

PREDICTING FINANCIAL STATEMENTS CORPORATE FRAUD: BENEISH M-SCORE MODEL

Hariri *)

Ayub Wijayati Sapta Pradana **)

Sri Luki Widjajanti ***)

ABSTRACT

This research aims to detect fraudulent financial statements the financial statements of XYZ, PT in the period 2010-2013. This research is a qualitative descriptive research. Data collection techniques used are observation and documentation. Data analysis techniques used are data reduction, data presentation and conclusion with Beniesh M-Score Model. The results showed that the financial statements in the period 2010-2013 as a whole that Beniesh M-Score XYZ, PT reached -3.94 in 2010, 0.70 in 2011, -3.32 in 2012 and -2.38 in 2013, the overall Beniesh M-Score reached above -2.22 except in 2011. Beniesh M-Score Model indicates that the management has performed the practice of manipulating numbers on the financial statements conducted continuously in the period of 2010, 2012 and 2013. The authors suggest the regulation (tax office) and public accounting firms, namely that the regulators do a review/inspection directly on the company's assets that has been recorded in the financial statements and the external auditor who has been appointed to conduct an examination of the financial statements to be more independent and do detection of financial statements using ratio analysis.

Keywords: Detection, Fraudulent Financial Statements, Beneish M-Score Model, Practice of Manipulation Number

1. INTRODUCTION

1.1 Research Background

PSAK No. 1 (2009) that the purpose of presentation of financial statements is to provide useful information in the determination of economic decisions. The information provided should be reliable because it can affect the accuracy of the decisions taken by the report. The financial statements will lose their reliability if they are materially misstated. This is due to a significant difference in the condition of the company recorded in the financial statements that have been presented with the actual conditions.

The cause of fraudulent financial reporting according to Sarwoko, et al. (2001: 22), fraud in the financial statements may involve the following actions: 1) Manipulation, counterfeiting, or alteration of accounting records or supporting documents that serve as a source of data for the presentation of financial statements. 2) Representation in or omission from the financial statements, events, transactions, or significant information. 3) Wrong misrepresentation of accounting principles relating to quantity, classification, manner of presentation or disclosure.

Financial report fraud is estimated to be about 10 percent of all types of cheating in the world of work. According to the Association of Certified Fraud Examiners (2011: 1,305) in the 2010 report of the Nations on Occupational Fraud and Abuse, cheating on the report comprised 4.8 percent of reported fraud, with an average loss of \$ 4,100,000. However, it is important to note that losses due to fraudulent financial statements often measure lost market capitalization or shareholder value lost rather than a direct financial loss of the asset. As we have seen with such high-profile cheating scandals of Enron and WorldCom. It can also have a tremendous impact on the organization's shareholders.

In Indonesia, several cases that occurred in the manipulation of financial statements by management include the Century Bank, Duta Bank, Lippo Bank, Gas Negara PT, Kimia Farma PT,

Case Citra Marga Nusapala Persada PT, Merck, KAI PT, and Telkom PT, directly or indirectly lead to the accounting profession (Adhikara, 2014).

The number of accounting scandals that occurred is one reason for the analysis of financial statements to minimize fraud on the financial statements. Companies always use the services of a public accountant to audit the company's financial statements, which are expected to limit the practice of fraudulent financial statements. One of the tools to predict the existence of fraud in the company's financial report is using Beneish M-Score Model (Mariana, 2012).

1.2 Research Problem

Based on the above reasoning, it is necessary and important to do research in order to provide evidence of the phenomenon. The problem is whether there are indications of acts of accounting fraud to the financial statements in XYZ, PT?

1.3 Research Purpose

Thus, it is hoped that Beneish M-Score Model can achieve the research objective, which is to provide empirical evidence about the possibility of fraud in the financial statements of XYZ, PT.

2. THEORETICAL FRAMEWORK AND HYPHOTESIS DEVELOPMENT

2.1 Previous Research Studies

Roxas (2011) stated that by using Beneish M-Score 5 Model can identify 62% company as manipulator, compared to M-Score 8 variable that can identify 46% company as manipulator. Mariana (2012) using data analysis method is done by fraud exposure rectangle, identification of fraud-inventory and cost of good sold, revenue and sales, overstatement asset, liabilities, inadequate fraud disclosure and Beneish M-Scoremodel as a tool to predict indication fraud. And the results of his research is as a whole of both objects of research proved to have an indication of fraud to the financial statements mainly due to the liability of the company is very large. Omar et al. (2014) In a case study at MMHB, the results of an investigation using the Beneish M-Score model to identify whether there is potential fraud in the company's financial statements. A M-score higher than -2.22 means that MMHB has been manipulating on corporate earnings. Then continued the investigation using the analysis of financial ratios for three consecutive years (2005, 2006 and 2007). Operating efficiency in ratio analysis indicates that the company recorded a fictitious income of RM 198,727. Therefore, the tools used in this investigation confirmed that management is involved in manipulating the company's financial statements.

2.2 Theoretical Framework

2.2.1 Financial Report Fraud

In the Association of Certified Fraud Examiners (2011) states that fraudulent financial statements are a deliberate error of a company's financial condition achieved through misstatement or omission over the disclosure of the number of figures in the financial statements to deceive the users of the financial statements.

Fraudulent Financial Statements can be defined as fraud committed by management in the form of material misstatements of Financial Statements that are detrimental to investors and creditors. This fraud can be financial or non-financial cheating (Amrizal, 2009).

Indonesia Financial Minister Sri Mulyani Indrawati said that many companies cheated by making double financial report, including companies that have become public companies. "The company cheated by making double financial statements, such as providing different financial statements for banks, BAPEPAM (Capital Market Supervisory Agency), and tax office," said Sri Mulyani in his presentation in front of participants Indonesia Investor Forum 1 in Jakarta today (Supriyanto, 2006). According to her, companies that do the fraud may have an interest to avoid taxes by submitting poor financial statements. In contrast, good financial statements are provided to banks for the benefit of obtaining quicker financing and to the authority of the Capital Market Managing Agency to be able to go public.

According Daniri and Simatupang (2009). the misstatements in the financial statements may be caused by unintentional mistakes (errors), as well as intentional (fraud). Presentation of false information or omission of information, both balances and notes, deliberate, and intended to trick users of financial statements, including fraud category.

Fraud in the financial statements can be classified as: (1) The deliberate misapplication of assets embezzlement of money received, theft of company assets, or payments for fictitious purchases; And (2) The deliberate misstatement by fraudulent financial reporting, which generally involves the manipulation, forgery, or alteration of the accounting records and supporting documents on which the financial statements are based; Omission or misrepresentation of events, transactions, or other important information presented in the financial statements; And incorrect application of deliberate accounting principles related to balances, classifications, forms of presentation, or disclosures. It is not easy to detect fraud, but there are indicators that can be used as a basis for attention for further review (Daniri and Simatupang, 2009).

2.2.2 Financial Statements Fraud of Classification

There are five classifications of fraudulent financial reporting schemes: Fictitious Income, Time Flaw, Incorrect asset valuation, Hidden Obligations and Expenses and Incorrect Disclosure (Association of Certified Fraud Examiners, 2011).

1. Fictitious Income

Fictitious revenue involves recording the sale of goods or services made but not occurring. Fictitious sales most often involve fraudulent customers, but can also involve legitimate customers.

2. The Time Difference (Including Premature Revenue Recognition)

Fraudulent financial statements may also involve a time difference, which is the recording of income or expenses in an inappropriate period. This can be done to shift the revenue or expense between one period to the next, increasing or decreasing the desired profit.

3. Incorrect Asset Valuation

An improper asset valuation usually takes the form of one of the following classifications:

- Inventory Assessment
- Accounts receivable
- Business Combination
- Property is fixed

4. Hidden Liabilities and Expenses

Minimize liabilities and expenses is one way to manipulate financial statements to make a company look more profitable than it really is. Because the pre-tax income will increase by the amount of expenses or liabilities that are not recorded, the method of financial statement fraud can have a significant impact on reported earnings.

5. Incorrect Disclosure

Management has a duty to disclose all important information is right in the financial statements in the management discussion and analysis. In addition, the disclosed information should not be misleading. Incorrect disclosure relates to fraudulent financial statements as follows:

- Negligence to Liability
- Events after the balance sheet date
- Related party transactions
- Changes in Accounting

2.2.3 Red Flags Associated with Financial Report Fraud

Some Red Flags show increased vulnerability to financial reporting (Association of Certified Fraud Examiners, 2011). And the more significant Red Flags are:

- Management is dominated by one person or small group (in business owner not managing) without any compensation control.

- The profitability or the expected trend level of investment analysts, institutional investors, significant creditors, or other external parties (especially overly aggressive or unrealistic expectations), including expectations made by management, such as announcing over-optimism over annual reports.
- Ineffective communication, implementation, support, or enforcement of entity values or ethical standards by management or communication of inappropriate values or ethical standards.
- Frequent negative cash flows from business activities or the inability to generate positive cash flow from operations when reporting revenue and profit growth.
- Rapid growth or unusual profitability, especially compared to other companies with the same industry.
- Significant, unusual, or highly complex transactions, especially at the end of a period that lead to difficult statements of "substance over form".
- Insignificant party-related transactions in business activities or with related entities are not audited or audited by other companies.
- Management's efforts to justify marginal accounting or not on the basis of materiality.
- Formal or informal restrictions on inappropriate auditors restrict access to information to people, or limit the ability of auditors to communicate effectively with those responsible for governance.

3. RESEARCH METHOD

3.1 Research Design

XYZ, PT was established in 1992 to support national transportation and to respond to the high demand for repair services and the capacity for making transportation equipment. The company started from 1996 until 2013 has carried out the repair of transportation equipment as much as 623 units. On average, repairs are 50 units per year. And the construction of new transportation equipment is approximately 3 units per year. This research uses secondary data, that is data obtained through search and examination of document studies contained in the place of research and that has to do with the problems studied. The data in this research is financial report of XYZ, PT period of 2010-2013. In this research, data collection will be conducted by using two methods of collecting qualitative data, namely: direct observation or observation and documentation.

3.2 Research Variables

The existing data will be analyzed using descriptive qualitative data analysis include: data reduction, data presentation and conclusion.

Beneish M-Score model is a probabilistic model, so it will not detect fraud with 100% accuracy. Beneish M-Score model has 8 variables (Beneish *et al*, 2012), as follows:

1. Days Sales in Receivables Index (DSRI):
2. Gross Margin Index (GMI)
3. Asset Quality Index (AQI)
4. Sales Growth Index (SGI)
5. Depreciation Index (DEPI)
6. Sales General and Administrative Expenses Index (SGAI)
7. Leverage Index (LVGI)
8. Total Accruals to Total Assets (TATA)

The Beneish M-Score Model formula is as follows:

$$\text{M-Score} = -4.840 + 0.920 (\text{DSRI}) + 0.528 (\text{GMI}) + 0.404 (\text{AQI}) + 0.892 (\text{SGI}) + 0.115 (\text{DEPI}) - 0.172 (\text{SGAI}) - 0.327 (\text{LVGI}) + 4.697 (\text{TATA})$$

If $M > -2.22$, this indicates an indication of the company's manipulation.

4. RESEARCH RESULT AND ANALYSIS

The following results presented data analysis in table 1 by using Beneish M-Score model to the financial statements of XYZ, PT from the period of 2010-2013.

Table 1 M-Score

M-score	2010	2011	2012	2013
5 variable model	-3,64	1,81	-3,97	-3,45
8 variable model	-3,94	0,70	-3,32	-2,38

Source: Processed Data

Table 1 shows that Beneish M-Score model XYZ, PT reached -3.94 in 2010, 0.70 in 2011, -3.32 in 2012 and -2.38 in 2013. The results of the analysis indicate that there is an indication that XYZ, PT has been fraudulently practicing the financial statements in 2010, 2012 and 2013. The results of this study support the results of research conducted Roxas (2011) and Omar et al. (2014). However, it does not support the results of his research Mariana (2012).

Table 2 Derived Variables

Derived Variables					
Years	2010	2011	2012	2013	
Other L/T Assets [TA-(CA+PPE)]	-7408	21283	2766	-3409	3361
DSRI	0,68	0,90	1,26	1,80	
GMI	1,27	0,95	1,22	0,87	
AQI	-0,57	9,71	-0,94	-1,04	
SGI	1,31	0,60	0,55	1,17	
DEPI	1,06	0,74	0,96	1,14	
SGAI	0,71	1,35	0,89	1,04	
TATA	-0,23	0,05	0,00	0,03	
LVGI	0,82	0,99	1,08	1,09	

Source: Processed Data

Based on the analysis of financial statements from the period 2010-2013 to 8 variables listed in Table 2, as follows:

1. Days Sales in Receivables Index XYZ, PT which continues to increase in the year 2010 to 2013 is 0.68 to 0.90 to 1.26 and to 1.80. This is due to the year-to-year management of real balances, as recorded in appendix 2 and appendix 1, which lowers the sales balance by -35% with the outstanding balance of -85% in 2010, the balance of sales -20% with outstanding balance of -83 % In 2011, sales balance -11% with outstanding balance of -83% in 2012 and sales balance -15% with balance of receivables -92% in 2013. From these results indicate the existence of an indication of fraud over recognition of revenue and receivables as well as significant decline in profits and continue to be done in the last 4 years. This study supports the results of research conducted by Roxas (2011) and Mariana (2012).
2. Gross Margin Index XYZ, PT in 2010 and 2012 is greater than 1 that is 1.27 and 1.22, while in the year 2011 and 2013 there was a decrease in index of 0.95 and 0.87. Management performs engineering by recognizing gross margin lower than real balance, as recorded in appendix 2 of -31% in 2010, -24% in 2011, -17% in 2012 and recognizing gross margin greater than 64% in 2013. From the results of the analysis shows that the gross margin of the company is experiencing an unstable situation, meaning there is a negative signal about the prospect of a company that has a positive relationship with the action of profit manipulation. This study supports the results of research conducted by Roxas (2011) and Mariana (2012).

3. Asset Quality Index XYZ, PT in 2010 to 2011 increased to greater than 1, ie -0.57 to 9.71. However, there is a decline in the index in 2012 and 2013, namely -0.94 and -1.04. Management performs engineering by reducing the balance of current assets from real balances, as recorded in Appendix 1 at -67% in 2010, -56% in 2011, -65% in 2012 and -71% in 2013. From Analysis results show that management has the potential to increase its involvement in eliminating some cost transactions. Eliminating some cost transactions done by management to make the company's assets look small and minimize the payment of fees, it is an indication related to profit manipulation. This study does not support the results of research conducted by Roxas (2011) and Mariana (2012).
4. Sales Growth Index XYZ, PT has decreased in 2010 to 2011 and to 2012 ie from 1.31 to 0.60 to 0.55. But there is a considerable increase in the year 2013 to reach 1.17. Management does engineering by not recording all sales balances from real transactions (in appendix 2) of -35% in 2010, -20% in 2011, -11% in 2012 and -15% in 2013 (as in Appendix 2). From the analysis results show that the management cheated the financial statements in the year due to declining financial position and increased capital needs so as to put pressure on managers to achieve profit objectives. This study supports the results of research conducted by Roxas (2011) and Mariana (2012).
5. Depreciation Index XYZ, PT has decreased in 2010 to 2011, that is 1.06 to 0.74. This has not yet demonstrated the degree to which the depreciated asset is lower and the likelihood that management has revised upwards the estimated useful life of the asset or adopted a new method that lowers the asset's balance in the year. And the increase in 2011 to 2012 and to 2013 is 0.74 to 0.96 to 1.14. Management performs engineering by recognizing the depreciation expense is lower than real, as in appendix 1 is -18% in 2010, -15% in 2011, -9% in 2012 and -5% in 2013. From the analysis show That the rate at which the asset is depreciated is less than the real and the likelihood that management has revised upwards the estimated useful life of the asset or adopted a new method that lowers the asset's balance in the year. This study shows the results of research conducted by Roxas (2011) and Mariana (2012).
6. General Sales and Administrative Expenses Index at XYZ, PT has increased in 2010 to 2011, which is 0.71 to 1.35 but experienced the index decline in 2011 to 2012, which is 1.35 to 0.89 and increased in 2012 to 2013, which is 0.89 to 1, 04. Management performed engineering at lower operating expenses by -4% in 2010, but in the following year recognizes operational expenses higher than real terms of 26% in 2011, 49% in 2012 and 28% in 2013 (as in appendix2). From the analysis results show that the cost incurred for the company's operations is greater than the real cost incurred in the year. And the increase in costs that occur indicates an increase in sales costs and can be interpreted to have a negative signal about the prospects of the company in the future. This study supports the results of research conducted by Mariana (2012). However, the research does not support Roxas (2011).
7. Leverage Index XYZ, PT in the last four years has increased in 2010 to 2011 from 0.82 to 0.99 and reached more than 1 is 2012 and 2013 at 1.08 and 1.09. Management did engineering by not recording all the total debt from the real report, as in Appendix 1 in the difference -63% in 2010, -64% in 2011, -66% in 2012 and -70% in 2013. From the analysis Shows the existence of profit manipulation to get the loan agreement from the company's creditors. This study supports the results of research conducted by Mariana (2012). However, the research does not support Roxas (2011).
8. Total Accruals to Total Assets at XYZ, PT in 2010 to 2011, in -0.23 to 0.05 and also increased in 2012 to 2013, which is 0.00 to 0.03. It can be explained that there is a significant increase in the cash flow statement from operating activities for the period 2010 to 2013 (as in annex 1), is -110% to 46% to 47% and to 96%. This increase indicates a negative signal in which managers make discretionary accounting choices to change earnings. This study supports the results of research conducted by Mariana (2012). However, the research does not support Roxas (2011).

Based on the results of financial ratio analysis using Beneish M-Score model to decry the fraudulent actions against the financial statements of XYZ, PT stated that empirically the management has conducted accounting fraud practices against the financial statements in the period of 2010, 2012 and 2013, that overall Beneish M-Score model reached above -2.22, this indicates an indication of companies manipulating the figures in the financial statements. While in 2011 Beneish M-Score model reached the number below -2.22, and showed no indication of manipulation of the figures in the financial statements because in the cash flow statement (appendix 3) in the period of 2010 the company made a mistake of recording (misstatement) on the accounting account and experienced A decrease (minus) on the net cash flows balance from (for) operating / business activities so as to affect the TATA value.

5. RESEARCH CONCLUSION, LIMITATION, AND RECOMMENDATION

5.1. Conclusion

The purpose of this research is to provide empirical evidence about the possibility of fraud in the financial statements, namely to detect the financial statements of XYZ, PT period 2010-2013 by using Beniesh M-Score Model. The results of this research indicate that Beniesh M-Score XYZ, PT reached -3.94 in 2010, 0.70 in 2011, -3.32 in 2012 and -2.38 in 2013, overall Beniesh M-Score reached above -2.22 except in 2011. The result of this research can be concluded that the management of XYZ, PT engages in the practice of manipulating numbers against financial statements conducted continuously in 2010, 2012 and 2013.

5.2. Limitation

As in qualitative research, this research has high subjectivity that can not be generalized. The case in the corporation under investigation and the suspicion of the informant is a limitation in this study.

5.3. Recommendation

From these conclusions can be submitted suggestions for the regulation (tax office) and public accounting firm, namely: for the regulators to review/direct examination of company assets that have been recorded in the financial statements and the external auditors who have been appointed to conduct an examination of the financial statements more independent and do the detection of financial statements by using ratio analysis.

REFERENCES

- Adhikara, MF Arrozi and Septyanto, Dihin. (2014). *Perilaku Etis Akuntan Manajemen Dalam Penyusunan Laporan Keuangan*. Accessed from <http://portal.kopertis3.or.id/bitstream/123456789/1979/1/Perilaku%20Etis%20Akuntan%20Manajemen%20Dalam%20Penyusunan%20Laporan%20Keuangan.pdf>.
- Association of Certified Fraud Examiners. (2011). *Fraud Examiners Manual, International Edition*. Accessed on March 26, 2014 from http://www.acfe.com/uploadedfiles/shared_content/products/books_and_manuals/maintoc11%20-%20final.pdf.
- Beneish, M.D.; Lee Charles M.C.; Nichols, D. Craig. (2012). *Fraud Detection and Expected Returns*. Accessed on May 7, 2014 from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1998387.
- Daniri, Mas Achmad and Simatupang, Angela Indriawati. (2009). *Rekayasa Pelaporan Keuangan: Isu Akuntansi Atau Governance*. Accessed on August 24, 2014 from <http://kadin-indonesia.or.id/enm/images/dokumen/KADIN-167-3754-15042009.pdf>.
- Dewimayasari. (2013). *Creative Accounting*. Accessed on March 10, 2014 from http://dewimayasari39.blogspot.com/2013/01/creative-accounting_11.html.

- Mariana, Lia (2012) Analisis Kecurangan Laporan Keuangan: Studi Kasus Pada PT. Bumi Resources, TBK. Dan PT. Berau Coal Energy, TBK. Accessed on March, 30, 2014 from http://thesis.binus.ac.id/doc/prosedur_program/2012-/-00450-if_prosedur_program001.pdf.
- Omar, Normah; Ridzuan, Kunji Koya; Zuraidah, Mohd Sanusi, and Shafie, Nur Aima. (2014). Financial Statement Fraud: A Case Examination Using Beneish Model and Ratio Analysis. *International Journal of Trade, Economics and Financial*, Vol. 5, No. 2, April 2014. DOI: 10.7763/IJTEF.2014.V5.367.
- Putra, Yuniarti Hidayah Suyoso. (2012). Praktik Kecurangan Akuntansi Dalam Perusahaan. Accessed from <http://ejournal.uin-malang.ac.id>.
- Roxas, Maria L. (2011). Financial Statement Fraud Detection Using Ratio and Digital Analysis. *Journal of Leadership, Accountability and Ethics*, Vol.8 (4) 2011.
- Sarwoko, Imam, Sensi, Ludovicus, and Bede, Djoemarma. (2001). *Kumpulan Materi Kuliah Praktek Audit*. Salemba Empat. Jakarta.
- Simanjuntak, A. (2008) Kecurangan: Pengertian dan Pencegahan. Accessed on March 24, 2014 from www.asei.co.id/internal/docs/Asei-Kecurangan.doc.
- Supriyanto, Agus. (2006). Banyak Perusahaan Buat Laporan Keuangan Ganda. Accessed on March 24, 2014 from <http://www.tempo.co/read/news/2006/07/31/05680947/Banyak-Perusahaan-BuatLaporan-Kuangan-Ganda>.
- Wilopo. (2006). Analisis Faktor-faktor yang Berpengaruh Terhadap Kecenderungan Kecurangan Akuntansi: Studi pada Perusahaan Publik dan Badan Usaha Milik Negara di Indonesia. *Simposium Nasional Akuntansi (SNA) 9*. Padang, August, 23-26, 2006.

*) **Hariri, University of Islam Malang**

) **Ayub Wijayati Sapta Pradana, University of Islam Malang

***) **Sri Luki Widjajanti, University of Islam Malang**