THE EFFECT OF SALES AND GROSS PROFIT ON NET INCOME IN ASTRA GROUP COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE

Natali Ikawidjaja[1], Zainal Abidin[2], Saripuddin D[3], Sri Endarti Halim[4], Abd. Kadir[5], M. Nur Abdurrahman Ridwan[6], Faisal Rizal Zainal[7]

[1] *Lecturer at STIE Ciputra, Makassar, Indonesia*
[2,3,4,7] *Lecturer at Institute Technology and Business of Nobel Indonesia, Makassar*
[5] *Lecturer at Institute Technology and Business of Arung Palakka, Bone*
[6] *Lecturer at University of Sulawesi Raya, Indonesia*

*Corresponding Author: Natali Ikawidjaja

Abstract: This study aims to analyze the influence of sales and gross profit on net income in Astra group companies listed on the Indonesia Stock Exchange (IDX). The research subjects were Astra Group companies listed on the Indonesia Stock Exchange (IDX). The method used in this study was descriptive quantitative, a research approach that utilizes numerous numbers, from data collection to interpretation. This study utilized secondary data, namely quarterly financial data from the first quarter of 2021 to the second quarter of 2025 (108 quarters). The results showed that sales had a negative but insignificant effect on net income, and gross profit had a positive and significant effect on net income in Astra group companies listed on the Indonesia Stock Exchange (IDX). The results also showed that sales and gross profit jointly influenced net income in Astra group companies listed on the Indonesia Stock Exchange (IDX), with a determination value of 98.9%.

Keywords: sales, gross profit, net income.

I. INTRODUCTION

Every company is essentially established to achieve certain predetermined goals, one of which is to improve performance in order to increase shareholder wealth. Good company performance is a key indicator of management's success in managing its resources effectively and efficiently. According to Brigham and Houston (2019), the primary goal of a company is to maximize company value, which will ultimately increase the prosperity of owners or shareholders. Company performance can be reflected in various aspects, including profitability, liquidity, solvency, and operational efficiency. Success in achieving optimal performance indicates that management is able to allocate resources appropriately, maintain business continuity, and make a positive contribution to stakeholders [1]. According to Harahap (2018), financial performance analysis is an important tool for management, investors, and creditors to assess the company's sustainability and future prospects. In addition to internal factors, company performance is also influenced by external factors such as macroeconomic conditions, the level of industry competition, technological developments, and government regulations. Therefore, companies are required to be able to adapt to changes in the business environment to survive and thrive [2]. According to Kaplan and Norton (2004), companies cannot simply focus on financial indicators; they must also consider non-financial aspects such as customer satisfaction, product innovation, and human resource quality [3].

As globalization and digitalization advance, companies face increasingly complex challenges. Fierce competition drives management to continuously improve performance, whether through operational efficiency, innovation, or long-term business strategies. Therefore, a company's success in improving performance not only benefits owners but also adds value to employees, the community, and the government. Therefore, studying company performance is crucial, not only for understanding financial success but also for identifying appropriate strategies to address the dynamics of the business environment. This aligns with Fahmi's (2015) opinion, which states that company performance reflects the financial condition and management's ability to manage the organization to achieve predetermined goals [4].

In business activities, sales are one of the main indicators determining a company's success. High sales reflect demand for the products or services offered by the company, thus becoming a primary source of revenue. According to Kotler and Keller (2016), sales are the result of effective marketing activities in creating,

communicating, and delivering value to consumers [5]. Thus, a company's success in increasing sales will have a direct impact on increasing revenue. However, increasing sales alone is not enough to guarantee high net income. Companies must also pay attention to gross profit, which is obtained from the difference between net sales and the cost of goods sold (COGS). Gross profit is an important indicator for assessing a company's efficiency in managing production and operational costs. According to Harahap (2018), gross profit shows a company's ability to generate initial profits before deducting other operational costs. High gross profit will strengthen the company's financial position and open up opportunities to increase net profit [6].

Net income, or net profit, is the ultimate goal of a company's business activities. Net income is obtained after deducting all costs, including operational expenses, interest expenses, and taxes. According to Brigham and Houston (2019), net profit reflects a company's ability to generate profits that can be distributed to shareholders or reinvested for company growth [7]. Therefore, the relationship between sales, gross profit, and net income is causal: sales increase gross profit, while well-managed gross profit will contribute to increased net income.

Furthermore, market conditions, pricing strategies, and production cost efficiency also influence the relationship between sales, gross profit, and net income. Companies that are able to increase sales volume while maintaining production cost efficiency will achieve greater gross profit, which ultimately has a positive impact on net income. According to Subramanyam (2014), analyzing the relationship between income statement items can provide a more comprehensive picture of a company's financial performance.

Therefore, it can be concluded that sales and gross profit are sources of income that significantly influence net income. Studying this relationship is important for understanding a company's strategy to increase profitability and create added value for shareholders.

II.   LITERATURE REVIEW

A.   Sales
1.   Concept and Definition of Sales

Sales is an exchange process that generates revenue for a company through the delivery of products/services to customers in exchange for value (money or cash equivalents). From a marketing management perspective, sales are the end result of efforts to create, communicate, and deliver value to the target market [9]. Stanton et al. (1994) view sales as part of the marketing mix that focuses on influencing potential buyers to make purchases through a combination of promotion, price, and service [10]. Similarly, Johnston & Marshall (2016) emphasize the role of personal selling and sales force management as the main levers for achieving sales targets and customer loyalty [11].

2.   Difference between Sales vs. Marketing

Marketing is oriented towards creating long-term value and relationships with customers, while sales is oriented towards converting transactions that are measurable in the short term [12]. However, the two complement each other: a good marketing strategy increases the chances of conversion, while feedback from sales activities enriches marketing decisions [13].

3.   Sales Determinants

a.   Marketing Mix (4Ps/7Ps):
1)   Product: Quality, features, and differentiation influence perceived benefits and conversion rates.
2)   Price: Determines perceived value and demand elasticity; discount/promotion strategies directly impact sales volume.
3)   Place/Distribution: Availability and ease of access (coverage, lead time, stock) impact sales, particularly in retail.
4)   Promotion/Communication: Advertising, sales promotions, and digital marketing increase awareness and purchase intention (Belch & Belch, 2018). In the service context (7Ps), people, process, and physical evidence increase satisfaction and encourage repeat purchases (Lovelock & Wirtz, 2016).
b.   Sales Force Capabilities and Control Systems:
Sales performance is influenced by the sales manager's competency, motivation, compensation, and leadership style. Outcome-based vs. non-result-based control systems Behavior-based selling impacts sales performance and ethics (Anderson & Oliver, 1987; Baldauf, Cravens, & Piercy, 2001).
c.   Customer Relationships and Trust (Relationship Selling):
Trust and commitment strengthen long-term relationships, reduce price sensitivity, and increase repeat sales (Weitz & Bradford, 1999).
d.   External Factors:

Economic cycles, competitive intensity, regulations, and technological dynamics influence market demand and sales achievement (Kotler & Keller, 2016).

4. Sales Strategy

a. Personal Selling & Consultative Selling:

A consultative approach that maps customer needs, proposes solutions, and creates shared value; proven to increase closing rates in B2B (Johnston & Marshall, 2016).

b. Sales Promotion & Trade Marketing:

Price promotions, bundling, retail displays, and channel incentives accelerate short-term volume but need to be managed to avoid eroding margins (Ailawadi et al., 2009).

c. Omnichannel & Digital Transformation:

Integrating physical and digital channels (stores, marketplaces, apps, social media) expands reach, increases convenience, and drives cross-channel sales (Brynjolfsson, Hu, & Rahman, 2013). The implementation of CRM and analytics (lead scoring, propensity modeling) optimizes the pipeline and prospect prioritization (Kumar et al., 2013).

d. Value-Based Pricing:

Sustainable selling is more effective when prices are based on customer-perceived value, not simply cost or competitors, as it reduces price wars and increases gross margins (Kotler & Keller, 2016).

B. Gross Profit

1. Concept and Definition of Gross Profit

Gross profit is the difference between net sales and the cost of goods sold (COGS). Gross profit represents a company's initial profit before deducting operating expenses, interest expenses, and taxes. According to Subramanyam (2014), gross profit is a measure of production efficiency and a company's ability to control direct costs associated with the goods or services sold.

Brigham and Houston (2019) emphasize that gross profit is an important indicator for investors and creditors in assessing a company's profitability prospects. Consistent gross profit indicates a company has a sound pricing strategy and cost structure.

2. Function and Importance of Gross Profit

Gross profit has several important functions in financial analysis:

a. Measuring Production Efficiency and Cost Control. High gross profit indicates a company's ability to manage production costs effectively (Harahap, 2018).

b. Basis for Calculating Gross Profit Margin. This ratio is used to assess profitability relative to sales (Kieso, Weygandt, & Warfield, 2018).

c. Pricing Strategy Indicators. Low gross profit can signal pricing problems or high production costs (Penman, 2013).

d. Net Profit Performance Prediction Tool. Changes in gross profit are often an early indicator of fluctuations in a company's net profit (Lev & Thiagarajan, 1993).

3. Factors Influencing Gross Profit

a. Product Selling Price. Pricing strategy directly influences gross profit levels (Kotler & Keller, 2016).

b. Production Costs. Efficiency in raw material purchasing, inventory management, and production processes plays a crucial role (Subramanyam, 2014).

c. Sales Volume. The higher the volume, the greater the likelihood of achieving economies of scale, thereby increasing gross profit (Horngren et al., 2014).

d. Market Conditions and Competition. Price competition can depress gross profit margins (Porter, 2008).

4. Gross Profit in Company Performance Analysis

Gross profit is used in various analytical approaches:

a. Gross Profit Margin Analysis: Assesses a company's ability to generate gross profit from each rupiah of sales.

b. Common Size Analysis: Gross profit as a percentage of sales is used for comparisons between companies or between periods.

c. Predictive Value: Empirical research (Lev & Thiagarajan, 1993) shows that gross profit has significant information content in predicting future earnings and stock prices.

C. Net Income

1. Concept and Definition of Net Income

Net income is the profit earned by a company after deducting all expenses, including cost of goods sold, operating expenses, interest, and taxes. Net income is the primary measure of a company's profitability and the basis for assessing its financial performance. According to Brigham and Houston (2019), net income is an important indicator

for investors and creditors because it reflects a company's ability to generate profits that can be used for dividend payments or reinvestment.

According to Kieso, Weygandt, and Warfield (2018), net income is "the excess of revenues over expenses," that is, the difference between revenues and all expenses in a period. This net income is reported in the income statement as the final result of operating, financing, and non-operating activities.

2.   Function and Importance of Net Income

a.   Financial Performance Indicator. Net profit is a measure of management's success in managing company resources (Harahap, 2018).

b.   Basis for Determining Dividends. Net income determines a company's ability to distribute profits to shareholders (Brigham & Houston, 2019).

c.   Investment Consideration. Investors use net income as a benchmark in assessing stock prospects and valuations (Penman, 2013).

d.   Profitability Analysis Tool. Ratios such as Net Profit Margin (NPM) use net income as a primary component (Subramanyam, 2014).

3.   Factors Affecting Net Income

a.   Sales Revenue. The higher the net sales, the greater the company's chance of earning net profit.

b.   Operating Expenses. Efficient administration, marketing, and general expenses will increase net income (Horngren, Datar, & Rajan, 2014).

c.   Interest Expenses. A company's leverage level affects the amount of interest expense and available net income.

d.   Taxes. Tax policies can affect reported net income (Kieso et al., 2018).

e.   External Factors. Macroeconomic conditions, inflation rates, and industry regulations also influence net income (Porter, 2008).

4.   Net Income in Company Performance Analysis

Net income is used in various forms of analysis:

a.   Profitability Analysis. The Net Profit Margin (NPM) ratio = Net Income / Net Sales indicates a company's efficiency in generating profit from sales.

b.   Return Analysis. Net income is a key component in calculating Return on Equity (ROE) and Return on Assets (ROA).

c.   Fundamental Stock Analysis. Investors use net income in calculating Earnings per Share (EPS) to assess the fair value of a stock (Penman, 2013).

D.   Conceptual Framework

Based on the previous description and literature review, the related variables in this study can be formulated into a conceptual framework as follows:
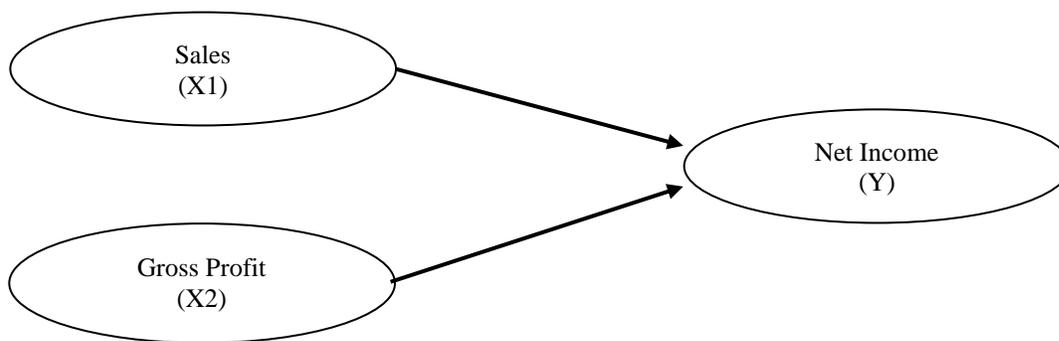

Pig. 1. Conceptual framework

According to the picture above, it can be described that Sales and Gross Profit can affect Net Income.

III.   RESEARCH METHOD

A.   Research Design

The research design is explanatory research with quantitative methods. Quantitative research is a type of research that focuses on collecting numerical data and statistical analysis to explain phenomena, identify patterns, or

test relationships between specific variables. This approach involves testing hypotheses and using instruments such as surveys, tests, or experimental measurements to collect data that can be analyzed mathematically [14].

B.   Object of research

The objects of this research are Astra Group companies that have been listed on the Indonesia Stock Exchange for 5 (five) years, namely: Astra International (ASII), United Tractors (UNTR), Astra Agro Lestari (AALI), Astra Graphia (ASGR), Acset Indonusa (ACST), Astra Autoparts (AUTO). This research uses secondary data taken from the Company's quarterly financial reports from the first quarter of 2021 to the second quarter of 2025 (108 Quarters).

C.   Data analysis technique

To solve the main problems faced in this research, an analytical method is used, namely descriptive analysis, namely an analysis that describes the results of secondary data. This study uses an analytical tool, namely SPPS version 29 software.

IV.   RESULT

A.   Classic assumption test

Heteroscedasticity is a classic requirement in linear regression analysis which must not occur which means that the residual variance must be the same. By using the SPSS version 29 program package, heteroscedasticity symptoms can be detected through the dependent variable scatterplot graph as follows:
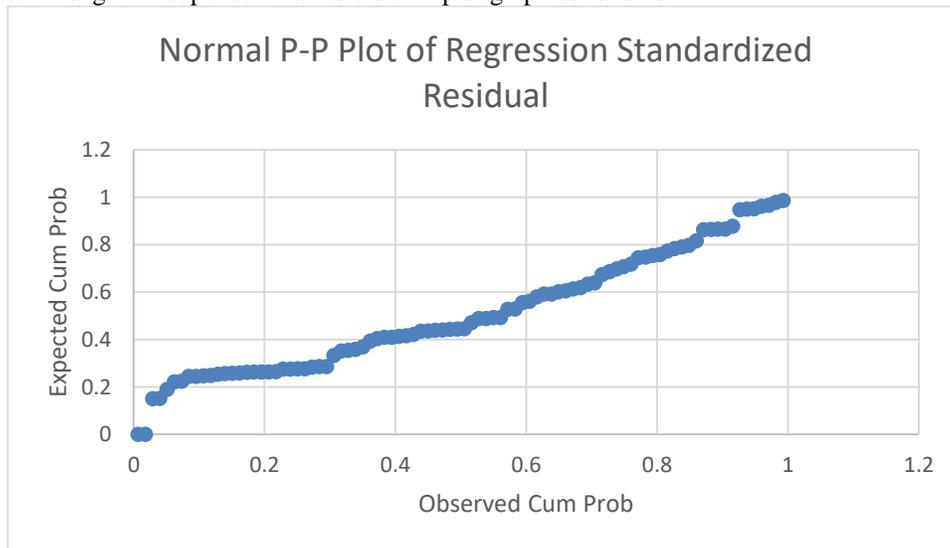
Graph 1. Dependent Variable Scatterplot

The graph in the graph above shows the points spread randomly and do not form a certain pattern, besides that they are spread above and below the number 0 on the Y axis. Thus, it does not show symptoms of heteroscedasticity in the regression model.

B.   Multiple Regression Test

Based on the results of multiple regression analysis using SPSS version 29, it shows that there is a relationship and variation in the direction of the relationship between the independent variable and the independent variable. The influence and direction of the relationship can be shown in the following table:

Table 1. Effect of the Independent Variable (X) on the dependent variable (Y).

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	494789.107	116853.176	
	Sales	-.149	.014	-1.351
	Gross Profit	1.107	.060	2.333

a. Dependent Variable: Net Income

Based on the results of the regression analysis in the table above, it shows that the Sales variable has a negative effect on Net Income and Gross Profit shows a positive effect on Net Income. From the results of the analysis, the regression equation is compiled as follows:

Y = 494789.107– 0.149X1 + 1.107X2

From the results of the multiple regression equation, it can be interpreted as follows:
1.   Constant (a)
This means that if the Sales and Gross Profit have a value of 0 (zero), then the net income is 494789.107.
2.   The Effect of Sales on Net Income
The leverage coefficient value for the Sales is -0.149 and the negative sign means that the Sales has a non-unidirectional relationship with the Net Income. Every increase of one unit of the Sales, the Net Income will decrease by 0.149 and every decrease of one unit of the Sales, the net income will increase by 0.149.
3.   The Effect of Gross Profit on Net Income
The leverage coefficient value for the gross profit is 1.107 and a positive sign means that the gross profit has a unidirectional relationship with the net income. Every increase of one unit of the gross profit, the net income will increase by 1.107 and every decrease of one unit of the Gross Profit, the Net Income will decrease by 1.107.

C.   Simultaneous Testing (F Test)
The f test is used to determine the effect of the variables simultaneously, namely communication and motivation and work discipline simultaneously affecting employee performance. The test is done by comparing the value of Fcount and Ftable. If the value of Fcount is greater than Ftable, it has a significant effect on the dependent variable. The results of the f test calculations can be seen in the following table:

Table 2 Calculation Results of f . Test

ANOVAᵃ

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6490358619166528.000	2	3245179309583264.000	4042.847	<.001ᵇ
	Residual	69834591607866.734	87	802696455262.836		
	Total	6560193210774395.000	89			

a. Dependent Variable: Net Income
b. Predictors: (Constant), Gross Profit, Sales

Source: Processed data (2025)

Based on table 2, it can be seen that the results of statistical calculations show the value of Fcount = 4042.847 > Ftable = 4.53 using a significance limit of 0.05, so from the table above, a significance value of less than 0.05 is obtained, it can be concluded that Sales and Gross Profit have a joint effect on Net Income.

D.   T Test (Partial Test)
The t-test is used to determine whether the independent variable partially has a significant effect on the dependent variable. The degree of significance used is 0.05. If the significant value is less than the degree of confidence, then we accept the alternative hypothesis, which states that an independent variable partially affects dependent variable. T-test analysis is also seen from the table as follows:

Table 3. The Effect of Partial Independent Variables on the Dependent Variable.

Coefficientsᵃ

Model		t	Sig.
1	(Constant)	4.234	.001

	Sales	-10.679	.001
	Gross Profit	18.446	.001

a. Dependent Variable: PBV

Source: Processed data (2023)

1.   The Partial Effect of Sales on Net Income
From table 3 it can be concluded that the Price Earnings Ratio (PER) has a t count of -10.679 with t table = 1,659. So t count < t table with a significance value of 0.017 which means it is smaller than 0.05, so it can be concluded that the sales has a not significant effect on net income..

2.   The Partial Effect of Gross Profit on Net Income
From table 3 it can be concluded that regional working capital has a t count of 18.446 with t table = 1.659. So t count > t table with a significance value of 0.001 which means it is smaller than 0.05, then it can be concluded that Gross Profit has significant Net Income.

E.   Coefficient of determination test (R²)
The coefficient of determination is used to find out how big the relationship of several variables is in a clearer sense. The coefficient of determination will explain how much change or variation in a variable can be explained by changes or variations in other variables (Santosa & Ashari, 2005). The value of this coefficient is between 0 and 1, if the result is closer to 0 it means the ability of the independent variables to explain the variation of the variable is very limited. But if the result is close to 1, it means that the independent variables provide almost all the information needed to predict the variation of the dependent variable. For analysis using SPSS output can be seen in the table "Model Summary" as follows:

Table 4. The effect of the independent variable on the dependent variable
Model Summaryb

Model	R	R Square	Adjusted R Square
1	.995[a]	.989	.989

Based on Table 4. it can be concluded that the Sales and Gross Profit have an effect of 98,9% on Net Income, while 1,1% is influenced by other variables not examined. Because the value of R Square is above 5%, it can be concluded that the ability of the independent variable in explaining the dependent variation is very good.

V.   DISCUSSION

Sales has a negative but insignificant effect on net income. This means that sales cannot significantly increase net income. This is in line with research conducted by Wahyuni (2023), which found that sales showed a t-test result smaller than the t-table with a probability value of 0.0000. This means that the sales variable has a negative and insignificant effect on net income. Gross profit has a positive and significant effect on net income. This means that gross profit can increase a company's net income. This research is in line with research conducted by Sari (2022), which showed that the effect of gross profit on net income is positive and significant.

VI.   CONCLUSION

Based on the results of research and discussion in this study, it can be concluded that:
1.   Sales have a negative but insignificant effect on net income at Astra Group companies listed on the Indonesia Stock Exchange (IDX).
2.   Gross profit has a positive and significant effect on net income at Astra Group companies listed on the Indonesia Stock Exchange (IDX).

REFERENCES

[1]   Brigham, E. F., & Houston, J. F. (2019). *Fundamentals of Financial Management* (15th ed.). Boston: Cengage Learning.

[2]   Fahmi, I. (2015). *Manajemen Kinerja: Teori dan Aplikasi*. Bandung: Alfabeta..

[3]   Harahap, S. S. (2018). *Analisis Kritis atas Laporan Keuangan*. Jakarta: PT RajaGrafindo Persada.

[4]   Kaplan, R. S., & Norton, D. P. (2004). *Strategy Maps: Converting Intangible Assets into Tangible Outcomes*. Boston: Harvard Business School Press.

[5]   Brigham, E. F., & Houston, J. F. (2019). *Fundamentals of Financial Management* (15th ed.). Boston: Cengage Learning.

[6]   Harahap, S. S. (2018). *Analisis Kritis atas Laporan Keuangan*. Jakarta: PT RajaGrafindo Persada.

[7]   Kotler, P., & Keller, K. L. (2016). *Marketing Management* (15th ed.). Pearson Education.

[8]   Subramanyam, K. R. (2014). *Financial Statement Analysis* (11th ed.). New York: McGraw-Hill Education.

[9]   R. J. Shiller, *Irrational Exuberance*. Princeton University Press, 2000.

[10]   N. Ikawidjaja, F. Rizal Zaenal, E. Rachim, and A. T. Akal, "THE EFFECT OF RETURN ON ASSET (ROA) AND RETURN ON EQUITY (ROE) ON PRICE BOOK VALUE (PBV) IN REGIONAL DEVELOPMENT BANKS LISTING ON THE INDONESIA STOCK EXCHANGE (IDX)," *American International Journal of Business Management*, vol. 6, p. 14, Sep. 2023, [Online]. Available: www.aijbm.com

[11]   S. H. Penman, *Financial Statement Analysis and Security Valuation*. McGraw-Hill, 2013.

[12]   E. F. , Brigham and J. F. Houston, *Fundamentals of Financial Management*. Cengage Learning, 2021.

[13]   S. A. , Ross, R. W. , Westerfield, and J. Jaffe, *Corporate Finance*. McGraw-Hill Education, 2022.

[14]   F. J. Fabozzi, *Financial Modeling of the Equity Market: From CAPM to Cointegration*. Wiley, 2021.

[15]   L. J. , Gitman and C. J. Zutter, *Principles of Managerial Finance*. Pearson Education., 2015.

[16]   J. C. , Van Horne and J. M. Wachowicz, *Fundamentals of Financial Management.* Pearson Education, 2008.

[17]   S. S. Harahap, *Analisis Kritis atas Laporan Keuangan*. Jakarta: PT RajaGrafindo Persada, 2018.

[18]   J. J. , Wild, K. R. , Subramanyam, and R. F. Halsey, *Financial Statement Analysis*. McGraw-Hill Education, 2020.

[19]   L. J. Gitman, *Principles of Managerial Finance (13th ed.)*. Pearson, 2009.

[20]   S. A. , Ross, R. , Westerfield, and B. D. Jordan, *Essentials of Corporate Finance (8th ed.)*. McGraw-Hill, 2013.

[21]   J. W. Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (4th ed.)*. Sage Publications, 2014.

[22]   I. Firdaus, "Pengaruh DER, PER dan ROA Terhadap PBV Pada Industri Perbankan," *Jurnal Ekonomi*, vol. 24, no. 2, p. 242, Sep. 2019, doi: 10.24912/je.v24i2.581.

[23]   A. Widyakto, R. R. Lulus, P. Nss, and I. Satya, "Effect of ROA, Growth and DER on Value Companies Study on Manufacturing Companies Listed on Indonesia Stock Exchange in 2017-2019," *Economics & Business Solutions Journal*, vol. 05, 2021.