Bukti Korespondensi

Laporan Penelitian yang dipublikasikan pada International Journal of Financial Research, Jurnal Internasional Bereputasi terindeks Scopus (Q4, SJR 0,13) dengan judul: Financial Statement Fraud Detection With Beneish M-Score and Dechow F-Score Model: An Empirical Analysis of Fraud Pentagon Theory in Indonesia ISSN Nomor 1923-4023; Volume 11 nomor 6 Special Issue, **Penulis Pertama**

[IJFR] Submission Acknowledgement

Inbox

Gina Perry <ijfr@sciedupress.com> Sat, Aug 1, 8:42 AM

to me

Dwi Ratmono:

Thank you for submitting the manuscript, "Financial Statement Fraud Detection with Beneish M-Score and Dechow F-Score Model: An Empirical Analysis of Fraud Pentagon Theory in Indonesia" to International Journal of Financial Research. With the online journal management system that we are using, you will be able to track its progress through the editorial process by logging in to the journal web site:

Manuscript URL:
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Username: 01dwiratmono1980

If you have any questions, please contact me. Thank you for considering this journal as a venue for your work.
Best Regards,

Gina Perry
Editorial Assistant, International Journal of Financial Research
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Website: http://ijfr.sciedupress.com

International Journal of Financial Research <ijfr@sciedupress.com> Mon, Sep 14, 9:45 AM

to me

Dear Dwi Ratmono,

Please find herewith in attachment the review result for your paper entitled "Financial Statement Fraud Detection with Beneish M-Score and Dechow F-Score Model: An Empirical Analysis of Fraud Pentagon Theory in Indonesia".

Please send back the Response-to-Comments to us together with your revised paper. If there is any question, please feel free to contact us.

Please acknowledge your receipt of this email. Thanks.

Best Regards,

Gina Perry
Editorial Assistant, International Journal of Financial Research
Sciedu Press
****
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2 Attachments

Result of Review

Article Title: Financial Statement Fraud Detection with Beneish M-Score and Dechow F-Score Model: An Empirical Analysis of Fraud Pentagon Theory in Indonesia

Author(s): Dwi Ratmono

Decision of Paper Selection

( ) A. Accept submission, no revisions required.

(*) B. Accept submission, revisions required; please revise the paper according to comments. (

) C. Decline submission; you may revise and resubmit for review.

( ) D. Decline submission.

What should you do next? (Only for accepted papers, A & B)

Revise the paper according to the comments (if applicable).

All authors must agree on the publication; please inform us of agreement by e-mail.

Pay the Article Processing Charge of 500.00USD for the paper.

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Proposed Schedule for Publication (Only for accepted papers, A & B)

Vol. 11, No. X, December 2020, if you meet above requirements within 2 weeks.

e-Version First: the online version may be published soon after the final draft is completed.

You may also ask to publish the paper later, if you need more time for revision or payment.

Comments from Editorial Team

Evaluation	Grade Please give a grade of 5, 4, 3, 2, 1(high to low)
Overall evaluation of the paper	**3**
Contribution to existing knowledge	3
Organization and readability	2
Soundness of methodology	3
Evidence supports conclusion	3
Adequacy of literature review	4

Comments and Suggestions (Only comments marked with * are required)

( ) 1. Revise the paper according to *Paper Submission Guide*: http://author.sciedupress.com

( ) 2. Picture(s)/figure(s) are not clear; 300 dpi is required.

( ) 3. Move the footnotes to endnotes.

( ) 4. Resize the table(s)/figure(s), to fit letter size paper (8.5*11 inch, 21.59*27.94cm), and make all pages be vertical.

( ) 5. Revise table(s) into three-line table(s).

( ) 6. Insert table(s) and figure(s) into the text, not after references.

( ) 7. Similarity index (checked by iThenticate) is high. Please find the iThenticate report attached and revise to keep the Similarity Index $\leqslant$30% and single source matches are $\leqslant$ 6%.

Comments from Reviewers

Evaluation (Please evaluate the manuscript by grade 1-5)	
5=Excellent 4=Good 3=Average 2=Below Average 1=Poor	
Items	**Grade**
Contribution to existing knowledge	3
Organization and readability	2
Soundness of methodology	2
Evidence supports conclusion	3
Adequacy of literature review	4

Strengths

The manuscript addresses an interesting practical topic, i.e., the fraud detection in financial statements. Also, this is in line with the aims of the journal.

Weaknesses

The logistic regression performed by the author(s) lacks rigor for two reasons:

1. It is not explained how companies "have indicated fraud in their financial statements or not" (p. 5);
2. The results of the hypotheses testing (p. 7) lack several elements, like the Likelihood Ration Test or the R^2 of the model and its diagnostic tests;

The time effect (years 2014-2018) is not considered in the statistical model.

Suggestions to Author/s

Please, provide a brief synthesis of the structure of the manuscript at the end of the first section.
An explanation of the following terms in the M-score formula is recommended: DSRI, GMI, AQI, SGI, DEPI, SGAI, TATA and LVGI.
When discussing the external pressure (p. 9), the author(s) stated "[…] there are other considerations such as the level of trust or a good relationship between the company and creditors (Prajanto, 2012)". Here I suggest to cite D. VALENTINETTI, M.A. REA, C. BASILE (2016): "Differences between national reporting practices and IFRS for SMEs presentation and disclosure requirements: Evidence from Italy", International Journal of Accounting and Financial Reporting vol. 6, issue 2, pp. 146-174, in order to highlight the prominence of leverage in explaining the role of shareholders' and creditors' protection in different legal systems, namely common law and civil law.
Please, address the weaknesses 1., 2. and 3. reported above.
A language proofreading of the manuscript is recommended.

Re: Result of review

dwi ratmono <dwi.ratmono2@gmail.com> Mon, Sep 14, 1:56 PM

to International

Thank you for receiving the email.
I will immediately revise the paper according to suggestions.
Please provide information about the proofreading service fee from IJFR.
In addition, I need information about iThenticate report which has not been attached to the email.

Re: Re: Result of review

Inbox

International Journal of Financial Research <ijfr@sciedupress.com> Tue, Sep 15, 10:16 AM

to me

Dear Dwi Ratmono,

Thanks for your questions. You needn't do anything about the similarity index as it is not marked with * before that comment.

Regarding the proofreading service, we suggest you refer to the Tools for Authors on the past page of the result of review. You can see the proofreading service there.

For any other question you have, please let us know.

Best Regards,

Gina Perry
Editorial Assistant, International Journal of Financial Research
Sciedu Press
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paper Ratmono_revised

dwi ratmono <dwi.ratmono2@gmail.com> Sat, Sep 19, 9:36 PM

to International

In the following, I have sent the revised paper according to the comments and suggestions from the editors and reviewers.
Also attached is the response to the comments form and proofreader certification.
Please provide information: Is it possible if my paper can be published in an edition earlier than the volume of 11 December 2020?

Thank you very much

Dwi Ratmono
Universitas Diponegoro, Indonesia

3 Attachments

Response to Comments

- Please complete this form to response to the comments from editor and reviewers.
- Please send the completed form to the journal's email address, along with revised manuscript.

****

Article Title:

Author(s):

Response to Editor's Comments

Comment #	Response
1	**Comment:** Improve the language quality by a professional proofreader. **Response:** The language quality has been improved by using professional proofreaders as stated in the attached statement.

2	
3	
4	
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6	

Response to Reviewer's Comments

Comment #	Response
1	**Comment:** The logistic regression performed by the author(s) lacks rigor for two reasons: 1. It is not explained how companies "have indicated fraud in their financial statements or not" (p. 5); 2. The results of the hypotheses testing (p. 7) lack several elements, like the Likelihood Ration Test or the R 2 of the model and its diagnostic tests; The time effect (years 2014-2018) is not considered in the statistical model. **Response:** 1. It has been revised on page 6 (highlighted in yellow) to describe the method of how companies "have indicated fraud in their financial statements or not" as follow: If the formula calculation with Beneish M-Score results more than -2.22, it is classified as a company manipulator. If the calculation with the Beneish M-Score is less than -2.22, it is classified as a non-manipulator company. If there is a sample that meets one of the criteria of the F-Score or M-Score as companies, it is indicated for the FSF then it is given a score of 1 and 0 if not. 2. A revision has been made on page 8 (highlighted in yellow), namely the table by adding the Hosmer and Lemeshow test and the coefficient of determination R2. In addition, a narrative is also made to explain the diagnostic test results, as follows: The feasibility test of the model or goodness of fit test can be done by observing the output of the Hosmer and Lemeshow's Goodness of fit test and can be seen in the table 2. The hypotheses developed on this feasibility test are as following: *H_0: The model hypothesized fits the data* *H_a: The model hypothesized does not fit the data*

	The results obtained in table 2, obtained by sig. 0.273, in other words, the statistical value of Hosmer and Lemeshow is greater than 0.05 (0.273> 0.05) then the null hypothesis is accepted which means that the model is able to predict the value of its observations. From this, the model of the logistic regression test is good and fits the data. The coefficient of determination R^2 is 0.75 which means that the ability of the independent variables in explaining the variance of financial statements fraud is 75% and there are 25% of other factors that explain the variance of financial statement fraud. 3. Revision has been made on page 7 (in yellow) as follows: Time years effect of 2014-2018 has been included in the logistic regression model with pooled method to ensure the validity of statistical conclusions.
2	**Comments:** provide a brief synthesis of the structure of the manuscript at the end of the first section. **Response:** Revision has been made on page 2 (in yellow) as follows: This paper is structured as follows; the next section provides literature review and hypotheses development. Sections 3 and 4 present the research methods and findings, respectively. The conclusions are outlined in the final section.
3	**Comments:** An explanation of the following terms in the M-score formula is recommended: DSRI, GMI, AQI, SGI, DEPI, SGAI, TATA and LVGI **Response:** Added narration on page 6 to explain the terminology in the M-score formula, for example: *DSRI: Days Sales in Receivables Index = (Net Receivables$_t$ / Sales$_t$) / (Net Receivables$_{t-1}$ / Sales$_{t-1}$)* ……
4	**Comments:** Here I suggest to cite D. VALENTINETTI, M.A. REA, C. BASILE (2016): "Differences between national reporting practices and IFRS for SMEs presentation and disclosure requirements: Evidence from Italy", International Journal of Accounting and Financial Reporting vol. 6, issue 2, pp. 146-174, in

	order to highlight the prominence of leverage in explaining the role of shareholders' and creditors' protection in different legal systems, namely common law and civil law **Response:** Additional discussion of research results has been made on page 10 (marked with yellow), as follows: Valentinetti et al. (2016) shows the important role of leverage for shareholders and creditors protection in different legal systems, namely common law and civil law.
5	**Comments:** A language proofreading of the manuscript is recommended. **Response:** The language quality has been improved by using professional proofreaders as stated in the attached statement.

Financial Statement Fraud Detection with Beneish M-Score and Dechow F-Score Model: An Empirical Analysis of Fraud Pentagon Theory in Indonesia

Abstract:

This research contributes to the Financial Statement Fraud (FSF) literature by examining the ability of the Beneish model and the F-Score model to detect FSF trends in the Indonesian context. This study also aims to provide empirical evidence on other issues that encourage fraud. The results of this study are empirical evidence that the financial target variables and CEO narcissism have a significant effect on financial statement fraud while financial stability, external pressure, supervision ineffectiveness, related party transactions, auditor turnover, and CEO dominance have no significant effect on financial statement fraud. Furthermore, when viewed in the table of the F-Score and M-Score models, there are several companies suspected or indicated of fraudulent financial reporting, including 284 companies out of 385 observation samples. The percentage of companies indicated to have financial statements fraud requires further examination to really prove that the company is cheating. The results of the fraudulent financial report analysis using the F-Score dan M-score for manufacturing companies in 2014 - 2018 successfully analyzed a total of 284 companies that indicated fraudulent financial reporting.

Keywords: financial statement fraud, Beneish M-Score, DechowF-score, fraud pentagon theory.

1. Introduction

Financial statement fraud; hereinafter abbreviated as FSF; has become one of the significant problems for the current business environment. FSF is defined by the Association of Certified Fraud Examiners (ACFE) as a deliberate misrepresentation of a company's financial condition through intentional misstatement or the elimination of the amount of disclosures in the financial statements in order to deceive users of financial statements. ACFE in Report to the Nations on Occupational Fraud and Abuse (2016) states that in terms of losses, FSF fraud is the form resulting in the greatest losses compared to asset misappropriation and corruption. According to ACFE (2016), asset misuse is the most common form of fraud with a case of more than 83% but it causes loss with the smallest median of $ 125,000. Whereas, financial statement fraud occurs with cases of less than 10% but it causes an average loss of $ 975,000. Another issue in FSF research is the motive for fraud. Various theories about fraud have emerged. One of which is

the Pentagon fraud theory initiated by Crowe (2011). Pentagon fraud theory is a theory explaining that there are five elements or factors that underlie a person to commit fraud namely pressure, opportunity, rationalization, capability, and arrogance.

This theory is a renewable theory based on the development of the fraud triangle theory proposed by Cressey (1953) and fraud diamond theory by Wolfe and Hermanson (2004). Previous research on fraud including financial report fraud is still dominated by fraud triangle models and diamond fraud while empirical research examining the pentagon fraud model is still limited. The use of pentagon fraud analysis in the detection of financial statement fraud has been carried out by Yusof. et al. (2015) and Aghghaleh et al. (2016) but with conflicting findings.

The rise of the FSF case and the magnitude of the impact of the losses caused many empirical studies to detect early FSF trends. However, most empirical researches still focus on accrual discretionary models with empirical evidence that is still inconsistent (Dechow et al., 2007; 2011); therefore, Repousis (2016) and Dechow et al. (2007; 2011) encourage the use of other models, namely the Beneish M-Score model and the Dechow F-Score model to detect FSF trends. This research contributes to the FSF literature by testing the ability of the Beneish model and the F-Score model to detect FSF trends in the Indonesian context. Repousis (2016) has tested the Beneish model for the context of the FSF in Greece while Dechow et al. (2007; 2011) have tested the F-Score model for the United States context but with inconsistent empirical evidence. In addition, the generalization of the findings of the two studies into the Indonesian context is still an important empirical question. Differences in the institutional context are that Indonesia, including the code law clusters with characteristics such as (Leuz et al., 2003), involves: (a) weak level of investor protection, (b) concentrated ownership, (c) the company's main funding source from bank loans, compared to the capital market, and (d) high level of earnings management. This may limit the generalization of the findings of previous studies into the Indonesian context.

This study also aims to provide empirical evidence on other issues of motives encouraging fraud. Previous FSF research is still dominated by testing fraud triangle models and diamond fraud while empirical research examining the pentagon fraud model is still limited. This research is expected to provide empirical evidence to explain the inconsistencies of previous research findings using more comprehensive determinant variables including financial targets, financial stability, external pressures, monitoring mechanisms, related party transactions, auditor turnover, dominance of the President Director, and narcissism of the President Director.

This paper is structured as follows; the next section provides literature review and hypotheses development. Sections 3 and 4 present the research methods and findings, respectively. The conclusions are outlined in the final section.

2. Literature Review and Hypotheses

2.1 Pentagon Fraud Theory

Pentagon fraud theory was put forward by Crowe (2011). This theory explains five elements of fraud including pressure, opportunity, rationalization, capability (competency), and arrogance. The theory is the development of the fraud triangle theory proposed by Cressey (1953) and the diamond fraud theory by Wolfe and Hermanson (2004).

2.2 Financial Statement Fraud (FSF)

FSF is defined by the Association of Certified Fraud Examiners (ACFE) as a deliberate misrepresentation of a company's financial condition through intentional misstatement or the elimination of the amount of disclosures in the financial statements in order to deceive users of financial statements. The COSO report (2010) proposes financial statement fraud techniques that commonly occur in categories include: improper revenue recognition, overstatement of assets, understatement of expenses / liabilities, misuse of assets, inappropriate disclosure, and various other types of techniques. The two most common techniques used by companies involved in fraud are inappropriate revenue recognition techniques by presenting revenue overstatement, and asset overstatement techniques (Intal and Linh, 2002). Repousis (2016) states that the FSF scheme includes fictitious income, timing differences, concealment of liabilities and costs, improper disclosure and improper valuation of assets.

The Beneish M-score model is a statistical model using financial ratios to evaluate the extent to which profits have been manipulated. Beneish (1999) analyzes the profile of companies that tend to manipulate profits (being examined by the SEC and or being in the media spotlight) and then develop statistical models to distinguish manipulators from non-manipulators. Furthermore, Beneish and Nichols (2009) refine the model by adding 8 variables to obtain the following formula:

*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*

From the formula above, an M-score can be obtained. If M-Score is less than -2.22, it indicates that the company does not manipulate earnings in that period, on the contrary if the M-score is more than 2.22, it is a signal that the company tends to be a manipulator.

The F-Score model developed by Dechow et al. (2011) is a fraud risk assessment tool producing an output called the F-Score, as an indication of the probability of fraudulent financial reporting. Dechow et al. (2011) follow a methodology similar to Beneish (1997, 1999) in developing scores to predict which companies had material misstatements. This F-score model is based on an examination of all Accounting and Auditing Enforcement Releases' (AAERs) data released by the SEC between 1982 and 2005.

In developing the F-Score model, Dechow et al. (2011) identify and select independent variables to be included in an equation. Furthermore, the variables that include: accrual, performance, non-financial, off balance sheet, and market incentive (market incentive) are included. Furthermore, these variables are addressed and after a series of analysis and tests, such as time-series analysis, cross-sectional, prediction, marginal and robustness tests, the best variables are detected in detecting fraud or material misstatement.

If the F-Score obtained shows less than 1 (<1), it will show that there is no manipulation of the financial statements. If the F-Score exceeds 1 (> 1), it can be a signal of an indication of fraud in the company's financial statements. The F-Score 1 (F-Score = 1) indicates that the company has the same probability of misstatement between the probabilities predicted by unconditional probability (the possibility of an event will end with certain results regardless of other conditions that may exist). If the F-score is greater than 1 (F-Score> 1) then it can show a higher probability of misstatement because the estimated probability is higher than unconditional probability. It can also indicate that the company's financial statements have been changed by the company. As in the case of Enron, it has an F-Score of 2.76 which means Enron's financial statements show twice the probability of misstatement. Several studies using the Beneish and Dechow F-Score models have found that both models are effective in predicting fraud and non-fraud companies. As an example of research, Aghghaleh et al. (2016) reveal that the Beneish and Dechow Models are effective in predicting fraud and non-fraud companies with an average accuracy of 73.17% and 76.22%. The results also show that the F-score Dechow model outperforms the Beneish M-score model in sensitivity to predict fraud cases at 73.17% while the M-Score is 69.51%.

2.3 Hypotheses

In the Pentagon fraud theory, it is explained that the existence of pressure can be a motive for fraud. One of them is financial pressure, for example shareholders as external parties demand performance from management to increase shareholder value. This can make management do various ways to convince shareholders about their performance which is reflected in the achievement of financial targets. One measure of a company's financial performance is ROA (Return on Assets). ROA indicates how large and effective assets are used to run the company's operations.

Dechow et al. (2007; 2011) state that there is a relationship between company performance and the level of manipulation in a company. Company managers are more likely to manipulate financial statements when the level of corporate financial performance is low. This can encourage managers to make improvements in performance, hide problems that cause performance to be low and increase overall financial performance in an incorrect way. This is in accordance with the pentagon fraud theory on the pressure element where the pressure affects the actions of a person doing fraud. In line with research from Skousen et al. (2009); Lou and Wang (2009) found that financial targets affect a person's tendency to manipulate financial statements.

H1: Financial targets have a positive effect on financial statement fraud.

Pressure on the pentagon fraud theory that encourages someone to commit fraud can be in the form of financial stability. According to SAS No. 99 when financial stability is threatened by the state of the economy, industry and other situations, managers face pressure to commit financial report fraud (Skousen et al., 2009). The low total assets held will create its own pressure for management because the company's performance appears to be decreasing so it is possible to reduce the flow of investment funds in the following year. For this reason, the management manipulated the financial statements as a tool to cover the condition of the company's poor stability.

H2: Financial stability has a negative effect on financial statement fraud.

Pressure that encourages someone to commit fraud can come from the pressure of external parties. External parties of the company always demand an increase in company's performance. To overcome these pressures, companies need additional debt or external financing sources to remain competitive including research funding and development or capital expenditures (Skousen et al., 2009). External pressure is proxied by using the leverage ratio, which is the ratio between total liabilities and total assets. Higher leverage ratios can also be associated with greater likelihood of violating debt agreements and reducing ability to obtain additional financing through debt (Persons, 2011). This is in line with the results of Dalnial et al. (2014) showing that the leverage ratio is significant in detecting financial statement fraud. Based on the explanation, the hypothesis can be formulated:

H3: External pressure has a positive effect on financial statement fraud.

Ineffectiveness of supervision can occur due to the dominance of management by one person or small group, such as the supervision of the board of directors and the audit committee on the process of financial reporting and internal control. Lack of control from internal parties of the company becomes a separate opportunity for some parties to manipulate data in the financial statements. This is in line with fraud theory, which is one that encourages someone to commit fraud when there is an opportunity. Effective internal control can maintain the reliability of the company's financial statements and prevent fraud. Weak internal audits and when management overrules control will increase the tendency of material financial misstatements (Lou and Wang, 2009). Based on the explanation, the hypothesis can be formulated:

H4: The ineffectiveness of supervision has a positive effect on financial statement fraud.

Related party transactions refer to financial relationships or other relationships between the company and clients that have a related relationship. Related party transactions can be used as an opportunity by management who intend to commit fraud to cheat financial statements. The reason manager's use this technique is to increase revenue because related parties are usually difficult to identify / identify. Unspecified related party transactions can be used to raise income incorrectly (fraud). This type of fraud is usually found in unusual material transactions, especially close to the end of the year. Another way for companies to mislead financial report users is to present a series of sales with related parties that are not disclosed in the financial statements.

If there is a higher percentage of complex related party transactions, then fraud perpetrators have a greater probability of fraud. Young (2005) found that related party transactions can be used by actors to manipulate profits and commit fraud. This is in line with the research of Henry et al. (2012) who found that related party transactions affect the tendency of fraudulent financial statements. Based on the above explanation, the following hypothesis can be formulated:

H5: Related party transactions have a positive effect on financial statement fraud.

Auditor turnover can be caused by the obligation of audit rotation regulated by the government (mandatory) or voluntary change. In Indonesia, in terms of audit rotation is mandatory, companies are required to replace KAP after conducting audits for 6 consecutive years and a maximum of 3 consecutive years by a public accountant. Red flags for fraudulent practices, one of which is the replacement of auditors that are voluntary. Voluntary change of auditors by companies can be considered as a form to eliminate fraud traces or to reduce the possibility of detecting financial statement fraud. This tendency encourages companies to replace their independent auditors to cover fraud in the company. Covering fraud can be one form of rationalizing fraud. The high frequency of auditor turnover in the year concerned shows a higher fraud risk. In line with the research of Lou and Wang (2009) that the deterioration of the relationship between company managers and auditors can be red flag of the company's fraud tendency. This shows the relationship between managers and auditors reflects rationalization in an organization. Based on the explanation, the hypothesis can be formulated:

H6: Auditor substitution has a positive effect on financial statement fraud.

The competence or capability of a director can be a gap in fraud when the CEO or other directors have more dominance in a company. The dominance of the CEO or directors can arise when the CEO or directors as company managers also concurrently shareholders. In Law No. 40 of 2007 concerning Limited Liability Companies does not clearly state the prohibition of the CEO or member of the board of directors from becoming a shareholder in the company concerned.

H7: The dominance of the CEO has a positive effect on financial statement fraud.

Narcissism CEOs are CEOs who have leadership styles that only prioritize how attractive they are. High-level narcissistic CEOs tend to be reluctant to report disappointing financial performance, because this will jeopardize their status. A CEO tends to want to show everyone the status and position they have in the company because they do not want to lose that status or position (or feel not considered), this is consistent with one of the elements presented by Crowe (2011); arrogance. This is in line with Rijsenbilt's research (2011) which states that CEO narcissism has a positive effect on the tendency to commit fraud. Johnson et al. (2013) also explained that the risk assessment of fraud will be further enhanced if the auditor knows the narcissistic character of a manager.

Financial reporting can be used as a means of self-actualization for a manager who has a narcissistic personality. Achievement of published targets can be an ideal goal for a manager with narcissistic personality because managers will get positive responses and attention from others when they reach the target (Amemic and Craig, 2010). Schwartz (quoted by Amemic & Craig 2010) suggests that accounting as part of the financial system, offers greater "narcissistic opportunities" from other management functions such as operations. According to Rijsenbilt & Commandeur (2013) there is a positive relationship between narcissism and fraud. This will be dangerous if someone with the narcissistic personality has authority that can influence the policies of his subordinates (Amemic & Craig, 2010). This is in line

with Crowe's research (2011) where there is a possibility that the CEO will do whatever it takes to maintain the position he currently has. On the basis of this thinking, a hypothesis can be built:
H8: CEO narcissism has a positive effect on financial statement fraud.

3. Research Method

3.1. Population and Sample

The population of this study is all manufacturing companies listed on the Indonesia Stock Exchange in 2014-2018. While the sample selection is done by using purposive sampling method with the criteria used, namely:

1. Manufacturing companies listed on the Indonesia Stock Exchange for the period of 2014 - 2018. Manufacturing companies were selected as samples because financial data on financial statements were more reliable for testing financial statements using the M Score and F-Score models. Manufacturing companies tend to have the same accrual characteristics in one industry.
2. Publish audit financial reports and annual reports for the period 2014-2018.
3. Presenting data related to research variables.

3.2 Variables

Financial Statement Fraud will be measured using an analysis of the Dechow F-Score model and the Beneish M-Score. The Dechow F Score model is a mathematical equation formulated by Dechow et al. (2011) using ratio analysis to identify manipulations or not. If the F-Score obtained shows less than 1 (<1), it will show that there is no manipulation of the financial statements. If the F-Score exceeds 1 (> 1), it can be a signal of an indication of fraud in the company's financial statements. While for the FSF measurement using the Beneish M-Score model will use the following formula:

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.

DSRI: Days Sales in Receivables Index = (Net Receivables$_t$ / Sales$_t$) / (Net Receivables$_{t-1}$ / Sales$_{t-1}$)
GMI: Gross Margin Index (GMI) = [(Sales$_{t-1}$ - COGS$_{t-1}$) / Sales$_{t-1}$] / [(Sales$_t$ - COGS$_t$) / Sales$_t$]
AQI: Asset Quality Index=[1 - (Current Assets$_t$ + PP&E$_t$ + Securities$_t$) / Total Assets$_t$] / [1 - ((Current Assets$_{t-1}$ + PP&E$_{t-1}$ + Securities$_{t-1}$) / Total Assets$_{t-1}$)]
SGI: Sales Growth Index=Sales$_t$ / Sales$_{t-1}$
DEPI: Depreciation Index = (Depreciation$_{t-1}$/ (PP&E$_{t-1}$ + Depreciation$_{t-1}$)) / (Depreciation$_t$ / (PP&E$_t$ + Depreciation$_t$))
SGAI: Sales General and Administrative Expenses Index = (SG&A Expense$_t$ / Sales$_t$) / (SG&A Expense$_{t-1}$ / Sales$_{t-1}$)
TATA: Total Accruals to Total Assets = (Income from Continuing Operations$_t$ - Cash Flows from Operations$_t$) / Total Assets$_t$
LVGI: Leverage Index = [(Current Liabilities$_t$ + Total Long Term Debt$_t$) / Total Assets$_t$] / [(Current Liabilities$_{t-1}$ + Total Long Term Debt$_{t-1}$) / Total Assets$_{t-1}$]

If the formula calculation with Beneish M-Score results more than -2.22, it is classified as a company manipulator. If the calculation with the Beneish M-Score is less than -2.22, it is classified as a non-manipulator company. If there is a sample that meets one of the criteria of the F-Score or M-Score as companies, it is indicated for the FSF then it is given a score of 1 and 0 if not.

Measurement of financial targets in this study uses ROA Change (ΔROA). The proxy used for financial stability is Asset Change (ACHANGE). External pressure in this study is proxied by leverage. Related to fraud, Dunn (2004) found that fraud-indicated companies had fewer independent commissioners compared to companies that were not indicated by fraud. Therefore, the proxy percentage of independent commissioners (BDOUT / Percentage of Board Members who are Outside Members). Transaction of related parties is measured by a proxy Sales of Related Party Transactions/Total Sales. Auditor Substitution is measured using a dummy variable where the value is 1 if the company replaces the auditor voluntarily (before the provision) and a value of 0 if it does not. Measurement of CEO Domination uses scores obtained from the method of Bebchuk et al. (2010) where the maximum score is 3. The greater the score, the more dominant the CEO position in the company is. The great dominance of a person in a company can represent its ability to utilize the gap of internal control. CEOs tend to be more narcissistic belonging-wanted to show to everyone its status and position in the company because they do not want to lose status or position (or was not considered). CEO narcissism in this study is measured using CEO photos displayed at the annual report. CEO photos provide evidence of how the CEO plays themselves and their company to the public. This depiction provides evidence of who the CEO is and how personality traits they might have, such as narcissistic personality trends (Olsen, 2014). Property values of CEO photos can be obtained from scores adopted from Rijsenbilt (2011) research. The greater the score, the higher the level of CEO narcissism reflected in the company's annual report.

3.2 Data Analysis

Logistic regression is used to model the relationship between dependent variables with two categories (binary) and independent variables. The dependent variable in the logistic regression analysis of this study is a dichotomous (two choices) between companies that have indicated fraud in their financial statements and not. The logistic regression method in this study was used to see the relationship of companies that commit financial report fraud in the Pentagon fraud theory perspective. The equations formed using logistic regression are as follows:

$Ln\ (F / 1\text{-}F) = \beta 0 + \beta 1\ ROA + \beta 2\ ACHANGE + \beta 3\ LEV + \beta 4\ BDOUT + \beta 5\ RPT + \beta 6\ AUDCHANGE + \beta 7\ CEODOM + \beta 8\ CEONARCISS + e$

Ln (F / 1-F) = dummy variable where 1 for fraud firms, 0 otherwise
β0 = Constants
β1 - β8 = Regression Coefficient
ΔROA = Change in Return on Assets
ACHANGE = Percentage of asset changes
LEV = Leverage Ratio
BDOUT = Number of Independent Commissioners / Number of Commissioners
RPT = Total Sales of Related Party Transactions / Total Sales
AUDCHANGE = Auditor Substitution
CEODOM = CEO dominance
CEONARCISS = CEO Narcissism
e = Error

Time years effect of 2014-2018 has been included in the logistic regression model with pooled method to ensure the validity of statistical conclusions.

4. Research Findings and Discussion

4.1 Research Samples

The samples of this study are manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2014-2018. The sample selection in this study uses purposive sampling method. Based on this method, there are companies included in the sample criteria. An explanation of sampling is shown in the table below.

Table 1. Research Sample

Note	Total
Number of Manufacturing Companies 2014-20168	143
Manufacturing Companies that Release Financial Reports and Annual Reports	110
Manufacturing Companies that Reveal Research Variables	77
Research Sample 77 x 5 Year	385
Total Observations	**385**

4.2 Result of Hypotheses Testing
The results of hypotheses testing are presented in the following Table 2.

Table 2. Results of Hypotheses Testing

Variables	B	S.E.	Wald	Sig.
ΔROA	3,796	1.884	4.061	.044
ACHANGE	.643	.658	.956	.328
LEVERAGE	-.458	.268	2.929	.087
BDOUT	.079	.956	.007	.934
RPT	.207	.507	.166	.684
AUDCHANGE	-.654	.591	1.227	.268
CEODOM	.363	.252	2.069	.150
CEONARCISS	.075	.036	4.267	.039
Constant	.401	.530	.573	.449
Hosmer and Lemeshow Test	Chi-square = 9.884 sig = .273			
R^2	0.75			

The feasibility test of the model or goodness of fit test can be done by observing the output of the Hosmer and Lemeshow's Goodness of fit test and can be seen in the table 2. The hypotheses developed on this feasibility test are as following:
H_0: The model hypothesized fits the data
H_a: The model hypothesized does not fit the data
The results obtained in table 2, obtained by sig. 0.273, in other words, the statistical value of Hosmer and Lemeshow is greater than 0.05 (0.273> 0.05) then the null hypothesis is accepted which means that the model is able to predict the value of its observations. From this, the model of the logistic regression test is good and fits the data. The coefficient of determination R^2 is 0.75 which means that the ability of the independent variables in explaining the variance of financial statements fraud is 75% and there are 25% of other factors that explain the variance of financial statement fraud.
Financial targets measured by ΔROA has a significance value of 0.044, which means less than 0.05 or 0.044 <0.05, then the beta value of ΔROA is 3.796 which shows a positive relationship to financial statement fraud. Thus, it can be concluded in this study that H1 is a financial target that has a significant effect on financial report fraud. Financial stability as measured by ACHANGE has a significance value of 0.324 which means it is greater than 0.05 or 0.328> 0.05. Hypothesis test results show the results have no significant effect. Furthermore, it can be concluded in this study that H2, namely financial stability has no significant effect on financial statement fraud. External pressure measured by LEVERAGE has a significance value of 0.087 which means greater than 0.05 or 0.087> 0.05. Hypothesis test results show the results have no significant effect. Therefore, it can be concluded that H3 namely external pressure has no significant effect on financial report fraud. Ineffectiveness of monitoring as measured by BDOUT has a significance value of 0.934 which means greater than 0.05 or 0.934> 0.05. Hypothesis test results show the results have no significant effect. Furthermore, it can be concluded that H4, which is the ineffectiveness of supervision, has no significant effect on fraudulent financial statements. Related party transactions as measured by RPT has a significance value of 0.684 which means greater than 0.05 or 0.684> 0.05. It can be concluded that H5, which is a related party transaction, has no significant effect on fraudulent financial statements. Auditor change as measured by AUDCHANGE has a significance value of 0.268 which means greater than 0.05 or 0.268> 0.05. It can be concluded that H6 namely the change of auditor has no significant effect on financial report fraud. CEO dominance as measured by CEODOM has a significance value of 0.05, which means equal to 0.05 or 0.150> 0.05. It can be concluded that H7 namely CEO domination does not have a significant effect on financial report fraud. CEO narcissism as measured by CEONARCISS has a significance value of 0.039 which means it is smaller than 0.05 or 0.039 <0.05, then the beta value of CEONARCISS is 0.075 which indicates the relationship positive for financial report fraud. Therefore, it can be concluded that H8, CEO narcissism, significantly influences financial report fraud.

5. Discussion

Financial targets have a significant effect on financial statement fraud with sig values. 0.044 or less than the 5% confidence level (0.044 <0.05). The results of this study are in line with those conducted by Skousen et al. (2009). This shows that the higher the financial targets set by company management, the higher the increase of financial statement fraud. According to agency theory, there are differences in interests of agents and principals. Agents, in this

case is management, want to be always judged by the principal to get compensation for their work. The principal also wants to be considered good by investors so the financial target, in this case, must continue to rise as an indication that the company has a good financial condition. Company profits that are in line with the target set will trigger investors' attention to the company. Investors will be more likely to be happy to invest their wealth in companies that have increased profits from the previous year. This will also be considered by investors as a good company. Furthermore, if the actual profit target is not achieved, but the agent or management imposes that profits continue to rise according to the principal's desire, which is the manipulation of financial statements to still achieve profit targets that will attract investors. This will encourage management to commit fraud so that the company's financial statements will be presented unnaturally.

Financial stability has no significant effect on financial statement fraud with sig values. 0.328 or greater than the 5% confidence level (0.328> 0.05). Corporate financial stability is measured based on the amount of total assets increase from year to year. The large number of assets owned by the company is a main attraction for investors, creditors, and other decision makers. If analyzed on asset change data (Asset Change / ACHANGE), the company that becomes the sample of observation that most companies in the year before and after indicated fraud, changes in assets can be said to be unstable. Fluctuating corporate financial stability does not necessarily cause management to cheat to improve the stability of the company (Wispandono, 2010). Possibly when the company has low financial stability, it turns out that similar companies in the same industry also have low stability. If the financial stability of the company's economy decreases, it is not certain that the company will cheat because the company can still operate well. It is also possible that financial stability does not affect financial statement fraud because some of the values in the financial statements have been manipulated by management.

External pressure has no significant effect on financial statement fraud with sig values. 0.087 or greater than 5% confidence level (0.087> 0.05). It can be concluded that the company's ability to fulfill its obligations is proven not to affect the occurrence of fraudulent financial statements. This research is not in line with that carried out by Lou and Wang (2009) which gives results that leverage affects the occurrence of fraudulent financial statements. However, the results of this study are in line with the research conducted by Subroto (2012) which states that the company's ability to fulfill its obligations (LEVERAGE) does not affect financial report fraud. This means that external pressure is not a strong factor for someone to cheat financial statements. Management does not fully experience external pressure when fulfilling its obligations. They have an obligation to fulfill their debts, but profit manipulation is not the only way to fulfill these obligations. They are more trying to improve their performance so they can generate good profits to fulfill their obligations. The tendency of companies to commit fraud with the characteristics of low leverage is more likely due to the current creditors not considering the amount of leverage generated, but there are other considerations such as the level of trust or a good relationship between the company and creditors (Prajanto, 2012). Valentinetti et al. (2016) shows the important role of leverage for shareholders and creditors protection in different legal systems, namely common law and civil law. Besides that, there are also various alternatives to increase the company's capital, one of which is by issuing shares. Many companies prefer to republish shares to obtain additional business capital from investors without having to enter into a new debt agreement that causes the company's debt burden to become greater and the company's financial leverage to be higher.

Supervision ineffectiveness has a significant effect on financial statement fraud with sig values. 0.934 or less than the 5% confidence level (0.934> 0.05). The value of ineffectiveness of supervision when viewed in BDOUT data this study shows that most manufacturing companies reach an average of 37.5% for the percentage of independent commissioners. Agency theory shows that the relationship and different interests between the principal and the agent, should make the principal a supervisor for the agent in this case the management to work according to the principles and ethics that apply. In some companies a commissioner is occupied by the owner or owner or founder of the company itself. Related Party Transactions have no significant effect on fraudulent financial statements with sig values. 0.684 or greater than the 5% confidence level (0.684> 0.05). It can be concluded that special party transactions do not affect the occurrence of fraudulent financial statements. The results of this study are in line with that of Hasnan et al., (2013) which states that companies with special party transactions do not affect financial fraud. The extent of disclosure of special parties and transactions between companies and special parties is influenced by various things such as the company's culture to the costs of disclosure. In addition, transactions with privileged parties may only have operational and economic motives which means that the recognition that the transactions are carried out on the same terms as the same transaction with third parties.

Furthermore, the results obtained that the auditor turnover does not have a significant effect on fraudulent financial statements with sig values. 0.268 or greater than the 5% confidence level (0.268> 0.05). In the auditor replacement table (attachment) there are only a few companies that make auditor changes after the book reporting year. Auditor turnover by the company may not affect financial statement fraud, because external auditors rarely disclose the condition of a fraud in the company in their fairness opinion report. When viewed that the main function of the general

audit is that it only assesses the fairness of the financial statements. When the financial statements are in accordance with the applicable PSAK, it is sufficient to provide a fair opinion on the audit report. Whereas a reasonable financial report is not necessarily free from fraud. The auditor changes made by manufacturing companies are mostly carried out according to the rules, from which it can indicate that the auditor's turnover is only a formality of the application of the applicable rules. This may indicate that the auditor's services will not be carried out by fraud. Furthermore, the auditor turnover prematurely is very difficult to determine exactly what is the cause. The results of auditor changes that have no effect on financial report fraud are in line with the research of Skousen et al. (2009) which states that auditor change does not affect financial statement fraud. So it can be concluded that changing whether or not KAP that conducts audits is less likely to be able to detect fraud, because to explore a fraud in financial statements, skepticism and auditor experience are also very influential.

CEO dominance has no significant effect on financial statement fraud with sig values. 0,150 or greater than 5% confidence level (0,150> 0,05). In the CEO domination table (appendix) there are only a few companies that have high CEO dominance. Most companies have implemented Good Corporate Governance (GCG). This finding is in line with the research of Khanna et al. (2013) suggesting that the CEO strength index only reflects the ability to do one's own will to others, not the influence of social norms or social consensus. The CEO's strength reflects the one-way influence of the CEO on the other side, which is easier to reject if the action or behavior in question is contrary to the law.

CEO narcissism has a significant effect on financial statement fraud with sig values. 0.039 or less than the 5% confidence level (0.039 <0.05). This is in line with Rijsenbilt's research (2011) which states that CEO narcissism has a positive effect on the tendency to commit fraud. A CEO tends to want to show everyone the status and position he has in the company because they do not want to lose that status or position (or feel not considered), this is consistent with one of the elements presented by Crowe (2011); arrogance. In line with Rijsenbilt and Commandeur's (2013) research, there is a positive relationship between narcissism and fraud. Schwartz (cited by Amemic and Craig 2010) suggests that accounting as part of the financial system offers a greater "narcissistic opportunity" than management functions that can be reflected on its annual report.

6. Conclusion

The results of this study, can be concluded that the pentagon fraud model can be used to predict financial statement fraud. The results of this study are empirical evidences that the financial target variables and CEO narcissism have significant effects on financial statement fraud while financial stability, external pressure, supervision ineffectiveness, related party transactions, auditor turnover, and CEO dominance have no significant effect on financial statement fraud. Furthermore, when viewed in the table of the F-Score and M-Score models, there are several companies suspected or indicated of fraudulent financial reporting, including 284 companies out of 385 observation samples. The percentage of companies indicated to have financial statements fraud requires further examination to really prove that the company is cheating. The results of the fraudulent financial report analysis using the F-Score dan M-score for manufacturing companies in 2012 - 2016 successfully analyzed a total of 284 companies that indicated fraudulent financial reporting.

Based on the research model developed in this study, it can strengthen theoretical concepts and provide empirical support for previous research and provide an improvement by re-examining previous research. Some important things related to theoretical implications can be explained as:

1. Fraud pentagon as a theory proposed by Crowe in 2011 can be used to explain the phenomenon of financial statement fraud. The results of the study showed pentagon fraud succeeded well in predicting the model as an independent variable against financial report fraud. The results of the study are in line and support previous research from Dalnial et. al (2014) who tested pentagon fraud against financial statement fraud which resulted in a significant influence between independent variables on financial statement fraud.
2. In this study the Dechow (F-Score) and Beneish (M-Score) analysis succeeded in indicating financial statement fraud committed by manufacturing companies. This can be proven in the F-score seen from the results of the analysis, and also related to the results of the study.

Based on the conclusions of the study, the authors' suggestions for further research are:

1. To examine financial report fraud by using quantitative and qualitative measurements on independent variables, especially on variables of financial stability, external pressure, related party transactions, and CEO dominance to get the right size in testing these variables.
2. The general audit function, regarding the variable auditor change, that only looks at the fairness of financial statements in accordance with the PSAK should need to be improved by focusing on accounts that are prone to

fraud. If there are indications of fraudulent financial statements, management immediately takes further action to conduct investigative and preventive audits so that they do not keep on showing up.

3. To develop measurements on pentagon fraud elements which consist of pressure, opportunity, rationalization, ability /competence, and arrogance.

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Financial Statement Fraud Detection With Beneish M-Score and Dechow F-Score Model: An Empirical Analysis of Fraud Pentagon Theory in Indonesia

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Abstract

This research contributes to the Financial Statement Fraud (FSF) literature by examining the ability of the Beneish model and the F-Score model to detect FSF trends in the Indonesian context. This study also aims to provide empirical evidence on other issues that encourage fraud. The results of this study are empirical evidence that the financial target variables and CEO narcissism have a significant effect on financial statement fraud while financial stability, external pressure, supervision ineffectiveness, related party transactions, auditor turnover, and CEO dominance have no significant effect on financial statement fraud. Furthermore, when viewed in the table of the F-Score and M-Score models, there are several companies suspected or indicated of fraudulent financial reporting, including 284 companies out of 385 observation samples. The percentage of companies indicated to have financial statements fraud requires further examination to really prove that the company is cheating. The results of the fraudulent financial report analysis using the F-Score dan M-score for manufacturing companies in 2014 - 2018 successfully analyzed a total of 284 companies that indicated fraudulent financial reporting.

Keywords: financial statement fraud, Beneish M-Score, DechowF-score, fraud pentagon theory

1. Introduction

Financial statement fraud; hereinafter abbreviated as FSF; has become one of the significant problems for the current business environment. FSF is defined by the Association of Certified Fraud Examiners (ACFE) as a deliberate misrepresentation of a company's financial condition through intentional misstatement or the elimination of the amount of disclosures in the financial statements in order to deceive users of financial statements. ACFE in Report to the Nations on Occupational Fraud and Abuse (2016) states that in terms of losses, FSF fraud is the form resulting in the greatest losses compared to asset misappropriation and corruption. According to ACFE (2016), asset misuse is the most common form of fraud with a case of more than 83% but it causes loss with the smallest median of $ 125,000. Whereas, financial statement fraud occurs with cases of less than 10% but it causes an average loss of $ 975,000. Another issue in FSF research is the motive for fraud. Various theories about fraud have emerged. One of which is the Pentagon fraud theory initiated by Crowe (2011). Pentagon fraud theory is a theory explaining that there are five elements or factors that underlie a person to commit fraud namely pressure, opportunity, rationalization, capability, and arrogance.

This theory is a renewable theory based on the development of the fraud triangle theory proposed by Cressey (1953) and fraud diamond theory by Wolfe and Hermanson (2004). Previous research on fraud including financial report fraud is still dominated by fraud triangle models and diamond fraud while empirical research examining the pentagon fraud model is still limited. The use of pentagon fraud analysis in the detection of financial statement fraud has been carried out by Yusof. et al. (2015) and Aghghaleh et al. (2016) but with conflicting findings.

The rise of the FSF case and the magnitude of the impact of the losses caused many empirical studies to detect early FSF trends. However, most empirical researches still focus on accrual discretionary models with empirical evidence that is still inconsistent (Dechow et al., 2007; 2011); therefore, Repousis (2016) and Dechow et al. (2007; 2011) encourage the use of other models, namely the Beneish M-Score model and the Dechow F-Score model to detect FSF trends. This research contributes to the FSF literature by testing the ability of the Beneish model and the F-Score model to detect FSF trends in the Indonesian context. Repousis (2016) has tested the Beneish model for the context of the FSF in Greece while Dechow et al. (2007; 2011) have tested the F-Score model for the United States context but with inconsistent empirical evidence. In addition, the generalization of the findings of the two studies into the Indonesian context is still an important empirical question. Differences in the institutional context are that Indonesia, including the code law clusters with characteristics such as (Leuz et al., 2003), involves: (a) weak level of investor protection, (b) concentrated ownership, (c) the company's main funding source from bank loans, compared to the capital market, and (d) high level of earnings management. This may limit the generalization of the findings of previous studies into the Indonesian context.

This study also aims to provide empirical evidence on other issues of motives encouraging fraud. Previous FSF research is still dominated by testing fraud triangle models and diamond fraud while empirical research examining the pentagon fraud model is still limited. This research is expected to provide empirical evidence to explain the inconsistencies of previous research findings using more comprehensive determinant variables including financial targets, financial stability, external pressures, monitoring mechanisms, related party transactions, auditor turnover, dominance of the President Director, and narcissism of the President Director.

This paper is structured as follows; the next section provides literature review and hypotheses development. Sections 3 and 4 present the research methods and findings, respectively. The conclusions are outlined in the final section.

2. Literature Review and Hypotheses

2.1 Pentagon Fraud Theory

Pentagon fraud theory was put forward by Crowe (2011). This theory explains five elements of fraud including pressure, opportunity, rationalization, capability (competency), and arrogance. The theory is the development of the fraud triangle theory proposed by Cressey (1953) and the diamond fraud theory by Wolfe and Hermanson (2004).

2.2 Financial Statement Fraud (FSF)

FSF is defined by the Association of Certified Fraud Examiners (ACFE) as a deliberate misrepresentation of a company's financial condition through intentional misstatement or the elimination of the amount of disclosures in the financial statements in order to deceive users of financial statements. The COSO report (2010) proposes financial statement fraud techniques that commonly occur in categories include: improper revenue recognition, overstatement of assets, understatement of expenses / liabilities, misuse of assets, inappropriate disclosure, and various other types of techniques. The two most common techniques used by companies involved in fraud are inappropriate revenue recognition techniques by presenting revenue overstatement, and asset overstatement techniques (Intal and Linh,

2002). Repousis (2016) states that the FSF scheme includes fictitious income, timing differences, concealment of liabilities and costs, improper disclosure and improper valuation of assets.

The Beneish M-score model is a statistical model using financial ratios to evaluate the extent to which profits have been manipulated. Beneish (1999) analyzes the profile of companies that tend to manipulate profits (being examined by the SEC and or being in the media spotlight) and then develop statistical models to distinguish manipulators from non-manipulators. Furthermore, Beneish and Nichols (2009) refine the model by adding 8 variables to obtain the following formula:

*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*

From the formula above, an M-score can be obtained. If M-Score is less than -2.22, it indicates that the company does not manipulate earnings in that period, on the contrary if the M-score is more than 2.22, it is a signal that the company tends to be a manipulator.

The F-Score model developed by Dechow et al. (2011) is a fraud risk assessment tool producing an output called the F-Score, as an indication of the probability of fraudulent financial reporting. Dechow et al. (2011) follow a methodology similar to Beneish (1997, 1999) in developing scores to predict which companies had material misstatements. This F-score model is based on an examination of all Accounting and Auditing Enforcement Releases' (AAERs) data released by the SEC between 1982 and 2005.

In developing the F-Score model, Dechow et al. (2011) identify and select independent variables to be included in an equation. Furthermore, the variables that include: accrual, performance, non-financial, off balance sheet, and market incentive (market incentive) are included. Furthermore, these variables are addressed and after a series of analysis and tests, such as time-series analysis, cross-sectional, prediction, marginal and robustness tests, the best variables are detected in detecting fraud or material misstatement.

If the F-Score obtained shows less than 1 (<1), it will show that there is no manipulation of the financial statements. If the F-Score exceeds 1 (> 1), it can be a signal of an indication of fraud in the company's financial statements. The F-Score 1 (F-Score = 1) indicates that the company has the same probability of misstatement between the probabilities predicted by unconditional probability (the possibility of an event will end with certain results regardless of other conditions that may exist). If the F-score is greater than 1 (F-Score> 1) then it can show a higher probability of misstatement because the estimated probability is higher than unconditional probability. It can also indicate that the company's financial statements have been changed by the company. As in the case of Enron, it has an F-Score of 2.76 which means Enron's financial statements show twice the probability of misstatement. Several studies using the Beneish and Dechow F-Score models have found that both models are effective in predicting fraud and non-fraud companies. As an example of research, Aghghaleh et al. (2016) reveal that the Beneish and Dechow Models are effective in predicting fraud and non-fraud companies with an average accuracy of 73.17% and 76.22%. The results also show that the F-score Dechow model outperforms the Beneish M-score model in sensitivity to predict fraud cases at 73.17% while the M-Score is 69.51%.

2.3 Hypotheses

In the Pentagon fraud theory, it is explained that the existence of pressure can be a motive for fraud. One of them is financial pressure, for example shareholders as external parties demand performance from management to increase shareholder value. This can make management do various ways to convince shareholders about their performance which is reflected in the achievement of financial targets. One measure of a company's financial performance is ROA (Return on Assets). ROA indicates how large and effective assets are used to run the company's operations.

Dechow et al. (2007; 2011) state that there is a relationship between company performance and the level of manipulation in a company. Company managers are more likely to manipulate financial statements when the level of corporate financial performance is low. This can encourage managers to make improvements in performance, hide problems that cause performance to be low and increase overall financial performance in an incorrect way. This is in accordance with the pentagon fraud theory on the pressure element where the pressure affects the actions of a person doing fraud. In line with research from Skousen et al. (2009); Lou and Wang (2009) found that financial targets affect a person's tendency to manipulate financial statements.

H1: Financial targets have a positive effect on financial statement fraud.

Pressure on the pentagon fraud theory that encourages someone to commit fraud can be in the form of financial

stability. According to SAS No. 99 when financial stability is threatened by the state of the economy, industry and other situations, managers face pressure to commit financial report fraud (Skousen et al., 2009). The low total assets held will create its own pressure for management because the company's performance appears to be decreasing so it is possible to reduce the flow of investment funds in the following year. For this reason, the management manipulated the financial statements as a tool to cover the condition of the company's poor stability.

H2: Financial stability has a negative effect on financial statement fraud.

Pressure that encourages someone to commit fraud can come from the pressure of external parties. External parties of the company always demand an increase in company's performance. To overcome these pressures, companies need additional debt or external financing sources to remain competitive including research funding and development or capital expenditures (Skousen et al., 2009). External pressure is proxied by using the leverage ratio, which is the ratio between total liabilities and total assets. Higher leverage ratios can also be associated with greater likelihood of violating debt agreements and reducing ability to obtain additional financing through debt (Persons, 2011). This is in line with the results of Dalnial et al. (2014) showing that the leverage ratio is significant in detecting financial statement fraud. Based on the explanation, the hypothesis can be formulated:

H3: External pressure has a positive effect on financial statement fraud.

Ineffectiveness of supervision can occur due to the dominance of management by one person or small group, such as the supervision of the board of directors and the audit committee on the process of financial reporting and internal control. Lack of control from internal parties of the company becomes a separate opportunity for some parties to manipulate data in the financial statements. This is in line with fraud theory, which is one that encourages someone to commit fraud when there is an opportunity. Effective internal control can maintain the reliability of the company's financial statements and prevent fraud. Weak internal audits and when management overrules control will increase the tendency of material financial misstatements (Lou and Wang, 2009). Based on the explanation, the hypothesis can be formulated:

H4: The ineffectiveness of supervision has a positive effect on financial statement fraud.

Related party transactions refer to financial relationships or other relationships between the company and clients that have a related relationship. Related party transactions can be used as an opportunity by management who intend to commit fraud to cheat financial statements. The reason manager's use this technique is to increase revenue because related parties are usually difficult to identify / identify. Unspecified related party transactions can be used to raise income incorrectly (fraud). This type of fraud is usually found in unusual material transactions, especially close to the end of the year. Another way for companies to mislead financial report users is to present a series of sales with related parties that are not disclosed in the financial statements.

If there is a higher percentage of complex related party transactions, then fraud perpetrators have a greater probability of fraud. Young (2005) found that related party transactions can be used by actors to manipulate profits and commit fraud. This is in line with the research of Henry et al. (2012) who found that related party transactions affect the tendency of fraudulent financial statements. Based on the above explanation, the following hypothesis can be formulated:

H5: Related party transactions have a positive effect on financial statement fraud.

Auditor turnover can be caused by the obligation of audit rotation regulated by the government (mandatory) or voluntary change. In Indonesia, in terms of audit rotation is mandatory, companies are required to replace KAP after conducting audits for 6 consecutive years and a maximum of 3 consecutive years by a public accountant. Red flags for fraudulent practices, one of which is the replacement of auditors that are voluntary. Voluntary change of auditors by companies can be considered as a form to eliminate fraud traces or to reduce the possibility of detecting financial statement fraud. This tendency encourages companies to replace their independent auditors to cover fraud in the company. Covering fraud can be one form of rationalizing fraud. The high frequency of auditor turnover in the year concerned shows a higher fraud risk. In line with the research of Lou and Wang (2009) that the deterioration of the relationship between company managers and auditors can be red flag of the company's fraud tendency. This shows the relationship between managers and auditors reflects rationalization in an organization. Based on the explanation, the hypothesis can be formulated:

H6: Auditor substitution has a positive effect on financial statement fraud.

The competence or capability of a director can be a gap in fraud when the CEO or other directors have more dominance

in a company. The dominance of the CEO or directors can arise when the CEO or directors as company managers also concurrently shareholders. In Law No. 40 of 2007 concerning Limited Liability Companies does not clearly state the prohibition of the CEO or member of the board of directors from becoming a shareholder in the company concerned.

H7: The dominance of the CEO has a positive effect on financial statement fraud.

Narcissism CEOs are CEOs who have leadership styles that only prioritize how attractive they are. High-level narcissistic CEOs tend to be reluctant to report disappointing financial performance, because this will jeopardize their status. A CEO tends to want to show everyone the status and position they have in the company because they do not want to lose that status or position (or feel not considered), this is consistent with one of the elements presented by Crowe (2011); arrogance. This is in line with Rijsenbilt's research (2011) which states that CEO narcissism has a positive effect on the tendency to commit fraud. Johnson et al. (2013) also explained that the risk assessment of fraud will be further enhanced if the auditor knows the narcissistic character of a manager.

Financial reporting can be used as a means of self-actualization for a manager who has a narcissistic personality. Achievement of published targets can be an ideal goal for a manager with narcissistic personality because managers will get positive responses and attention from others when they reach the target (Amemic and Craig, 2010). Schwartz (quoted by Amemic & Craig 2010) suggests that accounting as part of the financial system, offers greater "narcissistic opportunities" from other management functions such as operations. According to Rijsenbilt & Commandeur (2013) there is a positive relationship between narcissism and fraud. This will be dangerous if someone with the narcissistic personality has authority that can influence the policies of his subordinates (Amemic & Craig, 2010). This is in line with Crowe's research (2011) where there is a possibility that the CEO will do whatever it takes to maintain the position he currently has. On the basis of this thinking, a hypothesis can be built:

H8: CEO narcissism has a positive effect on financial statement fraud.

3. Research Method

3.1 Population and Sample

The population of this study is all manufacturing companies listed on the Indonesia Stock Exchange in 2014-2018. While the sample selection is done by using purposive sampling method with the criteria used, namely:

4. Manufacturing companies listed on the Indonesia Stock Exchange for the period of 2014 - 2018. Manufacturing companies were selected as samples because financial data on financial statements were more reliable for testing financial statements using the M Score and F-Score models. Manufacturing companies tend to have the same accrual characteristics in one industry.
5. Publish audited financial statements and annual reports for the period 2014-2018.
6. Presenting data related to research variables.

3.2 Variables

Financial Statement Fraud will be measured using an analysis of the Dechow F-Score model and the Beneish M-Score. The Dechow F Score model is a mathematical equation formulated by Dechow et al. (2011) using ratio analysis to identify manipulations or not. If the F-Score obtained shows less than 1 (<1), it will show that there is no manipulation of the financial statements. If the F-Score exceeds 1 (> 1), it can be a signal of an indication of fraud in the company's financial statements. While for the FSF measurement using the Beneish M-Score model will use the following formula:

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.

DSRI: Days Sales in Receivables Index = (Net Receivables$_t$ / Sales$_t$) / (Net Receivables$_{t-1}$ / Sales$_{t-1}$)

GMI: Gross Margin Index (GMI) = [(Sales$_{t-1}$ - COGS$_{t-1}$) / Sales$_{t-1}$] / [(Sales$_t$ - COGS$_t$) / Sales$_t$]

AQI: Asset Quality Index= [1 - (Current Assets$_t$ + PP&E$_t$ + Securities$_t$) / Total Assets$_t$] / [1 - ((Current Assets$_{t-1}$ + PP&E$_{t-1}$ + Securities$_{t-1}$) / Total Assets$_{t-1}$)]

SGI: Sales Growth Index=Sales$_t$ / Sales$_{t-1}$

DEPI: Depreciation Index = (Depreciation$_{t-1}$/ (PP&E$_{t-1}$ + Depreciation$_{t-1}$)) / (Depreciation$_t$ / (PP&E$_t$ + Depreciation$_t$))

SGAI: Sales General and Administrative Expenses Index = (SG&A Expense$_t$ / Sales$_t$) / (SG&A Expense$_{t-1}$ / Sales$_{t-1}$)

TATA: Total Accruals to Total Assets = (Income from Continuing Operations$_t$ - Cash Flows from Operations$_t$) / Total Assets$_t$

LVGI: Leverage Index = [(Current Liabilities$_t$ + Total Long Term Debt$_t$) / Total Assets$_t$] / [(Current Liabilities$_{t-1}$ + Total Long Term Debt$_{t-1}$) / Total Assets$_{t-1}$]

If the formula calculation with Beneish M-Score results more than -2.22, it is classified as a company manipulator. If the calculation with the Beneish M-Score is less than -2.22, it is classified as a non-manipulator company. If there is a sample that meets one of the criteria of the F-Score or M-Score as companies, it is indicated for the FSF then it is given a score of 1 and 0 if not.

Measurement of financial targets in this study uses ROA Change (ΔROA). The proxy used for financial stability is Asset Change (ACHANGE). External pressure in this study is proxied by leverage. Related to fraud, Dunn (2004) found that fraud-indicated companies had fewer independent commissioners compared to companies that were not indicated by fraud. Therefore, the proxy percentage of independent commissioners (BDOUT / Percentage of Board Members who are Outside Members). Transaction of related parties is measured by a proxy Sales of Related Party Transactions/Total Sales. Auditor Substitution is measured using a dummy variable where the value is 1 if the company replaces the auditor voluntarily (before the provision) and a value of 0 if it does not. Measurement of CEO Domination uses scores obtained from the method of Bebchuk et al. (2010) where the maximum score is 3. The greater the score, the more dominant the CEO position in the company is. The great dominance of a person in a company can represent its ability to utilize the gap of internal control. CEOs tend to be more narcissistic belonging-wanted to show to everyone its status and position in the company because they do not want to lose status or position (or was not considered). CEO narcissism in this study is measured using CEO photos displayed at the annual report. CEO photos provide evidence of how the CEO plays themselves and their company to the public. This depiction provides evidence of who the CEO is and how personality traits they might have, such as narcissistic personality trends (Olsen, 2014). Property values of CEO photos can be obtained from scores adopted from Rijsenbilt (2011) research. The greater the score, the higher the level of CEO narcissism reflected in the company's annual report.

3.3 Data Analysis

Logistic regression is used to model the relationship between dependent variables with two categories (binary) and independent variables. The dependent variable in the logistic regression analysis of this study is a dichotomous (two choices) between companies that have indicated fraud in their financial statements and not. The logistic regression method in this study was used to see the relationship of companies that commit financial report fraud in the Pentagon fraud theory perspective. The equations formed using logistic regression are as follows:

Ln (F / 1-F) = β0 + β1 ROA + β2 ACHANGE + β3 LEV + β4 BDOUT + β5 RPT + β6 AUDCHANGE + β7 CEODOM + β8 CEONARCISS + e

Ln (F / 1-F) = dummy variable where 1 for fraud firms, 0 otherwise

β0 = Constants

β1 - β8 = Regression Coefficient

ΔROA = Change in Return on Assets

ACHANGE = Percentage of asset changes

LEV = Leverage Ratio

BDOUT = Number of Independent Commissioners / Number of Commissioners

RPT = Total Sales of Related Party Transactions / Total Sales

AUDCHANGE = Auditor Substitution

CEODOM = CEO dominance

CEONARCISS = CEO Narcissism

e = Error

Time years effect of 2014-2018 has been included in the logistic regression model with pooled method to ensure the validity of statistical conclusions.

4. Research Findings and Discussion

4.1 Research Samples

The samples of this study are manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2014-2018. The sample selection in this study uses purposive sampling method. Based on this method, there are companies included in the sample criteria. An explanation of sampling is shown in the table below.

Table 1. Research sample

Note	Total
Number of Manufacturing Companies 2014-20168	143
Manufacturing Companies that Release Financial Reports and Annual Reports	110
Manufacturing Companies that Reveal Research Variables	77
Research Sample 77 x 5 Year	385
Total Observations	**385**

4.2 Result of Hypotheses Testing

The results of hypotheses testing are presented in the following Table 2.

Table 2. Results of hypotheses testing

Variables	B	S.E.	Wald	Sig.
ΔROA	3,796	1.884	4.061	.044
ACHANGE	.643	.658	.956	.328
LEVERAGE	-.458	.268	2.929	.087
BDOUT	.079	.956	.007	.934
RPT	.207	.507	.166	.684
AUDCHANGE	-.654	.591	1.227	.268
CEODOM	.363	.252	2.069	.150
CEONARCISS	.075	.036	4.267	.039
Constant	.401	.530	.573	.449
Hosmer and Lemeshow Test	Chi-square = 9.884 sig = .273			
R^2	0.75			

The feasibility test of the model or goodness of fit test can be done by observing the output of the Hosmer and Lemeshow's Goodness of fit test and can be seen in the table 2. The hypotheses developed on this feasibility test are as following:

H_0: The model hypothesized fits the data

H_a: The model hypothesized does not fit the data

The results obtained in table 2, obtained by sig. 0.273, in other words, the statistical value of Hosmer and Lemeshow is greater than 0.05 (0.273> 0.05) then the null hypothesis is accepted which means that the model is able to predict the value of its observations. From this, the model of the logistic regression test is good and fits the data. The coefficient of determination R^2 is 0.75 which means that the ability of the independent variables in explaining the variance of financial statements fraud is 75% and there are 25% of other factors that explain the variance of financial statement fraud.

Financial targets measured by ΔROA has a significance value of 0.044, which means less than 0.05 or 0.044 <0.05, then the beta value of ΔROA is 3.796 which shows a positive relationship to financial statement fraud. Thus, it can be

concluded in this study that H1 is a financial target that has a significant effect on financial report fraud. Financial stability as measured by ACHANGE has a significance value of 0.324 which means it is greater than 0.05 or 0.328> 0.05. Hypothesis test results show the results have no significant effect. Furthermore, it can be concluded in this study that H2, namely financial stability has no significant effect on financial statement fraud. External pressure measured by LEVERAGE has a significance value of 0.087 which means greater than 0.05 or 0.087> 0.05. Hypothesis test results show the results have no significant effect. Therefore, it can be concluded that H3 namely external pressure has no significant effect on financial report fraud. Ineffectiveness of monitoring as measured by BDOUT has a significance value of 0.934 which means greater than 0.05 or 0.934> 0.05. Hypothesis test results show the results have no significant effect. Furthermore, it can be concluded that H4, which is the ineffectiveness of supervision, has no significant effect on fraudulent financial statements. Related party transactions as measured by RPT has a significance value of 0.684 which means greater than 0.05 or 0.684> 0.05. It can be concluded that H5, which is a related party transaction, has no significant effect on fraudulent financial statements. Auditor change as measured by AUDCHANGE has a significance value of 0.268 which means greater than 0.05 or 0.268> 0.05. It can be concluded that H6 namely the change of auditor has no significant effect on financial report fraud. CEO dominance as measured by CEODOM has a significance value of 0.05, which means equal to 0.05 or 0.150> 0.05. It can be concluded that H7 namely CEO domination does not have a significant effect on financial report fraud. CEO narcissism as measured by CEONARCISS has a significance value of 0.039 which means it is smaller than 0.05 or 0.039 <0.05, then the beta value of CEONARCISS is 0.075 which indicates the relationship positive for financial report fraud. Therefore, it can be concluded that H8, CEO narcissism, significantly influences financial report fraud.

5. Discussion

Financial targets have a significant effect on financial statement fraud with sig values. 0.044 or less than the 5% significance level (0.044 <0.05). The results of this study are in line with those conducted by Skousen et al. (2009). This shows that the higher the financial targets set by company management, the higher the increase of financial statement fraud. According to agency theory, there are differences in interests of agents and principals. Agents, in this case is management, want to be always judged by the principal to get compensation for their work. The principal also wants to be considered good by investors so the financial target, in this case, must continue to rise as an indication that the company has a good financial condition. Company profits that are in line with the target set will trigger investors' attention to the company. Investors will be more likely to be happy to invest their wealth in companies that have increased profits from the previous year. This will also be considered by investors as a good company. Furthermore, if the actual profit target is not achieved, but the agent or management imposes that profits continue to rise according to the principal's desire, which is the manipulation of financial statements to still achieve profit targets that will attract investors. This will encourage management to commit fraud so that the company's financial statements will be presented unnaturally.

Financial stability has no significant effect on financial statement fraud with sig values. 0.328 or greater than the 5% significance level (0.328> 0.05). Corporate financial stability is measured based on the amount of total assets increase from year to year. The large number of assets owned by the company is a main attraction for investors, creditors, and other decision makers. If analyzed on asset change data (Asset Change / ACHANGE), the company that becomes the sample of observation that most companies in the year before and after indicated fraud, changes in assets can be said to be unstable. Fluctuating corporate financial stability does not necessarily cause management to cheat to improve the stability of the company (Wispandono, 2010). Possibly when the company has low financial stability, it turns out that similar companies in the same industry also have low stability. If the financial stability of the company's economy decreases, it is not certain that the company will cheat because the company can still operate well. It is also possible that financial stability does not affect financial statement fraud because some of the values in the financial statements have been manipulated by management.

External pressure has no significant effect on financial statement fraud with sig values. 0.087 or greater than 5% significance level (0.087> 0.05). It can be concluded that the company's ability to fulfill its obligations is proven not to affect the occurrence of fraudulent financial statements. This research is not in line with that carried out by Lou and Wang (2009) which gives results that leverage affects the occurrence of fraudulent financial statements. However, the results of this study are in line with the research conducted by Subroto (2012) which states that the company's ability to fulfill its obligations (LEVERAGE) does not affect financial report fraud. This means that external pressure is not a strong factor for someone to cheat financial statements. Management does not fully experience external pressure when fulfilling its obligations. They have an obligation to fulfill their debts, but profit manipulation is not the only

way to fulfill these obligations. They are more trying to improve their performance so they can generate good profits to fulfill their obligations. The tendency of companies to commit fraud with the characteristics of low leverage is more likely due to the current creditors not considering the amount of leverage generated, but there are other considerations such as the level of trust or a good relationship between the company and creditors (Prajanto, 2012). Valentinetti et al. (2016) shows the important role of leverage for shareholders and creditors protection in different legal systems, namely common law and civil law. Besides that, there are also various alternatives to increase the company's capital, one of which is by issuing shares. Many companies prefer to republish shares to obtain additional business capital from investors without having to enter into a new debt agreement that causes the company's debt burden to become greater and the company's financial leverage to be higher.

Supervision ineffectiveness has a significant effect on financial statement fraud with sig values. 0.934 or less than the 5% significance level (0.934> 0.05). The value of ineffectiveness of supervision when viewed in BDOUT data this study shows that most manufacturing companies reach an average of 37.5% for the percentage of independent commissioners. Agency theory shows that the relationship and different interests between the principal and the agent, should make the principal a supervisor for the agent in this case the management to work according to the principles and ethics that apply. In some companies a commissioner is occupied by the owner or owner or founder of the company itself. Related Party Transactions have no significant effect on fraudulent financial statements with sig values. 0.684 or greater than the 5% confidence level (0.684> 0.05). It can be concluded that special party transactions do not affect the occurrence of fraudulent financial statements. The results of this study are in line with that of Hasnan et al., (2013) which states that companies with special party transactions do not affect financial fraud. The extent of disclosure of special parties and transactions between companies and special parties is influenced by various things such as the company's culture to the costs of disclosure. In addition, transactions with privileged parties may only have operational and economic motives which means that the recognition that the transactions are carried out on the same terms as the same transaction with third parties.

Furthermore, the results obtained that the auditor turnover does not have a significant effect on fraudulent financial statements with sig values. 0.268 or greater than the 5% significance level (0.268> 0.05). In the auditor replacement table (attachment) there are only a few companies that make auditor changes after the book reporting year. Auditor turnover by the company may not affect financial statement fraud, because external auditors rarely disclose the condition of a fraud in the company in their fairness opinion report. When viewed that the main function of the general audit is that it only assesses the fairness of the financial statements. When the financial statements are in accordance with the applicable standards, it is sufficient to provide a fair opinion on the audit report. Whereas a reasonable financial report is not necessarily free from fraud. The auditor changes made by manufacturing companies are mostly carried out according to the rules, from which it can indicate that the auditor's turnover is only a formality of the application of the applicable rules. This may indicate that the auditor's services will not be carried out by fraud. Furthermore, the auditor turnover prematurely is very difficult to determine exactly what is the cause. The results of auditor changes that have no effect on financial report fraud are in line with the research of Skousen et al. (2009) which states that auditor change does not affect financial statement fraud. So it can be concluded that changing whether or not KAP that conducts audits is less likely to be able to detect fraud, because to explore a fraud in financial statements, skepticism and auditor experience are also very influential.

CEO dominance has no significant effect on financial statement fraud with sig values. 0,150 or greater than 5% significance level (0,150> 0,05). In the CEO domination table (appendix) there are only a few companies that have high CEO dominance. Most companies have implemented Good Corporate Governance (GCG). This finding is in line with the research of Khanna et al. (2013) suggesting that the CEO strength index only reflects the ability to do one's own will to others, not the influence of social norms or social consensus. The CEO's strength reflects the one-way influence of the CEO on the other side, which is easier to reject if the action or behavior in question is contrary to the law.

CEO narcissism has a significant effect on financial statement fraud with sig values. 0.039 or less than the 5% significance level (0.039 <0.05). This is in line with Rijsenbilt's research (2011) which states that CEO narcissism has a positive effect on the tendency to commit fraud. A CEO tends to want to show everyone the status and position he has in the company because they do not want to lose that status or position (or feel not considered), this is consistent with one of the elements presented by Crowe (2011); arrogance. In line with Rijsenbilt and Commandeur's (2013) research, there is a positive relationship between narcissism and fraud. Schwartz (cited by Amemic and Craig 2010) suggests that accounting as part of the financial system offers a greater "narcissistic opportunity" than management

functions that can be reflected on its annual report.

6. Conclusion

The results of this study can be concluded that the pentagon fraud model can be used to predict financial statement fraud. The results of this study are empirical evidences that the financial target variables and CEO narcissism have significant effects on financial statement fraud while financial stability, external pressure, supervision ineffectiveness, related party transactions, auditor turnover, and CEO dominance have no significant effect on financial statement fraud. Furthermore, when viewed in the table of the F-Score and M-Score models, there are several companies suspected or indicated of fraudulent financial reporting, including 284 companies out of 385 observation samples. The percentage of companies indicated to have financial statements fraud requires further examination to really prove that the company is cheating. The results of the fraudulent financial report analysis using the F-Score dan M-score for manufacturing companies in 2012 - 2016 successfully analyzed a total of 284 companies that indicated fraudulent financial reporting.

Based on the research model developed in this study, it can strengthen theoretical concepts and provide empirical support for previous research and provide an improvement by re-examining previous research. Some important things related to theoretical implications can be explained as:

3. Fraud pentagon as a theory proposed by Crowe in 2011 can be used to explain the phenomenon of financial statement fraud. The results of the study showed pentagon fraud succeeded well in predicting the model as an independent variable against financial report fraud. The results of the study are in line and support previous research from Dalnial et. al (2014) who tested pentagon fraud against financial statement fraud which resulted in a significant influence between independent variables on financial statement fraud.
4. In this study the Dechow (F-Score) and Beneish (M-Score) analysis succeeded in indicating financial statement fraud committed by manufacturing companies. This can be proven in the F-score seen from the results of the analysis, and also related to the results of the study.

Based on the conclusions of the study, the authors' suggestions for further research are:

4. To examine financial report fraud by using quantitative and qualitative measurements on independent variables, especially on variables of financial stability, external pressure, related party transactions, and CEO dominance to get the right size in testing these variables.
5. The general audit function, regarding the variable auditor change, that only looks at the fairness of financial statements in accordance with the PSAK should need to be improved by focusing on accounts that are prone to fraud. If there are indications of fraudulent financial statements, management immediately takes further action to conduct investigative and preventive audits so that they do not keep on showing up.
6. To develop measurements on pentagon fraud elements which consist of pressure, opportunity, rationalization, ability /competence, and arrogance.

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