Analysis of the Effect of Inventory Turnover, Receivables Turnover and Leverage on Profitability Levels in Automotive Companies Listed on the Indonesian Stock Exchange

Husni Mubaarak [1], M. Syafii[2]

Abstract:

Profitability is a ratio that measures ability company to pay all short-term financial obligations at maturity using available current assets. The research method used is a descriptive qualitative approach with descriptive and inferential analysis. The population of this research is automotive companies listed on the Indonesia Stock Exchange (BEI) in 2016-2020, with samples carried out using a purposive sampling method of 9 companies. The research results show that Leverage has a significant effect on Profitability Levels in automotive companies listed on the Indonesia Stock Exchange. This means that the higher the company's leverage ratio, the more impact it will have on the company's level of profitability. Inventory turnover has a significant effect on profitability levels in automotive companies listed on the Indonesia Stock Exchange. This also indicates that when inventory turnover increases or decreases, it will have an impact on the company's level of profitability. Receivables Turnover has a significant effect on Profitability Levels in automotive companies listed on the Indonesia Stock Exchange. This indicates that receivables turnover, whether large or small, will influence the company's level of profitability.

Keywords: *Inventory Turnover, Receivables Turnover, Leverage, Profitability Level*

1. Introduction

World development is currently accelerating, and as a result, many new businesses are emerging, leading to tight business competition among business actors. To survive and be able to face this competitive business landscape, companies must increase effectiveness and efficiency to achieve their goals. Company performance can be assessed by its profitability, which measures the company's ability to generate profits from its business activities, indicating whether the company's financial condition is good or not (Innocent, Mary, & Matthew, 2013).

Profitability, as described by various scholars, shows the comparison between profits and assets or capital that generate profits (Amanda, 2019). According to Affandi, Sunarko, and Yunanto (2019), profitability is the final result of a series of management policies and decisions concerning the source and use of funds in company operations.

[1]*Faculty of Economics and Business, Universitas Sumatera Utara, Indonesia.*
Husnimubaroknst@gmail.com
[2]*Faculty of Economics and Business, Universitas Sumatera Utara, Indonesia*
Syafiimuhammad91@gmail.com

These policies and decisions are summarized in the balance sheet and presented by financial ratios. From these definitions, it can be concluded that profitability is the final result of various decisions made by management in utilizing the resources available during one period to obtain a profit (Binsaddig et al., 2023).

Automotive and component companies are one of the industrial sectors listed on the Indonesia Stock Exchange (IDX), where their development is very rapid, and sales continue to increase every year. For example, PT Prima Alloy Steel Tbk experienced losses almost every year except in 2018, while PT Astra Otoparts Tbk, PT Indo Kordsa Tbk, and PT Goodyear Indonesia Tbk reported losses in 2020. Meanwhile, PT Astra Internasional Tbk did not experience any losses but showed fluctuating profitability with a high value of 7.94% in 2018 (Hasanudin, Awaloedin, & Arviany, 2022).

There are several factors that can influence profitability, including inventory turnover, receivables turnover, and leverage. Brigham and colleagues state that the profitability ratio shows the combined influence of liquidity, activity, and leverage (Kartika, Hertati, & Munandar, 2023). Leverage, or the use of borrowed funds to increase profits, can impact profitability. Leverage is a ratio used to measure how much a company is financed by debt, indicating the relationship between a company's debt and capital (Jindal, Jain, & Vartika, 2017).

Inventory turnover is an essential element in a company's operations, as optimal inventory can increase the company's effectiveness and profits. Companies must guarantee inventory availability to maintain sales (Jasmani, 2019). Additionally, a company's ability to generate profits can be seen through its receivables turnover. High receivables turnover indicates smooth cash inflow, which can be used for other profit-generating activities (Wulandari & Lubis, 2021).

Previous research has investigated various factors affecting profitability. For example, Hiran (2016) explored the impact of liquidity and leverage on financial performance in the automobile industry, while Oktavia and Indrati (2021) examined the effect of receivables, inventories, and payables on working capital. However, there is a research gap concerning the combined effect of inventory turnover, receivables turnover, and leverage on profitability, specifically in the context of the Indonesian automotive industry.

This study aims to fill the research gap by providing a comprehensive analysis of these variables and their impact on profitability. The novelty of this research lies in its focus on the Indonesian automotive sector, which has shown significant growth and potential in recent years (Mulyono, Djumahir, & Ratnawati, 2018). The urgency of this study is underscored by the need for automotive companies to enhance their financial performance to remain competitive in the rapidly evolving market.

The objective of this research is to determine the effect of inventory turnover, receivables turnover, and leverage on the profitability of automotive companies listed

on the IDX. By understanding these relationships, the study aims to provide insights that can help automotive companies improve their financial strategies and achieve better profitability, thereby contributing to the overall economic growth of Indonesia (Nasution et al., 2022).

2. Theoretical Background

Profitability

Profitability is a key ratio used to assess a company's ability to generate profit. It provides an illustration of how effectively a company operates to produce profits. In company operations, profit is an essential element for sustaining the company's activities. By effectively using all available resources, a company can achieve its goals. According to Amanda (2019), profitability describes a company's ability to earn profits through its various capabilities and resources, such as sales, cash, capital, employees, and branches. Meanwhile, Affandi, Sunarko, and Yunanto (2019) state that profitability is the final result of a series of policies and decisions made by the company. Various measurements of company profitability relate to sales volume, total assets, and equity. Overall, these measurements enable an evaluation of the company's earnings in relation to its sales volume, asset base, and investments (Binsaddig et al., 2023). Without profit, it becomes challenging for companies to attract external capital (Innocent, Mary, & Matthew, 2013). Profitability ratios are used to measure the efficiency of asset utilization, linking it to the level of sales generated (Hasanudin, Awaloedin, & Arviany, 2022).

Leverage

Leverage is a tool to measure how much a company relies on creditors to finance its assets. A high level of leverage indicates significant dependence on external loans, whereas a lower leverage level indicates that the company finances more of its assets with its own capital. The level of leverage is used to assess the company's ability to settle its obligations to other parties. The debt-to-equity ratio, calculated by dividing total debt by total capital, illustrates the comparison between external funds and the company's funds. Leverage also provides an overview of the company's capital structure, measuring the company's assets against creditor costs (Kartika, Hertati, & Munandar, 2023). The Leverage Ratio is used to measure how much a company is financed by debt. A higher leverage ratio entails higher risk, but also a greater potential for large profits. Conversely, a low leverage ratio, indicating lower risk, results in lower returns during economic upswings (Jindal, Jain, & Vartika, 2017).

Inventory Turnover

Inventory consists of goods owned and provided by a company for resale or goods in the production process. For industrial companies, inventory includes raw materials,

work-in-process, and finished goods, whereas for trading companies, it includes only merchandise inventory (Jasmani, 2019). Effective inventory management is crucial to ensure that a company maintains sufficient supplies—not too much and not too little. Excess inventory incurs high costs, risks, and investment, potentially causing losses. Conversely, inadequate inventory can result in unfulfilled consumer demand, also leading to losses. Inventory turnover indicates a company's performance in its operational activities. A high inventory turnover rate signifies a greater ability to make a profit, while a low turnover rate diminishes this ability (Wulandari & Lubis, 2021). Inventory turnover, as defined by Amanda (2019), is the ratio between the total cost of goods sold and the average value of inventory. It measures how many times inventory is sold and restocked within a period, calculated by dividing the cost of goods sold by average inventory. A higher turnover rate is preferable as it reduces the risk of losses due to price reductions or changes in consumer tastes, and saves on storage and maintenance costs.

Receivables Turnover

Receivables arise from companies providing concessions to customers, allowing them to pay later for goods or services. Receivables include all the company's rights to receive money, goods, or services in the future due to past transactions (Nasution et al., 2022). Typically, receivables are a significant part of current assets on a company's balance sheet, warranting efficient management. Receivables turnover measures how many times a company collects its receivables within a certain period. Efficient receivables management enhances cash flow, allowing funds to be used for other profitable activities (Wajo, 2021). Higher receivables turnover indicates smooth cash inflow, contributing positively to the company's profitability (Wulandari & Lubis, 2021).

3. Methodology

This study employs a descriptive quantitative approach to explore the effect of inventory turnover, receivables turnover, and leverage on the profitability levels of automotive companies listed on the Indonesia Stock Exchange (IDX) over the period from 2016 to 2020. Descriptive research is utilized to systematically and accurately describe the characteristics of the subject under investigation, providing a clear overview of how these financial ratios influence company performance (Sekaran & Bougie, 2016). This approach is particularly suited for capturing the current state of the automotive industry's financial health and understanding the dynamics between different financial metrics and profitability.

In addition to descriptive methods, this research employs inferential statistical techniques to draw conclusions from sample data and generalize findings to the larger population of automotive companies. Inferential methods are critical in research with

limited resources, allowing for efficient analysis by using a representative sample to infer conclusions about a broader set of data (Hair et al., 2014). Specifically, multiple linear regression analysis is used as the main inferential technique to assess the relationships between independent variables—inventory turnover, receivables turnover, and leverage—and the dependent variable, profitability, measured by the Return on Investment (ROI) ratio.

Multiple linear regression analysis provides a framework for evaluating the simultaneous effects of several independent variables on a single dependent variable, enabling the study to explore how these financial factors collectively influence profitability (Field, 2018). The model used in this study can be expressed as:

$$\text{ROI}_i = \beta_0 + \beta_1(\text{IT}_i) + \beta_2(\text{RT}_i) + \beta_3(\text{LEV}_i) + \epsilon_i$$

Here, ROI_i represents the Return on Investment for company i, IT_i denotes the inventory turnover ratio, RT_i signifies the receivables turnover ratio, LEV_i indicates the leverage ratio, and ϵ_i is the error term for company i. This model aims to quantify how variations in inventory management, accounts receivable efficiency, and financial leverage affect the overall profitability of automotive firms.

The population for this study consists of all automotive companies listed on the IDX between 2016 and 2020. A purposive sampling method was used to select a sample based on specific criteria to ensure that the chosen companies were representative of the automotive industry's financial landscape during the study period (Sekaran & Bougie, 2016). The criteria for sample selection included being listed on the IDX for the entire study period, providing complete annual reports for 2016-2020, and maintaining positive profitability throughout the period. Out of 13 automotive companies meeting the initial criteria, 9 were selected as they fulfilled all requirements set for the research.

Data for this study were collected from the annual reports of the selected companies. The data collection process involved gathering financial statements and other relevant financial information from public records. Following data collection, the data were cleaned and organized to ensure accuracy and completeness. Descriptive statistics were then calculated to summarize the data, including measures of central tendency and variability. The core analytical technique, multiple linear regression, was applied to assess the relationships between the independent variables and profitability, providing insights into how these factors impact the financial performance of the automotive companies.

By integrating descriptive and inferential methods, this study aims to provide a detailed understanding of the factors affecting profitability in the automotive sector,

offering valuable information for both academic research and practical financial management.

4. Empirical Findings /Results

Before carrying out regression analysis, the classical assumption test is first carried out. Whether the population or data is normally distributed or not, knowing some of the same variants , and testing the linearity of the data. In this study, 4 classical assumption tests were used, including normality, multicollinearity, heteroscedasticity and autocorrelation tests.

Normality test

Data to be analyzed with parametric statistics must first meet the data requirements that the data is normally distributed. This normality test is assisted by using SPSS v.25 *software* through the graphic analysis method by looking at *the normal probability plot* which compares the cumulative distribution from the normal distribution. After that, proceed with the Kolmogorov-Smirnov non-parametric statistical test to obtain confidence that the data is normally distributed. The normality test in this research begins with *normal probability plot graphic analysis* . The graph of *the normal probability plot* test results can be seen as follows
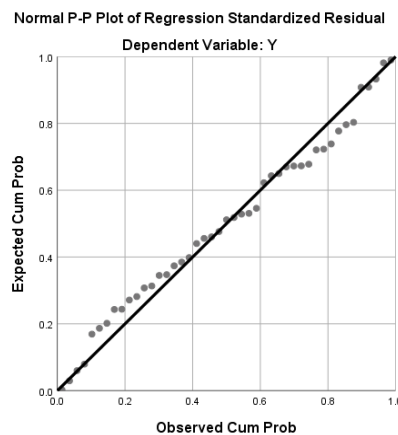

Figure 1. *Normal Probability Plot* **Graph**

Figure 1 above show the results of the normality test. From table 4.1 it can be seen that the data is normally distributed as shown by the histogram pattern graph which is normally distributed. The results of the normality distribution can also be seen in Figure 4.2, namely the normal probability plot graph. Where the points follow a diagonal line which indicates that the data is normally distributed.

To gain confidence that the data studied is normally distributed, the Kolmogorov-Smirnov normality test is then carried out. Normally distributed data is indicated by a significance value above 0.05 (Gozali: 2006). The following are the results of the Kolmogorov-Smirnov normality test:

Table 1. Kolmogorov-Smirnov Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residuals
N		45
Normal Parameters [a, b]	Mean	0.0000000
	Std. Deviation	2.68964688
Most Extreme Differences	Absolute	0.080
	Positive	0.077
	Negative	-0.080
Statistical Tests		0.080
Asymp. Sig. (2-tailed)		,200 [c,d]

Table 1 above shows the results of the Kolmogorov-Smirnov statistical test. It can be seen from the table above that the significance value shows that the independent and dependent variables have a significance above 0.05. This significance value can be seen from *Asymp. Sig* (*2-tailed*) is worth 0.200. The significance value is above 0.05, meaning that it shows that the data is normally distributed and meets the assumptions of normality.

Autocorrelation Test

The autocorrelation test is used to see whether there is a relationship between a certain period and the previous period and whether there is *error* from one observation influenced by *error* from the previous observation . Good data is data that does not contain autocorrelation. One way to detect the presence or absence of autocorrelation is with the Durbin-Watson Test (DW test). The results of the Durbin-Watson test (DW Test) can be seen below:

Table 2 Durbin-Watson Statistical Test

Model Summary [b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,544 [a]	0.296	0.243	2.67389	1,696

Table 2 above shows the results of the Durbin-Watson statistical test (DW Test). It can be seen from the table above, the Durbin-Watson (d) value is 1.696. The DU value is = 1.6662 and the 4-DU value = 2.6168. so the DW value of 1.696 is in the range DU < DW < 4-DU or 1.6662 < 1.696 < 2.6168. This shows that the regression model is free from autocorrelation problems.

Heteroscedasticity Test

Heteroscedasticity testing aims to determine whether the regression model has unequal *variance* from *the residuals* of one observation to another. A good regression model is one where heteroscedasticity does not occur.

The situation of heteroscedasticity will cause the interpretation of regression coefficients to be inefficient and the estimated results can be less or more than they should be. Thus, so that the regression coefficients are not misleading, the heteroscedasticity situation must be removed from the regression model. One way to detect the presence or absence of heteroscedasticity is to see whether there is a certain pattern on the *scatterplot graph* , where the X axis is the residual (predicted Y-actual Y) and the Y axis is the predicted Y axis. The basis for making the decision is as follows:

a. If there is a certain pattern, such as the points forming a certain regular pattern (wavy, wide and narrow), then heteroscedasticity occurs.

b. If there is no clear pattern, such as dots spread above and below the number 0 and on the Y axis, then heteroscedasticity does not occur.

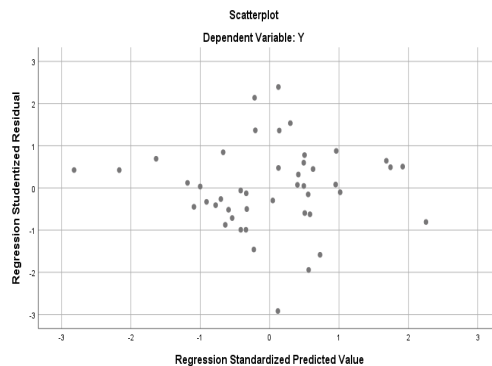The results of the heteroscedasticity test using a *scatter plot graph* can be seen below:

Figure 2. Scatter Plot Graphics

The image above shows the results of the heteroscedasticity test using a scatter plot graph. As can be seen in the image above, the data points are spread randomly and do not form a particular pattern. These data points are spread above and below the number 0 on the Y axis. From the results of these observations it can be concluded that there is no heteroscedasticity in the variables in the regression model of this research

Multicollinearity Test

The multicollinearity test aims to test whether the regression model has a correlation between independent variables or not. Multicollinearity is a condition where there is a linear relationship between independent variables. Because it involves several independent variables, multicollinearity will not occur in a simple regression equation. In a good multiple regression model there should be no correlation between independent variables with high significance.

In this study, the multicollinearity test looked at *the Variable Inflation Factor* (VIF) numbers . If the VIF value < 10 then the data does not contain multicollinearity. The results of the multicollinearity test include the following

Table 3. Multicollinearity Test Results

Coefficients [a]

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	**Std. Error**	**Beta**	**t**	**Sig.**	**Tolerance**	**VIF**
1	(Constant)	3,505	1,146		3,059	0.004		
	X1	-1,609	0.407	-0.515	-3,956	0,000	0.867	1,153
	X2	0.428	0.143	0.381	2,992	0.005	0.905	1,105
	X3	-0.061	0.028	-0.289	-2,164	0.036	0.821	1,219

The table shows the results of the multicollinearity test. From the table above it can be seen that all the independent variables studied have VIF values below 10 (VIF <10). The respective VIF values for each variable are X1 of 1.1543, X2 of 1.105 and X3 of 1.219 (<10). Thus, it can be concluded that the data in this study is free from multicollinearity

Multiple Regression Analysis

Multiple regression analysis is carried out to see the relationship between two or more independent variables and the dependent variable. The independent variables in this research consist of three independent variables, namely Leverage (X1), Inventory Turnover (X2) and Receivables Turnover (X3), while the dependent variable is Profitability (Y). The results of the multiple regression test can be seen in the table below

Table 4. Multiple Linear Regression Test Results

		Unstandardized Coefficients		Standardized Coefficients		
	Model	B	Std. Error	Beta	t	Sig.
1	(Constant)	3,505	1,146		3,059	0.004
	X1	-1,609	0.407	-0.515	-3,956	0,000
	X2	0.428	0.143	0.381	2,992	0.005
	X3	-0.061	0.028	-0.289	-2,164	0.036

Coefficients [a]

Table 4 above shows the results of the multiple linear regression test. The purpose of multiple linear analysis is to see the influence of two or more independent variables (X) on the dependent variable (Y). The constant value obtained is 3.505 , while the coefficient for each independent variable is -0.515 for the Leverage variable (X1), 0.381 for the Inventory Turnover variable (X2) and -0.289 for the Credit Turnover variable (X3). Based on the table above, the regression model used is as follows:

$$Y = 3.505 – 0.515X1 + 0.381X2 – 0.289X3$$

Y   = Profitability
a   = Constant
X1   = Leverage
X2   = Inventory Turnover
X3   = Receivables Turnover

Based on the multiple regression model and table 4.8 above, the multiple regression results can be explained as follows:

1. The linear regression equation above has a constant of 3.505, meaning that if the Leverage, Inventory Turnover and Receivables Turnover values are 0 (zero) then the Profitability (Y) value is 3.505.
2. The Leverage variable has a coefficient value of -0.515 , meaning that every increase in Leverage by one unit will cause a decrease in Profitability of 0.515.
3. The Inventory Turnover variable has a coefficient value of 0.381, meaning that an increase in Inventory Turnover of 1 unit will cause an increase in Profitability of 0.381.
4. The Receivables Turnover variable has a coefficient value of -0.289 , meaning that an increase in Receivables Turnover of 1 unit will cause a decrease in Profitability of 0.289.

Coefficient of Determination Test

The coefficient of determination test is carried out to determine how much influence the independent variables simultaneously have on the dependent variable. The results of the coefficient of determination test can be seen in the table on the following page:

Table 5. Coefficient of Determination Test Results (R^2)

	Model Summary			
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.631 [a]	0.398	0.354	2.78631

Table 5 above shows the results of the coefficient of determination test (R^2). It can be seen from the table above that the R *Square value* is 0.398. This means that the influence of the independent variables X1,

F test

The F test is used to determine whether all independent variables, namely Leverage, Inventory Turnover and Receivables Turnover together have significant influence on Profitability. The F test results can be seen on the following page.

Table 6. F Test Results

		ANOVA [a]				
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	210.152	3	70,051	9,023	,000 [b]
	Residual	318.305	41	7,764		
	Total	528,457	44			

From table 6 above, it can be concluded that there is a significant influence simultaneously between Leverage (X1), Inventory Turnover (X2), and Receivables Turnover (X3) on Profitability (Y). Based on the results of the processed data in the table, it is obtained significance level of 0.000 when compared with the significance value determined in this study of 0.05, then the significance level the results of data processing are smaller than the significance level specified in this research, as a result Ho was rejected.

And the $_{\text{calculated F value}}$ is 9.023, while for the F $_{\text{table}}$ it is 2.83, then this value is compared with the $_{\text{calculated}}$ F value = 9.023 then based on the criteria above, namely F $_{\text{calculated}}$ > F $_{\text{table}}$, it H_0 is rejected and H_a accepted . This proves that Leverage, Inventory Turnover, and Receivables Turnover together influence Profitability in Automotive Companies listed on the Indonesia Stock Exchange.

t test

The t test was carried out to determine or show the influence of each independent variable Leverage (X1), Inventory Turnover (X2) and Receivables Turnover on the dependent variable Profitability (Y). Following are the results of the t test:

Table 7. t Test Results

Coefficients ^a

	Model	Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3,505	1,146		3,059	0.004
	X1	-1,609	0.407	-0.515	-3,956	0,000
	X2	0.428	0.143	0.381	2,992	0.005
	X3	-0.061	0.028	-0.289	-2,164	0.036

Table 7 above shows the t test results using SPSS v.23.0. From this table it can be seen that the $_{\text{calculated t value}}$ and significance value for the independent variable Leverage (X1) is -3.956 and 0.000. For the Inventory Turnover variable (X2) t $_{\text{is calculated}}$ and the significance value is 2.992 and 0.005. And for the Accounts Receivable Turnover variable (X3) t $_{\text{is calculated}}$ and the significance value is -2.164 and 0.036. Meanwhile, the t $_{\text{table}}$ value is 2.01669. So it can be concluded that:

1) Leverage variable (X1) with a $_{\text{calculated}}$ t value $\leq$ t $_{\text{table}}$ and with a significance value < 0.05, it can be concluded that Leverage (X1) has an effect on Profitability (Y).
2) Inventory Turnover Variable (X2) with a $_{\text{calculated}}$ t value $\leq$ t $_{\text{table}}$ and with a significance value < 0.05, it can be concluded that Inventory Turnover (X2) has an effect on Profitability (Y).
3) The Receivables Turnover variable (X3) with a $_{\text{calculated}}$ t value $\leq$ t $_{\text{table}}$ and with a significance value <0.05, it can be concluded that Receivables Turnover (X3) has an effect on Profitability (Y).

5. Discussion

The results of this study reveal that leverage, inventory turnover, and receivables turnover have a significant joint effect on the profitability of automotive companies listed on the Indonesia Stock Exchange (IDX) from 2016 to 2020. The R-squared value of the regression model indicates that approximately 39.8% of the variation in profitability can be explained by the combined influence of leverage, inventory turnover, and receivables turnover, while the remaining 60.2% is attributed to other factors not included in this study. This finding is consistent with the research by Mulyono et al. (2018), which found that various financial ratios collectively impact profitability, though other variables might also play crucial roles. This implies that while these financial metrics are important, they do not entirely account for the profitability variations observed among the companies.

Leverage was found to have a significant positive effect on profitability. This result supports the findings of Linda (2021), who demonstrated that leverage can indeed influence profitability by altering the risk and return profile of a company. Leverage,

which refers to the extent to which a company uses debt to finance its assets, has a dual impact. On one hand, higher leverage increases the potential for returns on equity, as debt financing can amplify gains when the company's returns exceed the cost of debt (Brigham & Ehrhardt, 2016). On the other hand, excessive leverage increases financial risk and can lead to higher interest expenses, potentially reducing profitability during economic downturns (Hiran, 2016). Thus, while the ability to use debt to boost profits is evident, the risks associated with high leverage must be managed carefully to maintain profitability (Linda, 2021).

Inventory turnover also demonstrated a significant effect on profitability, affirming findings from previous studies such as those by Wulandari & Lubis (2021), who identified a positive relationship between inventory turnover and profitability. Efficient inventory management minimizes holding costs and reduces the risk of obsolescence, which can adversely affect a company's financial performance (Binsaddig et al., 2023). A high inventory turnover ratio implies that a company is effective in managing its stock levels, leading to reduced costs and increased profits (Amanda, 2019). Conversely, a slow inventory turnover rate can result in higher storage costs and potential losses from unsold inventory (Hasanudin et al., 2022). Thus, effective inventory management is crucial for maintaining and enhancing profitability.

Receivables turnover was also found to significantly influence profitability, which aligns with the results of research by Oktavia & Indrati (2021) and Innocent et al. (2013). High receivables turnover indicates that a company is efficient in collecting its receivables, which is essential for maintaining cash flow and reducing the risk of bad debts (Jindal et al., 2017). Efficient receivables management ensures that funds are collected promptly and can be reinvested into the company's operations, thus supporting profitability (Herison et al., 2022). Slow turnover, on the other hand, ties up capital in receivables and may require the company to seek external financing, which can increase financial costs and affect profitability (Wajo, 2021).

Overall, the results of this study highlight the importance of effective financial management practices in enhancing profitability. While leverage, inventory turnover, and receivables turnover are significant factors, their impact on profitability is moderated by other external and internal factors not covered in this study. Future research could explore additional variables such as market competition, technological advancements, and regulatory changes that might also influence profitability in the automotive sector. Moreover, longitudinal studies could provide deeper insights into how these relationships evolve over time and across different economic conditions (Sekaran & Bougie, 2016).

By understanding the interplay between these financial metrics, automotive companies can develop strategies to improve their profitability. For instance, balancing leverage to avoid excessive debt, optimizing inventory management to

reduce costs, and enhancing receivables collection processes can collectively contribute to better financial performance (Brigham & Ehrhardt, 2016; Amanda, 2019). These insights are valuable for both practitioners in the automotive industry and researchers seeking to expand the knowledge base on financial management practices.

6.   Conclusions

Based on the research conducted on the influence of Leverage, Inventory Turnover, and Receivables Turnover on profitability levels in automotive companies listed on the Indonesia Stock Exchange (IDX) from 2016 to 2020, several key conclusions can be drawn.

Firstly, leverage has a significant effect on the profitability of automotive companies listed on the IDX. This finding suggests that the level of debt used to finance assets has a notable impact on the company's profitability. Companies with higher leverage ratios can potentially amplify their returns, but they also face increased financial risks which can affect their profitability. This supports the notion that while leverage can enhance returns, it must be managed carefully to balance potential gains against the risks of financial distress.

Secondly, inventory turnover significantly affects profitability. The results indicate that an increase or decrease in inventory turnover directly impacts a company's profitability. Efficient inventory management, which ensures optimal inventory levels and minimizes holding costs, plays a crucial role in maintaining or enhancing profitability. This aligns with previous studies which highlight that higher inventory turnover leads to better financial performance by reducing storage costs and the risk of obsolescence.

Lastly, receivables turnover also has a significant impact on profitability. The analysis shows that the efficiency of collecting receivables affects the company's profitability. High receivables turnover indicates effective credit management practices which contribute to improved cash flow and financial performance. This finding is consistent with previous research that underscores the importance of managing receivables to avoid tying up capital and incurring additional costs.

Future research could explore several avenues to extend the understanding of factors affecting profitability in the automotive industry. First, it would be beneficial to investigate additional financial ratios and external variables that might influence profitability, such as market competition, technological advancements, and regulatory changes. For instance, incorporating factors like R&D expenditure or market share could provide a more comprehensive analysis of profitability drivers in the automotive sector.

Second, longitudinal studies that examine these relationships over a longer period or across different economic conditions could yield deeper insights into how these financial metrics impact profitability over time. Such studies could explore whether the observed effects of leverage, inventory turnover, and receivables turnover on profitability are consistent during periods of economic growth versus recession.

Lastly, expanding the scope of research to include a comparative analysis between different industries could offer valuable insights into how industry-specific factors influence the relationships between financial metrics and profitability. This comparative approach could highlight unique challenges and opportunities faced by the automotive industry relative to other sectors.

By addressing these research gaps, future studies can contribute to a more nuanced understanding of financial management practices and their impact on profitability, offering actionable insights for both academics and practitioners in the automotive industry.

References:

Affandi, F., Sunarko, B. A. M. B. A. N. G., & Yunanto, A. (2019). The impact of cash ratio, debt to equity ratio, receivables turnover, net profit margin, return on equity, and institutional ownership to dividend payout ratio. *Journal of Research in Management*, *1*(4), 1-11.

Amanda, R. I. (2019). The impact of cash turnover, receivable turnover, inventory turnover, current ratio and debt to equity ratio on profitability. *Journal of research in management*, *2*(2), 14-22.

Binsaddig, R., Ali, A., Al-Alkawi, T., & Ali, B. J. (2023). Inventory Turnover, Accounts Receivable Turnover, and Manufacturing Profitability: An Empirical Study. *International Journal of Economics and Finance Studies*, *15*(1), 1-16.

Hasanudin, H., Awaloedin, D. T., & Arviany, D. D. (2022). The impact of cash turnover, accounts receivable turnover, and inventory turnover on return on assets (ROA) for agribusiness companies listed on the Indonesia stock exchange (IDX) during the period 2016-2020. *Jurnal Info Sains: Informatika dan Sains*, *12*(02), 37-44.

Herison, R., Sahabuddin, R., Azis, M., & Azis, F. (2022). The effect of working capital turnover, accounts receivable turnover and inventory turnover on profitability levels on the Indonesia Stock Exchange 2015-2019. *Psychology And Education*, *59*(1).

Hiran, S. (2016). Financial Performance Analysis of Indian Companies Belongs to Automobile Industry with Special Reference to Liquidity & Leverage. *International journal of multidisciplinary and current research*, *4*, 39-51.

Innocent, E. C., Mary, O. I., & Matthew, O. M. (2013). Financial ratio analysis as a determinant of profitability in Nigerian pharmaceutical industry. *International journal of business and management*, *8*(8), 107.

Jasmani, J. (2019). The effect of liquidity and working capital turnover on profitability at PT. Sumber Cipta Multiniaga, South Jakarta. *PINISI Discretion Review*, *3*(1), 29-38.

Jindal, D., Jain, S., & Vartika, K. (2017). Effect of receivables management on profitability: A study of commercial vehicle industry in India. *management*, *2*(2), 246-255.

Kartika, A. D., Hertati, L., & Munandar, A. (2023). The Effect of Leverage, Acceptable Turnover and Inventory Turnover On Company Profitability. *Journal of Humanities, Social Sciences and Business*, *2*(2), 455-464.

Mulyono, S., Djumahir, D., & Ratnawati, K. (2018). The effect of capital working management on the profitability. *Jurnal Keuangan dan Perbankan*, *22*(1), 94-102.

Nasution, I. A., Sembiring, F., Batubara, M., & Putri, T. O. D. S. (2022). The Effect Of Cash Turnover, Receivable Turnover, And Inventory Turnover On Liquidity On Liquidity Of Consumer Goods Companies Listed In The Indonesia Stock Exchange In the 2011-2014 Period. *Enrichment: Journal of Management*, *12*(2), 1840-1845.

Oktavia, D., & Indrati, M. (2021). Effect Of Receivables, Inventories, and Payables On Working Capital. *Journal Research of Social Science, Economics, and Management*, *1*(2), 101-115.

Wajo, A. R. (2021). Effect of cash turnover, receivable turnover, inventory turnover and growth opportunity on profitability. *ATESTASI: Jurnal Ilmiah Akuntansi*, *4*(1), 61-69.

Wulandari, N., & Lubis, I. (2021). Influence of receivables turnover and inventory turnover to profitability PT Kimia Farma (Persero) Tbk. *Indonesian Financial Review*, *1*(2), 114-132.