The Effects of External Pressures, Financial Targets and Financial Distress on Financial Statement Fraud

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Abstract—The objective of this study is to analyze the influence of external pressures, financial targets and financial distress to the possibility of financial statement fraud. The proxy of financial statement fraud is the Beneish M-Score (1999). I f the M-Score is greater than -2.22, the company is likely to do financial statement fraud. The population of this study is listed on the Indonesia Stock Exchange during 2014-2016.This study is using secondary data that is the company's annual report. Sample collection method is purposive sampling method, which resulted with 123 companies. Hypotheses testing was done using logistics regression. The results show that external pressure influence the probability of financial statement fraud. While the financial targets and financial distress does not influence t he probability of financial statement fraud.

Keywords—financial statement fraud; the beneish m-score; financial distress

I. INTRODUCTION

In a Report to the Nations [1], it is stated that the financial statement fraud is the fraud that causes the biggest losses compared to the other two fraud categories, namely assets missappropation and corruption . Some companies which did fraud, are companies that face external pressures to obtain financing and also high financial targets. For example Toshiba Japan that did fraud due to high financial targets and business divisions.

Financial statement fraud is deliberate mistakes in the presentation of financial statements by eliminating or hiding numbers or explanations that resulted in financial statements are not presented in confirming GAAP (Generally Accepted Accounting Principles) in all material matters. It was done with the aim to deceive users of financial [2]. Five scheme classification of financial statement frauds [3]. Those are fictitious revenue, the difference in timing, hidden debts and expenses, improper disclosures and improper asset valuations.

In this study, researchers developed previous research results by examining three factors suspected to influence the likelihood of financial statement fraud. Third among other things namely external pressures, financial targets and financial distress.

A. Theoretical Framework

- Agency Theory

Jensen developed agency theory that describes the agency relation as a contract in which one or more people (principal(s)) make another person (agent) to perform some tasks [4]. Principals delegates authority in making decisions to agents. Agency theory also describes the conflict between the owner (principal) and the management (agent) . This conflict is often referred to as the "agency problem". This conflict can occur because there are differences of interests between principal and agent. Owners expect an increase in the value of firms, while management wants to maximize the salary and bonus and run the company in their own way. The owner asks the accountability report from management to know the company's performance and activities undertaken by management, because the owner's funds are invested into the company.

- Signaling Theory

Signaling theory was first proposed by Spence since 1973. Signaling theory arises because each party has different information relating to investment decisions called information asymmetry. Management makes financial reports to convey information to users of financial statements as a form of management responsibility. Signaling theory describes the signals that management should provide to financial statements users. Signals can be either information or promotion that the company is having better performance than other companies. When the firm reports profit then good signals occur, whereas when the company reports a loss the signal is not good.

- Financial Statement Fraud

According to IAPI, listed on Audit Standard 240, fraud is an action that was done intentionally which resulted in significant or material financial statements misstatements [5]. It was done by eliminating or hide numbers or explanations which resulted in the financial statements are not presented in confirming Generally Accepted Accounting Principles (GAAP) in all material respects. It has an aim to deceive financial statements users. Errors in presenting financial statements can be due to fraud or error. According to AICPA, differences in fraud and error exist on the basis of actions that

resulted in financial reporting misstatements, intentionally or unintentionally [2].

Financial statements fraud are often carried out by abandoning management control with some of the following techniques [6]. First, fictitious journal. Second, incorrectly approximate adjustments and alter the considerations that have made to estimate a particular account balance. Third, eliminating, making faster or slower recognition of events and transactions that occurred during the financial reporting. Fourth, covering or not presenting the facts. Fifth, using complex transactions conducted to reveal wrong financial statement. Last, changing records and policies related to unusual and significant transactions.
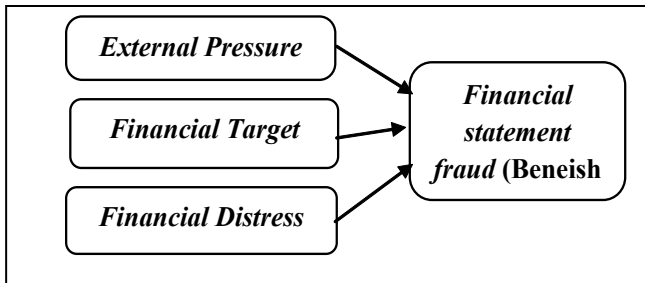

Fig. 1. Theoretical Model

- The Effect of External Pressure on Financial Statement Fraud

Excessive pressures to the management to achieve the terms and expectations of third parties will make the management depressed so they conduct fraud [5]. For example, when a company wants to obtain external financing due to a lack of funds to run its operations. In order to achieve creditors approval for the financing, the company is likely to commit to do financial statements fraud. This is because if the company's financial statements reflect a bad condition, then most likely the creditors will not approve the borrowing of funds, so the pressure from the external will make the company cheating the financial statements.

Previous research results reported that pressure from outside parties can affect the financial statement fraud done by Tiffani, Skousen, Sari, and Widarti [7-10]. Different research results obtained by Hapsari, Iqbal, Haryono, Rachmawati, and Octarigusta [11-15]. They found that external pressure has no effect on fraudulent financial statements. Based on the exposure, hypotheses 1 can be expressed as follows.

H1 : External pressure affects the possibility of a financial statement fraud.

- Financial Targets and Financial Statement Fraud

Excessive financial performance targets for management or operations personnel, including incentives sales target, will make management more likely to commit on fraudulent financial statements. If the condition of the company in the current year is not as good as last year, while the financial targets of the head of the company are made based on the performance of the previous year, then it is likely to be a

pressure for management to maintain a financial condition that seems good performance.

Previous studies that found that financial targets could affect financial reporting fraud were undertaken by Widarti and Hapsari [10,11], while research results obtained by Tiffani, Skousen, Sari, Iqbal, Haryono, and Rachmawati [7-9,12-14]. They found no significant effect of financial targets on financial reporting fraud. Based on the exposure, hypothesis 2 can be stated as follows.

H2: Financial targets affect the possibility of a financial statement fraud.

- Financial Distress and Financial Statement Fraud

An entity that is in danger of continuing their business or experiencing financial distress will manipulate or deceive the financial statements because companies tend to show the condition of the company that seems good by manipulating. According to Kartikasari, the company will manipulate the financial statements when the company is at risk of bankruptcy [16].

Research on the influence of financial distress (financial difficulties) to financial statement fraud has been done by Vega which resulted that financial distress significantly affect earnings management [17]. While the research obtained by Yudhanti indicated that financial distress companies have no significant effect on fraudulent financial statements [18]. Based on the exposure, hypothesis 3 can be stated as follows:

H3: financial distress affects the possibility of a financial statement fraud.

II. METHOD

This research used quantitative research methods. It used hypothesis testing. This research includes causal research because this research is done to prove the cause and effect relationship of several variables. The time dimension of this study involved a lot of time with multiple samples (panel data or pooled data). Data collection methods is using indirect form of archive. The research environment was the real environment (field setting). The unit of analysis is manufacturing companies in the capital market.

A. Operational Definition of Variables

The dependent variable in this research is financial statement fraud which is proclaimed by using [19].

Beneish Model is a mathematical model created by Professor Messod Daniel Beneish, who is a professional in India who invented a financial statement analysis technique to detect financial statement fraud [16]. Beneish formulates eight ratio analyzes to identify the occurrence of financial statement fraud and the tendency to manipulate income [19]. The variable model is constructed from the company's financial statements, and after calculating the eight ratios are then formulated in M- Score, which is a score that indicates the occurrence of profit manipulation. The following Beneish models are used in this study.

1. Days Sales in Receivables Index (DSRI)

$$DSRI = \frac{Net\ Receivables\ (t)\ /\ Sales\ (t)}{Net\ Receivables\ (t-1)\ /\ Sales\ t-1)}$$

2. Gross Margin Index (GMI)

$$GMI = \frac{[Sales\ (t-1) - HPP\ (t-1)\ ]\ /\ Sales\ (t-1)}{[Sales\ (t) - HPP\ (t)\ ]\ /\ Sales\ (t)}$$

3. Asset Quality Index (AQI)

$$AQI = \frac{1 - [CA\ t\ ) + FA\ (t)\ ]\ /\ TA\ t}{1 - [CA(t-1) + FA(t-1)\ ]\ /\ TA(t-1)}$$

4. Sales Growth Index (SGI)

$$SGI = \frac{Sales\ (t)}{Sales\ (t-1)}$$

5. Depreciation Index (DEPI)

$$DEPI = \frac{Depr(t-1)\ /\ [FA\ (t-1) + Deprt-1)\ ]}{Depr(t)\ /\ [FA\ (t) + Depr\ (t)\ ]}$$

6. Sales and General Administrative Expenses Index (SGAI)

$$SGAI = \frac{Sales\ \&\ General\ Adm\ Exp\ (t)\ /\ Sales\ (t)}{Sales\ \&\ General\ Adm\ Exp\ (\ t-1)\ /\ Sales\ (t-1)}$$

7. Leverage Index (LVGI)

$$LVGI = \frac{[Cur\ Debt\ (t) + LT\ Debt\ (t)\ ]\ /\ TA\ (t)}{[Cur\ Debt\ (t-1\ ) + LT\ Debt\ (t-1)\ ]\ /\ TA\ (t-1)}$$

8. Total Accruals to Total Assets (TATA)

$$SYSTEM = \frac{Net\ inc\ operations\ (t) - CF\ operation(t)}{Total\ Assets\ (t)}$$

From the calculation of the eight ratios, then we calculated into the formula M- Score :

M- Score = -4.84 + (0.92 * DSRI) + (0.528 * GMI) + (0.404 * AQI) + (0.892 * SGI) + (0.115 * DEPI) - (0.172 * SGAI) + (4.679 * TATA) - (0.327 * LVGI)

If M- Score > -2.22, then it indicates the company is likely to perform a financial statement fraud . Then, companies that are likely to do financial statements fraud are given a value of 1 is companies with the M- Score is greater than -2.22, while companies that may not do financial statement fraud are given a value of 0 with the M- Score is smaller than - 2.22.

1) Independent Variables
2) External Pressures
External pressures illustrate the pressure that management receives from the need to obtain financing, which is debt or additional capital; or target of profitability levels or certain earnings trends. The measurement of this variable used the measurement proxy used by [8], namely:

$$LEV = \frac{Total\ Amount\ of\ debt}{Total\ Assets}$$

$$FINANCE\ (t) = \frac{CFO\ (t) - Ave\ Cap\ Expenditure\ (t-3)\ sd\ (t-1)}{Current\ Assets\ (t-1)}$$

FREEC = CFO activities - Cash Dividend – Capital Expenditures

3) Financial Target
Financial targets illustrate the excessive pressures received by management to achieve financial performance targets based on past performance. Measurements of these variables use the ROA used by [8]:

$$ROA = \frac{Net\ profit\ before\ extra(t-1)}{Total\ Assets\ (t)}$$

4) Financial Distress
Financial distress is a situation where the company experienced insufficient funds to repay its obligations which have an impact on the company's inability to continue its efforts. Financial distress measurements use the Springate model, which uses four variables in the S- Score model . The four variables are:

$$X1 = \frac{Working\ capital}{Total\ Assets}$$

$$X2 = \frac{Net\ inc\ before\ interest\ \&\ taxes}{Total\ Assets}$$

$$X3 = \frac{Net\ profit\ before\ tax}{Current\ liabilities}$$

$$X4 = \frac{Sales}{Total\ Assets}$$

S- Score = (1.03 * X1) + (3.07 * X2) + (0.66 * X3) + (0.4 * X4)

If S -Score <0.862 then the company is predicted to experience financial distress. So companies that S- Score <0.862, they experience financial distress and given a value of 1, and vice versa, if companies have the value of S- Score > 0.862 then the companies do not experience financial distress and given a value of 0.

B. Population, Sample and Data
The population in this study is all manufacturing companies which are listed on the Indonesia Stock Exchange (IDX) from 2014 to 2016. The reason for the selection of the period 2014-2016 because the period is the most recent period and has not been studied by many researchers previously associated with the detection of financial statement fraud. Sampling method is purposive sampling method with a certain criteria or goals. The data in this research are obtained from BEI website (www.idx.co.id) or website company.

1) Data Analysis
Methods of data analysis in this study are logistic regression analyses. The choice of logistic regression analysis

because the dependent variable is categorical variable (non-metric) that is the possibility of a financial statement fraud (1) or the possibility of not occurring financial statement fraud (0) and also the independent variable is the metric and non metric variable. In addition, logistic regression analysis does not assume a linear relationship between independent variables and dependent variables, so no normality testing and classical assumption testing of independent variables are required. Logistic regression required larger sample than linear regression because the coefficient of maximum likelihood is a large sample estimation.

C. Hypotheses Testing

The hypotheses in this study were tested using logistic regression analyses. The logistic regression equation model used in this research is as follows:

$$\text{Logit}(p(x)) = \log\left(\frac{p(x)}{1-p(x)}\right) = \alpha + \beta_1 \text{LEV} + \beta_2 \text{FINANCE} + \beta_3 \text{FREECLL} + \beta_4 \text{ROA} + \beta_5 \text{FD}$$

Where:

p = A possible financial statement fraud (Dummy variable , 1 = exist, 0 = no)

α = Constants

β = Coefficient

LEV = Total debt / total assets

FINANCE = (Cash flow from operation - average capital expenditure from t-3 until t-1)) / Assets

FREEC = Cash flow from cash-dividend operating activities-capital expenditures

ROA = Return on assets

FD = Financial Distress (1 = Yes; 0 = No)

III. RESULTS AND DISCUSSION

A. Description of Research Objects

Manufacturing companies listed on the Indonesia Stock Exchange from 2014 to 2016 are as many as 140 companies. Of the 140 companies, there are 49 companies that do not make financial statements fraud at least once in 3 years of research based on Beneish M- Score. Companies that do not have complete data for research are 48 companies. Companies whose financial reporting end date is not December 31 during the observation period are 2 companies. After elimination, the research sample per year is 41 companies, the observation period is 2014-2016, so the final sample amount is 123 companies.

Of the 123 samples selected, there are two sample classifications, first 55companies indicated the possibility of doing financial statements fraud and 68 companies which is not indicated to do fraud.

B. Assessing the Eligibility of the Regression Model

TABLE I.   RESULTS OF FEASIBILITY TESTING OF REGRESSION MODEL

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	7,249	8	0.51

Source: Secondary data processed SPSS 24, 2017

From the result of Hosmer and Lemeshow statistic test, goodness of fit test is obtained by significance value of 0.51.Because it is more than 0.05, the null hypothesis fails to be rejected, indicating that the model has been able to predict the observed value or in other words the model in this study is the appropriate model because it matches the observed data (no difference between prediction and observation).

C. Classification Matrix Test Result

TABLE II.   CLASSIFICATION MATRIX TEST RESULT

Classification Table					
			Predicted		
			FRAUD		Percentage
	Observed		0	1	Correct
Step 1	FRAUD	0	57	10	85.1
		1	27	29	51.8
	Overall Percentage				69.9

Source: Secondary data processed SPSS 24, 2017

From the classification matrix results, the overall percentage is 69.9%, so overall 69,9% sample can be appraised accurately by logistic regression model in this research. With the magnitude of accuracy of the predicted results then reinforce no significant difference between the observation data and predicted data results so as to show a good logistic regression model.

D. Logistic Regression Test Results

TABLE III.   RESULTS OF LOGISTIC REGRESSION TESTING

Variables in the Equation							
		B	SE	Wald	df	Sig.	Exp (B)
Step 1	LEV	0.013	0.011	1,432	1	0.231	1.013
	FINANCE	-4,587	1.483	9,568	1	0.002	0.01
	FREEC	0	0	0.245	1	0.62	1
	ROA	0.063	0.035	3,225	1	0.073	1.065
	FD (1)	0.098	0.49	0.04	1	0.842	1,103
	Constant	-1.234	0.64	3.72	1	0.054	0.291

Source: Secondary data processed SPSS 24, 2017

The hypothesis was tested by using the comparison of significance values obtained in Table 8 with a significance level of 5%. If the value of significance <0.05, hence hypothesis 0 is rejected and hypothesis 1 is accepted, which indicate that independent variable have significant effect to dependent variable in this research.

E. Effect of External Pressure on Financial Statement Fraud

Of the three proxies of external pressures measurements: LEV, FINANCE and FREEC, only FINANCE proxies proved to be significantly affect the possibility of financial fraud on the 5% significance level of 0.002 with Beta -4.587. It means that the smaller (negative) FINANCE , the more big pressures to commit fraudulent financial statements. When the company does not have cash , the company will be pressured to obtain external financing so that it will conduct fraudulent financial statements, so that the financing can be approved. The results of this study corroborate research conducted by Tiffani, Skousen, Sari, and Widarti [7-10]. Based on these results, it can be concluded that hypothesis 1 is accepted.

F. The Influence of Financial Target Category Pressure Factor to Financial Statement Fraud

The proxy for financial targets of the pressure category is ROA that has a significance value of 0.07. It indicates that the financial target has no significant effect on the possibility of fraudulent financial statements due to the exceed of 5% significance level. The results of this study reinforce research conducted by Tiffani, Skousen, Sari, Iqbal, Haryono, and Rachmawati [7-9,12-14] but did not support research conducted by Widarti [10]. Based on these results, it can be concluded that the second hypothesis is rejected.

G. The Influence of Financial Distress on Financial Statement Fraud

From the results of hypothesis testing, the value of significance for financial distress variables is 0.842. Thus, it can be concluded that financial distress variables have no significant effect on the possibility of a financial statement fraud. These results corroborate research conducted by Yudhanti [18], but not in accordance with research conducted by Vega [17].

The results of different studies with previous studies are estimated due to differences in the sample used in the study. In the study of Vega using a sample of manufacturing companies, sample criteria is the company experienced a loss or profit decreased during the study period, while in this study using a sample manufacturing companies with a wider coverage and not all sampled companies experienced financial distress, some sample companies are big companies and not predicted to experience financial distress, so do not make financial statement fraud due to experiencing financial distress [17]. Based on these results, it was concluded that the 3rd hypothesis was rejected.

IV. Conclusion

This study aim was to analyze the influence of fraud triangle and predict bankruptcy of the company against the possibility of financial statement fraud in manufacturing companies. The financial fraud case procurement is Beneish M- Score (1999) If M- Score is > -2.22 then the company is likely to perform a financial statement fraud. From the result of discussion of hypotheses above, hence it can be concluded that external pressure with FINANCE proxy has significant effect to possibility of financial fraud occurrence , while financial target and financial distress have no significant effect to the possibility of financial fraud happening.

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