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# The Applicability of the Beneish M-Score Method for Detecting Financial Statement Fraud in Manufacturing Companies during the Covid-19 Pandemic

Retnawati Siregar[1*], Linda Lores[1], Warsani Purnama Sari[1], Indah Cahya Sagala[1], Fitriani Saragih[2]

[1] Universitas Medan Area, Indonesia
[2]Universitas Muhammadiyah Sumatera Utara, Indonesia
*retnawatiumsu1956@yahoo.com (Corresponding author)*

**Abstract.** Financial statements are an important instrument for investors to know the condition of a company in which they invest. Financial statements must be presented in accordance with applicable regulations in order to become relevant information. The management always hopes that the financial statements that will show good results so that they can attract investors to invest.This study aims to determine which companies are classified as manipulators, non-manipulators, and gray companies as manufacturing companies in the consumer goods industry sector which are listed on the Indonesia Stock Exchange. The population in this study are 53 manufacturing companies in the consumer goods industry sector which are listed on the Indonesia Stock Exchange for the period 2019 to 2021. It uses a purposive sampling technique. The data collection method uses the documentation method.The data analysis technique used is the Beneish M Score method which consists of 8 variables, namely Days Sales In Receivables Index (DSRI), Gross Margin Index (GMI), Asset Quality Index (AQI), Sales Growth Index (SGI), Depretiation Index (DEPI), Sales, General and Administrative Expenses (SGAI), Leverage Index (LVGI) and Total Accrual To Total Assets Index (TATA) and logistic analysis.As for the results of the study, it was found that in 2019 25%, in 2020 27%, in 2021 30% were classified as manipulators according to the Beneish M-Score Model, in 2019 75%, in 2020 73%, in 2021 70% were classified as non-manipulators according to the Beneish M-Score Model and there were no companies classified as grey companies according to the Beneish M-Score Model.

**Keywords:** Beneish, Manipulators, Grey Companies, Financial Statements

# 1. Introduction

Fraud is an illegal act that harms an entity or organisation and benefits the perpetrator. Fraud not only results to reduce the assets of organisation but can also reduce reputation. According to (A. Abbas, 2017; Erdoğan & Erdoğan, 2020) financial difficulties have a greater incentive to commit fraud. Fraud can be reduced through prevention, detection and investigation (Repousis et al., 2019). To prevent fraud, it is necessary to eliminate the causes and the booster of fraud and improve internal control (Lastri Surna; Fahlevi, Heru; Diantimala, 2022). Fraud detection can be done by identifying symptoms and signs of fraud to be studied and analysed (Dwi Ratmono; Darsono Darsono; Nur Cahyonowati, 2020).

Beneish is a model used to detect fraud in financial statements. Beneish states that in general the financial statements of companies which is manipulated will show a significant increase in revenue and a significant decrease in expense accounts between accounting periods (Omar Normah; Koya, 2014)(Hasan et al., 2017)there are differences for some countries in the practice of manipulation in financial statements.

This technique is known as the Beneish M-Score which was popularized by professor Messod D. Beneish in 1999 at Indiana University Bloomington. The Beneish ratio index consists of 8 variables, namely DSRI, GMI, AQI, SGI, DEPI, SGAI, LVGI and TATA. Variables are measured by using data from specified year (t) and data from previous year (t-1). This model is an effective model in detecting fraud (Hołda, 2020; Shakouri et al., 2021)This model can estimate public financial information, this analysis technique can be used as an early detection for parties who use financial statements in making decisions (Beneish, 2019).

In Indonesia, fraud in manipulating financial statements has been occurred in manufacturing companies in consumer goods industry sector, namely PT. Kimia Farma. The audit in December 31, 2001, Kimia Farma's management reported a net profit of IDR 132 billion. However, the Ministry of BUMN and BAPEPAM considered that the net profit was too large and contained manipulation elements. After being re-audited on October 3rd, 2002, Kimia Farma's 2001 financial statements were restated because pretty basic error was found. In the new financial statements, the profit presented was Rp. 99.56 billion or lower Rp. 32.6 billion, or 24.7% lower than the previous profit report. The errors that occurred in the raw material industry unit, there were overstated sales of IDR 23.9 billion, the errors also occurred in pharmaceutical inventory units, there were overstated inventory of IDR 8.1 billion and error in sales with overstated of IDR 10.7 billion.

Based on (Knežević et al., 2021; Shakouri et al., 2021)revealed that the Beneish M-Score model as a whole can detect the fraud of financial statement. Margin index, gross profit index, depreciation index, sales and general administration index and total accrual index are significant variables that are able to map manipulated and non-manipulated financial statements, while (Kukreja et al., 2020), did not confirm the efficacy of the Beneish model in predicting fraudulent financial statements.

The difference in the results of this study made researchers use the Beneish M-Score method during the Covid 19 pandemic, it was said that financial stability would have an impact on the company's financial performance. According to (Yuliana et al., 2022)financial stability has no effect on fraudulent financial statements. Refers to the relevant basic theory, this research explicitly aims to find out the percentage of manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2019-2021 that are detected as gray companies and the percentage of manufacturing companies listed on the IDX in 2019-2021 that do not commit fraudulent or are non-manipulators. This study also aims to find out which companies are classified as manipulators, non-manipulators, and grey companies in manufacturing companies in the consumer goods industry sector which are listed on the Indonesia Stock Exchange.And whether all the variables contained in the Beneish M-Score method can detect companies that commit fraud or companies that do not commit fraud, and can analyze to prove the truth. The purpose of this study is to find companies that perform manipulators and those that are detected as gray companies by using the M. Score method and analyze them.

# 2. Theoretical Background

## 2.1. Gone Theory

The elements that influence the likelihood of fraud during the procurement of goods and services are explained by the GONE theory. The GONE hypothesis can be used to identify fraudulent activities committed by certain agencies or organizations and can assist internal and external auditors in identifying the root causes of fraud. It can help internal and external auditors identify the root causes of fraud. It can be said that the use of the GONE Theory is appropriate because it can explain why criminals commit fraud. (Theodorus Tuanakotta, 2010).This hypothesis is a development of the fraud triangle theory, which states that the fraud triangle consists of three components. (fraud triangle), where it is stated that pressure, opportunity, and pressure are three elements that are always present in every fraud scenario, namely pressure, opportunity and rationalization (Cressey, 1953).

## 2.2. Fraud

Fraud is a broad term with many definitions that results from human inventiveness and is used when one party intentionally aims to increase personal gain(Sihombing, 2021). Characteristics of cheating include surprise, deception, cunning, and using unusual means to deceive others(Paranoan, 2022).The only way to explain this is to say cheating corrupts human morality. Furthermore, according to(Bhaktiar, 2021), Fraud results from irregularities in law enforcement, which are carried out to achieve specific goals (for example, stealing or providing false information to rival organizations) by individuals inside or outside the organization. Financial statements that contain untrue or misleading information will have a negative impact, especially on the users' interests(Triyanto, 2019). The decision-making capacity of financial statement users, such as lenders, investors, and regulators, may be affected by this(Sakti, 2020). This can result in huge investment or financial losses. In the financial world, trust is crucial. Financial statement fraud can erode investor, shareholder, and public confidence in the company. Loss of clients, a drop in share price, and severe damage to one's reputation are all possible outcomes(Achmad, 2022). Therefore, financial statement fraud can damage the reputation of the company and its management(Fathmaningrum, 2021). This can increase the cost of capital and make it harder for businesses to secure external funding, such as loans(Rukmana, 2021).

## 2.3. Purpose of Financial Statements

According to (Collis et al., 2012) the general purpose of financial statements is to share financial information about reporting entities that are very useful for interested parties, such as potential investors, creditors, and other parties involved in making decisions and policies regarding to resources within the company. The definition of fraudulent financial statements according to (AICPA, 2017) Fraudulent financial statements can be interpreted as fraud committed by management in presenting misstatements of financial statements that make investors and creditors suffer some loss. However, these fraud can be financial or non-financial fraud (Jan, 2018).

The financial performance of the company can be tracked by owners, shareholders, management, and other related parties with the help of financial statements(Abdulshakour, 2020). They can observe the growth or decline of the company over some time(D. S. Abbas, 2021). Financial statements are a valuable tool for shareholders when deciding whether to buy, sell, or hold on to their shares(Maisharoh, 2020). Creditors can also use financial statements to evaluate the risk of lending. Financial statements are tools used by the management of a company to make choices(Miquel, 2020).

Meanwhile, according to (Wells, 2011) fraud in financial statement includes (1) Fake document, modification document, or manipulation documents either financial records, subsidiary documents or business transactions. (2) Intentional disappearance of any affairs, transactions, accounts, or other important information as a source of presentation of financial statements. (3) The using of accounting principles, policies, and procedures which is applied intentionally in improper way to measure, identify, report, and disclose economic events and business transactions. (4) Intentional disappearance of any information that need to be revealed and published due to the using of accounting principles and policies in the preparation of financial statements.According to((COSO), 2010) identifies fraud in several areasunreasonable income admission, asset overstatement (aside fromaccount receivables related to fraud in revenue recognition), expenses/liabilities understatement, assets misuse, improper reveal, other possible fraud.

Of the various possible financial statement frauds, understatement in reporting statement (Diansari & Wijaya, 2019) is the most common.

1. Overstatement of Revenue
   a. Fake Sales is done by creating sales reports that do not actually exist but are created. This is done by posting special purpose entity, i.e. as a seller and manipulatesales documents.
   b. Premature Revenue Recognition is a method where the employees have recorded revenue when the buyer is still placing an order, not when the goods have been shipped.
   c. Conditional Sales Recognition is a method where employees record sales on transactions that have not been fully recorded because the company still has contingent liabilities.
   d. Misuse of Cut-off Date of Sales is a method used to increase current period revenue, so that employees can move past period revenue to the current period.a. Abuse of the
   e. Percentage of Completion misstatement is a method that when a contract is in progress, employees can increase the percentage of completion of the contract so that revenue increases.
2. Overstatement of Sales
   a. Inventory fraud is a common case of overstating ending inventory. If this overstatement is detected, the fraudster may be able to give reason that it was due to a miscalculation.
   b. Accounts receivable fraud is an overstatement of accounts receivable due to an underestimation of allowance for doubtful accounts or fraud in the final balance of accounts receivable.
   c. Fixed assets fraud happens when employees who intentionally do not calculate the depreciation value of fixed assets even though they have actually experienced depreciation, resulting in an overstatement presentation the value of fixed assets.

### 2.4. Beneish Ratio

Beneish ratio is a technique used to analyze financial statements in detecting whether there is or there is no fraud in financial statements. This has been proven by (Beneish, 2019)who has identified quantitative differences among the companies that manipulate their revenue (there is fraud) and the ones that do not manipulate their revenue (there is no fraud).Beneish performs an analysis by using financial data and then calculates financial ratios. This is done to find out whether there is any indication of manipulation (fraud) in the financial statement. In general revenue manipulation is indicated by a significant increase or significant decrease in expenses from one certain year (t) to the previous year (t-1). The Beneish M-Score method is a method that contain financial ratios used to detect fraud in the financial statements of a company significantly from one year (t) to the previous year (t-1). And the results of the calculation of the Beneish M-Score robust with an indication that if the value/ score is more than -2.22, the company is classified as a manipulator company, if it is equal to -2.22, the company is classified as a gray company and if it is less than -2.22, the company is classified as a non-manipulator company.

## 3. Research Methods

Data collection methods are obtained from observation, interviews, documentation and triangulation (Sugiyono, 2016). The survey technique used is a documentary technique, a technique of recording past events in the form of documents, drawings, sketches, etc., (Sugiyono, 2018). The data used in this research is the financial statements of consumer goods listed on the Indonesia Stock Exchange (IDX) for 2019-2021. This information is taken from the website www.idx.co.id.

This research covers all manufacturing companies in the consumer goods industry sector that are listed on the Indonesia Stock Exchange for the 2019-2021 period. The population is 53 companies, obtained from the website of the Indonesia Stock Exchange (IDX) www.idx.co.id and the website www.sahamok.com. Here are the names of manufacturing companies in the consumer goods industry sector.The data analysis used is the index ratio analysis technique, where this technique is used to analyze the financial statements of companies that have been selected as samples in this study. The results of the calculation of the ratio index (index count) will then be adjusted to the parameter index according to the Beneish Model, this calculation is intended to be able to determine companies that have committed financial statement fraud (manipulators) or those that do not commit financial statement fraud (non manipulators).

The method used to determine the criteria for companies classified as manipulators or non-manipulators is 1. Calculating the company's Beneish M-Score, 2 Comparing the calculated index with the Parameter Index (Beneish ratio index):

1. Calculate the company's Beneish M-Score according to the formula for each variable.
   a. Days Sales In Receivables Index (DSRI)
   b. Gross Margin Index (GMI)
   c. Asset Quality Index (AQI)
   d. Sales Growth Index (SGI)
   e. Depretiation Index (DEPI)
   f. Sales General and Administrative Expenses (SGAI)
   g. Leverage Index (LVGI)
   h. Total Accrual to Total Assets Index (TATA)
2. Compare the Calculated Index with the Parameter Index (Beneish ratio index)

Table 1. Parameter Index (Beneish ratio index)

| No | Index | Explanation |
|---|---|---|
| Days Sales In Receivables Index (DSRI) | 1,031 | Non-manipulator |
| | 1,031 < index < 1,465 | Grey |
| | 1.465 | Manipulator |
| Gross Margin Index (GMI) | 1,014 | Non-manipulator |
| | 1,014 < index < 1,193 | Grey |
| | 1.193 | Manipulator |
| Asset Quality Index (AQI) | 1,039 | Non-manipulator |
| | 1,039< index < 1,254 | Grey |
| | 1,254 | Manipulator |
| Sales Growth Index (SGI) | 1.134 | Non-manipulator |
| | 1.134< index < 1.607 | Grey |
| | 1,607 | Manipulator |
| Depretiation Index (DEPI) | 1,001 | Non-manipulator |
| | 1,001< index < 1,077 | Grey |
| | 1,077 | Manipulator |
| Sales General and Administrative Expenses (SGAI) | 1,001 | Non-manipulator |
| | 1,001< indeks < 1,041 | Grey |

| | | |
|---|---|---|
| | 1,041 | Manipulator |
| Leverage Index (LVGI) | 1,037 | Non-manipulator |
| | 1,037< index < 1,111 | Grey |
| | 1.111 | Manipulator |
| Total Accrual To Total Assets Index (TATA) | 0,018 | Non-manipulator |
| | 0,018< index < 0,031 | Grey |
| | 0,031 | Manipulator |

3. After obtaining the results from the 8 (eight) ratios, they are then calculated by using the Beneish Model equation function, namely: [19].

> *BeneishM-Score*= -4,840 +0,920(DSRI)+0,528(GMI)+0,404(AQI)+0,892 (SGI)+0,115 (DEPI)–0,172 (SGAI)–0,327 (LVGI)+4,697(TATA).

4. Calculate and find out the percentage of companies classified as manipulators, non-manipulators and gray companies

The analysis technique used in this research is logistic regression analysis, where the independent variables are dummy scale and nominal scale.

## 4. Results

The results from the 8 (eight) ratios, they are then calculated by using the Beneish Model equation function:

BeneishM-Score=-4,840+0,920(DSRI)+0,528(GMI)+0,404(AQI)+0,892(SGI)+0,115(DEPI)– 0,172(SGAI)–0,327 (LVGI) +4,697 (TATA).

From the M-Score calculation, if the result is more than -2.22, then the companies are included in the list of manipulator companies. Meanwhile, companies that get an M-Score of less than -2.22 are classified as companies that do not manipulate their financial statements or they are non-manipulator companies. The overall results of the calculation of the M-Score and the categories of the company can be seen in the table below

Table 2. The Result of M–Scoreand The Categorization

| No. | Emitten Code | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| 1. | AISA | 1,158 | 0,825 | -2,139 |
| 2 | ALTO | -2,725 | -2,648 | -2,522 |
| 3 | CAMP | -3,193 | -3,401 | -2,999 |
| 4 | CEKA | -3,18 | -1,206 | -1,607 |
| 5 | CLEO | -2,759 | -2,988 | -2,875 |
| 6 | COCO | -1,887 | -3,14 | -2,285 |
| 7 | DLTA | -2,079 | -3,674 | -3,127 |
| 8 | DMND | -2,523 | -2,658 | -2,536 |
| 9 | FOOD | -2,403 | -2,3 | -2,244 |

| | | | | |
|---|---|---|---|---|
| 10 | GOOD | -2,336 | -3,044 | -2,479 |
| 11 | ICBP | -2,71 | -3,561 | -2,161 |
| 12 | INDF | -2,833 | -2,689 | -2,326 |
| 13 | KEJU | -3,395 | -3,176 | -2,032 |
| 14 | MLBI | -2,34 | -3,193 | -4,462 |
| 15 | MYOR | -2,821 | -2,851 | -3,397 |
| 16 | ROTI | -2,607 | -3,009 | -2,894 |
| 17 | SKLT | -2,413 | -2,92 | -2,593 |
| 18 | STTP | 0,746 | -2,942 | -1,985 |
| 19 | UTLJ | -2,62 | -1,543 | -2,565 |
| 20 | GGRM | -1,857 | -2,45 | -2,307 |
| 21 | ITIC | -2,685 | -1,651 | -0,754 |
| 22 | RMBA | -3,578 | -1,505 | -4,289 |
| 23 | WIIM | -3,017 | -1,915 | -2,554 |
| 24 | DVLA | -2,64 | -2,173 | -3,416 |
| 25 | INAF | -2,166 | -1,618 | -2,254 |
| 26 | KAEF | -0,925 | -2,964 | -2,264 |
| 27 | KLBF | -2,395 | -2,807 | -2,415 |
| 28 | MERK | -2,677 | -2,841 | -1,938 |
| 29 | PEHA | -2,030 | -3,232 | -2,884 |
| 30 | PYFA | -2,734 | -1,350 | -1,968 |
| 31 | SIDO | -2,334 | -2,766 | -2,335 |
| 32 | TSPC | -2,671 | -2,404 | -2,444 |
| 33 | SCPI | -3,509 | -1,861 | 3,811 |
| 34 | ADES | 2,283 | 7,605 | 5,957 |
| 35 | KINO | -1,657 | -2,508 | -2,851 |
| 36 | MBTO | -2,302 | -0,737 | -2,485 |
| 37 | MRAT | -2,472 | -2,676 | -2,510 |
| 38 | TCID | -2,393 | -2,502 | -2,599 |
| 39 | UNVR | -2,332 | -2,896 | -3,161 |
| 40 | CINT | -2,386 | -2,769 | 0,142 |
| 41 | KICI | -2,571 | -2,337 | -1,756 |
| 42 | LMPI | -2,662 | -2,667 | -2,625 |
| 43 | WOOD | -1,656 | -2,357 | 2,459 |
| 44 | HRTA | -2,824 | -3,134 | -2,838 |
| Jumlah variabel | | 11 | 12 | 13 |

*Source : Processed Data,2022*

Non manipulator : 96
Greycompany :
0Manipulator 36.

From the results of the discussion in Table 4.1, it shows that for 3 consecutive years the sample of companies in 2019-2021, it is obtained that 96 companies are classified as non-manipulator companies and there are no companies classified as gray companies and there are 36 companies classified as manipulator companies.

# 5. Discussion

### Non-manipulator companies

Based on the calculation of the Beneish M score model, it is mentioned that non-manipulator companies are companies that have not detected fraud in the financial statements. Based on the data that has been obtained, it can be seen that manufacturing companies in the consumer goods industry sector listed on the Indonesia Stock Exchange from 2019 to 2021 there is a decrease in companies that do not commit fraud, in 2019 it can be obtained 75% companies are non-manipulators, in 2020 it becomes 72.7% (decrease) and it keeps decreasing in 2021 as 70.4% companies are non-manipulators. The non-manipulator companies will uphold their commitment to protect the interests of users of financial statements and they belief this way can reduce the risk of low return on capital and the risk of default on the issue of investments and loans of the company.

### The Grey Companies

Based on the results of the calculation of the Beneish M Score, it is found that the companies with value of -2.22, are categorized as grey companies. Based on the calculation of the beneficial m score formula that has been carried out for manufacturing companies in the consumer goods industry sector that are listed on the Indonesia Stock Exchange 2019-2021, no companies are found that are grey in color. However, based on calculations, there are several variables indicating that the company is classified as a manipulator but does not have a significant amount or the amount of fraud is not sufficient enough to be declared as a manipulator company.The results of calculations using the Beneish M-Score method, manufacturing companies in the consumer goods industry sector listed on the Indonesia Stock Exchange in 2019 there are 25% companies classified as manipulators, in 2020 there are 27% companies, in 2021 there are 30% companies. It can be concluded that from year to year the number of manipulator companies continue to increase. Thus, according to a survey conducted by RSM (2020) that the COVID-19 pandemic which has been going on for 2 years in Indonesia has greatly affected the financial statements of each company with trends that appear to be increasing every year. Companies that commit financial statement fraud can inflict a financial loss to various parties who are directly or indirectly involved with the company.For investors, such fraud issue can increase the risk of a low rate of return on the investment that has been invested in the company. For creditors, this fraud can increase the risk of default on loans that have been given to the company. After knowing that the company is committing fraud, investors and creditors can make decisions not to invest and provide loans to the company.

### The Manipulator Companies

Manipulators companies are companies that have been detected cheating on financial statements based on calculations by using the beneish m score method that has been carried out in manufacturing companies in the consumer goods industry sector listed on the Indonesia Stock Exchange 2019-2021.However, it can be seen that based on the calculation of each variable, there are several indicators that classify companies as manipulators, such as in 2019, there are 12 manufacturing companies in the consumer goods industry sector to do some cheating (fraud) and they are detected on the Leverage Index (LVGI) variable, those companies have high levels of debt which the value of their debt is higher than the assets they own, this indicates that the occurrence of the Covid 19 pandemic greatly affected the condition of the company's financial statements.In 2020, based on the calculation of each variable, it can be seen that as many as 18 companies are detected to have committed financial statement fraud in the Sales General and Administrative Expenses (SGAI) variable. Based on the ratio measures sales, general and administrative costs to sales in one year (t) and in previously (t-1), it shows an increase in sales that are not reasonable with the existing expenses, it can be interpreted that the company is manipulating.Meanwhile, in 2021 it can be seen that based on the results of the calculation, there are 14 companies that committed financial statement fraud on the Depreciation Index Ratio (DEPI) variable, one of companiesis the PYFA company, which has high DEPI value of 4.419, it means (based on the calculation of this variable) there isnegative indication, there is asset depreciation which began to slow down and the increase of asset usage. Companies that commit financial statement fraud can inflict a financial loss for various parties involved directly or indirectly with the companies.

For investors, such fraud can increase the risk of a low rate of return on the investment that has been given to the company (Hashem, 2019). For creditors, this fraud can increase the risk of default on loans that have been handed to the company. After knowing that the company is committing fraud, and they do not want to take any risk, investors and creditors can make decisions not to invest and provide loans to the company.

However, the users of financial statements should know that the calculation of the Beneish M-Score cannot immediately conclude that a company is committing fraud from one or two variable calculations only, because the Beneish M-Score is a combined calculation of 8 variables that can measure the level of manipulation from multiple significant points and calculation. So based on these results it can be concluded that from year to year companies classified as manipulator companies continue to increase and one of the most influencing condition is the covid 19 pandemic.

Here is the correlation the eight (8) variables of Beneish M-Score with the financial statements of a company. DSRI variable, DEPI variable and TATA variable have effect on financial statement fraud, while GMI variable, AQI variable, SGI variable, SGAI variable, and LVGI variable, have no effect on financial statement fraud. These results support the findings of (Knežević et al., 2021; Septiani et al., 2020; Shabnam Fazli Aghghaleh; Zakiah Muhammaddun Mohamed; Mohd Mohid Rahmat, 2016)that this method is proven significant in classifying manipulator, non-manipulator, and gray companies and is accurate in detecting not only fraud but also the generated profits manipulation (Farizal; & Amrizah, 2021) (Dabba, 2023) that exist in the financial statements that happened by increasing or decreasing profits.

## Practical implications of the findings

1. Build a good internal control structure
   When the company becomes bigger, it needs more effort to run and to control the company. In order to achieve the targets, to make sure the assets of the company are secured so that the operational activities can be carried out effectively and efficiently, management needs to establish a good internal control structure and effectively to prevent fraud by doing:
    a. The control environment determines the style of an organization to influence the control awareness of its people
    b. Risk assessment identifies the entity, analyzes the relevant risks to achieve its objectives, and establishes basic guidelines for determining how risks should be managed
    c. Standard Control (control activities) by establishing a policy of procedures to ensure that management directives are carried out well.
    d. Information and communication perform the identification, then obtain, and transfer the information at all times to support people to carry out their responsibilities
2. Effectivize control activities
3. Improve organizational culture
   To Improve organizational culture can be done by implementing the principles of GoodCorporate Governance (GCG) which are interrelated with each other in order to encourage the performance of company resources to work efficiently, to generate long-term sustainable economic value for shareholders and local communities as a whole.

4. Effectivize the internal audit function
   When the internal audit function runs effectively, it is expected to be able to detect fraud and can provide useful suggestions to management to prevent fraud.

# 6. Conclusion

Based on the results of research using Beneish M- Score, the following conclusions have been obtained:

a. Here is the percentage of manipulator companies. In 2019 there is 25% companies, in 2020 there is 27% companies, and in 2021 there is 30% companies categorized as manipulators.
b. From 2019 to 2021 there are no manufacturing companies in the consumer goods industry sector that are classified as gray companies;
c. In 2019, 75% of companies are classified as non-manipulators, in 2020 as many as 73% of companies are classified as non-manipulators and in 2021 as many as 70% of companies are classified as non-manipulators.
d. DSRI variable, DEPI variable and TATA variable have effect on financial statement fraud, while GMI variable, AQI variable, SGI variable, SGAI variable, and LVGI variable, have no effect on financial statement fraud.
e. Leverage Index (LVGI) variable show the companies with high levels of debt which the value of their debt is higher than the assets they own, this indicates that the occurrence of the Covid 19 pandemic greatly affected the condition of the company's financial statements

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