

## Financial Fraud Analysis Pt. Rb With Beneish Ratio Approach 2017- Third Quarter 2022

Rudy Mikiyanto Kusumo<sup>1</sup>

<sup>1</sup>rudymk90@gmail.com

<sup>1</sup>STIE NU Terate Gresik

**Abstract:** *One of the goals of establishing a business entity is to get high profits so that it can increase the value of the company. Investors' assessment of the company's value is based on how well the company is performing, which can be seen in the company's financial statements. Companies that have good performance generally increase the company's stock price. This type of research is a descriptive research. The data used is secondary data. The data taken is the data of the Financial Statements of PT. RB in 2017, 2018, 2019, 2020, 2021, 3rd quarter 2021, and 3rd quarter 2022. PT RB is a mining company that has been reported to manipulate Financial Statements in 2011. The data collection technique in this study uses the documentation method while the analysis technique uses the Ratio Index. Classification of PT. RB during 2018, 2019, 2021, and the 3rd quarter of 2022 based on the beneish ratio revealed that in those years, PT. RB is classified as a non-manipulator. However, in 2020 the company PT. RB is classified as a manipulator. The results of this study indicate that PT. RB with GMI, SGI, DEPI, SGAI, LVGI, TATA ratios proves that there are indications of fraud in the financial statements. These ratios can be used as a tool to detect fraudulent financial statements at PT. RB.*

**Keywords:** *fraud, beneish, mining company*

### Introduction

Creating a business entity with the intention of making significant profits in order to raise the enterprise's worth is one of the objectives. Based on the company's performance, which is evident in its financial statements, investors determine the worth of the company. In order to execute the business strategy and objectives, stakeholders and shareholders use the financial report as a decision-making tool. The management's success in portraying the company's profit is shown in the financial report.

In 30 issuers listed on the Stock Exchange, according to Purnomo (1998), there is a favorable correlation between stock prices and financial performance measures such as earnings per share (EPS), price earning ratio (PER), return on equity (ROE), and dividend per share (DPS). Indonesia's Jakarta Stock Exchange (JSX) from 1992 to 1996 Additionally, according to Dita (2013), for the years 2009 to 2011, the stock prices of automotive businesses listed on the Indonesia Stock Exchange (IDX) were partially influenced by the variable earnings per share (EPS), price earning ratio (PER), and current ratio (CR). As a result, businesses with strong performance metrics typically see an increase in their stock price.

Indonesia's economy grew by 3.51% in the third quarter of 2021, which was aided by strong growth in the mining and health services industries (CNBC Indonesia, 2021). Additionally, according to Bisnis.com (222), the possibility of the mining industry is one of the probable industries in 2022 due to the increasing price of mining mineral commodities. As a result, the mining industry can be considered one of the foundations of Indonesia's economic growth in 2022.

Fraud is described as an act of deception committed with the purpose of making an improbable profit at the expense of others, such as investors. The element of opportunity is one of them in the Fraud Triangle.

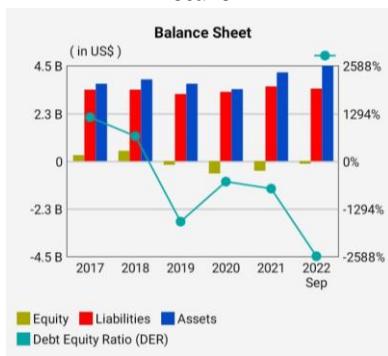
Due to the potential presented by the rising prices of mining-related commodities, mining enterprises may be motivated to falsify financial accounts. One of the top-selling stocks in a week is PT. RB, a company in Indonesia's mining sector (Bisnis.com, 2022).

The impact of fraud losses may not be completely averted, but they can be reduced by promptly identifying fraud that is occurring or has already taken place.

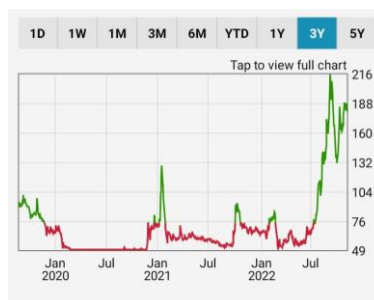
Days Sales In Receivable Index (DSRI), Gross Margin Index (GMI), Asset Quality Index (AQI), Sales Growth Index (SGI), Depreciation Index (DEPI), Sales General and Administrative Expenses Index (SGAI), Leverage Index (LVGI), and Total Accruals To Total Assets Index (TATA) are among the variables that can identify signs of earnings manipulation, according to Beneish (1999). The Beneish Model's m-score gross margin index, depreciation index, sales index, general administrative expenses, and total accruals are all significant in identifying financial fraud, according to Tarjo and Herawati (2015). Additionally, Omar (2014) demonstrates how Megan Media fabricated an income of RM 198,727 in order to alter their financial situation. According to Suyanto (2009), who utilizes the Beneish ratio to categorize Manipulator and Manipulator organizations, Pressure Variables (Profit / Total Assets) and Opportunity Variables (Inventory / Total Assets, Related Party Transactions, and Big 4) are strongly associated with false financial statements. Handayani (2016) demonstrates that while the correlations between receivables and income, cash flow, and profit can all be utilized as warning signs, the correlations between receivables and allowances for bad debts and receivables cannot. According to the aforementioned research, the Beneish Ratio can identify financial statement fraud in mining corporations.

According to Rahman (2014), 22% of fraud is committed by management and non-management personnel who act as internal parties, while the remaining fraud is brought on by external reasons. According to the aforementioned research, the Beneish Ratio can be utilized to spot false financial statements.

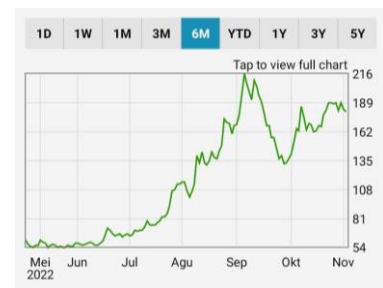
Picture 1



Picture 2



Picture 3



According to Figure 2 from the RTI Business application, the share price of PT. RB typically hovers around Rp. 50 from January 2020 to June 2020. Figure 3 shows that the period from July to September 2022 saw the most increase.

Positive financial performance measures, such as EPS on September 30, 2022, did not sustain the considerable increase in share prices.

The researchers attempted to examine the PT. RB false financial statements in the midst of a big rise in stock prices based on the phenomena, cases, and research studies mentioned above. The company was chosen for the case study at PT. RB because it had both positive equity and equity deficits from 2017 to Quarter III 2022, which suggested the company would be depressed due to an equity deficit and try to immediately recover the equity deficit by leveraging opportunities in the momentum of rising commodity prices.

Based on the above background, the formulation of the problem in this study are:

1. Does PT. RB in 2018, 2019, 2020, 2021, 3rd quarter 2022 is classified as a manipulator ?
2. Which variable from the benefit ratio indicates an indication of fraud when the Company has an equity deficit in 2020?
3. Which variable from the benefit ratio indicates an indication of fraud when the Company experiences a significant increase in share price?

## Literature Review

### Financial Statement Fraud

The Association of Certified Fraud Examiners (ACFE) defines fraud as an error or act of fraud committed by a person or organization knowing that the error may have undesirable consequences for other people, organizations, or parties. Several factors, including pressure, opportunity, and justification, can lead to fraud (Donald R. Cressey, 1953 in James A. Hall and Tommie Singleton, 2007).

The three categories of fraud identified by the Association of Certified Fraud Examiners (ACFE) are Financial Statement Fraud, Asset Misappropriation, and Corruption. Financial statement fraud is when management materially misstates financial statements in a way that is harmful to creditors and investors, whether it be financial or non-financial (ACFE).

Financial statement fraud, according to Rezaee in Ratna Wardhani (2012), can be connected to a number of schemes, including:

- a. financial records, supporting documents, or business transactions that have been falsely altered or manipulated;
- b. events, transactions, accounts, or other key information that is a source of information for compiling financial statements are materially and intentionally misstated, deleted, or misrepresented;
- c. intentional misuse, misunderstanding, and improper application of accounting standards in the use of the guidelines, procedures, and techniques used to quantify, identify, and record economic events and corporate transactions;
- d. deliberate absence from disclosure or presentation of insufficient disclosures relating to accounting principles, standards, and procedures that are based on current accounting standards but have flaws or gaps that the company can exploit to conceal the economic substance of its performance.

According to the following classification, James A. Hall and Tommie Singleton (2007: 296) categorize risk factors for fraud in financial statements:

- a. Management's traits and effects on the control environment.  
This element is connected to the top management's perspective on internal control, management approach, pressure from the environment, and financial reporting procedure.
- b. Business circumstances.  
The connected entity's operating environment, including its regulatory and economic environments, are included in this classification. For instance, organizations in industries that are experiencing a slump or whose main clients are experiencing financial difficulties are more likely to fall victim to fraud than those whose underlying industries are stable.
- c. Financial stability and operational features.  
The nature of the entity in relation to the complexity of its transactions is considered in this classification. For instance, businesses that conduct unaudited transactions with third parties may be vulnerable to fraud.

According to ACFE, financial statement analysis can typically identify fraud in the presentation of financial statements as follows:

- a. vertical analysis, which describes the relationship between items in the income statement, balance sheet, or cash flow statement as a percentage, is a technique used to assess these relationships.
- b. A method for examining the percentage changes in financial statement items over a number of reporting periods is called horizontal analysis.
- c. Ratio analysis, a tool for assessing how the values of various items in financial statements relate to one another. In this investigation, the following ratio is employed:

1. Days Sales in Receivables Index (DSRI)

This ratio is used to compare the net sales numbers for the current year to those from the prior reporting year and to determine the link between sales days in accounts receivable. This ratio will make it simpler to ascertain whether receivables and revenues are balanced over the course of two years. There could be a number of causes for the apparent rise in day sales in accounts receivable, including adjustments to credit or financial policies, strategic adjustments, and profit manipulation. There is a chance of income inflation if the DSRI ratio is greater than 1. (Nwoye et al, 2013)

2. Gross Margin Index (GMI)

The gross margin index (GMI) is the gross margin index divided by the current year. The primary goal of a business is to raise profit margins and reduce gross profit margins, which serves as a caution. A decreasing gross margin may imply that the corporation is more prone to manipulate earnings if the GMI ratio is more than 1, which is the case (Nwoye et al, 2013).

3. Asset Quality Index (AQI)

AQI is a ratio that compares the total assets for the current year to the total assets from the previous year to establish the relationship between the total current assets and non-current assets, such as property, plant, and equipment. If the AQI is higher than 1, the corporation may be able to enhance its engagement by postponing costs, according to Siegel

(1991). Additionally, this ratio aids in assessing the asset quality during the previous two years. Indicators of earnings manipulation may include a rise in asset realization risk and a fall in asset quality.

4. Sales Growth Index (SGI)

SGI measures the difference between net sales for the current year and the prior year. Increased firm growth could be a sign of inflated profits. However, young businesses are more reliant on outside funding than established ones. The desire among managers to manipulate earnings and sales in order to meet future targets and profits may increase as a result of the necessity for external financing sources (Wahlen, J. M., Wahlen, S. P., Baginski, M. B., 2014, 465). There is a chance that the company is under pressure and may alter results to preserve performance if the SGI ratio is greater than 1 or too small and less than 1. (Nwoye et al, 2013).

5. Depreciation Index (DEPI)

Depreciation expense from the prior year in relation to the similar figure for the current year is measured by a ratio called *depi*. For ratios greater than 1, the business has put in place a policy to enhance the rate of depreciation by lengthening the duration of the depreciation in order to boost earnings (Wahlen, J. M., Wahlen, S. P., Baginski, M. B. 2015, 465). DEPI ratio greater than 1 implies a propensity for assets to deteriorate more slowly in order to increase income (Nwoye et al, 2013).

6. Sales General Administration Expenses Index (SGAI)

The excessive increase in revenue is seen by SGAI as a warning indicator for the company's future prospects. According to Beneish (1999), there is a correlation between SGAI and the potential for manipulation. If the SGAI is more than 1, either the company's operational costs, administrative costs, general expenses, and sales have increased or sales have decreased. Conversely, if  $SGAI < 1$ , it means that the company's operating costs have decreased or its sales have increased. Beneish (1999) states that if  $SGAI > 1$ , then this indicates a trigger for the company to commit fraud due to a decrease in the efficiency of the company's costs.

7. Leverage Index (LVGI)

Leverage is increased when the LVGI value is larger than 1 (one). This variable is meant to represent the existence of income-manipulating incentives in debt covenants. Changes in a company's capital structure's leverage are linked to the impact of technical default on the stock market, according to Beneish (1999). When the LVGI ratio is more than 1, it shows that the company's debt is more heavily weighted toward its assets overall, whereas a lower ratio shows that it has less debt overall. According to Beneish (1999), a probable company situation for the occurrence of earning overstatements to meet its obligations is indicated if  $LVGI > 1$ .

8. Total Accrual to Total Assets (TATA)

Other than after deducting depreciation, total accruals are calculated as changes in working capital accounts. Beneish (1999) calculates the amount of cash that supports reported earnings using TATA and predicts that larger positive accruals (less cash) are related to a higher likelihood of manipulating earnings.

## Methods

This type of research is a descriptive research. This research is a descriptive type, which explains the characteristics of a phenomenon that can be used as a basis for making decisions to solve business problems (Nur Indriantoro, 2002: 88). The data used is secondary data. The data taken is the data of the Financial Statements of PT. RB 2017, 2018, 2019, 2020, 2021, 3rd quarter 2021 and 3rd quarter 2022.

Data collection techniques in this study using the method of documentation. This study uses the Ratio Index analysis technique on financial statement data to be classified as a non-manipulator or manipulator category. Classification as a manipulator if the M Score is greater than -2.22, while it is categorized as a Non Manipulator if the M Score is less than -2.22. M Score is calculated based on the equation below:

$$\text{M Score} = -4.48 + 0.920 \cdot \text{DSRI} + 0.528 \cdot \text{GMI} + 0.404 \cdot \text{AQI} + 0.892 \cdot \text{SGI} + 0.115 \cdot \text{DEPI} - 0.172 \cdot \text{SGAI} - 0.327 \cdot \text{LVGI} + 4,697 \text{ TATA}$$

## Findings

### Background of PT RB

PT RB is a go public company engaged in the mining sector. PT RB has been reported to have manipulated financial statements in 2011 (okezone, 2012). In addition, according to information obtained from the RTI Business application, the company's ROE as of October 30, 2022 is -365.12%. The value of the company's ROE indicates the inability of the returns that the company prints for shareholders and the last dividend distribution was made by the company in 2011.

### PT. RB Classification (Manipulator / Non Manipulator)

By applying the beneish ratio approach, it can be seen that PT. RB is indicated as a manipulator or non-manipulator, namely by calculating the M-Score. If the M Score is greater than -2.22, while it is categorized as Non Manipulator if the M Score is less than -2.22. Below is the data needed to calculate the M Score:

Table 1: Input Beneish Ratio Data

Input Data	2017	2018	2019	2020	2021	30/09/2021	30/09/2022
Accounts receivable	170.397.380	141.284.862	192.081.755	97.379.069	189.070.030	158.472.991	193.312.186
Sales	17.366.667	1.111.820.412	1.112.566.618	790.436.397	1.008.212.975	666.181.865	1.394.806.179
Gross profit	17.366.667	146.504.933	105.083.350	91.914.927	201.736.646	153.397.029	294.274.472
Current assets	758.083.685	460.903.744	454.001.034	397.376.705	775.582.880	551.556.637	990.343.259
Fixed assets	51.209.742	24.216.701	26.320.547	20.004.650	144.526.892	172.170.298	175.665.971

<b>Total Assets</b>	3.696.498.624	3.906.773.939	3.702.805.778	3.428.550.327	4.223.787.286	104.716.475	4.544.447.280
<b>Depreciation</b>	1.155.727	1.164.556	1.358.312	1.476.427	1.619.621	1.147.004	1.158.623
<b>Sales and Administration Fee</b>	38.437.019	34.065.061	33.419.872	30.757.874	31.535.375	49.235.766	35.022.965
<b>Total Liability</b>	3.410.147.622	3.403.162.098	3.192.870.099	3.295.912.298	3.577.340.599	3.422.511.218	3.451.468.845
<b>Operating Activities Cash Flow</b>	127.707.513	109.819.895	58.310.165	17.537.506	74.421.710	94.313.975	76.012.789
<b>EAT</b>	242.746.183	158.218.349	9.470.482	(337.350.969)	223.377.014	71.286.430	383.675.915

Based on the input data as described in table 1 and the M Score equation, the following results were found:

Table 2 Results of the M Score Equation

<b>Rasio Beneish</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>30/09/2022</b>
<b>DSRI</b>	0,012951	1,358623	0,713573	1,5222	0,582616689
<b>GMI</b>	7,588962	1,395114	0,812248	0,581148	1,091403685
<b>AQI</b>	0,584522	1,033324	0,952951	1,357396	0,04948093
<b>SGI</b>	64,02037	1,000671	0,710462	1,275514	2,093731836
<b>DEPI</b>	0,48101986	0,93496617	0,71399542	6,20198891	1,01000503
<b>SGAI</b>	0,013843	0,980402	1,29542	0,803815	0,339743498
<b>LVGI</b>	0,944239	0,989888	1,114846	0,881035	0,023237694
<b>TATA</b>	0,012388	-0,01319	-0,10351	0,035266	0,10115393
<b>M Score</b>	56.68356058	- 1,63013905	- 3,36736377	- 0,63406547	- -0,95489643
<b>Manipulator (&gt; -2,22)</b>			V		
<b>Non Manipulator (&lt; -2,22)</b>	V	V		V	V

Based on table 2, it was found that PT. RB in 2018, 2019, 2021, 3rd quarter of 2022 is classified as a non-manipulator. But in 2020 it is classified as a manipulator. This indicates 2018, 2019, 2021, 3rd quarter 2022 PT. RB in those years was not indicated to commit fraudulent financial statements. Year 2020 PT. RB is indicated to commit fraudulent financial statements. The indications of PT RB's fraud in 2020 could occur because the company suffered a loss, so it is possible to try to reduce operational losses from getting bigger. Whereas in 2018, 2019, 2021 and the third quarter of 2022, the company did not experience losses.

### Beneish Ratio Analysis

#### DSRI Change Analysis since 2018 - 3rd quarter 2022

DSRI is used to measure receivables and income balance or not in two consecutive years. If the increase in the number of sales days in accounts receivable means the impact of changes in credit policies to spur sales. If the DSRI ratio has a value of more than 1, then there is a possibility of income inflation (Nwoye, Okoye, and Oraka, 2013). If seen from table 2, in 2019 and 2021 the DSRI ratio exceeded 1, which indicates that there is an indication of revenue manipulation. However, in 2018, 2020 and the third quarter of 2022, the DSRI ratio was below 1, which indicates that management did not manipulate revenue. In 2019 and 2021, it is indicated that revenue manipulation occurred because in 2019 sales were higher than in 2018, even though the price of coal commodities tended to decline from the end of 2018 to the end of 2019, which was previously 100 US Dollars per tonne to 71 US Dollars per tonne. Whereas in 2021 was the beginning of a revival of coal commodity prices because throughout 2020 coal prices were depressed only by US\$51 per tonne which allowed management to take advantage of opportunities amid rising commodity prices by committing fraud in the recognition of revenue.

Researchers' analysis of the annual report of PT. 2018 RB which is not indicated to manipulate revenue. Based on the financial review of the annual report of PT. RB showed that in 2018 the company's revenue increased by 6,302.04%, up from US\$ 17.37 million to US\$ 1.11 billion. Based on the 2018 annual report, it is known that the Company assumed that the increase in revenue was due to the addition of Arutmin's results in the consolidated statements of profit and loss and other comprehensive income, which were not previously consolidated.

### **GMI Change Analysis since 2018 - 3rd quarter 2022**

If the GMI has increased, it indicates that the company is inflating its profits. If the GMI ratio has a value of more than 1, then there is a possibility that a worsening gross margin indicates the company is more likely to manipulate earnings (Nwoye, Okoye, and Oraka, 2013). If seen from table 2, in 2018, 2019, Quarter 3 2022 shows that the GMI Ratio exceeds number 1, which indicates that PT. RB is indicated to inflate its profit. However, in 2020 and 2021 the GMI ratio is below 1, which indicates management is not inflating profits because the proportion of gross profit in 2020 and 2021 is in accordance with the conditions of coal price movements in those years.

Based on the above, in 2018 there were indications of inflating profits, by taking advantage of the momentum of rising coal prices in 2018, which was around 100 US dollars per ton compared to 2017, which was around 80 US dollars per ton, so that the manipulation was disguised by this momentum. In the third quarter of 2022 there were also indications of inflating profits, by taking advantage of the momentum of rising coal prices in the third quarter of 2022, which was around 319 US dollars per ton compared to 2021, which was around 280 US dollars so that the manipulation was disguised by this momentum. Whereas in 2019, there were indications of a profit bubble because sales in 2019 were higher than in 2018, even though coal commodity prices tended to decline from the end of 2018 to the end of 2019, which was previously 100 US Dollars per ton to 71 US Dollars per ton.

### **AQI Change Analysis since 2018 - 3rd quarter 2022**

According to Siegel (1991), if the AQI is greater than 1, this indicates that the company has the potential to increase its involvement by deferring costs. If seen from table 2, in 2019 and 2021 the AQI ratio exceeds 1, which indicates that there are indications of manipulation by deferring



costs. However, in 2018, 2020 and the third quarter of 2022 the AQI ratio is below 1, which indicates that management has no indication of deferring costs because there is no indication of a decline in asset quality in those years.

In 2019 there were indications of manipulation deferring costs because the price of coal commodities tended to decline from the end of 2018 to the end of 2019, which was previously 100 US Dollars per ton to 71 US Dollars per ton so that it is possible for management to bear the costs to maintain the company's 2019 profit performance so that it does not it can be seen that there has been a drastic decrease in profit when compared to profits in 2018. Whereas 2021 was the beginning of a revival of coal commodity prices because throughout 2020 coal prices were depressed by only 51 US Dollars per ton which made it possible for management to take advantage of opportunities amid rising commodity prices by committing fraud with deferring costs.

### **SGI Change Analysis since 2018 - 3rd quarter 2022**

SGI can tell which companies are entering fake sales. The increase in SGI shows that there is a tendency for companies to record fictitious income to consider the expected normal growth in that period. SGI ratios that have a value of more than 1 or too less than 1, then there is a possibility that the company is under pressure which might manipulate profits to maintain performance (Nwoye, Okoye, and Oraka, 2013). If seen from table 2, in 2018, 2019, 2021 and Quarter 3 2022 the SGI ratio exceeds number 1, which shows that there are indications of profit manipulation. However, in 2020 the SGI ratio was below 1, which indicated that management had no indication of manipulating profits because in 2020 it was not possible to generate fictitious income when coal prices dropped dramatically to US\$50 per tonne that year.

In 2018, 2021 and Third Quarter 2022 there are indications that companies tend to make fictitious income by taking advantage of the momentum of rising commodity prices when compared to the previous year. However, this is different from 2019, because coal commodity prices tend to decline from the end of 2018 to the end of 2019, which was previously 100 US Dollars per tonne to 71 US Dollars per ton and the value of trade receivables and sales has increased compared to 2018.

### **DEPI Change Analysis since 2018 - 3rd quarter 2022**

If the DEPI is greater than 1 (one), it indicates that the rate at which assets are being depreciated is slowing, which increases the likelihood that the company has increased its estimate of assets useful lives or adopted a new method of increasing income. Beneish (1999) estimates that there is a positive relationship between DEPI and the possibility of manipulation. If seen from table 2, in 2021 and Third Quarter 2022 the DEPI ratio exceeded 1, which indicates that there are indications of manipulation of depreciation. However, in 2018, 2019, and 2020, the DEPI ratio was below 1, which indicates that management is not indicated to manipulate depreciation.

In 2021 and the third quarter of 2022 there are indications that companies tend to manipulate depreciation by taking advantage of the momentum of rising commodity prices compared to the

previous year so that profit bubbles appear faintly. Meanwhile, indications for 2021 and the third quarter of 2022 can be seen in the balance of fixed assets which has increased significantly compared to the previous year, but the increase in depreciation costs for these assets is not in line with the magnitude of the increase in fixed asset balances.

### **SGAI Change Analysis since 2018 - 3rd quarter 2022**

According to Beneish (1999) estimates that there is a positive relationship between SGAI and the possibility of manipulation. If  $SGAI > 1$ , it indicates an increase in operating expenses, general & administrative expenses, on sales. If seen from table 2, in 2020 and the third quarter of 2022 the SGAI ratio is more than 1, which indicates an increase in operating expenses, general & administrative expenses on sales made by company management. However, in 2018, 2019, 2021, third quarter of 2022 the SGAI ratio was below 1, which means that the company's management did not increase operating expenses, general & administrative expenses, and sales or a decrease in sales. In 2020 it indicated an increase in operating expenses, general & administrative expenses, on sales because at that time the company was experiencing coal selling price pressure of around 51 US Dollars per ton while the company's fixed costs continued so that the company would be motivated to commit fraudulent financial statements

In 2018, 2021, the third quarter of 2022 are indicated not to manipulate financial reports due to an increase in coal prices compared to the previous year and in 2019, coal prices have not yet fallen to their lowest point.

### **LVGI Change Analysis since 2018 - 3rd quarter 2022**

Beneish (1999) explains that there is a change in leverage in the company's capital structure related to the effect of technical default on the stock market. If  $LVGI > 1$ , it interprets that there is an increase in the composition of debt from all assets owned by the company, while a decrease in this ratio indicates a decrease in the amount of debt owned by the company. If seen from table 2, in 2020 the LVGI ratio is more than 1, which indicates that in the company there is an increase in the composition of debt on all assets owned by the company. Meanwhile 2018, 2019, 2021, and the third quarter of 2022, it was below 1, which means that there was no increase in the composition of debt for all assets owned by the company. In 2020, coal prices were depressed by only 51 US Dollars per ton, causing the composition of liabilities to company assets to increase, thus motivating management to commit financial statement fraud. Increasing the composition of debt to assets puts pressure on companies to avoid the notion that companies are unable to pay debts or even bankrupt.

### **TATA Change Analysis since 2018 - 3rd quarter 2022**

Beneish (1999) argues that a high (positive) TATA ratio indicates a company in a potential condition for earnings overstatement through an increase in accrual transactions in revenue recognition. When seen from table 2, in third quarter of 2022 a high ratio was obtained, indicating that there was an increase in accrual transactions in revenue recognition within the company. Whereas 2018, 2019, 2020, 2021 did not produce a high enough ratio, which means that the company did not increase accrual transactions in revenue recognition. In the third quarter of 2022, there was an increase in coal prices compared to the previous year. In 2021, the price of coal

touched US\$280 per ton, while in the third quarter of 2022 the price was around US\$330 per ton. This indicates that management is increasing accrual transactions by taking advantage of the momentum of rising coal prices so that financial statement fraud is not easily detected.

## Conclusion

Based on the discussion above, the conclusions that can be drawn are as follows:

1. Classification of PT. RB during 2018, 2019, 2021, and 3rd quarter of 2022 based on the beneficial ratio revealed that in these years, PT. RB is classified as a non manipulator. But in 2020 the company PT. RB is classified as a manipulator.
2. A beneficial ratio that can detect indications of fraudulent financial reporting by PT. RB when the company experienced a deficit in equity in 2020, namely SGAI and LVGI.
3. Beneish ratios that can detect indications of fraudulent financial statements of PT. RB at a time when the company experienced a significant increase in share prices in the third quarter of 2020, namely GMI, SGI, DEPI and TATA. The 4 benefit ratios are GMI, SGI, DEPI, TATA.

## References

- Abbas, A. (2017). Earnings Fraud And Financial Stability. *Asia Pacific Fraud Journal*.  
<https://doi.org/10.21532/apfj.001.17.02.01.010>
- ACFE. (2012). *International Fraud Examiners Manual*. Austin, Texas USA: ACFE Inc.
- ACFE. (2019). Report to the Nations 2018 Global Study on Occupational Fraud and Abuse. Profiling the Fraudster. <https://doi.org/10.1002/9781118929773.oth1>
- Aghghaleh, S. F., Mohamed, Z. M., & Rahmat, M. M. (2016). Detecting Financial Statement Frauds in Malaysia: Comparing the Abilities of Beneish and Dechow Models. *Asian Journal of Accounting and Governance*. <https://doi.org/10.17576/ajag-2016-07-05>
- Albrecht, W. S., C. C. Albrecht, and C. O. A. (2006). *Fraud Examination (second edi)*. South Western: a division Thomson Learning.
- Altman, E. I. (2013). Predicting financial distress of companies: Revisiting the ZScore and ZETA® models. In *Handbook of Research Methods and Applications in Empirical Finance*.  
<https://doi.org/10.4337/9780857936097.00027>
- Anshori, M., & Iswati, S. (2009). *Buku Ajar Metodologi Penelitian Kuantitatif*. Surabaya: Pusat Penerbitan dan Percetakan Unair.
- Beneish, M. D. (1999). The Detection of Earnings Manipulation. *Financial Analysts Journal*.  
<https://doi.org/10.2469/faj.v55.n5.2296>
- Bisnis.com, (2022). <https://ekonomi.bisnis.com/read/20220224/9/1504612/ indef-pertambangan-jadi-sektor-potensial-di-2022>
- Bisnis.com, (2022). <https://market.bisnis.com/read/20221010/7/1586028/ bumi-jadi-saham-terlaris-big-broker-mirae-hingga-jp-morgan-paling-banyak-transaksi>

- Brigham, E. G., & Gapenski, L. C. (1997). *Financial Management – Theory and Practice* (Eight Edit). The Dryden Press.
- Clinard, M. B., & Cressey, D. R. (1954). Other People's Money: A Study in the Social Psychology of Embezzlement. *American Sociological Review*. <https://doi.org/10.2307/2087778>
- CNBC Indonesia, (2021).<https://www.cnbcindonesia.com/news/20211105105459-4-289231/industri-kesehatan-tambang-jadi-juara-di-kuartal-iii-2021>
- Dita, Ines Farah. "Pengaruh Kinerja Keuangan Terhadap Harga Saham (Studi Pada Perusahaan Otomotif yang Terdaftar di Bursa Efek Indonesia (BEI) periode 2009-2011." *Fakultas Ekonomi dan Bisnis. Universitas Brawijaya Malang* (2013).
- Ghozali, I. (2013). *Aplikasi Analisis Multivariate dengan Program IBM SPSS*. Semarang: Badan Penerbitan Universitas Diponegoro.
- Gugus Irianto. (2003). *Skandal Korporasi dan Akuntan. Skandal Korporasi Dan Akuntan*.
- Handayani, Handayani, Tarjo Tarjo, and Yuni Rimawati. "Correlation of financial statement components in detecting financial fraud." *Asia Pacific Fraud Journal* 1.2 (2016): 275-300.
- Hall, James A., and Tommie Singleton. "Audit Teknologi Informasi dan Assurance." *Jakarta: Salemba Empat* (2007).
- Jensen, M. C., & Meckling, W. H. (1976). Theory of The Firm Manajerial Behaviour, Agency Cost and Ownership structure. *Journal of Financial Economics*, 3, 305–360. Retrieved from [http://uclafinance.typepad.com/main/files/jensen\\_76.pdf](http://uclafinance.typepad.com/main/files/jensen_76.pdf)
- Kartikasari, R. N., & Irianto, G. (2010). Penerapan Model Beneish (1999) dan Model Altman (2000) dalam Pendeteksian Kecurangan Laporan Keuangan. *Jurnal Akuntansi Multiparadigma*. <https://doi.org/10.18202/jamal.2010.08.7096>
- Kluger, B. D., & Shields, D. (1989). Auditor changes, information quality and bankruptcy prediction. *Managerial and Decision Economics*. <https://doi.org/10.1002/mde.4090100404>
- Kokić, T., Gligorić, M., & Knežević, G. (2018). Use of Beneish Model on Serbian Super League Football Clubs. <https://doi.org/10.15308/finiz-2018-118-122>
- Kristina, R. (2016). Analysis of earnings manipulation practices of Finnish and German companies using Beneish M-score model, (August).
- Lotfi, N., & Chadegani, A. A. (2017). Detecting Corporate Financial Fraud using Beneish M-Score Model. *International Journal of Finance and Manegerial Accounting*.
- Magdalena, F., & Tanusdjaja, H. (2018). Analisis Komparasi Metode Altman Z-Score – Financial Ratio dan Metode Beneish M-Score Model – Data Mining dalam Mendeteksi Fraudulent Financial Reporting. *Jurnal Muara Ilmu Ekonomi Dan Bisnis*. <https://doi.org/10.24912/jmie.v2i1.1530>
- Marfuah, & Ardiami, kinanti putri. (2018). Model beneish m-score untuk mendeteksi kecurangan pada perusahaan perbankan di indonesia. *JURNAL OPTIMUM*, 8(2 September 2018).
- Nurharyanto. (2013). *Sistem Kendali Kecurangan (Fraud) Perbankan. Konsepsi, Asesmen Risiko dan Penerapan Kebijakan Anti Fraud*. Jakarta: Tinta Ceative Production.

- Nwoye, Dr, Emmanuel Ikechukwu Okoye, and Azubuike Onuora Oraka. "Beneish model as effective complement to the application of SAS No. 99 in the conduct of audit in Nigeria." *Management and Administrative Sciences Review* 2.6 (2013): 640-655.
- Ofori, E. (2016). Detecting Corporate Financial Fraud Using Modified Altman ZScore and Beneish M-Score . The Case of Enron Corp. *Research Journal of Finance and Accounting*, 7(4), 59–65.
- Okezone, (2021). <https://economy.okezone.com/read/2012/09/24/278/694275/bumi-resources-manipulasi-laporan-keuangan-2011>
- Omar, Normah, et al. "Financial statement fraud: A case examination using Beneish Model and ratio analysis." *International Journal of Trade, Economics and Finance* 5.2 (2014): 184.
- Purnomo, Yogo. 1998. "Keterkaitan Kinerja Keuangan dan Harga Saham" Usahawan. No. 12. BPFE UI. Jakarta.
- Rahman, Rashidah Abdul, and Irda Syahira Khair Anwar. "Effectiveness of fraud prevention and detection techniques in Malaysian Islamic banks." *Procedia-Social and Behavioral Sciences* 145 (2014): 97-102.
- Repousis, S. (2016). Using Beneish model to detect corporate financial statement fraud in Greece. *Journal of Financial Crime*. <https://doi.org/10.1108/JFC-11-2014-0055>
- Shah, C., Saraswat, M., & Mehta, A. (2018). Predicting earnings manipulation using Beneish M - score of selected companies in India. *Indian Journal of Finance*. <https://doi.org/10.17010/ijf/2018/v12i4/122796>
- Suyanto, Suyanto. "Fraudulent financial statement: evidence from statement on auditing standard no. 99." *Gadjah Mada International Journal of Business* 11.1 (2009): 117-144.
- Sulistiyanto, S. (2008). *Manajemen Laba (Teori & Model Empiris)*. Grasindo.
- Siegel, Joel G. *How to analyze businesses, financial statements, and the quality of earnings*. Prentice Hall Direct, 1991.
- Tarjo, & Herawati, N. (2015). Application of Beneish M-Score Models and Data Mining to Detect Financial Fraud. *Procedia - Social and Behavioral Sciences*. <https://doi.org/10.1016/j.sbspro.2015.11.122>
- Ugochukwu, N., Emma, O., & Azubuike, O. (2013). Beneish Model as Effective Complement to the Application of SAS No . 99 in the Conduct of Audit in Nigeria. *Management and Administrative Sciences Review*.
- Wahlen, James M., Stephen P. Baginski, and Mark Bradshaw. *Financial reporting, financial statement analysis and valuation*. Cengage learning, 2014.
- Wells, J. T. (2001). Irrational Ratios. *Journal of Accountancy*.