

Unmasking Financial Report Manipulation: A Forensic Analysis of Its Impact on Stock Returns in Indonesia's Energy Sector

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The Indonesian energy sector, while holding immense potential, is susceptible to financial statement manipulation. This study examines the prevalence of such manipulation in public energy companies and its impact on stock returns. Utilizing a quantitative approach, this research analyzes 47 public companies operating in the energy sector in the country of Indonesia and listed in the stock market in Indonesia during the period 2018-2022. M-Score Beneish, the tool to detect financial manipulation, is employed to assess the likelihood of manipulation. The findings reveal that a significant proportion of companies exhibit potential manipulation. However, further analysis shows that financial statement manipulation has no significant impact on share returns. Finally, further research is needed to identify factors that have a higher impact on the performance of energy sector stocks, such as industry dynamics, macroeconomic conditions and investor sentiment. Future research could consider a broader range of variables, alternative detection models, or focus on specific sub-sectors.

Keywords— Beneish-M Score; Financial statement manipulation; Indonesia Stock Exchange; Public energy companies; Stock returns

I. INTRODUCTION (HEADING I)

Financial statement manipulation remains a persistent concern with profound implications for accounting, finance, and capital markets, recently escalating into a global phenomenon. High-profile scandals, such as Enron, Lehman Brothers, and Simmit Technology, underscore the pervasive nature of this issue and its detrimental impact on investor confidence and market stability. [1] defines earnings manipulation as the intentional misrepresentation of financial performance, often achieved by artificially inflating revenues or deflating expenses, thereby distorting a company's true financial health¹.

In essence, financial statement manipulation is an act that significantly impacts all stakeholders, typically manifesting as a decrease in stock returns. [1] proposed a theory stating that companies that tend to manipulate are companies that show very high sales growth from year to year; experience fundamental deterioration as proven by declining quality of assets, declining profits and increasing levels of leverage or debt ratios; and apply aggressive accounting practices such as growth in receivables that exceed revenue or reduction in depreciation. This theory is in line with the explanation provided by the Association of Certified Fraud Examiners (ACFE), which says fraud schemes in financial reporting can include overstating or understating net income by manipulating data in financial statement items and accompanying disclosures.

The market for financial statement manipulation has evolved into an ongoing industry that persists to this day. This practice has inflicted substantial financial losses on numerous countries, with the monetary impact reaching significant proportions. A study conducted by [2] implicitly estimated that annual costs in the United States of manipulating reported finances could be as high as \$500 billion USD². Another study

¹ Messod D. Beneish, "The Detection of Earnings Manipulation". Financial Analysts Journal - Financ Anal J, September, 1999, pages 26-28.

² Zabihollah Rezaee, "Causes, Consequences, And Deterrence Of Financial Statement Fraud, Critical Perspectives on Accounting, April, 2005, Volume 16, No. 3 pages. Abstract.

conducted by [3] which examined 347 reported cases of financial statement manipulation from 1998 - 2007, found that the average loss resulting from the impact of such manipulation amounted to \$12 million³.

The energy sector plays a vital role in Indonesia. It is of paramount importance due to its direct impact on the livelihood of the entire Indonesian population. Furthermore, this sector is crucial and significantly contributes to Indonesia's economic growth. Based on its share of Indonesia's overall Gross Domestic Product (GDP), the energy sector accounted for 8.98% in 2021. Significant fluctuations in commodity prices also have a substantial impact on Indonesia's GDP. The influence of commodity price changes on GDP can be observed in 2015, when energy prices experienced a considerable increase, resulting in Indonesia's GDP growth exceeding 5% compared to the period of 2010-2013.

The energy sector has become a "favored playground" for major conglomerates in Indonesia. This sector has created numerous new wealthy individuals in the country. Despite being favored by many conglomerates, it is a highly complex sector with various rules and regulations. Beyond regulatory considerations, this sector is closely intertwined with intricate supply chain systems and must prioritize environmental sustainability in the vicinity of mining or energy drilling areas. These multiple layers of complexity should also be reflected in each entity's respective audited statements, following the applicable standards. With "Report to the Nations: 2020 Global Study on Fraud and Abuse in the Workplace" by the Association of Certified Fraud Examiners in 2020, there were 89 reported fraudulent cases related to the energy sector in 2020, with approximately 9% of these cases stemming from financial statement manipulation practices.

This high level of complexity can create opportunities for financial statement manipulation. In Indonesia, although not related to the energy sector, a prominent company was recently discovered to have engaged in long-term manipulation. This company is PT Garuda Indonesia (Persero) Tbk, the largest and most prestigious state-owned airline in Indonesia, which carried out manipulation in 2018, only to be revealed a year later in 2019.

This research is based on previous research findings which investigated the detection by public accountants of manipulation using the M-Score Beneish model. Research conducted by [4] titled "The Effect of Earnings Manipulation With Using M-Score on Stock Return (Empirical Evidence in Indonesia Listed Companies on LQ45 at Indonesia Stock Exchange Period 2009-2011)" employed multiple linear regression methodology. Findings revealed that calculated Beneish M-Score, or earnings manipulation, has a negative impact on stock returns.

Furthermore, in a study by [5] titled "Pendeteksian Kecurangan Laporan Keuangan menggunakan Analisis Beneish M-Score Pada Perusahaan Non Keuangan Yang Terdaftar Di Bursa Efek Indonesia Tahun 2017-2018," which also employed multiple linear regression analysis. The findings show the 222 out from 568 samples of non-financial companies can be categorized as companies that manipulate information in their reports. Research gaps within this research lie in the use of only two periods of financial statements, which results in limitations in the test sample.

Another study conducted by [6] titled "Detecting Financial Statement Fraud by Malaysian Public Listed Companies: The Reliability of the Beneish M-Score Model" utilized a sample of companies in Malaysia. Sample consists of 17 publicly traded companies on Bursa Malaysia whose executives or upper management has been indicted by Securities Commission Malaysia (SC) on charges of financial statement fraud and misrepresentation from 1996-2014. The research shows that M-Score Beneish method successfully detects the fraud and cheating on 82% of the companies in the sample.

Agency Theory

At its core, agency theory is a framework that examines any contractual relation between company owners (principals) and company managers (agents). This contract outlines the owners' interests and delegates responsibility to managers to act in accordance with those interests. [7] defines agency theory simply in terms of a contract in which one or a few people (principals) engage someone else (agent) to perform certain functions on behalf of them, involving delegation of certain decisional powers to the agent.

Financial statement manipulation is a manifestation of agency conflict. This conflict arises when

³ Mark Beasley et al., "Fraudulent financial reporting: 1998-2007: An Analysis Of U.S. Public Companies". Association Sections Divisions Boards Teams, January, 2010, pages. 3.

managers prioritize their own interests over those of the company's owners. Essentially, the conflict stems from a divergence of interests between managers and owners, leading to actions by managers that may not align with the owners' objectives. [7] elucidates that the agency problem is a pervasive feature of economic life. This problem arises when a person (principal) delegates power to another person (agent) to perform actions on behalf of the principal. Problem is the agent is not necessarily acting in the best interest of the principal⁴.

Financial statement manipulation is a consequence of conflicts arising within agency theory. This practice can occur when the objectives set by owners cannot be achieved by company managers. The failure to meet these targets creates pressure on managers, compelling them to engage in manipulative practices in financial reporting to give the appearance that the financial targets set by company owners have been met. Furthermore, this practice may also occur when managers attempt to manipulate financial statements to achieve owner-set targets, thereby securing bonuses or promotions. Research conducted by reveals that companies with higher levels of managerial ownership tend to exhibit higher discretionary accruals. This suggests that when managers have a greater ownership stake, they are more likely to act in self-interest and manipulate financial statements to enhance the value of their shares⁵. This is also in line with the understanding by [8] where the manager's interest in pursuing matters related to earnings quality is very important because it will greatly affect the stakeholders⁶.

Efficient Market Hypothesis

Simply put, the Efficient Market Hypothesis is a hypothesis that states a stock's current price in public markets has reflected all available information, both published and non-public. It describes an efficiently run market as a market whose prices always "fully reflect" the available information. Based on this theory, it can be inferred that the prices of stocks traded in the market already reflect a fair value and are consistent with all available information.

Financial statement manipulation is an action that can generally influence stock prices. When manipulated financial statements are released to the public, and the public is unaware that the figures in these reports are the result of manipulation, the market tends to appreciate the stock price, yielding substantial returns for the market. Conversely, if the market becomes aware of financial statement manipulation practices, stock prices are likely to experience a sharp decline due to massive selling actions by the market, resulting in negative returns. The existence of a method of calculating M-Score Beneish that can be done independently by market participants can be additional information that will ultimately contribute to the information embedded in stock prices.

Irrational Exuberance Theory

This theory stands in contrast to the *Efficient Market Hypothesis*. This suggests [10] that markets are not always completely streamlined, and stock prices do not always move in accordance with available information. This theory also explains that asset prices can move beyond what is justified by both fundamental and technical analysis. This phenomenon can occur due to excessive investor optimism, unrealistic expectations, or investors simply following the crowd without conducting proper analysis. The consequences of this phenomenon can be significant, potentially leading to the formation of "bubbles" that are destined to burst. The Enron Corporation case exemplifies this theory. When Enron announced significant profit increases, the market highly appreciated Enron's stock price, creating excessive reasonable assumptions about the company's earnings and cash flows in the future. The market was unaware that the information derived from Enron's financial statements was manipulated to appear favorable to investors.

⁴ Michael C. Jensen and William H. Meckling, "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure". *Journal of Financial Economics*, October, 1976, V. 3, No. 4, pages 306-308.

⁵ Patricia M. Dechow, Amy P. Hutton, and Jung Hoon Kim, "Detecting Earnings Management", SSRN Scholarly Paper, February, 1994, pages. 1.

⁶ Febriana Louw, "Analisis Faktor-faktor yang Memengaruhi Kualitas Laba (Studi Kasus Perusahaan Sektor Pertambangan di Bursa Efek Indonesia)", *Jurnal Ilmiah Fakultas Ekonomi dan Bisnis Universitas Widya Dharma Pontianak*, November, 2019, pages. 16

Financial statement manipulation is typically a practice known only to management and internal parties within a company. Companies will not disclose such actions until they are discovered and investigated. During this period of "concealment," stock prices in the market move inefficiently. This is due to the existence of information that is not accessible to the market, thus preventing stock price movements from fully reflecting all available information.

Beneish M-Score

M-Score is an indicator which is used for detecting potential financial statement manipulation within a company. While this indicator cannot definitively confirm that a detected company has undoubtedly engaged in manipulation, it can serve as supplementary information in stock analysis and investment decision-making processes. M-Score of Beneish are quantitative indicators designed for detecting potential fraud; consequently, it does not consider qualitative aspects of management and struggles to assess management characteristics that may or may not be indicative of manipulative behavior.

To get the M-Score of Beneish, eight more ratios need a calculation. These ratios include Days' Sales in Receivables 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 (TATA). The results of each of these ratios are then used in a calculation to arrive at a single Beneish M-Score value.

[1] elucidates that this ratio has an accuracy rate of up to 76% in detecting manipulation conducted by a company. Although not 100% accurate, the results of this calculation can assist various stakeholders with interests related to financial statements. Auditors can employ this calculation in the audit process, policymakers and supervisors can utilize this indicator calculation for more stringent detection and oversight, and investors themselves can use this indicator as supplementary information prior to making investment decisions.

Stock Return

In simple terms, stock returns are returns received by investors, either in positive or negative returns. This return helps investors determine whether their investment is profitable or not. One form of stock returns is capital gains, which is the spread between buying price and selling price of a stock. This means that if a stock is bought at a price lower than the selling price, the resulting return is positive. Conversely, when the purchase prices are higher than selling prices, returns are negative.

Numerous factors, both macro and micro, influence stock returns. In simple terms, the stock market operates like any other market, governed by supply and demand dynamics. This implies that when the supply of a stock (amount of shares outstanding) is excessive on the market and is not accompanied with matching demand, the stock price will decline, resulting in a negative return. Conversely, when the supply of a stock becomes limited and there is strong demand, prices increase, resulting in positive returns. These supply and demand dynamics are highly dependent on both macro economic and micro economic factors.. On a macro economic level, a country's economy, domestic political landscape and the state of global geopolitics significantly affect the movement of a company's share price. At a micro level, firm performance, quality of management, product quality, and the overall condition of the industry and sector related to the company also substantially influence stock price movements. All these factors ultimately determine how supply and demand are formed in the market, which is then reflected in the company's stock price.

Research Hypothesis

The Influence of Beneish M-Score on Stock Returns

The Beneish M-Score value serves as information that can be utilized to determine buy, sell, or investment decisions regarding a company. When a company's Beneish M-Score is classified as a "manipulator," the market should generally react to this information, typically through a decline in stock price due to the risk that arises if the company is indeed proven to have manipulated its financial statements. This would inevitably lead to negative returns for investors in that company. Conversely, if a company's Beneish M-Score is favorable and not classified as a "manipulator," the market is likely to react to this information by appreciating the stock price. This appreciation stems from the notion that the values presented in the company's financial statements align with reality and are free from manipulation, potentially driving the stock price upward and yielding positive returns for the company's investor.

The aforementioned general notion aligns with the Efficient Market Hypothesis, which posits that stock prices reflect all historical information, both public and private. Although management will not readily admit to engaging in financial statement manipulation, the Beneish M-Score calculation method can assist investors and stakeholders in gaining insights and additional information about whether a company is engaging in such practices. The information derived from the Beneish M-Score will ultimately be reflected in the stock price, which will subsequently determine the resulting stock returns.

Despite this, the Beneish M-Score value may also represent information that is entirely disregarded by investors and stakeholders. In such cases, the Irrational Exuberance Theory comes into play, which posits that markets operate inefficiently and do not reflect all available information. This implies that there are other variables that exert a stronger influence on stock price movements compared to the Beneish M-Score itself. These more potent information sources may subsequently lead to market irrationality and culminate in the formation of "bubbles" that could burst at any time. This theory can also support the notion that the Beneish M-Score may serve as an indicator that could potentially engender excessive negative expectations in the market. This could occur due to a Beneish M-Score that is excessively high and categorized as indicative of a "manipulator," thereby precipitating a drastic decline in stock prices and yielding negative returns. Based on these explanations, the hypothesis for this research is as follows:

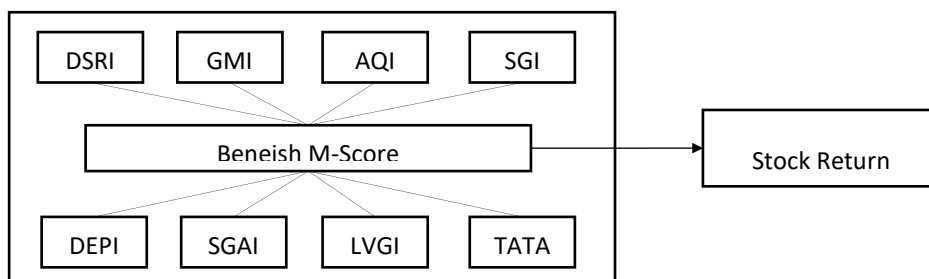
H_0 = The Beneish M-Score value has a positive but insignificant effect on Stock Returns

H_1 = The Beneish M-Score value has a positive and significant influence on Stock Returns

Conceptual Framework

Based on the explanations and hypotheses presented above, the following conceptual framework can be established for this research:

Table 3. Conceptual Framework



II. RESEARCH METHODS

A. RESEARCH SAMPLE AND DATA

Research Design

In this study, the researcher employs a quantitative research design with an associative approach. Quantitative data is collected from companies' financial statements, and the Beneish M-Score is calculated based on this data. The calculated M-Score is then used to assess its influence on stock returns.

Research Object

In this study, the research focuses on Indonesian companies listed on the Indonesia Stock Exchange that operate in the energy sector. Indonesia is a country that is a major producer of commodities and energy, hence this sector greatly affects the economy and the inflow or outflow of funds into Indonesia. This sector holds significant growth potential due to the increasing energy needs driven by population growth. Moreover, it directly contributes to Indonesia's Gross Domestic Product growth and supports national resilience.

Data Type

In this study, the type of data used is quantitative data obtained from the financial reports of each company listed on the Indonesia Stock Exchange and operating in the energy sector in Indonesia. The source of the quantitative data is the annual reports of the respective companies, which are available on their official websites. The research collected data for a period of 5 years, from 2018 to 2022.

Population and Sample

According to [11], a population is defined as the entire set of objects to be studied, sharing common characteristics. In this research, the population consists of companies listed on the Indonesia Stock Exchange (IDX) that belong to the energy sector, resulting in a total population of 88 companies.

According to [11] the definition of a sample is a portion or representative of the population that will be studied. In this research, the criteria for sample selection involve using non-probability sampling, which means that each part of the population does not have an equal chance of being selected as a sample. The specific non-probability sampling technique used in this study is purposive sampling, which means that certain criteria must be met by the population in order to be selected as a sample, ensuring that the resulting sample is relevant to the research objectives. There are specific criteria for selecting the sample, as follows:

Table 3. Data elimination table

No	Sample Criteria	Total
1	Energy sector companies listed on the Indonesia Stock Exchange during the period 2018 to 2022	88
2	Companies in the energy sector that are inconsistent in reporting complete financial reports in the 2018-2022 period	(7)
3	Companies that take corporate action, namely initial public offering (IPO) after 2020	(22)
4	Companies with a share price below Rp 50 or included in the Full Call Auction (FCA) list	(7)
5	Companies with incomplete financial data or missing values in the accounts required for calculations (Sales; Acc. Receivable; Cost of Goods Sold, Current Asset ; Total Asset ; Plant, Property and Equipment ; Depreciation and Amortization ; Sales, General, and Administrative expense ; Working Capital ; Cash ; Income tax payable ; Current long term debt ; Long term debt ; Current liabilities	(5)
	Total companies that meet the criteria	47
	Number of years of research	5
	Number of research data before outliers	235
	Data Outlier	(23)
	Total final research data for the period 2018 - 2022	212

Data Analysis Techniques

In this study, the researcher employs data analysis techniques including descriptive analysis, classical assumption tests (normality test, multicollinearity test, autocorrelation test, and heteroscedasticity test), and simple linear regression analysis. These analyses are conducted using the Statistical Product and Service Solutions (SPSS) software version 26.

B. RESEARCH VARIABLES

The variables used in this study are divided into two categories, namely independent variables and dependent variables. The explanation and calculation of each independent variable and dependent variable are as follows:

Beneish M-Score

The Beneish M-Score is a value that will determine whether a company is classified as a financial statement "manipulator" or not. The formula used to calculate the Beneish M-Score is as follows:

$$\text{M-Score} = -4,84 + 0,92 \text{ DSRI} + 0,528 \text{ GMI} + 0,404 \text{ AQI} + 0,892 \text{ SGI} + 0,115 \text{ DEPI} - 0,172 \text{ SGAI} + 4,679 \text{ TATA} - 0,327 \text{ LVGI}$$

The Beneish M-Score value can be categorized as manipulative when the value is above -2.2. Conversely, if the Beneish M-Score is below -2.2, it is not considered manipulative [12].

Prior to calculating the Beneish M-Score, it is necessary to compute eight prerequisite ratios. These eight ratios, along with their respective formulas, are as follows:

1. Days Sales in Receivable Index (DSRI)

This ratio explains the relationship between accounts receivable and total sales of a company. In this ratio, a high value can be classified as a "manipulator" because it assumes that an excessively high value means that the company may be recognizing revenue in a period when it should not be recognized. The formula for this ratio is:

$$\text{DSRI} = \left(\frac{\text{Receivables}_t}{\text{Sales}_t} \right) / \left(\frac{\text{Receivables}_{t-1}}{\text{Sales}_{t-1}} \right)$$

2. Gross Margin Index (GMI)

This ratio aims to compare the change in a company's gross profit margin between the current year and the previous year. A ratio value exceeding 1 indicates a potential for manipulation, suggesting a decrease in gross profit margin, potentially caused by manipulation practices such as sales inflation. The formula for this ratio is:

$$\left(\frac{\text{Sales}_{t-1} - \text{Cost of Sales}_{t-1}}{\text{Sales}_{t-1}} \right) / \left(\frac{\text{Sales}_t - \text{Cost of Sales}_t}{\text{Sales}_t} \right)$$

3. Asset Quality Index (AQI)

This ratio compares the quality of assets between the current year and the previous year. An AQI value greater than 1 can indicate that the company has low asset quality, which may lead to manipulative practices such as delaying the disposal of assets. The formula for this ratio is:

$$\left(1 - \frac{\text{Current Assets}_t + \text{PPE}_t}{\text{Total Assets}_t} \right) / \left(1 - \frac{\text{Current Assets}_{t-1} + \text{PPE}_{t-1}}{\text{Total Assets}_{t-1}} \right)$$

4. Sales Growth Index (SGI)

SGI is a ratio that compares the growth in sales between the current year and the previous year. Generally, an SGI value greater than 1 indicates healthy sales growth for the company. However, if the growth is excessively high, it could be an indication of potential manipulation. The formula for this ratio is:

$$\left(\frac{\text{Sales}_t}{\text{Sales}_{t-1}} \right)$$

5. Depreciation Index (DEPI)

DEPI is a ratio that measures the difference in depreciation of a company's assets from the current year compared to the previous year. A DEPI ratio value greater than 1 can indicate the presence of

manipulative practices because this ratio assumes a slowdown in depreciation compared to what should be expected, indicating that the company is attempting to increase its profit by taking such actions. The formula for this ratio is:

$$\left(\frac{Depreciation_{t-1}}{Depreciation_{t-1} + PPE_{t-1}} \right) / \left(\frac{Depreciation_t}{Depreciation_t + PPE_t} \right)$$

6. Sales, General, and Administrative Expenses Index (SGAI)

This ratio compares and measures the changes in expenses related to the company's operating and business costs between the current year and the previous year. An SGAI value exceeding 1 can be interpreted as either an increase in operating expenses or a significant increase in sales without a corresponding increase in operating expenses, suggesting the possibility of financial statement manipulation. The formula for this ratio is:

$$\left(\frac{SGA\ Expenses_t}{Sales_t} \right) / \left(\frac{SGA\ Expense_{t-1}}{Sales_{t-1}} \right)$$

7. Total Accruals to Total Assets (TATA)

This ratio is a measure of the change in accruals of a company and can detect the presence of manipulative practices. Accruals, or total accruals, can take the form of working capital, cash and cash equivalents, tax payments, short-term liabilities, and the value of depreciation and amortization, which will then be compared to the total assets of the company. A positive and high TATA value can indicate that the company is inflating revenue significantly and manipulating accruals, as this manipulation is easier to perform than transactions related to cash. The formula for this ratio is:

$$\frac{\Delta WWC - \Delta Cash + \Delta Income\ Tax\ Payable + \Delta Current\ LTD - Depreciation\ \&\ Amortization}{Total\ Assets_t}$$

8. Leverage Index (LVGI)

This ratio examines the change in a company's debt level relative to its total assets, comparing the current year to the previous year. An LVGI value exceeding 1 can be interpreted as the company attempting to increase its debt proportion compared to the previous year, either to finance its business operations or to conceal financial difficulties. The formula for this ratio is:

$$\left(\frac{LTD_t + Current\ Liabilities_t}{Total\ Assets_t} \right) / \left(\frac{LTD_{t-1} + Current\ Liabilities_{t-1}}{Total\ Assets_{t-1}} \right)$$

Return Saham

Stock returns are determined by fluctuations in stock prices. Furthermore, the purchase price point and sales price point of a stock will exert a significant influence on the resulting return. The determination of purchase and sales points will be based on the closing price of each month during the period 2018-2022. Subsequently, the changes in stock returns for each month (over a one-year period) will be averaged in order to obtain an average stock return for five consecutive years from the period 2018-2022. The following is the formula for stock returns:

$$R_t = (P_t - P_{t-1}) / P_{t-1}$$

Keterangan:

R_t = Stock Return

P_t = This month's closing share price
 P_{t-1} = Previous month's closing share price

The next calculation is to calculate the average stock return each year during the period 2018 - 2022, with the following formula:

$$\text{Average } Rt = \frac{Rt_1 + Rt_2 + Rt_3 + Rt_4 + Rt_5 + Rt_6 + Rt_7 + Rt_8 + Rt_9 + Rt_{10} + Rt_{11} + Rt_{12}}{12}$$

Keterangan:

Average Rt = Average stock return per year

Rt_1, Rt_2, Rt_3, Rt_x = Monthly stock return

III. RESULT AND DISCUSSION

A. DESCRIPTIVE ANALYSIS

Descriptive analysis is a method of data analysis that involves the collection of data, the practice of data analysis, and the presentation of the results of that analysis in the form of a clear and detailed description.. As stated by [13], descriptive analysis is a method employed to gain an understanding of the characteristics of a given population. In descriptive analysis, a series of values are presented, including the minimum, maximum, mean, and standard deviation. The following section presents the results of the descriptive analysis conducted in this study:

Table 3. Descriptive Analysis Results

	N	Minimum	Maximum	Mean	Std. Deviation
Beneish M-Score	235	-10,2670240	55,38851485	-1,35157007	5,991693738
Return Saham	235	-,009938712	4,533047720	0,0204179537	0,2956609923

Source : SPSS Output 26 (2024)

As illustrated in Table 3, the descriptive analysis revealed that the study sample consisted of 235 samples. The table presents a variety of values, including the minimum, maximum, mean, and standard deviation. Upon examination, the minimum value is observed in the Beneish M-Score variable, which is -10.2670240. Similarly, the maximum value is also observed in the Beneish M-Score variable, which is 55.38851485. The largest average value is observed in the stock return variable, with a value of 0.0204179537. Conversely, the smallest average value is observed in the Beneish M-Score variable, with a value of -1.35157007. The standard deviation value reveals that the largest value is observed in the Beneish M-Score variable (5.991693738), while the smallest value is observed in the stock return variable (0.2956609923). This indicates that the standard deviation value for stock returns is the closest to the average or mean value.

B. CLASSICAL ASSUMPTION TEST

The normality test was carried out by the researchers using the classical assumption test method with a Kolmogorov-Smirnov approach, while *multicollinearity* was tested using a *Variance Inflation Factor (VIF)* test methods, *Durbin-Watson* for autocorrelation and testing *Heteroscedasticity* tests were performed according to *Glejser*. The results of each test and their respective explanations are shown below:

1. Normality Test (*Kolmogorov Smirnov* or *ONE KS*)

Table 4. Normality Test Result (*Kolmogorov Smirnov* atau *ONE KS*)

N	Asymp. Sig. (2-tailed)	Kriteria	Kesimpulan
204	0,074	.>0,050	Data terdistribusi secara normal

Source : SPSS Output 26 (2024)

A normality test is the main diagnostic test that you may need to do in practice; if this fails, interpretation does not go any further. The results of normality tests based on the Kolmogorov Smirnov test method are

a normally distributed data Asymp. requirements for this test method Sig. To say that data is normally distributed, then it should have less than 0.050 p-value (2-tailed). Test results indicating that Asymp. Sig. (2-tailed) (0.074 > 0.050) data normally distributed.

2. Multicollinearity Test (Uji VIF)

Table 5. Multicollinearity Test Result (Uji VIF)

Model	Tolerance	Criteria	VIF	Criteria	Conclusion
Beneish M-Score	1,000	>0,10	1,000	<10	No interference occurs

Source : SPSS Output 26 (2024)

In general, the multicollinearity test is a test carried out with the aim of how the significance of the correlation between the independent variables and the regression model. In testing multicollinearity with the VIF test method, there are conditions that need to be met, namely the tolerance value must be above 0.10 and the VIF value must be below 10. When viewed in the test results, the tolerance value is at 1.000 which means it is greater than 0.10 and the VIF value is smaller than 10 so it can be said that there is no multicollinearity disorder..

3. Autocorrelation Test (Durbin-Watson)

Table 6. Autocorrelation Test Result (Durbin-Watson)

Durbin-Watson	dL	dU	4-dL	4-dU
2,060	1,777	1,809	2,223	2,191

dU 1,809 < DW 2,060 < 4-dU 2,191

Kesimpulan:

No interference occurs

Source : SPSS Output 26 (2024)

The autocorrelation test in general is a test conducted to detect whether autocorrelation occurs in a linear regression model. The Durbin-Watson test has a requirement that the DW value must be above the dU value and the 4-dU value so that it can be said that there is no autocorrelation disorder. When viewed, the DW value in the test results is at 2.060 where this value is greater than the dU value of 1.809 and smaller than the 4-dU value of 2.191 so that it can be said that there is no autocorrelation disorder.

4. Heteroscedasticity Test

Table 7. Heteroscedasticity Test Result (Glejser)

Model	Sig.	Criteria	Conclusion
Beneish M - Score	0,120	> 0,050	No interference occurs

Source : SPSS Output 26 (2024)

Heteroscedasticity test is a statistical method used to evaluate whether the variance of the residuals in a linear regression model is consistent across studies. In testing heteroscedasticity with the Glejser test method, there are conditions that need to be met, namely the Sig. value must be greater than 0.05 so that it can be said that there is no heteroscedasticity disorder. When viewed from the test results, the Sig. value is 0.120, which means it is greater than 0.05 so it can be said that there is no heteroscedasticity disorder.

C. SIMPLE LINEAR REGRESSION TEST

Table 8 Simple Linear Regression Test Result

Model	Unstandardized B	Sig.
(Constant)	0,000	0,000
Beneish M-Score	-0,00001569.	0,120

Source : SPSS Output 26 (2024)

Simple linear regression testing can be formulated as follows:

$$Y = \alpha + bX$$

$$Y = 0,000 - 0,00001569 X$$

Keterangan:

Y = Stok Return

α = Constant

X = Beneish M-Score

In the test results, it can be seen that the constant value is at a value of 0.000, which means that if the independent variable, namely Beneish M-Score, is eliminated, the value of the dependent variable, namely stock returns, will be close to 0. The value of -0.00001569 indicates that there is a negative relationship between the independent variable and the dependent variable, where each increase of one value in the independent variable will cause a decrease of 0.00001569 in the dependent variable. The Sig. value that exceeds 0.05 also indicates that there is no influence between the independent variable and the dependent variable. If you look at the Sig. value in the test results, it is 0.120, which means that there is no relationship between the independent variable and the dependent variable.

D. COEFFICIENT OF DETERMINATION R^2 TEST

TABLE 9. COEFFICIENT OF DETERMINATION R^2 RESULT

Model	Adjusted R Square	Kesimpulan
1	0.004	The effect of the independent variable on the dependent variable only has an effect of 4%, the remaining 96% is influenced by other variables

Source : SPSS Output 26 (2024)

The test results show that the Adjusted R Square value is 0.004, which indicates that the independent variable (Beneish M-Score) is only able to influence the dependent variable (stock return) by 4%. The remaining percentage portion, which is 96% (100% - 4%), means that there are variables outside the study that further influence the dependent variable (stock returns).

IV. CONCLUSION

Various pressures in the energy sector can cause financial statement manipulation practices. Pressures such as competition between other companies, targets from company owners and investors, expectations of company performance from the public, or pressure due to declining share prices so that manipulation can increase share prices. There are many examples of financial statement manipulation practices so that financial statements seem to look good to stakeholders such as fictitious revenue reporting, revenue recognition not in the period in which the transaction has occurred, hiding impaired assets, using accruals to increase revenue or decrease revenue, and many other practices. These practices are practices that are very detrimental to investors so it is important for investors and stakeholders to see and ensure that there are no manipulation practices in the companies invested in. Researchers hope that this research can help the application of the use of the Beneish M-Score method, especially how it affects the capital market in Indonesia.

The results showed that the Beneish M-Score value can affect stock returns with a very small percentage so that the research hypothesis H_1 is rejected and the H_0 hypothesis can be accepted. This is because there are other variables that are stronger in moving stock prices so that they have more influence on stock returns. Variables such as the country's economic conditions, politics, sector conditions such as supply and demand in the sector, factors of who owns the company and corporate actions taken are more reliable in moving a stock price so that it can have an impact on stock returns. Although the effect of Beneish M-Score on stock returns is very small, there is interesting information that from the sample of 47 companies used as research test material, it was found that 40 companies or around 85% of the total companies tested were likely to manipulate based on the Beneish M-Score method, but unfortunately the potential for manipulation practices cannot directly affect the stock returns of the companies concerned. This research has various limitations such as only focusing on the energy sector. Researchers hope that future research should expand the scope to include all sectors listed on the Indonesia Stock Exchange and extend the time period to get a more comprehensive understanding. In addition, this study only uses the overall Beneish M-Score value without testing the results of the 8 ratios contained in the Beneish M-Score. Researchers hope that in future studies the 8 ratios that are part of the Beneish M-Score can also be tested so that the test results can be more comprehensive.

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