefore, the regression analysis can be confidently used to explain the effect of financial ratios on profit change in manufacturing companies without the concern of serial correlation that could distort the model's accuracy or reliability.

Table 5. Results of Autocorrelation Test (Durbin–Watson Test)

No	Model	Durbin–Watson Value	Acceptable Range	Interpretation	Conclusion
1	Regression Model	1.912	1.5 – 2.5	No autocorrelation detected	Independent residuals (valid model)

Table 5 presents the result of the Durbin–Watson (DW) test conducted to detect the presence of autocorrelation in the regression model. The obtained DW value is 1.912, which lies within the acceptable range of 1.5 to 2.5. This result confirms that there is no significant correlation among the residuals of the observed data, meaning the regression model satisfies the assumption of independence. A DW value close to 2.0 indicates that the residuals are randomly distributed, further supporting the reliability of the model's estimation results. These findings suggest that the regression equation constructed in this study is statistically sound and free from time-based bias. Since the data do not show autocorrelation, the estimation of coefficients and standard errors remains accurate, and the hypothesis testing results are valid. The absence of autocorrelation also reflects the consistency of financial behavior among manufacturing companies over the 2020–2023 period, indicating that fluctuations in financial ratios and profit changes occur independently rather than being influenced by residual patterns. Hence, the regression model can be confidently used for interpretation and forecasting purposes in analyzing the determinants of profit changes in Indonesia's manufacturing sector.

Coefficient of Determination (R^2)

The results of the coefficient of determination (R^2) analysis show that the regression model has a strong explanatory power in explaining variations in profit changes among manufacturing companies. The R^2 value of 0.68, or 68 percent, indicates that the four independent variables—Current Ratio (CR), Debt to Equity Ratio (DER), Return on Equity (ROE), and Total Asset Turnover (TATO)—collectively explain 68 percent of the variation in profit change. This means that these financial ratios play a significant role in influencing

company profitability. The remaining 32 percent of variation is influenced by other factors not included in the model, such as market conditions, operational efficiency, inflation, or changes in company management strategies. This result demonstrates that the model is statistically strong and capable of describing the relationship between financial performance indicators and profit change effectively. A coefficient of determination above 0.60 is generally considered good in financial and social sciences because it reflects a substantial level of predictive accuracy. Therefore, the regression model built in this study can be used as a reliable analytical tool to assess how liquidity, leverage, profitability, and asset efficiency collectively impact profit fluctuations in manufacturing companies listed on the Indonesia Stock Exchange.

Table 6. Result of Coefficient of Determination (R^2)

No	Model	R Value	R Square (R^2)	Adjusted R^2	Interpretation
1	Regression Model	0.825	0.680	0.654	68% of profit change variation is explained by CR, DER, ROE, and TATO variables.

Table 6 shows the results of the coefficient of determination (R^2) from the regression model used in this research. The R^2 value of 0.680 means that 68 percent of the variation in profit change among manufacturing companies can be explained by the combination of Current Ratio, Debt to Equity Ratio, Return on Equity, and Total Asset Turnover. Meanwhile, the adjusted R^2 value of 0.654 indicates that the model remains stable and reliable even after adjusting for the number of independent variables, suggesting that overfitting did not occur. These findings confirm that the regression model has a strong predictive ability and that the selected variables are relevant in explaining changes in company profitability. The high R^2 value demonstrates that liquidity, leverage, profitability, and asset efficiency collectively have a significant impact on profit variations. The remaining 32 percent of unexplained variation may come from external macroeconomic factors or internal company policies not included in the model. Overall, this result reinforces that the regression model used is both valid and robust for analyzing financial performance in the manufacturing sector.

The regression model shows that 68 percent of the variation in profit change can be explained by the financial ratios used in this study, while the remaining 32 percent is influenced by other factors outside the model. These external factors include operational efficiency, dividend policy, inflation rates, and market condition changes. Operational efficiency reflects how effectively a company manages its production process, labor, and cost control to maintain profitability. Companies with higher operational efficiency tend to achieve stable profit margins even when facing economic challenges. On the other hand, dividend policies also play an important role in profit allocation. Companies that distribute large dividends might reduce the amount of retained earnings available for reinvestment, which can indirectly affect future profit growth. In addition, macroeconomic variables such as inflation and market conditions have a substantial impact on financial performance. Inflation can reduce purchasing power and increase production costs, affecting both revenue and profit margins. Meanwhile, fluctuations in market conditions—such as changes in consumer demand, exchange rates, and raw material prices—can also cause profit variations. Therefore, while financial ratios like liquidity, leverage, profitability, and asset efficiency are important indicators, the results emphasize that company performance is also strongly influenced by broader economic and managerial factors. Recognizing these external

influences allows companies to develop more adaptive strategies to maintain stable profit growth.

Table 7. External Factors Affecting Profit Change Beyond the Regression Model

No	External Factor	Description	Possible Effect on Profit Change	Supporting Explanation
1	Operational Efficiency	The ability of the company to optimize production and cost management.	High efficiency increases profit stability; low efficiency reduces profitability.	Efficient operations minimize waste and increase productivity.
2	Dividend Policy	Management decision on the proportion of profits distributed to shareholders.	High dividend payout may reduce retained earnings for reinvestment.	Affects long-term profit growth and capital structure.
3	Inflation Rate	The general rise in prices affecting production costs and purchasing power.	High inflation can lower profit margins due to increased expenses.	Impacts cost management and consumer demand.
4	Market Conditions	Changes in demand, supply, and competition in the industry.	Unstable markets can cause fluctuations in company revenue and profits.	Influenced by external shocks such as global crises or currency fluctuations.

Table 7 provides a summary of the main external factors contributing to the remaining 32 percent of unexplained profit variation in the regression model. Operational efficiency, dividend policy, inflation rate, and market conditions are all variables that significantly influence company profitability but were not included as independent variables in the regression equation. Each of these factors interacts dynamically with company management decisions and broader macroeconomic trends. For instance, companies with strong cost-control strategies and adaptive production systems can better maintain profit margins despite external economic pressures. These findings highlight the importance of integrating both internal financial indicators and external macroeconomic factors when analyzing company performance. Profit change cannot be fully understood by financial ratios alone, as it is also shaped by strategic management, market behavior, and global economic stability. Thus, for future research, incorporating these external variables into the analytical model may enhance the explanatory power (R^2) and provide a more comprehensive understanding of the determinants of profitability among manufacturing companies in Indonesia.

4.2 Discussion

The results of the research demonstrate that financial ratios such as Current Ratio (CR), Debt to Equity Ratio (DER), Return on Equity (ROE), and Total Asset Turnover (TATO) significantly influence profit change among manufacturing companies listed on the Indonesia Stock Exchange (IDX). Based on the descriptive analysis, companies generally maintain a healthy financial condition, as reflected in the average CR value above 1.5 and a DER value between 0.8 and 2.0. These findings indicate that most manufacturing firms can meet short-term obligations effectively and maintain a balanced capital structure between debt and equity. According to Brigham and Houston (2021), a sound liquidity position and moderate

leverage level are key indicators of financial stability, as they minimize bankruptcy risk while maximizing operational flexibility.

The regression analysis further confirms that profitability and efficiency indicators—ROE and TATO—have the most significant impact on profit change. The ROE values, which fluctuate between 10 and 15 percent, reveal variations in how effectively companies utilize shareholders' equity to generate net income. Meanwhile, the TATO value averaging 1.2 times indicates that company assets are efficiently used to produce sales and revenue. These results align with Gitman and Zutter (2020), who argue that asset turnover and equity utilization reflect management's ability to maximize resources and drive profitability. Thus, companies that effectively manage capital and optimize asset use tend to achieve better financial outcomes over time.

The classical assumption tests—normality, multicollinearity, heteroscedasticity, and autocorrelation—confirm that the regression model used in this study is statistically valid and free from bias. The normality test results, with significance values greater than 0.05, indicate that the data are normally distributed, ensuring the reliability of regression estimates. Similarly, VIF values below 10 and tolerance values above 0.10 suggest that there is no multicollinearity among the independent variables, meaning each ratio independently contributes to explaining profit change. These findings are consistent with Kasmir (2019), who emphasized the importance of meeting classical assumptions to obtain accurate and unbiased regression models in financial performance analysis. The results of the heteroscedasticity and autocorrelation tests further reinforce the validity of the model. The heteroscedasticity test, with significance values above 0.05, shows that the residuals have a constant variance, while the Durbin–Watson value between 1.5 and 2.5 indicates no autocorrelation in the data. These findings demonstrate that the model's residuals are randomly distributed, confirming its reliability for prediction and hypothesis testing. Fahmi (2021) noted that when these assumptions are fulfilled, the regression model can be considered robust, and the estimated coefficients can be used confidently to draw conclusions about financial relationships in the dataset.

The coefficient of determination (R^2) value of 0.68 indicates that 68 percent of profit variation can be explained by CR, DER, ROE, and TATO. This strong explanatory power suggests that financial ratios play a dominant role in influencing profitability among manufacturing firms. However, the remaining 32 percent of variation is affected by other factors not included in the model, such as operational efficiency, dividend policy, inflation rate, and market conditions. These external factors can influence production costs, investment decisions, and overall financial performance. As Harahap (2020) pointed out, profitability is a multidimensional measure that depends not only on financial ratios but also on managerial, operational, and macroeconomic factors. Finally, the findings emphasize the importance of integrating internal and external determinants when evaluating company performance. While financial ratios provide valuable insights into liquidity, leverage, profitability, and efficiency, they must be analyzed in conjunction with broader economic variables to achieve a comprehensive understanding. This aligns with the argument of Horne and Wachowicz (2019), who stated that financial performance should be assessed holistically to capture both microeconomic behaviors and macroeconomic influences. Therefore, for manufacturing companies in Indonesia, effective financial management, operational optimization, and adaptability to market fluctuations are essential strategies to maintain sustainable profit growth and competitiveness in a dynamic economic environment.

5. Conclusion

The results of this study conclude that financial ratios, namely Current Ratio (CR), Debt to Equity Ratio (DER), Return on Equity (ROE), and Total Asset Turnover (TATO), have a significant influence on profit changes in manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2023 period. The regression analysis shows that ROE and TATO are the most dominant variables affecting profit change, indicating that profitability and asset efficiency play crucial roles in determining company performance. Meanwhile, CR and DER also contribute to explaining variations in profit change, although their influence is relatively smaller. The coefficient of determination (R^2) value of 0.68 confirms that 68 percent of profit variation can be explained by these financial ratios, reflecting the strong explanatory power of the model. The remaining 32 percent is influenced by other factors such as operational efficiency, dividend policy, inflation, and market fluctuations. Overall, the study highlights that a company's ability to manage liquidity, capital structure, profitability, and asset utilization determines its financial sustainability and resilience to market dynamics. The results also reinforce that financial ratio analysis remains a reliable tool for investors, managers, and policymakers to evaluate company performance and design effective financial strategies. To enhance profitability, manufacturing companies should maintain optimal liquidity, manage debt prudently, improve operational efficiency, and adapt to macroeconomic changes. These strategic actions will not only strengthen the financial foundation of the firms but also ensure long-term profitability and competitiveness in Indonesia's dynamic industrial environment.

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