

AN ANALYSIS OF FINANCIAL PERFORMANCE AND BANKRUPTCY PREDICTION: CASE STUDY OF PT INDOFOOD SUKSES MAKMUR TBK BASED ON 2015-2019

Wiwiek Mardawiyah Daryanto
Jessika Ina Putri Ginting
Salsabila Aathirah Boekoesoe

ABSTRACT

Investment is one of the financial tools used to earn additional capital for a company. Financial performance affects the stock price of PT Indofood Sukses Makmur Tbk which was a successful Initial Public Offering (IPO) company. PT Indofood Sukses Makmur Tbk is an established Indonesian company that operates mainly in the food industry. The aim is to determine financial health as a guide for investors in making investment decisions. The population in this study is financial statements at PT Indofood Sukses Makmur Tbk from 2015-2019. The financial ratios used in this research are based on the Decree of the Minister of BUMN No: KEP-100/MBU/2002. Other financial ratios provided are Price to Earnings Ratio (PER), Price to Book Value (PBV), and Earnings per Share (EPS) to further comprehend PT Indofood Sukses Makmur Tbk financial situation. Aside from these, Altman Z-Score will also be used to screen the bankruptcy risk of a company. The average result of Altman Z-Score (2.575) showed that the company is in a financial 'caution' zone. Based on this research, PT Indofood Sukses Makmur Tbk (INDF) is financially healthy according to the Decree of the Minister of BUMN.

Keywords: Financial Ratio, Bankruptcy Analysis, Decree of the Minister of BUMN, Altman Z-Score, PT Indofood Sukses Makmur Tbk.

INTRODUCTION

PT Indofood Sukses Makmur Tbk (INDF) is a consumer goods company that is primarily engaged in the food processing industry. The variety of businesses are classified into five segments such as consumer branded products, bogasari, agribusiness, distribution, vegetable cultivation, and processing. The company has operations in each stage of Indonesia's food manufacturing process: from the production of raw materials, it is processing to consumer and products on the retailer's shelf. The success of their selling product affects the speed to make a profit. The company grew into a business giant and became an IPO company on July 14, 1994.

Indofood is Indonesia's largest food processing company and the world's biggest producer of instant noodles. PT Indofood CBP Sukses Makmur Tbk is the company's subsidiary that handles consumer-branded goods (ICBP). Its products include dairy products, snacks, biscuits, food seasonings, beverages as well as nutritional and special foods. Bogasari's sector includes the production of wheat flour and pasta. The agribusiness segment includes oil palm cultivation and milling, cooking oils, margarine, and shortening manufacturing. The company's vegetable production and processing operations are handled by a subsidiary in China.

Financial performance is fundamental for a company to measure how well a company can utilize its resources (assets) to generate revenues. It also determines financial health between given periods. To analyze financial performance, the financial ratio is one of the tools that help to gain insightful information as it is derived from the company's financial statements. These ratios are also helpful to classify whether the company is in 'financial distress' or has a safe balance sheet.

Bankruptcy on the other hand refers to a company's inability to meet its obligation to the creditors. Through reviewing financial statements, the company is able to recognize the bankruptcy cause factors as soon as possible. This paper will also help to guide investors in making investment decisions according to PT Indofood Sukses Makmur Tbk financial health.

LITERATURE REVIEW

Financial Performance

The financial performance of a company derived from it is a financial statement. A financial statement is a summary of the accounting process that is used to report on the financial state and to convey financial data, derived from Munawir (2004:2). The results of financial statement analysis are a valuable source of knowledge on how the company performed in the previous period (Calotă & Vintilescu, 2013).

Financial Ratio Analysis

Financial ratios are commonly used to interpret data and, as a result, have developed into a bankruptcy prediction model. Financial ratios are a valuable metric that can be calculated from financial statements to explain the situation in the past, current, and future (Ahmad Khaliq et al, 2014). If the ratio's value is higher, the corporation is said to be stronger because it demonstrates its ability to satisfy short-term obligations (Fitriyah & Hariyati, 2013).

Bankruptcy

The term "bankruptcy" comes from a combination of the Latin terms *bancus* and *ruptus*, which mean "bench or table" and "broken," respectively. Bankruptcy is one of the biggest threats to companies and the result of the company's inability to honor its payments on time. One of the studies of bankruptcy is bankruptcy risk. It allowed the design of prediction models for economic theory and practical activity (Buzgurescu, O.L.P., and Elena, N, 2020).

METHODOLOGY

Decree of the Minister of BUMN

The Ministry of BUMN has its other ratios needing assessments to measure a company's financial health. These valuations are declared in the KEP-100/MBU/2002 regulation. This method uses Financial Ratio Analysis (FRA), as the result will be compared to its standard value. Written on the decree, considering the development of the business world in an increasingly open economic situation needs to be based on means and work appraisal systems that can encourage companies to improve efficiency and competitiveness.

The financial ratio analysis is divided into 4 groups: Profitability, Liquidity, Activity, and Solvency. Each group have a ratio variable that determines the result, ratios calculated are:

Profitability

According to the definition of profitability itself, it refers to the company's ability to generate profit during a certain period. This method uses Return on Investment (ROI) and Return on Equity to measure profitability. Return on Investment (ROI) measures the firm's efficiency in managing the invested capital. While Return on Equity (ROE) calculated the shareholder's rate of return on their investment in the company (Abel Majed & Majed Qabajeh, 2012). Prediction is one of the most critical aspects of economic decision-making; investors, creditors, managers, and other users rely on prediction and anticipation when making economic decisions. Investors are interested in forecasting the potential performance of a company that has higher stable products in its financial statements (Heirany et al, 2014).

a. Return on Investment (ROI)

$$\left(\frac{EBIT + Depreciation}{Capital Employed} \right) \times 100\%$$

b. Return on Equity (ROE)

$$\left(\frac{net\ income}{shareholders\ equity} \right) \times 100\%$$

Liquidity

Liquidity refers to the speed at which assets are converted into cash. Liquidity ratios concentrate mainly on cash flows and are used to determine a company's ability to fulfill short-term obligations (Omar D., Abdul Aziz A. A., Syed Ahsan J., Nour Aldeen G., 2016). Liquidity management is done by allowing optimal use of assets (Robinson et al., 2015). Liquidity ratios include the following ratio: Cash Ratio, this ratio of current assets depends only on short-term marketable investment and its cash attributed to current liabilities (Gibson, 2009).

c. Cash Ratio

$$\left(\frac{cash + cash\ equivalent}{current\ liabilities} \right) \times 100\%$$

d. Current Ratio

$$\left(\frac{current\ assets}{current\ liabilities} \right) \times 100\%$$

Activity

The activity ratio indicates how effectively the organization has used its resources (Dirvi S. A., 2019). The Decree of the Minister of BUMN uses 3 ratios to calculate the activity: Collection periods also referred to as Days in Account Receivables is a measure of how well the company manages to collect on accounts receivable (Gill et al, 2010). Total Assets Turnover refers to the calculation that shows the efficiency of the company using its total assets to obtain sales (Gitman, 2015). Whilst Inventory turnover is a measurement of the liquidity and the effectiveness of the company to manage it is an inventory (Wachowicz, 1992).

e. Collection Periods

$$\left(\frac{average\ account\ receivable}{sales\ revenue} \right) \times 365$$

f. Total Assets Turnover

$$\left(\frac{revenue}{capital\ employed} \right) \times 100\%$$

g. Inventory Turnover

$$\left(\frac{cost\ if\ goods\ sold}{average\ inventory} \right)$$

Solvency

The word "solvency" refers to a company's ability to fulfill its long-term debt obligations. (Abdul Aziz A. A., 2017). The credit would be difficult to come by for a company that has a history of not meeting its debts or obligations. A lack of available credit could result in a decrease in the profitability of the company (Marvin W., Andi Ina Y., 2017). Total Equity to Total Assets is used to measure solvency, as it assesses the amount of equity the business has when compared to the total assets.

h. Total Equity to Total Assets

$$\left(\frac{\text{Total Equity}}{\text{Total Assets}}\right) \times 100\%$$

Each financial ratio used has weight determined by the Decree of the Minister of BUMN for it to be classified into groups. After each ratio is calculated it will be assessed by comparing it to the list of ratio scores and recorded based on the weight referred to in Table 1. The weight calculation is divided into 2 categories; for PT Indofood Sukses Makmur will fall under the non-infrastructure category.

Table 1: Indicator List and Weight Decree of The Minister of BUMN

Indicator	Infra	Non-Infra
ROI	10	15
ROE	15	20
CASH RATIO	3	5
CURRENT RATIO	4	5
COLLECTION PERIODS	4	5
TOTAL ASSET TURNOVER	4	5
TURNOVER INVENTORY	4	5
TOTAL EQUITY TO TOTAL ASSETS	6	10
TOTAL WEIGHT	50	70

Source: Decree of the Minister of BUMN No: KEP-100/MBU/2002

Afterward, the total weight will be compared to the total weight Decree of the Minister of BUMN classification and assessed whether the company's financial performance is healthy or unhealthy. The scoring categories are indicated in table 2.

Table 2: Company Healthiness Category Based on Decree of The Minister of BUMN

Category	Classification	Total Weight
HEALTHY	AAA	>95
	AA	80<TW≤95
	A	65<TW≤80
UNHEALTHY TO	BBB	50<TW≤65
NEAR HEALTHY	BB	40<TW≤50
UNHEALTHY	B	30<TW≤40
	CCC	20<TW≤30
	CC	10<TW≤20
	C	TW≤10

Source: Decree of the Minister of BUMN No: KEP-100/MBU/2002

3.2 Stock Performance with PER, PBV, and EPS

Aside from the ratios calculated in the Decree of the Minister of BUMN, other ratios need to be considered to identify whether a company's financial condition is healthy or not.

Earnings per Share (EPS)

Earnings per Share (EPS) is the amount of profit based on the outstanding shares of the organizations (Arma Yuliza, 2018). Earnings per share (EPS) is a metric used to determine management's performance in producing earnings for shareholders.

$$EPS = \frac{\text{Net Income}}{\text{Number of Shares Outstanding}}$$

Price-to-Earnings Ratio (PER)

The Price-to-Earnings ratio is crucial in both investment decisions and academic research as it reflects the market's expectations for future developments and is associated with firm risk (Thomas & Zhang, 2006). It is the ratio for measuring current share price relative to the company Earning per Share (EPS). P/E ratios are commonly used by investors to determine the relative value of a company's shares side by side.

$$PER = \frac{\text{Market Price per Share}}{\text{Earnings per Share}}$$

Price-to-Book Value (PBV)

Price-to-Book value is also one of the ratios favored among investors, the relationship between the market price of a share and the book value of equity is represented by the price-to-book value (Damodaran, 2002).

$$PBV = \frac{\text{Market Price per Share}}{\text{Book Value per Share}}$$

3.3 Altman Z-Score

Altman (1968) analyzed the activity in the period 1946–1965, of 33 industrial companies with financial problems and 33 firms smoothly in terms of 22 indicators and created a model based on five rates considered which he published with comments in 1968 in 'Financial ratios, discriminant analysis and the prediction of corporate bankruptcy.

The 1968 Altman model was developed based on a representative sample of 66 businesses, of which 33 companies were healthy and 33 firms had financial difficulties. For the construction of the model, 22 financial ratios were tested, of which 5 were retained as having significant discriminating power. The Altman's score function in 1968 had the following form:

$$Z = 1.2 X_1 + 1.4 X_2 + 3.3 X_3 + 0.6 X_4 + 1.0 X_5$$

X_1 = Working capital/total assets;

X_2 = Retained earnings/total assets;

X_3 = Earnings before interest and taxes/total assets;

X_4 = Market value of equity/ book value of total debt;

X_5 = Sales/total assets.

The ranges of values of the function are:

- if $Z < 1.81$ – the firm is bankrupt;
- if $1.81 < Z \leq 2.90$ – the company is in "grey area";
- if $Z > 2.90$ – the company might be considered economically healthy.

Analyzing the companies with financial difficulties, Altman identified five phases of bankruptcy in an enterprise:

- the emergence of first signs of financial difficulties (slight decrease in profitability, turnover, reduction in cash availability) but ignored by the company's management;
- the clear manifestation of financial difficulties, which are not followed by the adoption of resolution measures in the hope that they will disappear on their own;
- the strong deterioration of the financial situation, the disturbing factors affecting the entire activity of the firm;
- the collapse or the inability of management to take adequate measures to remedy the situation;
- intervention, either by recovery measures or by declaring bankruptcy.

Z-score has been used by numerous researchers. Prof. Vandana and Dr. Vani (2015) used Altman Z-Score in their research to determine the bankruptcy position of the company SME during 2014 - 2018. The result of their research indicates that the company was in "Grey Zone" for five consecutive years. This implies that the company might or might not go into bankruptcy.

RESULT AND FINDINGS

Decree of the Minister of BUMN

1. Profitability Analysis

Table 3: Profitability Ratio Score Based on Decree of The Minister of BUMN

PERIOD	Profitability Ratio			
	ROE	RATIO SCORE	ROI	RATIO SCORE
2015	7.5%	10	4.8%	4
2016	11.0%	14	7.7%	6
2017	10.8%	14	7.6%	6
2018	9.9%	14	7.6%	6
2019	10.9%	14	8.3%	6

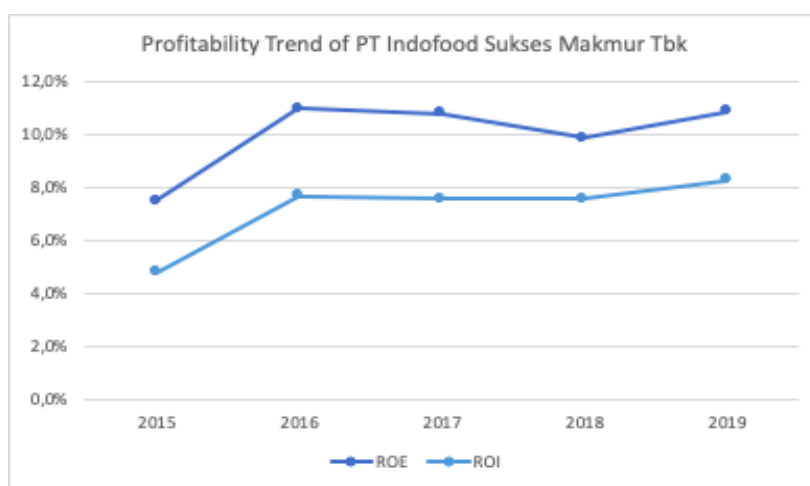


Figure 1. Profitability Trend of PT Indofood Sukses Makmur Tbk (2015-2019)

The outcome of Return on Equity (ROE) of PT Indofood Sukses Makmur Tbk fluctuates between 2015-2019. Starts in 2015 with 7.5% and the highest are in 2016 with 11% based on table 4. This showed how PT Indofood Sukses Makmur Tbk inconsistency in the ability to use assets to become profits. However, it has not reached the lowest mark of 7.5% since 2015 (during 2015-2019) which indicates that the ROE can grow over the year.

Return on Investment (ROI) on the other hand shows a positive trend as it increases during the years shown in figure 1. As it starts at 4.8% and reaches 8.3% in 2019, most investors would consider 10% as the standard value of ROI. Even though PT Indofood Sukses Makmur Tbk has not attained that value based on the result each year it displays enough possibility for them to reach the 10% mark in the coming year.

2. Liquidity Analysis

Table 4: Liquidity Ratio Score Based on Decree of The Minister of BUMN

PERIOD	Liquidity Ratio			
	ROE	RATIO SCORE	ROI	RATIO SCORE
2015	51.6%	5	170.5%	5
2016	69.5%	5	150.8%	5
2017	63.2%	5	152.3%	5
2018	28.1%	4	106.6%	4
2019	55.6%	5	127.2%	5

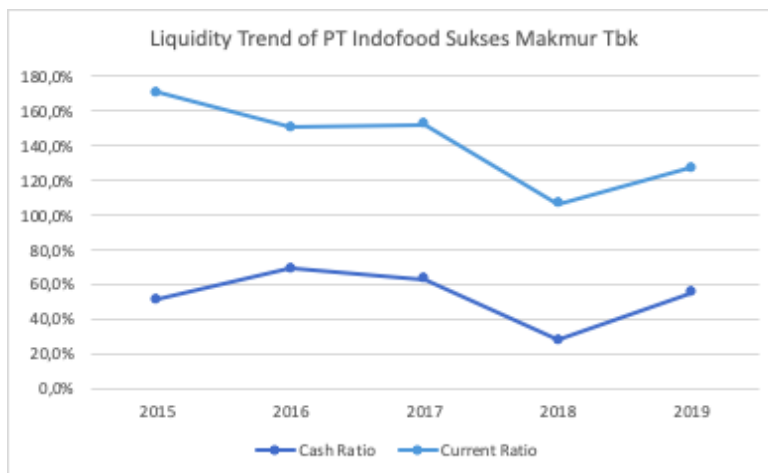


Figure 2. Liquidity Trend of PT Indofood Sukses Makmur Tbk (2015-2019)

Liquidity analysis of PT Indofood Sukses Makmur Tbk established by the cash ratio, exhibited an increase during 2015-2017. Yet it dropped significantly in 2018 from 63.2% to 28.1% referred from table 4. Indicates the rate of repayment with cash to its current liabilities dropped in 2018. Then, it picks up again in 2019 increasing to 55.6%.

The Current Ratio varies during the year, the changes in the percentage of the Current Ratio range between 20% -50% during 2015-2019. Along with the Cash Ratio, it is also decreased the most significantly during 2018. Therefore, PT Indofood Sukses Makmur Tbk shows no significant change in the ability to pay off short-term liabilities as they can rise again in 2019.

3. Activity Analysis

Table 5: Activity Ratio Score Based on Decree of The Minister of BUMN

Activity Ratio						
PERIOD	COLLECTION PERIOD	RATIO SCORE	INVENTORY TURNOVER	RATIO SCORE	TOTAL ASSET TURNOVER	RATIO SCORE
2015	24.2	5	43.5	5	111.1	4.5
2016	25.3	5	46.3	5	141.6	5
2017	26.3	5	53.7	5	143.5	5
2018	26.9	5	57.9	5	136.4	5
2019	25.8	5	46	5	145	5

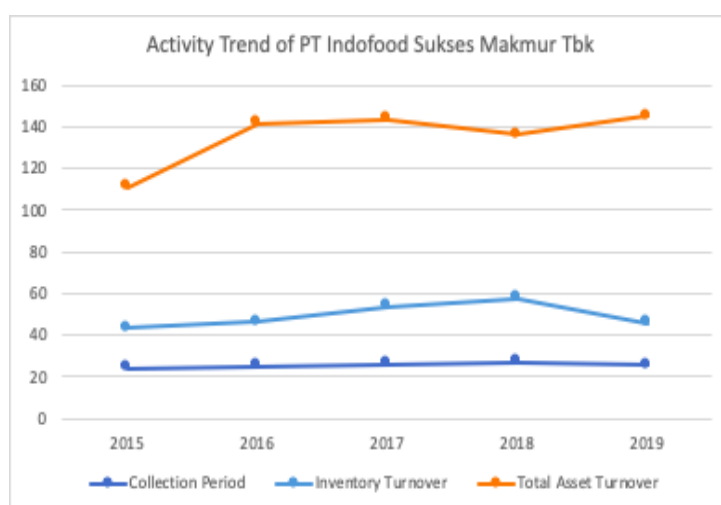


Figure 3. Activity Trend of PT Indofood Sukses Makmur Tbk (2015-2019)

Activity analysis presented by Collection Period (days), Inventory Turnover (days), and Total Asset Turnover (%). Derived from Table 5. Collection Period of PT Indofood Sukses Makmur Tbk indicates an increase during 2015-2018 and fell slightly from 26.9 to 25.8 days in 2019. Inventory Turnover also shows a similar trend as it increased from the last 4 years and

dropped in 2019 which also can be seen in figure 3. Total Asset Turnover fluctuates by hitting the highest mark in 2019 with 145% from 111.1% in 2015.

4. Solvency Analysis

Table 6: Solvency Ratio Score Based on Decree of The Minister of BUMN

Category	Classification	Total Weight
Period	Total Equity to Total Asset	Ratio Score
2015	46.9	9
2016	53.5	8.5
2017	53.3	8.5
2018	51.7	8.5
2019	56.3	8.5

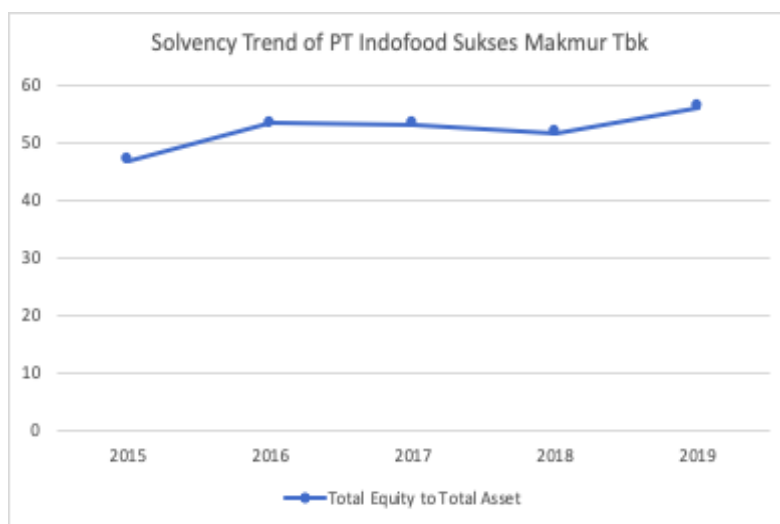


Figure 4. Solvency Trend of PT Indofood Sukses Makmur Tbk (2015-2019)

Solvency analysis of PT Indofood Sukses Makmur Tbk established by Total Equity to Total Asset (TETA). Figure 4 shows the trend ratio increased from 46.9% to 56.3% in 2015-2019. The Total Equity to Total Asset relatively tends to be constant in an upward trend. However, there was a slight downward trend in 2018, but it has risen significantly in 2019. Total Equity to Total Asset ratio used to measure the efficiency of asset utilization. The lower the Total Equity to Total Assets of a company, the lower the net value for investors (Daryanto, 2018). Table 6 shows the average of the Total Equity to Total Asset around $\pm 52.34\%$, which means their assets are financed by the equity.

5. Category Result

Table 7: Summary of Test Results for PT Indofood Sukses Makmur Tbk

PERIOD	COLLECTION PERIOD	RATIO SCORE	INVENTORY TURNOVER	RATIO SCORE	TOTAL ASSET TURNOVER	RATIO SCORE
2015	24.2	5	43.5	5	111.1	4.5
2016	25.3	5	46.3	5	141.6	5
2017	26.3	5	53.7	5	143.5	5
2018	26.9	5	57.9	5	136.4	5
2019	25.8	5	46	5	145	5

According to table 7, the conclusions from 2015-2019 of PT Indofood Sukses Makmur Tbk have shown positive category results which are 'Healthy'. This outcome is based on the indicators from the Decree of the Minister of BUMN. The result is a calculation of the total weight each year. This presents that PT Indofood Sukses Makmur Tbk is having a safe balance sheet throughout the year. However, there was a slight downward in 2018 but managed to rise again in 2019 with 53.5. This symbolizes the consistency of the company to improve better and maintain their financial status of healthiness.

4.2 Stock Performance with EPS, PER, and PBV

4.2.1 Earnings Per Share (EPS)

Table 8. Earnings Per Share of PT Indofood Sukses Makmur Tbk (2015-2019)

Period	Earnings Per Share
2015	368.06
2016	552.65
2017	580.53
2018	565.10
2019	672.26

The table 8 shows the Earnings per Share (EPS) of PT Indofood Sukses Makmur Tbk from 2015 to 2019. There was a significant increase in the ratio. This indicates the rising productivity of PT Indofood Sukses Makmur Tbk. The highest point happened in 2019 derived from the net profit margin after tax.

4.2.2 Price to Earnings Ratio (PER)

Table 9. Price to Earnings Ratio of PT Indofood Sukses Makmur Tbk (2015-2019)

Period	Price to Earnings Ratio (times)
2015	14.06
2016	14.34
2017	13.13
2018	13.18
2019	11.78

Table 9 shows the Price-to-Earnings Ratio (PER) of PT Indofood Sukses Makmur Tbk from 2015 to 2019. There was an extreme decrease in the ratio hence the company's profits increased for each year. Meanwhile, the market price per share escalated. The companies with high growth opportunities generally have high PER. (Gibson, 2009). The smaller a company's PER, the higher the company's profitability to achieve its profits. Figure 6, indicating the performance of INDF was tremendous.

4.2.3 Price to Book Value (PBV)

Table 10. Price to Book Value of PT Indofood Sukses Makmur Tbk (2015-2019)

Period	Price to Book Value (times)
2015	1.05
2016	1.58
2017	1.43
2018	1.31
2019	1.28

Table 10 shows the Price-to-Book Value (PBV) ratio of PT Indofood Sukses Makmur Tbk from 2015 to 2019. This ratio was used to measure the profitability performance of the company. The PBV ratio fluctuated according to the rising market price. The high price of PBV occurred in 2016 as much as 1.58 times. On the other hand, PT Indofood Sukses Makmur Tbk succeeded to establish its PBV around 1.28 in 2019. This implies the growth of the book value from PT Indofood Sukses Makmur Tbk.

4.3 Altman Z-Score result

Table 11. Altman Z-Score result of PT Indofood Sukses Makmur Tbk (2015-2019)

Period	Z-Score
2015	2.147665220
2016	2.852316864
2017	2.720404580
2018	2.410046599
2019	2.745827325
Average	2.575252118

After the ratios needed are calculated and inputted in the formula, the results are shown in Table 11. From 2015-2019 PT Indofood Sukses Makmur Tbk outcome range between 2.14-2.8. The nominal indicates that PT Indofood Sukses Makmur is in the 'caution zone' as it is a part of the $1.81 < Z \leq 2.90$ range. Looking at the result with the average of 2.57 and the highest mark at 2.81 it is closer to the 2.9 mark which indicates that PT Indofood Sukses Makmur Tbk is nearing the 'safe zone' and economically healthy in terms of their financial condition.

CONCLUSION

The study of the financial performance of PT Indofood Sukses Makmur Tbk is examined based on the Decree of the Ministry of BUMN. The indicators are divided into four classifications: Profitability, Liquidity, Activity, and Solvency ratios. The result showed that PT Indofood Sukses Makmur Tbk was classified as "A" level for 2015-2019. This implied that the company's financial performance is healthy. According to the stock performances, the indicator ratios are Earning per share (EPS), Price to earnings ratio (PER), and Price to book value (PBV). Based on the result, the EPS is increasing and that proves the profit is increasing. The PER is lower than the previous year which indicates the good performance of the company. The increasing number of PBV shows the growth of the book value of the company. In addition, measuring the bankruptcy of the company using the Altman Z-score average result appeared to be 2.575. This shows the current position of the financial statement is in the "caution zone" and nearly to the "safe zone".

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Wiwiek Mardawiyah Daryanto
Sekolah Tinggi Manajemen IPMI
Email: wiwiek.daryanto@ipmi.ac.id

Jessika Ina Putri Ginting
Sekolah Bisnis dan Manajemen,
Institut Teknologi Bandung
Email: jessika_ginting@sbm-itb.ac.id

Salsabila Aathirah Boekoesoe
Sekolah Bisnis dan Manajemen, Institut Teknologi Bandung
Email: salsabila_boekoesoe@sbm-itb.ac.id