

# **Effect of Earnings Per Share, Net Profit Margin, and Return on Assets on Price to Book Value in Food and Beverage Manufacturing Companies Listed on The Indonesia Stock Exchange**

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**Abstract:** The purpose of this study is to identify and analyze the effect of Earning Per Share (EPS), Net Profit Margin (NPM), and Return on Assets (ROA) on Price to Book Value (PBV) in Food and Beverage Manufacturing Companies Listed on the Stock Exchange. Indonesia in 2019-2021. The data used in this study is secondary data based on reports from the issuer Tri Banyan Tirta Tbk. (ALTO), Wilmar Cahaya Indonesia Tbk. (CEKA), Indofood CBP Sukses Makmur Tbk. (ICBP), Indofood Sukses Makmur Tbk. (INDF), Delta Djakarta Tbk. (DLTA), Multi Bintang Indonesia Tbk. (MLBI), Mayora Indah Tbk. (MYOR), Nippon Indosari Corpindo Tbk. (ROTI), Sekar Bumi Tbk. (SKBM), Sekar Laut Tbk. (SKLT), Siantar Top Tbk. (STTP), Ultrajaya Milk Industry Tbk. (ULTJ) Quarter I – Quarter IV 2019-2021 obtained from the publication of the Indonesia Stock Exchange (IDX). The method in this study used multiple linear regression analysis using SPSS 25 software. The results showed that partially Earning Per Share (EPS) had a negative but not significant effect, Net Profit Margin (NPM) had a positive but not significant effect on Price to Book Value (PBV). Meanwhile, Return on Assets (ROA) has a positive and significant influence on Price to Book Value (PBV). Simultaneously (together) Earning Per Share (EPS), Net Profit Margin (NPM), and Return on Assets (ROA) have a significant effect on Price to Book Value (PBV).

**Keywords:** EPS, NPM, ROA, PBV.

## **I. INTRODUCTION**

Capital market is a physical financial market for long-term funds. People are increasingly considering the stock market as an investment opportunity at present. This is evident by the increasing number of capital market activity.

Selling shares on the capital market to the general public is one method corporations use to meet their funding needs in order to remain competitive.

The capital market is an increasingly popular investment alternative that is useful for channeling funds to various productive sectors in order to increase the added value of the funds owned.

However, investors must consider a number of factors before deciding to invest in the capital market, as there is no such thing as a risk-free investment in terms of investing. A manufacturing company is a commercial entity that runs machinery, equipment, and workers in a process medium to convert raw materials into saleable finished goods. Food and beverage subsector manufacturing firms are one of the sectors within the Manufacturing Sector. Compared to other industries, manufacturing companies in the food and beverage subsector have greater future possibilities.

Indeed, the food and beverage industry sector is the most desirable, as all humans require food and drink to survive, ensuring that the sector will continue to develop in accordance with human demands.

The purpose of the business is to maximize the wealth of shareholders or firm owners. This normative objective can be achieved through maximizing the firm's market worth (Abidin, 2018). Price to Book Value is one method for calculating the intrinsic worth of a stock (real value) (PBV). The price per book value (PBV) ratio is the relationship between the market price of a stock and its per-share book value. PBV is an indicator for evaluating the health of companies that go public on the Indonesia Stock Exchange, particularly food and beverage manufacturing enterprises. According to the Indonesian Institute of Accountants (2007), A company's financial performance is its capacity to manage and govern its resources. The financial performance of a firm is also a formal effort made by the company to examine the efficiency and effectiveness of the company's activities over a specific time period. It is

essential for management, shareholders, the government, and all other parties having a stake in the distribution of wealth inside the organization to analyze its financial success. Using financial ratios, one may measure a company's financial performance. There are four different sorts of financial ratios: liquidity ratios, activity ratios, solvency ratios, and profitability ratios. In financial management, study of profitability ratios is one method for evaluating the efficacy of a company's financial performance. Profitability analysis is required to evaluate a company's business output. According to Munawir (2010) The profitability ratio demonstrates the company's ability to earn profits over a specific time period. This ratio provides an insight of the company's managerial efficiency. Profitability is sometimes determined in a business by comparing operational capital to earnings. Investors can use a company's profitability to measure the capital invested by the company.

The ratios used in this study include profitability ratios and market ratios. The market ratio to be used is Price to Book Value (PBV), while the profitability ratio to be used is Earnings per Share (EPS), Net Profit Margin (NPM) and Return on Assets (ROA). One type of market ratio that is often associated with stock prices is the Price to Book Value (PBV), which is the ratio between the stock price and its book value. The higher the PBV value, the higher the company is valued by investors compared to the funds invested in the company (F. Poernamawatie, 2008). The lower an equity's Price to Book Value (PBV) ratio, the lower its price, and vice versa. With the Price to Book Value (PBV) ratio, investors will be able to determine instantly how many times the market value of a stock has surpassed its book value. The PBV ratio can offer an indication of the potential for share movement, which indicates that the PBV ratio provides for the share price. Profits per Share (EPS) is a ratio that is studied by many potential investors, since EPS information is regarded the most basic information and may indicate a company's future earnings possibilities. Typically, firm management, ordinary shareholders, and potential shareholders are interested in Earnings per Share, since it reflects the amount of rupiah earned per common share (Syamsuddin, 2007). Net Profit Margin (NPM) is the ratio between net profit (net profit), which is after deducting all expenses including taxes compared to sales (Syamsuddin, 2007). The higher the Net Profit Margin, the higher the efficiency, so this variable is an important factor to consider. According to Mardiyanto (2009), Return on Assets (ROA) is the ratio used to measure a company's ability to generate profits because this ratio represents the return on company activities. According to Hery (2014), The greater the return on assets, the greater the net profit made per rupiah of money invested in total assets. Conversely, the lower the return on assets, the less the net profit gained from each rupiah of money invested in total assets.

## **II. LITERATURE REVIEW**

### **A. Earnings per Share (EPS)**

Investors demand per-share returns in the form of profits while investing. Earnings per Share is the amount of rupiah received for each share. Consequently, firm management, existing shareholders, and potential shareholders are interested in this ratio as a measure of a company's performance (Muchtari, 2021). According to another perspective, Earnings per Share is a ratio that displays the amount of profit an investor has relative to the number of shares he holds. The investor will get a share of the company's net earnings after taxes (Asnawi and Wijaya, 2015).

### **B. Net Profit Margin (NPM)**

The net profit margin (NPM) is a monitoring statistic for profitability. NPM measures the operational profit produced per rupiah of revenue. Kasmir (2014) The NPM is obtained by comparing operational profit to sales, as explained. The bigger the value of this ratio, the more interested investors will be in investing in a company as its profitability increases. The Net Profit Margin (NPM) demonstrates a business's ability to generate profits, according to Fahmi (2012). Ryan (2016) (2016) The Net Profit Margin is the relationship between net profit and sales. The higher the NPM, the more productive the company's performance will be, which will increase investor confidence. According to Hery (2015), Net Profit Margin is the ratio used to measure a company's degree of efficiency, i.e., the extent to which a business is able to reduce its operational expenditures over a certain period of time. This ratio is beneficial since the company's power to earn profits via sales is quite high, and its capability to reduce expenditures is also rather strong. According to Jumingan (2014), the Net Profit Margin may be determined by comparing operating profit to revenue. The bigger the value of this ratio, the more interested investors will be in investing in a company as its profitability increases.

### **C. Return on Asset (ROA)**

Return On Assets (ROA) indicates the capacity of invested capital to generate profits for investors. Return On Assets (ROA) is calculated by dividing net income after taxes by total assets. When analyzing the success of a company, potential investors often analyze its net profit. If the net income number is positive, potential investors will see the level of profit for the company's shareholders as favorable. According to Irham Fahmi (2013), Return on

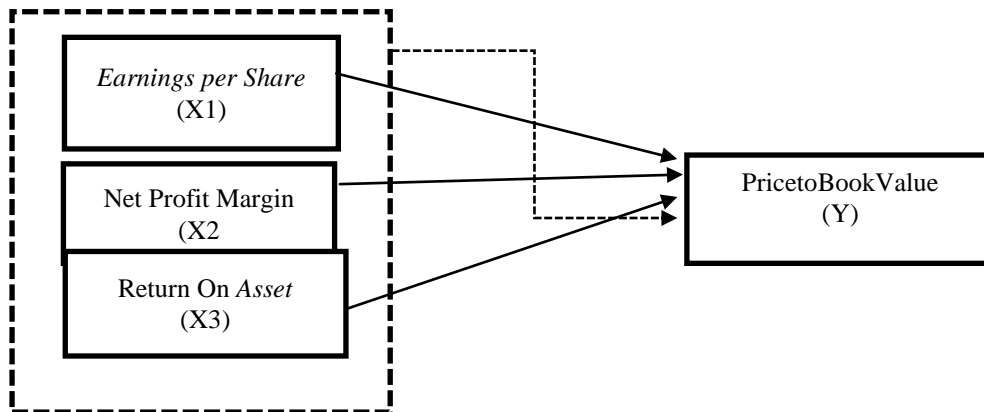
Assets (ROA) quantifies the extent to which investments may generate expected returns. And the investment is equivalent to the funds deposited or invested by the firm. Every organization strives for a high ROA. As ROA increases, so does a company's profitability (Arista, 2012). This boosts investor interest in acquiring business shares, causes a rise in stock prices, and is followed by a high stock return rate. (Gd GilangGunadi and I Ketut Wijaya Kesuma, 2015). Return on Assets (ROA) is the ratio used to calculate the net profit earned via the use of assets. In other words, the higher this ratio, the higher the asset's ability to generate net profit. This will enhance the company's attractiveness to investors even more. Return on Assets is used to determine whether management has gotten enough remuneration based on the assets it already has. This ratio is particularly helpful for determining how efficiently a corporation has used its finances (Ahmad, et. al., 2022).

**D. Price Book Value (PBV)**

Price to Book Value (PBV) or market to book value, according to Brigham and Houston (2013), is a market estimate of a company's price compared to its book value. Investors will choose companies with low risk and fast growth rates, and companies with these characteristics will have a high market-to-book ratio. According to Bragg (2002), book value per share is an investor's evaluation and investigation into whether the market price of a firm exceeds or falls below its book value. Higher market prices indicate that investors have put a greater value on a company due to its management, products, patents, or other favorable characteristics. Price to Book Value, per Tandelilin (2017), is an illustration of the relationship between the stock market price and the book value per share that may be used to determine the book value of shares in scenarios where the market value of a stock must equal its book value.

**E. 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:



Gambar 1. Conceptual framework

According to the picture above, it can be described earning per share (EPS), Net Profit Margin (NPM), and Return on Asset (ROA) can effect on price to book value (PBV).

**F. RESEARCH METHOD**

**A. Research Design**

The study design is explanatory research using quantitative methodologies, i.e. a methodology that heavily relies on statistics, beginning with the collection of data, interpretation of the data acquired, and presentation of the conclusions (Arikunto, 2006). The data used are secondary data collected from the yearly financial reports of Indonesia Stock Exchange-listed industrial enterprises. Earnings per Share, Net Profit Margin, Return on Assets, and Price to Book Value are required metrics. The information was collected from the official website, [www.idx.co.id](http://www.idx.co.id).

**B. Object of Research**

This study utilizes the population of all IDX-listed manufacturing enterprises from 2019 to 2021. Indonesian public firms may be described by the situation of the manufacturing industry, which has the most issuers and the most diversified industries.

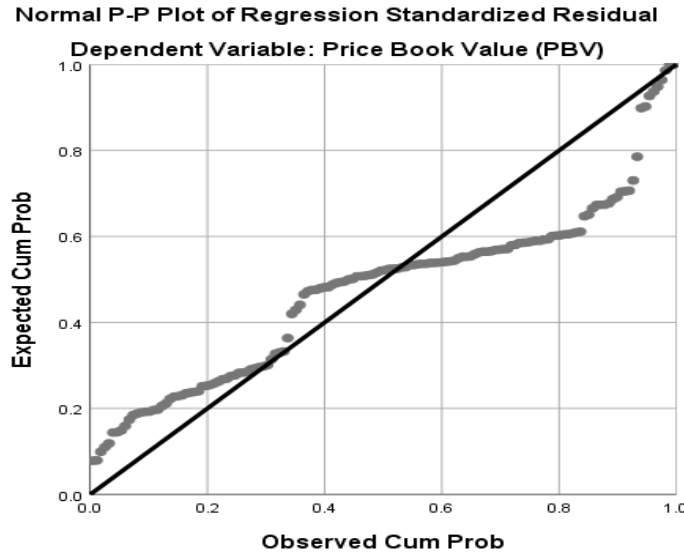
**C. Data analysis technique**

Descriptive analysis, which summarizes the outcomes of secondary data analysis, is utilized to tackle the primary challenges encountered in this study. This research use SPSS version 25 software as an analytical tool.

**G. 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 25 program package, heteroscedasticity symptoms can be detected through the dependent variable scatterplot graph as follows:



Graph 1. Dependent Variable Scatterplot

The dots in the graph above are distributed arbitrarily and do not create a pattern, except that they are distributed above and below 0 on the Y axis. Consequently, it does not exhibit heteroscedasticity in the regression model.

**B. Multiple Regression Test**

Multiple regression analysis using SPSS version 25 indicates that there is a link between the independent variable and the dependent variable, as well as variance in the direction of that relationship. The impact and direction of the association are shown in the table below:

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

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	-.966	1.042	
	Earnings Per Share (EPS)	-.002	.004	-.038
	Net Profit Margin (NPM)	1.742	10.399	.020
	Return on Asset (ROA)	.580	.129	.533

Source: Output SPSS 25, 2022

Based on table 1 coefficients, the regression equation is obtained as follows:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

$$Y = -0.966 + (-0.002)X_1 + 1.742 X_2 + 0.580 X_3 + e$$

From the above equation can be interpreted as follows:

1. Constant Value (a)  
The constant value is -0.966, meaning that if the Earnings per Share (EPS), Net Profit Margin (NPM) and Return on Assets (ROA) variables on Price to Book Value (PBV) are fixed or 0 (zero), then Price to Book Value (PBV) is -0.966.
2. Earnings per Share (EPS) X1

The X1 regression coefficient ( $\beta_1$ ) is -0.002, meaning that if the Earnings per Share (EPS) variable increases by one unit, the Price to Book Value (PBV) will decrease by 0.002 or if the Earnings per Share (EPS) variable decreases by one unit, the Price to Book Value (PBV) will increase by 0.002.

3. Net Profit Margin (NPM) X2

The X1 regression coefficient ( $\beta_1$ ) is 1,742 meaning that if the Net Profit Margin (NPM) variable increases by one unit, the Price to Book Value (PBV) will increase by 1,742. if the Net Profit Margin (NPM) variable decreases by one unit, the Price to Book Value (PBV) will decrease by 1,742.

4. Return on Assets (ROA) X3

The regression coefficient X1 ( $\beta_1$ ) is 0.580, meaning that if the Return on Assets (ROA) variable increases by one unit, the Price to Book Value (PBV) will increase by 0.580 or if the Return on Assets (ROA) variable decreases by one unit, the Price to Book Value (PBV) will decrease by 0.580.

**C. Simultaneous Testing (F Test)**

The f test is used to measure the influence of the factors concurrently influencing employee performance, notably communication, motivation, and work discipline. The test is conducted by comparing Fcount and Ftable. If Fcount is more than Ftable, the variable has a considerable impact on the dependent variable. The outcomes of the f test computations are shown in the table below:

**Table 2 Calculation Results of f test**

ANOVA<sup>a</sup>

Model		F	Sig.
1	Regression	19,241 <sup>25</sup>	.000 <sup>b</sup>
	Residual		
	Total		

Sumber: Output SPSS 25 data diolah, 2022

From table 2 ANOVA, the Fcount value is 19,241 with a Ftable of 2.67. Thus Fcount 19,241 > Ftable value 2.67 and a significant level of 0.000 so that sig has a value of 0.000 < 0.05 then the variables Earnings per Share (EPS) (X1), Net Profit Margin (NPM) (X2) and Return on Assets (ROA) (X3) has a positive effect simultaneously on Price to Book Value (PBV) (Y).

**D. T Test (Partial Test)**

The t-test is used to examine whether the independent variable has a substantial impact on the dependent variable. The significance level utilized is 0.05. If the significant value is smaller than the confidence level, we adopt the alternative hypothesis, which argues that an independent variable has a partial effect on the dependent variable. T-test analysis may also be seen in the table below:

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

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.966	1.042		-.927	.356
	Earnings per Share (EPS)	-.002	.004	-.038	-.510	.611
	Net Profit Margin (NPM)	1.742	10.399	.020	.168	.867
	Return on Asset (ROA)	.580	.129	.533	4.484	.000

a. Dependent Variable: Price to Book Value (PBV)

Source: SPSS output 25 data processed, 2022

In table 3 the coefficient can be seen that the results of partial hypothesis testing (t test) can be explained as follows:

1. Variable Earnings per Share (EPS) (X1), obtained tcount -0.510 < ttable 1.976, namely tcount is smaller than ttable. Meanwhile, the sig value is 0.611 which is greater than the probability, which is 0.05 or 0.611 > 0.05. So it can be concluded that the independent variable Earnings per Share (EPS) has no significant effect on Price to Book Value (PBV).
2. Variable Net Profit Margin (X2), obtained a tcount value of 0.168 < ttable 1,976, which is tcount smaller than ttable. Meanwhile, the sig value of 0.867 is greater than the probability, which is 0.05 or 0.867 >

0.05. So it can be concluded that the independent variable Net Profit Margin (NPM) has no significant effect on Price to Book Value (PBV).

3. The variable Return on Assets (ROA) (X3), obtained a tcount of 4,484 > ttable of 1,976, which is tcount greater than ttable. While sig has a value of 0.000 which is smaller than probability, which is 0.05 or 0.000 < 0.05. So it can be concluded that the independent variable Return on Assets (ROA) has a significant effect on Price to Book Value (PBV).

**E. Coefficient of determination test (R<sup>2</sup>)**

The coefficient of determination is used to determine the strength of the association between several variables. The coefficient of determination describes the amount of change or variation in a variable that may be explained by changes or variations in other variables (Santosa & Ashari, 2005). This coefficient has a value between 0 and 1, and a value closer to 0 indicates that the capacity of the independent variables to explain the variance of the dependent variable is relatively restricted. If the result is close to 1, however, it indicates that the independent variables supply almost all of the information necessary to forecast the variation of the dependent variable. For analysis using SPSS, the "Model Summary" table displays the results:

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

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.540 <sup>a</sup>	.292	.277	7.40801

a. Predictor: Constant, ROA, EPS, NPM

b. Dependent Variable: PBV

Source: SPSS output 25 data processed, 2022

Based on Table 4 of the Summary Model, it is known that the coefficient of determination (R<sup>2</sup>) is 0.292 (29.2%). This figure indicates that the independent variables namely Earnings per Share (EPS) (X1), Net Profit Margin (NPM) (X2) and Return on Assets (ROA) (X3) explain the dependent variable Price to Book Value (PBV) (Y) of 29.2% while the remaining 70.8% is explained by other factors outside this model.

**III. DISCUSSION**

According to the findings of multiple linear regression with a negative sign, X1 has a negative influence, but this is not statistically significant since tcount is less than ttable and sig = 0.611 is bigger than 0.05, therefore the conclusion is not statistically significant. Thus, it can be stated that Earnings per Share (EPS) has a negative but not statistically significant influence on Price to Book Value. The findings of this research reveal that Earnings per Share (EPS), at a high or low degree of business risk, is a problem for a firm in which Earnings per Share (EPS) outcomes influence the Price to Book Value (PBV), regardless of whether it is costly, inexpensive, or weak. According to the author's study on a food and beverage subsector manufacturing business listed on the Indonesia Stock Exchange, Earnings per Share has a negative but insignificant influence on Price to Book Value (PBV). This study's findings mirror those of Hartini's (2017) study, which concluded that Earnings per Share had a negative impact on Price to Book Value (PBV).

The findings for X2 have a positive impact (according to multiple linear regression with a positive sign), but they are not statistically significant since tcount is less than ttable and sig = 0.867 is more than 0.05, thus the conclusion is not statistically significant. Consequently, it can be inferred that the independent variable Net Profit Margin (NPM) has a positive but not statistically significant influence on Price to Book Value (PBV). According to the findings of this research, the Net profit margin (NPM) of food and beverage subsector manufacturing businesses listed on the Indonesia Stock Exchange has a favorable but insignificant influence on Price to Book Value (PBV). This study's findings concur with Idha Ayu Apsari, Dwiatmanto, and Devi Farah Azizah's (2015) assertion that Net Profit Margin (NPM) has a beneficial influence on PBV. Profits may be enhanced through increasing sales volume and pricing, as well as by decreasing expenses.

The results for X3 have a positive effect (according to the results of multiple linear regression with a positive sign), but they are not statistically significant because the tcount is greater than the ttable value. However, the conclusion is statistically significant because sig = 0.000 is less than 0.05. Thus, it can be stated that Return on

Assets (ROA) has a positive and statistically significant influence on Price to Book Value (PBV). The findings of this study indicate that the Return on Assets (ROA) in each food and beverage sub-sector manufacturing company listed on the Indonesia Stock Exchange utilizes its assets to generate profits, with the results of Return on Assets (ROA) influencing the Price to Book Value (PBV) as expensive, inexpensive, or weak. These findings are consistent with Fandy Setiawan's (2019) assertion that Return on Assets (ROA) has a beneficial influence on stock prices. Therefore, the Return on Assets (ROA) impacts the Price to Book Value (PBV) regardless of whether the stock price is costly or inexpensive.

#### IV. CONCLUSION

Based on the objectives in this study, namely to determine Earnings per Share (EPS), Net Profit Margin (NPM), and Return on Assets (ROA) affect Price to Book Value (PBV), in food and beverage sub-sector manufacturing companies listed in Indonesia stock exchange. From the research results that have been obtained, it can be concluded as follows:

1. The Earnings per Share (EPS) variable partially has a negative but not significant effect on Price to Book Value (PBV) in food and beverage sub-sector manufacturing companies listed on the Indonesia Stock Exchange. This proves that the first hypothesis in this study cannot be accepted.
2. The variable Net Profit Margin (NPM) partially has a positive but not significant effect on Price to Book Value (PBV) in food and beverage sub-sector manufacturing companies listed on the Indonesia Stock Exchange. This proves that the second hypothesis in this study is accepted.
3. The variable Return on Assets (ROA) partially has a positive and significant effect on Price to Book Value (PBV) in food and beverage sub-sector manufacturing companies listed on the Indonesia Stock Exchange. This proves that the third hypothesis in this study can be accepted.

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