

An Analysis Bankruptcy Prediction on Stock Price Through Earnings Per Share at PT. Bank Mandiri (Persero) Tbk.

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Abstract

This study aims to measure the effect of bankruptcy predictions on the stock price and earning per share as an intervening variable. The object used is PT. Bank Mandiri (Persero) Tbk. and data used is secondary data containing the company's monthly financial statements from 2016-2019 and stock data from Indonesia Stock Exchange. This study uses path analysis with SPSS program. The results of the study show that bankruptcy predictions have a direct and significant effect on stock prices, and bankruptcy predictions have an indirect and significant effect on stock prices through earnings per share.

Keywords: Bankruptcy Prediction, Stock Price, Earning Per Share.

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1. INTRODUCTION

The stock price is seen as a measure of company value, this is shown in the results agreed by the company in running its business, stock prices can change at any time due to several factors, one of the factors that increase the stock price is bankruptcy. The bankruptcy of the company becomes important for investors in making decisions, besides that some problems or rumors are information about the company, where the information can affect investors who will invest their money or not.

Information about the company's financial data that has go public is information that is open for the public and who want to find out financial information from the company, this information can be used to receive investments given on each share or also the company's stock price. The value of the company can support the company's stock price which can be seen from the company's ability to reach his goal, namely to benefit from its operational activities. But other things can

change the company's stock price, one of the cases that occurred at PT. Bank Mandiri (Persero) Tbk. in August 2019 after publishing the second quarter financial statements by recording a profit of 13.5 trillion rupiahs. Bank Mandiri (Persero) Tbk. make the stock price dominant go down.

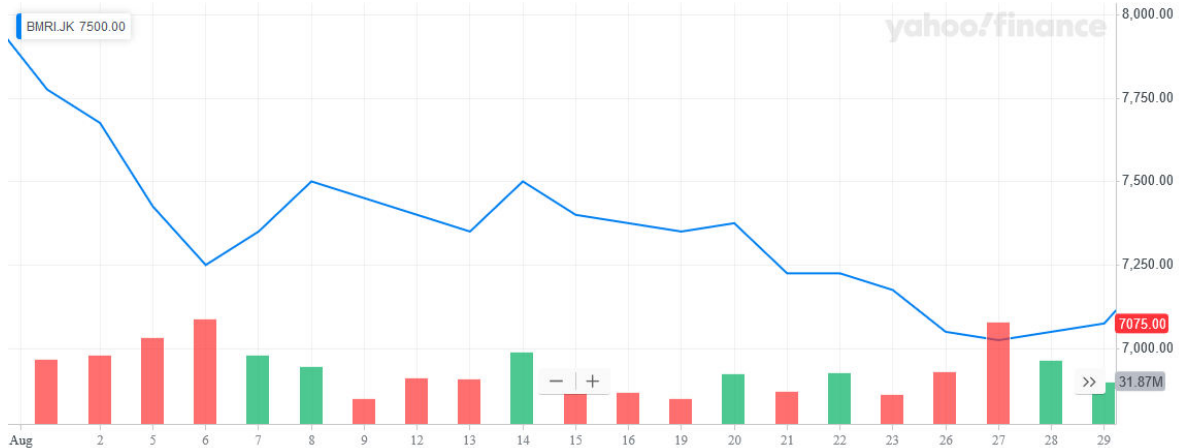


Figure 1. Stock Price Chart PT. Bank Mandiri (Persero) Tbk. on Aug 2019
Source: finance.yahoo.com

The bankruptcy of a company is important for investors to choose the decision to keep company stock before the stock price move down, ways to predict bankruptcy, one of them by analyzing the financial statements of a company with bankruptcy prediction methods. Also, some factors affect changes in stock prices, that is earnings per share. To predict stock prices sometimes have to think about several aspects before deciding to buy or sell stock where stock prices tend to be unstable due to several factors.

According to Wiyarni (2018), the value of the z-score bankruptcy prediction model has positively influenced the stock price, it is consistent with Syamni, Majid and Siregar (2018), showed bankruptcy prediction model can be utilized as one of the ways to measure movement stock price. And earning per shares effect on stock price (Velankar, Chandani and Ahuja, 2017). The result of research from Velankar, Chandani and Ahuja, (2017) consistent with Pradhan and Paudel (2016), showed earning per share are positively related to the stock price. Then for that reason, the author will analyze the effect of bankruptcy predictions on stock prices and earnings per share as an intervening variable.

2. LITERATURE REVIEW

2.1. Bankruptcy Prediction

Bankruptcy prediction is a way to predict whether a company will a bankruptcy or not in the future, otherwise, it can be used to measure the level of health of the

company. Bankruptcy is a legitimate status of an individual or other association that can't reimburse their obligations to lenders (Panchal et al., 2019). Bankruptcy is a condition that is very much avoided for legal entities with business activities (Nuryanto, Sulistiyono and Pujiono, 2019). Bankruptcy is a condition of indebtedness where an organization or an association can't release its money related commitment or can't meet the installments to their lenders (Kapil and Agarwal, 2019). Bankruptcy is the point at which an individual intentionally announces himself as an indebted and goes to the court. On announcing him as bankrupt, the court is dependable to exchange the individual property of the ruined and hand it out to its lenders. It gives a crisp rent of life to the indebted (Sharma and Vyas, 2017).

2.2. Earnings Per Share

Earnings per share or commonly abbreviated as EPS is profit derived from each share issued. Earning per share speaks to the ability of an organization in making benefit for each stock possessed by stakeholder. The increasing earning per share for the most part shows the development of an organization and bringing about high market cost (Pradhan and Paudel, 2016). Earning per share is classified as a market ratio, which is one indicator to measure which stocks have the potential to benefit investors (Puspita, 2017). based on the theory above, earning per share is a ratio to measure how much profit will be obtained by investors from each share that comes from the company's revenue and it can be concluded that every income earned by the company in its operations will be distributed to investors so that it has an impact on stock prices.

2.3. Stock Prices

Stock price is the nominal that must be paid for each share and the end of the stock price is seen from the closing price on the day or the last time the stock market operates. Stock price can reflect the value of the company because the value of the company is seen how much the company's revenue and the number of assets owned so that the stock price is valued as a reflection of the value of the company. Stock prices are the price that occurs in the stock market at a certain time determined by the demand and supply of shares offered in the capital market (Hartono, 2015, p.188).

2.4. Development of Hypotheses

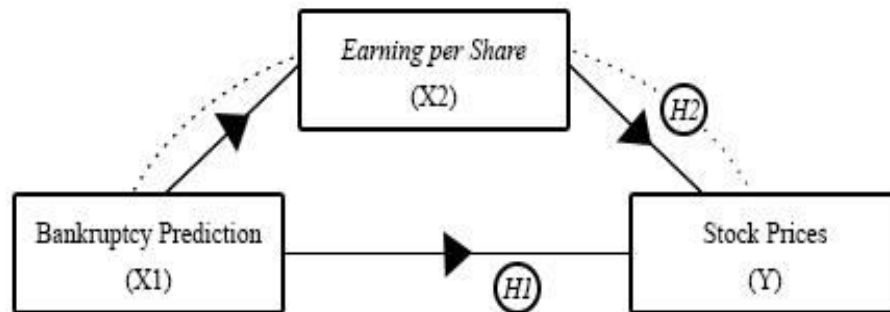
Bankruptcy prediction has a relationship with stock prices where bankruptcy is an understanding that the company fails to achieve its goals so that the company's stock price may be worthless. Bankruptcy predictions can estimate the stock price movements that will occur it is supported by Wiyarni (2018) bankruptcy predictions affect stock prices. The reason for bankruptcy prediction can affect stock prices is the valuation and trust in the company's shares in achieving its goals. Based on the description above, it can be concluded the hypothesis that:

H1 : Bankruptcy prediction has a direct significant effect on stock prices.

In addition, there are other factors that affect stock prices, namely EPS, because the more profits obtained by shareholders can increase the desire to own company shares and make company shares rise, so the concept why EPS can affect stock prices. Based on the description above, it can be concluded the hypothesis that:

H2 : Bankruptcy prediction has an indirect significant effect on stock prices through earnings per share.

2.5. Research Scheme



3. METHODOLOGY

This study uses secondary data, data available from other parties. The data analyzed in this study were taken from the bank's financial statements from the main website of PT. Bank Mandiri (Persero) Tbk. financial reports can be downloaded from www.bankmandiri.co.id and stock price history from www.idx.co.id or <http://finance.yahoo.com>.

3.1. Operationalization of Variables

The dependent variable in this research is stock price using data from the closing price. Then independent variable is a bankruptcy prediction model from Altman Z-Score modified for non-manufacturing firms. The formula is:

$$Z = 6.56(X1) + 3.26(X2) + 6.72(X3) + 1.05(X4)$$

$$X1 = NWC \div Total Assets$$

$X2 = \text{Retained Earnings} \div \text{Total Assets}$

$X3 = \text{EBIT} \div \text{Total Assets}$

$X4 = \text{Book Value of Equity} \div \text{Book Value of Liabilities}$
(Altman et al., 2017)

The last variable is earning per share as an intervening variable, the formula used to calculate EPS is as follows:

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

3.2. Data Analysis Method

The test will use program application SPSS 23 with path analysis.

$$Y1 = px1x2 + px2y1 + e$$

Where:

Y1 : Stock Price

X1 : Bankruptcy Prediction

X2 : Earnings Per Share

p : Path Analysis

px1x2 : Coefficient path direct X1 to X2

px2y1 : Coefficient path direct X2 to Y1

4. RESULT AND DISCUSSION

4.1. Normality Test

This test is to find out whether the data is normally distributed or not and for the terms of the regression analysis test that is by way of Kolmogorov Smirnov (K-S), the significant value must be below 0.05 as a condition of normality or by looking at the results of the probability plot image with a decision if a small dot follows a diagonal line then declared distributed normal.

Table 1. Kolmogorov-Smirnov Test

| One-Sample Kolmogorov-Smirnov Test | | Unstandardized Residual |
|------------------------------------|----------------|-------------------------|
| N | | 47 |
| Normal Parameters ^{a,b} | Mean | .0000000 |
| | Std. Deviation | 752.41821030 |
| Most Extreme Differences | Absolute | .091 |
| | Positive | .061 |

| | | |
|------------------------|----------|---------------------|
| | Negative | -.091 |
| Test Statistic | | .091 |
| Asymp. Sig. (2-tailed) | | .200 ^{c,d} |

Source: Reseacher, Output SPSS, 2020

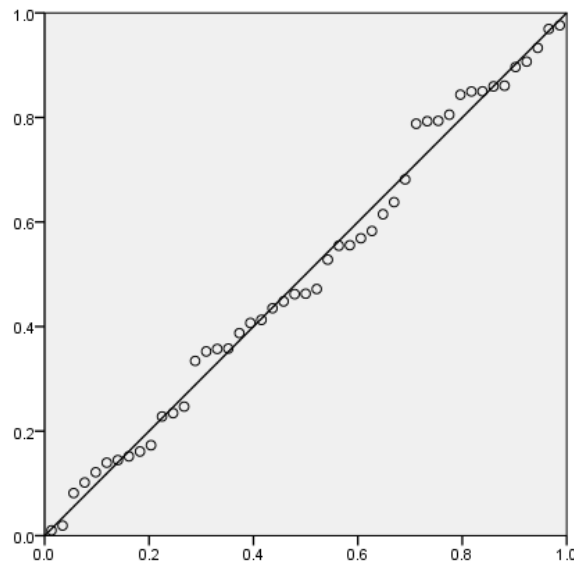


Figure 2. Probability Test

Source: Reseacher, Output SPSS, 2020

Based on the K-S results in the table and the probability plot image, we can find out that the data is normally distributed due to a significant value of 0.2 meaning > 0.05 and on the small point picture follows a diagonal line.

4.2. Heteroscedasticity Test

This test uses a glacier test with the criterion of a significant value above a value of 0.05 so that it can be said that heteroscedasticity did not occur and successfully met the requirements.

Table 2. Glejser Test

| Coefficients | | Collinearity Statistics | | |
|--------------|-----------------------|-------------------------|-----------|-------|
| Model | | Sig. | Tolerance | VIF |
| 1 | (Constant) | .005 | | |
| | EPS | .636 | .600 | 1.667 |
| | Bankruptcy Prediction | .024 | .600 | 1.667 |

Source: Reseacher, Output SPSS, 2020

Based on the table above, it can be stated that there is no heteroscedasticity in the data, which is significant in the EPS variable 0.636 and 0.024 bankruptcy prediction variables > 0.05.

4.3. Multicollinearity Test

This test aims to determine whether the data occurs heteroscedasticity through tolerance and VIF based on tolerance decisions > 0.100 and VIF < 10.00.

Table 3. Multicollinearity Test

| Coefficients | | Collinearity Statistics | |
|--------------|-----------------------|-------------------------|-------|
| | | Tolerance | VIF |
| Model | Sig. | | |
| 1 | (Constant) | .005 | |
| | EPS | .636 | 1.667 |
| | Bankruptcy Prediction | .024 | 1.667 |

Source: Reseacher, Output SPSS, 2020

Based on the multicollinearity test results table, it can be stated to meet the criteria because the requirements are met, meaning there is no multicollinearity event.

4.4. Autocorrelation Test

This test is performed to determine whether the data occurs autocorrelation in the data used. Decision making by: $du < dw < 4 - du$

Table 4. Autocorrelation Test Durbin's Two-Step

| Model Summary ^b | | | | | |
|----------------------------|-------------------|-------------------|----------------------------|---------------|--|
| Model | R | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson | |
| 1 | .055 ^a | .003 | .05029 | 2.012 | |

Source: Reseacher, Output SPSS, 2020

Based on the results table above, it can be seen that there is no autocorrelation in the data cause $du (1.6204) < dw (2.012) < 4 - du (2.3796)$

4.5. T-Test

This test is to obtain information on whether there is an influence of each independent variable on the dependent variable directly.

Table 5. T-Test

| Coefficients ^a | | | |
|---------------------------|-----------------------|--------|------|
| Model | | t | Sig. |
| 1 | (Constant) | -3.360 | .002 |
| | EPS | -4.584 | .000 |
| | Bankruptcy Prediction | 6.436 | .000 |

Source: Reseachr, Output SPSS, 2020

t-test results table, it can be stated that it is seen that there is a significant effect of bankruptcy predictions on stock prices due to a significant value < 0.05.

4.6. Sobel Test

This test is to obtain information on indirect effects through intervening variables.

| | Input: | | Test statistic: | Std. Error: | p-value: |
|----------------|-------------|---------------|-----------------|---------------|------------|
| a | 1361.258183 | Sobel test: | -3.51573928 | 1636.40401204 | 0.00043853 |
| b | -4.226362 | Aroian test: | -3.48178973 | 1652.35993617 | 0.00049807 |
| s _a | 248.461785 | Goodman test: | -3.55070168 | 1620.29096849 | 0.00038421 |
| s _b | 0.921972 | Reset all | Calculate | | |

Figure 3. Sobel Test Calculation

Source: Reseachr, 2020

Based on the calculation of the Sobel test, it is known that the p-value is 0.0004 which means < 0.05 then based on the p-value and the value of 0.05 can be interpreted that there is a mediating influence of earnings per share of the relationship of bankruptcy prediction on stock prices.

5. CONCLUSION

There is a significant influence of bankruptcy predictions on stock prices in PT. Bank Mandiri (Persero) Tbk. And there is a significant influence of bankruptcy predictions on stock prices through earnings per share or an indirect effect between bankruptcy predictions on stock prices mediated by earnings per share at PT. Bank Mandiri (Persero) Tbk.

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