

Behavioral Strategy Analysis Using the Fraud Diamond Theory Approach To Detecting Corporate Fraud in Indonesia

Christian, Natalis

Department of Accounting, Faculty of Economic, Universitas Internasional Batam, Batam Island, Indonesia
Corresponding author: Natalis Christian

Abstract: *The purpose of this study is to analyze empirically by using secondary data on the possibility of corporate fraud by using the theory of behavioral strategy with fraud diamond theory approach. This study also included financial distress variables as an intervening variable in analyzing the relationship between fraud diamond theory and corporate fraud. The research model in this study was tested using the ordinary least square (OLS) analysis method. A total of 310 company data were collected which consisted of financial data and other supporting data published by companies listed on the Indonesia Stock Exchange in the range of 2012 to 2017. Fraud diamond has a significant influence on both financial distress and corporate fraud. In this study it was also found that financial distress can be used effectively as an intervening variable in the analysis of the relationship between fraud diamond theory and corporate fraud. This study provides empirical evidence that fraud diamond theory and financial distress can be investigated for its effect on corporate fraud by only using secondary data that is available and freely accessed by the public. This finding can make it easier for interested parties to carry out their own analysis of the possibility of the occurrence of corporate fraud in day to day economic activities. The empirically tested research model in this study, namely the fraud diamond, can provide a comprehensive understanding of practitioners, academics, government agencies and the general public in analyzing the topic of corporate fraud.*

Key words: *Behavioral strategy, financial distress, corporate fraud, fraud theory, and fraud diamond.*

Date of Submission: 10-04-2020

Date of Acceptance: 24-04-2020

I. INTRODUCTION

Many scandals in the past few years that have befallen the chief executive director (CEO) and the chairman of multinational companies are the main highlights in assessing the effectiveness of the implementation of good corporate governance. Some major scandals have occurred, for example the scandal of Nissan chairman Carlos Ghosn involved in the manipulation of corporate financial reports and misuse of company assets, the 1Malaysia Development Berhad (1MBD) scandal involving alleged corruption cases of former Malaysian prime minister Dato Seri Najib Tun Razak, corruption scandal which happened to Samsung Corporation heir Lee Jae Yong who also involved former South Korean president Park Guen Hye, Kobe Steel's information manipulation scandal involving large companies in the world, namely Toyota, Boeing, Ford, Nissan and Subaru.

In Indonesia, the occurrence of corporate fraud that caused losses both financially and non-financially has often happened. For example the Hambalang project case involving elite politicians in Indonesia, the fictitious budget of state-owned company PT. Brantas Abipraya in 2013-2014, corruption case in Central Lombok involving PT. Perusda Loft One in 2017, financial report manipulation by PT. Sun Prima Nusantara Financing in May 2018 and a suspected corruption case of the Meikarta project involving the Lippo Group (Komisi Pemberantas Korupsi, 2014, 2015, 2016, 2017, 2018).

The implementation of ineffective corporate governance to detect corporate fraud proves that there is still a lack of theoretical foundations and procedures that have been implemented by the company in order to prevent corporate fraud. One of the latest theoretical approaches that is expected to complement the literature on corporate fraud is a behavioral strategy theory approach. According to Powell, Lovallo, and Fox (2011), behavioral strategy tries to explain the behavior of a decision maker in a strategic position in a company based on realistic assumptions about human cognition, emotion and social interaction. The addition of theories related to the behavioral strategy is expected to enrich knowledge related to topics regarding corporate fraud and make a real contribution in detecting and preventing the occurrence of corporate fraud.

One of the earliest theories that tried to detect fraud with a behavioral approach from fraud perpetrators was the theory of fraud triangle proposed by a criminologist named Donald Cressey which began in 1950. Cressey (1953) finally put forward his theory of fraud triangles in his book entitled *Other People's Money: The Social Psychology of Embezzlement*. Over time, the theory of fraud triangle proposed by Cressey (1953) was

used and developed by other researchers. The latest development of the theory of fraud triangle was carried out by Wolfe and Hermanson (2004) who put forward the theory of diamond fraud. Although cases of corporate fraud have often been investigated in the Asia Pacific region, especially in China, but in Southeast Asia there is still very little research or literature that examines cases of corporate fraud using the diamond fraud approach.

II. RESEARCH FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Figure 1 below is the picture of the conceptual framework in this study. This conceptual framework illustrates the effect of independent variables and moderating variables on the dependent variable with a sample of companies listed on the Indonesia Stock Exchange.

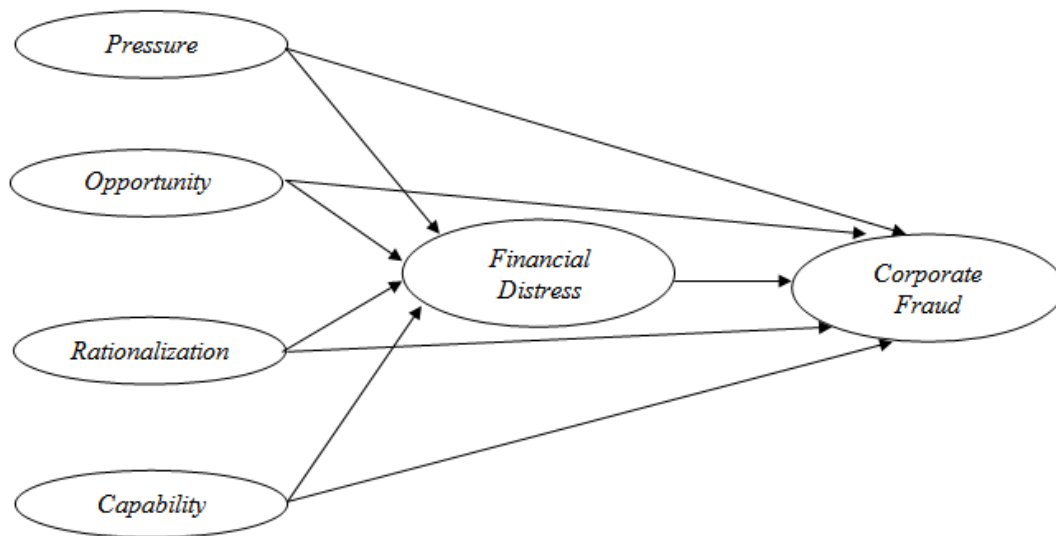


Figure 1. Conceptual Framework

The results of Alifiah's (2014) research found that pressure related to financial problems in a company can cause the company to experience financial distress. According to Jiang and Jones (2018) the pressure experienced by the management of the company that owns the shares of the company they lead can affect the company's management to be more serious and careful in managing the company so that the company can avoid financial distress.

H1: Pressure has a significant effect on the occurrence of financial distress.

Habib, Costa, Huang, Bhuiyan, and Sun (2018) in their research found that companies that have the implementation of weak corporate governance can increase the likelihood of financial distress in these companies. The implementation of weak corporate governance can give rise to opportunities for the management of the company not to give full effort in managing the company they lead. In their research, Habib *et al.* (2018) also found that the weak implementation of corporate governance in the past, will lead to weakening the effectiveness of the implementation of corporate governance in the future so that it can create new opportunities in the future for parties to violating the law that in the end it can cause the company to experience financial distress in the future.

H2: Opportunities have a significant effect on the occurrence of financial distress.

Indonesia Institute of Public Accountant/IAPI (2018) in the Auditor Standard Statement No. 70 shows that the tension in the relationship between management and the external auditor as an indication to cover up the sensitive information contained in the financial statements. The external auditor playing an important role in the assurance of financial statement's qualities. Information about companies that are indicated to experience financial distress, usually also known by the external auditor through the financial statement audit process. Companies that experience financial distress often make external auditor changes to cover up the financial distress information from the old auditor and tend to reduce the possibility of detection by new auditors (Lou & Wang, 2009). The study of Abdullahi, Mansor, and Nuhu (2015) concluded that auditor resignation had a positive effect on the likelihood of litigation. Based on the theory and from the results of previous studies, the rationalization by replacing auditors becomes one of the factors that can be used to detect the occurrence of financial distress. According to Hasnan, Rahman, and Mahenthiran (2013) rationalization to conducting the transactions with affiliates reflect a conflict of interest between the owner of the company and the management of the company. Transactions with affiliates are usually not carried out at a reasonable price so that the

transactions made may not provide benefits to the company's profits. This concludes that transactions with affiliates have negative implications for company finances which can cause companies to experience financial distress.

H3: Rationalization has a significant effect on the occurrence of financial distress.

Arroyave (2018) in his research found that the likelihood of financial distress will decrease if the tenure of the CEO is longer. The results of the study state a significant negative influence between those variables. The results of this study are consistent with the results of research conducted by Bărbuță-Mișu and Codreanu (2014). Bărbuță-Mișu and Codreanu (2014) in their study found a negative relationship between the length of the company's CEO tenure to financial distress, but did not find a significant effect between the two variables. Research on the effect of the company's CEO tenure on financial distress was carried out by Rajasekar, Ashraf, and Deo (2014). In their research, Rajasekar, Ashraf, and Deo (2014) found that there were no significant negative effects between the length of the CEO's tenure on financial distress. This shows that the longer a CEO has a position in a company, then the possibility of financial distress in the company will shrink. These results are consistent with the results of research by Singh and Mishra (2016), but are not consistent with the results of Endri (2018). Lokanan and Sharma (2018) states that a person who has a degree in finance and/or business tends to have the knowledge and experience needed to make decisions in managing a company. By having this degree, someone better understands the methods of corporate governance and is able to analyze and correct weaknesses in the implementation of corporate governance that have been implemented within the company.

H4: Capability has a significant effect on the occurrence of financial distress.

Hou and Moore (2010) state that fraud companies have poor financial conditions compared to non-fraud companies. This condition forces companies that have poor financial conditions to require large amounts of funds in order to improve its financial performance. By manipulating financial statements fraud companies can accentuate a good financial condition so the companies can easily get new fresh funds from external investors at a relatively lower cost.

According to SAS No. 99 (ACPAI, 2019), managers face a great pressure to conduct financial statement fraud when financial stability of the company is threatened by the poor financial performance. Financial stability is a condition that describes the condition of the company's financial instability (Skousen, Smith, and Wright, 2009). Management often gets pressure to show that the company has been able to manage its assets so that the higher profits can be generated and will later generate high returns on investment for investors. For this reason, management utilizes financial statements as a tool to cover up poor financial stability by committing fraud. Research conducted by Skousen *et al.*, (2009) shows that the percentage change in total assets has a positive effect on financial statement fraud. Based on the results of Mulford and Comiskey (2011) research the percentage change in total assets indicates the existence of fraud in financial statements, because of the higher percentage change in total assets often use by the management as a way to show the company's higher earnings power and a stronger financial position.

H5: Pressure has a significant effect on the occurrence of corporate fraud.

Hsu and Wu (2014) conducted a study to determine the relationship between opportunities measured by using the percentage of independent members on the board of directors as an indicator toward corporate fraud. The results of their research found a significant negative effect between the percentage of independent members on the board of directors and corporate fraud. Wu, Johan, and Rui (2014) conducted a similar study to determine the relationship between the percentage of independent members on the board of directors and corporate fraud. The results of their study found that there was no significant effect between the percentage of independent members on the board of directors and corporate fraud.

Persons (2009) in his research found that fraud companies have a higher rate of turnover of executive personnel compared to companies that non-fraud company. Jia, Ding, Li, and Wu (2009) continue the research of Persons (2009) in their research which compares chairman changes in companies that fraud and non-fraud companies. In their study, Jia *et al.* (2009) found a significant positive influence between the change of chairman in the year in which the company committed corporate fraud to the possibility of corporate fraud occurring in the company.

H6: Opportunities has a significant effect on the occurrence of corporate fraud.

Rationalization in fraud caused by an indication of management that having an excessive interest in maintaining or increasing the company's stock prices and profit. Efforts to maintain profits require certain treatment so that the company's profits look good, for example by using accrual in earnings management. The use of discretionary accruals causes a company to get a qualified audit opinions (Skousen *et al.*, 2009).

Anderson (2017) states that perpetrators of fraud are individuals who have a long history of committing violations from an early age to adulthood. Fraud perpetrators who have a time lag without committing a violation are usually caused by coercion/punishment from external parties and not because of changes in personal attitudes and personal behavior. This condition concludes that without pressure from external parties, such as giving penalties or sanctions, fraud perpetrators tend to repeat the violations that have been committed in the past.

H7: Rationalization has a significant effect on the occurrence of corporate fraud.

According to Lokanan and Sharma (2018), the longer a CEO tenure in the company the stronger his influence will be in overseeing the company. This causes the possibility of corporate fraud to decrease with strong supervision. In their research, Lokanan and Sharma (2018) also found a significant negative effect between the two variables. Lokanan and Sharma (2018) continued their previous research to find out the influence between the length of the CEO's position on corporate fraud. The results of their research did not find a significant relationship between the two variables. Geest, Weisburd, and Blokland (2017) concluded that the majority of fraud perpetrators were perpetrators of fraud who had criminal records of serious violations other than violations of fraud. In fact, there are fraud perpetrators from among those with middle collar economic conditions (white collar criminals) who specialize themselves in committing fraud. This condition is very different when compared with the conditions in 1940, where the majority of fraud perpetrators came from among the middle-to-low economic ability (common criminals). This is due to rapid technological developments that give rise to huge opportunities for fraud perpetrators from the white collar criminals, who tend to have higher social status and education levels, to be more flexible in committing fraud. This study is consistent with research conducted by Anderson (2017) and Zara & Farrington (2016).

H8: Capability has a significant effect on the occurrence of corporate fraud.

Research on the effect of financial distress on corporate fraud was carried out by Johnson, Ryan, and Tian (2009). In this study, Johnson *et al.* (2009) did not find a significant effect between financial distress and corporate fraud. Jia *et al.* (2009) also conducted a study to determine the effect of financial distress on the possibility of corporate fraud. Jia *et al.* (2009) found that there was no significant effect between the debt to asset ratio to corporate fraud. This study is consistent with the results of the study by Brazel, Jones, & Zimbelman (2009) and Johnson *et al.* (2009), but the results of this study are not consistent with the results of the study of Schrand and Zechman (2012). However, in this study, Jia *et al.* (2009) found that companies that fraud corporate have a larger debt composition when compared to non-fraud companies. In the same year, Donelson, McInnis, and Mergenthaler (2016) and Nelson (2012a, 2012b) also conducted research to determine the effect of financial distress on corporate fraud. The results of these three studies state that there is no significant influence between financial distress on corporate fraud. The results of Maccarthy (2017) study found that the measurement of financial distress with the Altman Z-Score as indicator if combined with the measurement of corporate fraud with the Beneish M-Score as indicator can significantly improve the detection of financial report manipulation conducted by management.

H9: Financial distress has a significant effect on the occurrence of corporate fraud.

III. RESEARCH METHODOLOGY

Based on the objectives of the study, this study can be classified as a basic research that uses a deductive approach. This study uses hypotheses as guidelines and directions to determine the research methods used in fact testing (Schindler, 2018). This study was designed in a comparative causal form and using cross sectional panel data (Schindler, 2018). The populations in this study are companies listed on the Indonesia Stock Exchange. The sampling method uses purposive sampling method. The sample used in this study is the samples have met the criteria that have been determined. The criteria for company samples to be examined are as follows:

1. Registered on the Indonesia Stock Exchange from the period 2011 to 2017.
2. Not engaged in the financial, property, real estate industry and/or construction industry.
3. Has published financial statement consisting of statement of financial position, statement of profit or loss and other comprehensive income and statement of cash flow by using the Rupiah (Rp) as reporting currency from 2011 to 2017.
4. Has published annual report consisting of a list of CEO profiles, board of director profiles, company committee profiles, disclosure of the company's shareholding structure, a list of board of director's meetings from 2011 to 2017.

The final data collected will be analyse through the statistic description test, outlier test, classic assumption test (autocorrelation test, multicollinearity test, heteroscedasticity test and normality test), and

hypothesis test (F value test, t value test, coefficient determination test and Sobel test) using SPSS (*Statistical Package for The Social Sciences*) 24.0. The operational definition of variable and its indicator used in this research were as follow:

Tabel 1. Operational Definition of Variable

No	Variable	Indikator	References
1	Pressure	Financial Stability	Lokanan & Sharma (2018); Skousen <i>et al.</i> (2009)
		External Pressure	Lokanan & Sharma (2018); Skousen <i>et al.</i> (2009)
		Personal Financial Needs	Lokanan & Sharma (2018); Skousen <i>et al.</i> (2009)
		Financial Target	Lokanan & Sharma (2018); Skousen <i>et al.</i> (2009)
2	Opportunity	Ineffective Monitoring	Hasnan <i>et al.</i> (2013); Lokanan & Sharma (2018)
		Nature of Industry	Skousen <i>et al.</i> (2009); Wang <i>et al.</i> (2017)
		BOD Turnover	Abdullahi <i>et al.</i> (2015); Jia <i>et al.</i> (2009)
		Multiple Directorship	Hasnan <i>et al.</i> (2013)
3	Rationalization	Auditor Switch	Lokanan & Sharma (2018); Skousen <i>et al.</i> (2009)
		Audit Opinion	Lokanan & Sharma (2018); Skousen <i>et al.</i> (2009)
		Related Party Transaction	Abdullahi <i>et al.</i> (2015); Hasnan <i>et al.</i> (2013)
		Founder's on Board	Hasnan <i>et al.</i> (2013)
4	Capability	CEO Tenure	Abdullahi <i>et al.</i> (2015); Wang <i>et al.</i> (2017)
		CEO Age	Abdullahi <i>et al.</i> (2015)
		CEO Educations	Abdullahi <i>et al.</i> (2015); Lokanan & Sharma (2018)
6	Corporate Fraud	Beneish M-Score	Beneish (1999); Warshavsky (2012); Zaki (2017)
		F-Score	Dechow <i>et al.</i> (2011); Hung, Ha, & Binh (2017)
		Tax Avoidence	Chen, Huang, Liu, & Wang (2019)
7	Financial Distress	Altman Z-Score	Altman (1968); Maccarthy (2017); Sulub (2014)
		Altman Z'-Score	Altman (1968); Maccarthy (2017); Sulub (2014)
		Altman Z"-Score	Altman (1968); Maccarthy (2017); Sulub (2014)
		Springate	Aminian <i>et al.</i> (2016); Springate (1978)
		Zmijewski	Aminian <i>et al.</i> (2016); Zmijewski (1984)

IV. RESULTS AND DISCUSSIONS

The total population of companies listed on the Indonesia Stock Exchange (IDX) as March 1, 2019 is 626 companies. There are 208 companies listed on the IDX after January 1, 2012 so that they do not meet the research criteria and are not further examined in this research. Of the remaining 418 companies listed on the IDX before January 1, 2012, there were 108 companies which were not examined further because they were engaged in the finance, property, real estate and construction industries (64 moving companies in the financial industry and the remaining 44 companies are engaged in the property, real estate and construction industries). Thus the data of remaining 310 companies was collected from 2012 to 2017 resulting 1,550 data that will be further examined in this research.

All the of classic assumption test conducted showed that the data passed all the classic assumption test with Durbin Watson value (autocorrelation test) of 0.79 for financial distress and 1.30 for corporate fraud, VIF value (multicollinearity test) of 1.013 for pressure, 1.04 for opportunity, 1.62 for rationalization, and 1.00 for capability. The result of scatterplot test (heteroscedasticity test) and normal P-P Plot test (normality test) also showed that the data do not have heteroscedasticity and normality problem.

Tabel 2. Result of Hypothesis Test (t value test)

No	Variable Dependent	Variable Independent	Std. Error	Standardized Coefficients Beta	t	Sig.	Decision
H1	<i>Financial Distress</i>	<i>Pressure</i>	0,32800	-0,15500	-589,300	0,00000	Accepted
H2	<i>Financial Distress</i>	<i>Opportunity</i>	0,14600	-0,00500	-0,19900	0,84200	Rejected
H3	<i>Financial Distress</i>	<i>Rationalization</i>	0,04800	0,15300	464,600	0,00000	Accepted
H4	<i>Financial Distress</i>	<i>Capability</i>	0,00400	0,11700	447,600	0,00000	Accepted
H5	<i>Corporate Fraud</i>	<i>Pressure</i>	0,15200	0,11800	434,300	0,00000	Accepted
H6	<i>Corporate Fraud</i>	<i>Opportunity</i>	0,06800	0,08800	320,800	0,00100	Accepted
H7	<i>Corporate Fraud</i>	<i>Rationalization</i>	0,02200	0,07400	218,000	0,02900	Accepted
H8	<i>Corporate Fraud</i>	<i>Capability</i>	0,00200	0,05600	206,200	0,03900	Accepted
H9	<i>Corporate Fraud</i>	<i>Financial Distress</i>	0,01200	0,12800	4,72700	0,00000	Accepted

Based on the results of hypothesis testing in Tabel 2 above, it can be concluded that hypothesis one (H1), hypothesis three (H3), hypothesis four (H4) have successfully accepted, so it can be concluded that pressure, rationalization, and capability have a significant influence on financial distress. The results of this study are consistent with the results of previous studies conducted by Abdullahi *et al.* (2015), Aminian *et al.* (2016), Hasnan *et al.* (2013), Jia *et al.* (2009), Lokanan and Sharma (2018), Maccarthy (2017), Puspitha and Yasa (2018), Skousen *et al.* (2009), Sulub (2014), Wang *et al.* (2017), Wu *et al.* (2014) and Zaki (2017). However, the results of the analysis also show that the hypothesis two (H2) is rejected, so that it can be concluded that opportunity does not have a significant effect on financial distress. The results of the hypothesis two (H2) are not consistent with the results of previous studies. Rejection of the hypothesis two (H2) states that the opportunity is proven empirically does not have a significant effect on financial distress. This result may occur because of the tight control, both those carried out by the internal of the company as well as by the external parties of the company which causes the management of the company unable to carry out negligence which will later cause the company to experience financial distress. Strict control by authorized government institutions, such as the Indonesia Stock Exchange (IDX) and the Financial Services Authority (Otoritas Jasa Keuangan/OJK) has contributed to the control of corporate governance in public companies.

The results of hypothesis testing in Table 2 above showed that hypotheses five (H5), hypotheses six (H6), hypotheses seven (H7), hypothesis eight (H8) are successfully accepted, so it can be concluded that pressure, opportunity, rationalization and capability have a significant influence on corporate fraud. The results of this study are consistent with the results of previous studies conducted by Abdullahi *et al.* (2015), Aminian *et al.* (2016), Dechow *et al.* (2011), Hasnan *et al.* (2013), Jia *et al.* (2009), Lokanan and Sharma (2018), Maccarthy (2017), Puspitha and Yasa (2018), Skousen *et al.* (2009), Wang *et al.* (2017), Warshavsky (2012), Wu *et al.* (2014) and Zaki (2017). The result also showed that hypothesis nine (H9) is successfully accepted which is consistent with the previous studies conducted by Altman (1968), Aminian *et al.* (2016), Beer *et al.* (2019), Beneish (1999), Chen *et al.* (2019), Dechow *et al.* (2011), Hung *et al.* (2017), Khurana *et al.* (2018), López-González, Martínez-Ferrero, and García-Meca (2019), Maccarthy (2017), Shen *et al.* (2019), Springate (1978), Warshavsky (2012), Zaki (2017) and Zmijewski (1984).

Additional test was conducted to test the mediating effect of financial distress to fraud theory and corporate fraud. The results were as follow:

Tabel 3. Result of Sobel Test

Independent Variable	t statistic	P-Value
<i>Pressure</i>	3,68731790	0,00022663
<i>Opportunity</i>	0,19882389	0,84240051
<i>Rationalization</i>	3,31348472	0,00092141
<i>Capability</i>	3,25012295	0,00115355

The results of the Sobel Test test in Table 3 above show the test results for the independent variable on corporate fraud mediated by financial distress resulting in a t-statistic test result of 3.69 for pressure, 0.20 for opportunity, 3.31 for rationalization and 3.25 for capability. Test result for pressure, rationalization and capability are greater than the t table value amounting to 1.96. From the results of the t-statistical test, it can be concluded that the financial distress variable has a mediating effect in the effect of the pressure, rationalization and capability to corporate fraud.

V. CONCLUSIONS AND IMPLICATIONS

Especially in Indonesia, the practice of corporate fraud is still very difficult to detect by the public due to the lack of government regulations governing whistleblower systems that can expose corporate fraud practices. The lack of information that can be accessed by the public regarding the practice of corporate fraud in the business environment causes a high risk that must be borne by the public against losses caused by cases of corporate fraud.

This study tries to empirically examine the factors that enable corporate fraud to occur using only secondary data available and freely accessible to the general public, so that the general public can analyze the possibility of corporate fraud in a company based on secondary data. Fraud diamond theory is the main theory used in this study to explain the factors that can cause corporate fraud. This study also uses financial distress variables as an intervening variable in explaining the relationship of influence between fraud diamond theory and corporate fraud.

From the results of this study, it can be concluded that fraud diamond analysis and financial distress can be effectively used to detect the possibility of corporate fraud, where the measurement of all variables examined in this study uses secondary data that can be accessed freely by the public. This facilitates the efforts of economic practitioners, academics, governments and even the public to detect the possibility of corporate fraud occurring in day to day economic activities.

The conclusion of this research on corporate fraud cases in Indonesia can also be used as input and consideration for stakeholders in other countries in the Southeast Asia region, especially for investors and government agencies. With the increasing number of economic cooperation between Southeast Asian countries that facilitate the implementation of cross-country investment, the case of corporate fraud in one country will not only affect the country, but will also affect other countries. By looking at the importance of research on corporate fraud, the conclusions in this study are expected to be useful in subsequent studies in countries in Southeast Asia other than Indonesia and can effectively minimize or even prevent the risk of corporate fraud occurring in the company.

Some recommendations and suggestions that can be developed in future research/studies are expand the scope of the analysis of corporate fraud by including an analysis of other types of corporate fraud such as misuse of company assets and fraudulent government, development of formulas/measurements so that they can be applied to detect corporate fraud in companies engaged in the finance, property, real estate and construction industries. Future researcher also can changing the method of collecting data from secondary data into primary data or combined data using questionnaire instruments or by direct interviews with the respondents involved in research so that research can be done with the availability of more complete and accurate data.

REFERENCES

- [1]. Abdullahi, R., Mansor, N., & Nuhu, M. S. (2015). Fraud triangle theory and fraud diamond theory: Understanding the convergent and divergent for future research. *European Journal of Business and Management*, 7(28). Retrieved from www.iiste.org
- [2]. ACPAI. (2019). *Statement on Auditing Standards No. 99*. Durham: Association of Certified Public Accountant.
- [3]. Alifiah, M. N. (2014). Prediction of financial distress companies in the trading and services sector in Malaysia using macroeconomic variables. *Procedia - Social and Behavioral Sciences*, 90–98. <https://doi.org/10.1016/j.sbspro.2014.03.652>
- [4]. Altman, E. I. (1968). Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. *The Journal of Finance*, 23(4), 589–609.
- [5]. Aminian, A., Mousazade, H., & Khoshkho, O. I. (2016). Investigate the ability of bankruptcy prediction models of Altman and Springate and Zmijewski and Grover in Tehran Stock Exchange. *Mediterranean Journal of Social Sciences*, 7(4), 208–214. <https://doi.org/10.5901/mjss.2016.v7n4s1p208>
- [6]. Anderson, L. C. (2017). A practitioner's response to "chronic offenders and the syndrome of antisociality: Offending is a minor feature." *Irish Probation Journal*, 14, 72–77.
- [7]. Arroyave, J. (2018). A comparative analysis of the effectiveness of corporate bankruptcy prediction models based on financial ratios: Evidence from Colombia. *Journal of International Studies*, 11(1), 273–287. <https://doi.org/10.14254/2071>
- [8]. Bărbuță-Mișu, N., & Codreanu, E.-S. (2014). Analysis and prediction of the bankruptcy risk in Romanian building sector companies. *Ekonomika*, 93(2), 131–146.
- [9]. Beer, S., Mooij, R. de, & Liu, L. (2019). International corporate tax avoidance: A review of the channels, magnitudes, and blind spots. *Journal of Economic Surveys*, 1–29. <https://doi.org/10.1111/joes.12305>
- [10]. Beneish, M. D. (1999). The detection of earnings manipulation. *Financial Analysts Journal*, (September/October), 24–36. <https://doi.org/10.2469/faj.v55.n5.2296>
- [11]. Brazel, J. F., Jones, K. L., & Zimbelman, M. F. (2009). Using nonfinancial measures to assess fraud risk. *Journal of Accounting Research*, 47(5), 1135–1166. <https://doi.org/10.1111/j.1475-679X.2009.00349.x>
- [12]. Chen, Y., Huang, J., Liu, H., & Wang, W. (2019). Regional favoritism and tax avoidance: Evidence from China. *Accounting and*

- Finance*, 58, 1413–1443. <https://doi.org/10.1111/acfi.12447>
- [13]. Cressey, D. R. (1953). Other people's money: A study in the social psychology of embezzlement. *The American Journal of Sociology*.
- [14]. Dechow, P. M., Ge, W., Larson, C. R., & Sloan, R. G. (2011). Predicting material accounting misstatements. *Contemporary Accounting Research*, 28, 17–82. <https://doi.org/10.1111/j.1911-3846.2010.01041.x>
- [15]. Donelson, D. C., McInnis, J., & Mergenthaler, R. D. (2016). The effect of governance reforms on financial reporting fraud. *Journal of Law, Finance, and Accounting*, 1, 235–274. <https://doi.org/10.2139/ssrn.2138348>
- [16]. Endri. (2018). Prediction of bankruptcy potential company of drinking water region. *International Journal of Business and Management Invention (IJBMI)*, 7(5), 75–85. Retrieved from www.ijbmi.org/75%7CPage
- [17]. Geest, V. R. van der, Weisburd, D., & Blokland, A. A. J. (2017). Developmental trajectories of offenders convicted of fraud: A follow-up to age 50 in a Dutch conviction cohort. *European Journal of Criminology*, 14(5), 543–565. <https://doi.org/10.1177/1477370816677620>
- [18]. Habib, A., Costa, M. D., Huang, H. J., Bhuiyan, M. B. U., & Sun, L. (2018). Determinants and consequences of financial distress: Review of the empirical literature. *Accounting and Finance*. <https://doi.org/10.1111/acfi.12400>
- [19]. Hasnan, S., Rahman, R. A., & Mahenthiran, S. (2013). Management motive, weak governance, earnings management, and fraudulent financial reporting: Malaysian evidence. *Journal of International Accounting Research*, 12(1), 1–27. <https://doi.org/10.2308/jiar-50353>
- [20]. Hou, W., & Moore, G. (2010). Player and referee roles held jointly: The effect of state ownership on China's regulatory enforcement against fraud. *Journal of Business Ethics*, 95, 317–335. <https://doi.org/10.1007/s10551-011-0858-1>
- [21]. Hsu, H. H., & Wu, C. Y. H. (2014). Board composition, grey directors and corporate failure in the UK. *The British Accounting Review*, 46(3), 215–227. <https://doi.org/10.1016/j.bar.2013.12.002>
- [22]. Hung, D. N., Ha, H. T. V., & Binh, D. T. (2017). Application of F-score in predicting fraud, errors: Experimental research in Vietnam. *International Journal of Accounting and Financial Reporting*, 7(2), 303–322. <https://doi.org/10.5296/ijaf.v7i2.12174>
- [23]. IAPI. (2018). *Standar profesional akutan publik*. (Institut Akuntan Publik Indonesia, Ed.). Jakarta: Salemba Empat.
- [24]. Jia, C., Ding, S., Li, Y., & Wu, Z. (2009). Fraud, enforcement action, and the role of corporate governance: Evidence from China. *Journal of Business Ethics*, 90, 561–576. <https://doi.org/10.1007/s10551-009-0061-9>
- [25]. Jiang, Y., & Jones, S. (2018). Corporate distress prediction in China: A machine learning approach. *Accounting and Finance*. <https://doi.org/10.1111/acfi.12432>
- [26]. Johnson, S. A., Ryan, H. E., & Tian, Y. S. (2009). Managerial incentives and corporate fraud: The sources of incentives matter. *Review of Finance*, 13, 115–145. <https://doi.org/10.1093/rof/rfn014>
- [27]. Khurana, I. K., Moser, W. J., & Raman, K. K. (2018). Tax avoidance, managerial ability, and investment efficiency. *Abacus*, 54, 547–575. <https://doi.org/10.1111/abac.12142>
- [28]. Komisi Pemberantas Korupsi. (2014). *Laporan tahunan KPK 2013*. Jakarta.
- [29]. Komisi Pemberantas Korupsi. (2015). *Laporan tahunan KPK 2014: Menjaga harapan tetap menyala*. Jakarta. Retrieved from www.kpk.go.id
- [30]. Komisi Pemberantas Korupsi. (2016). *Laporan tahunan KPK 2015: Menolak surut*. Jakarta. Retrieved from www.kpk.go.id
- [31]. Komisi Pemberantas Korupsi. (2017). *Laporan tahunan KPK 2016: Hingga ke bawah permukaan*. Jakarta.
- [32]. Komisi Pemberantas Korupsi. (2018). *Laporan tahunan KPK 2017: Demi Indonesia untuk Indonesia*. Jakarta. Retrieved from www.kpk.go.id
- [33]. Lokanan, M., & Sharma, S. (2018). A fraud triangle analysis of the LIBOR fraud. *Journal of Forensic & Investigative Accounting*, 10(2), 187–212.
- [34]. López-González, E., Martínez-Ferrero, J., & García-Meca, E. (2019). Does corporate social responsibility affect tax avoidance: Evidence from family firms. *Corporate Social Responsibility and Environmental Management*, 1–13. <https://doi.org/10.1002/csr.1723>
- [35]. Lou, Y. I., & Wang, M. L. (2009). Fraud risk factor of the fraud triangle assessing the likelihood of fraudulent financial reporting. *Journal of Business & Economics Research*, 7(2), 61–78.
- [36]. Maccarthy, J. (2017). Using Altman Z-score and Beneish M-score models to detect financial fraud and corporate failure: A case study of Enron Corporation. *International Journal of Finance and Accounting*, 6(6), 159–166. <https://doi.org/10.5923/j.ijfa.20170606.01>
- [37]. Mulford, C. W., & Comiskey, E. E. (2011). *The financial numbers game detecting creative accounting theory*. New York: John Wiley and Sons, Inc.
- [38]. Nelson, S. P. (2012a). Post fraud: An empirical study of firms in Malaysia. *International Journal of Management and Business Studies*, 2(3), 59–065. Retrieved from <http://internationalscholarsjournals.org>
- [39]. Nelson, S. P. (2012b). Pre fraud: An empirical in Malaysia. *International Journal of Economics and Finance Studies*, 4(1).
- [40]. Persons, O. S. (2009). Audit committee characteristics and earlier voluntary ethics disclosure among fraud and no-fraud firms. *International Journal of Disclosure and Governance*, 6(4), 284–297. <https://doi.org/10.1057/jdg.2008.29>
- [41]. Powell, T. C., Lovallo, D., & Fox, C. R. (2011). Behavioral strategy. *Strategic Management Journal*, 32, 1369–1386. <https://doi.org/10.1002/smj.968>
- [42]. Puspitha, M. Y., & Yasa, G. W. (2018). Fraud pentagon analysis in detecting fraudulent financial reporting (study on Indonesian capital market). *International Journal of Sciences: Basic and Applied Research*, 42(5), 93–109. Retrieved from <http://gssrr.org/index.php?journal=JournalOfBasicAndApplied>
- [43]. Rajasekar, T., Ashraf, S., & Deo, M. (2014). An empirical enquiry on the financial distress of Navratna companies in India. *Journal of Accounting and Finance*, 14(3).
- [44]. Schindler, P. (2018). *Business research methods* (13th ed.). Boston: McGraw Hill.
- [45]. Schrand, C. M., & Zechman, S. L. C. (2012). Executive overconfidence and the slippery slope to financial misreporting. *Journal of Accounting and Economics*, 53, 311–329. <https://doi.org/10.1016/j.jacceco.2011.09.001>
- [46]. Shen, Y., Gao, D., Bu, D., Yan, L., & Chen, P. (2019). CEO hometown ties and tax avoidance-evidence from China's listed firms. *Accounting and Finance*, 58, 1549–1580. <https://doi.org/10.1111/acfi.12442>
- [47]. Singh, B. P., & Mishra, A. K. (2016). Re-estimation and comparisons of alternative accounting based bankruptcy prediction models for Indian companies. *Financial Innovation*, 2(6). <https://doi.org/10.1186/s40854-016-0026-9>
- [48]. Skousen, C. J., Smith, K. R., & Wright, C. J. (2009). Detecting and predicting financial statement fraud: The effectiveness of the fraud triangle and SAS No. 99. *Advances in Financial Economics: Corporate Governance and Performance*, 13, 53–81. [https://doi.org/10.1108/S1569-3732\(2009\)0000013005](https://doi.org/10.1108/S1569-3732(2009)0000013005)
- [49]. Springate, G. L. (1978). *Predicting the possibility of failure in a Canadian firm. Unpublished MBA project*. Simon Fraser

- University.
- [50]. Sulub, A. S. (2014). Testing the predictive power of Altman's revised Z' model: The case of 10 multinational companies. *Research Journal of Finance and Accounting*, 5(21), 174–184. Retrieved from www.iiste.org
- [51]. Wang, Z., Chen, M. H., Chin, C. L., & Zheng, Q. (2017). Managerial ability, political connections, and fraudulent financial reporting in China. *Journal of Accounting and Public Policy*, XXX(2). <https://doi.org/10.1016/j.jaccpubpol.2017.02.004>
- [52]. Warshavsky, M. (2012). Analyzing earnings quality as a financial forensic tool. *Financial Valuation and Litigation Expert Journal*, 39(16), 16–20.
- [53]. Wolfe, D. T., & Hermanson, D. R. (2004). The fraud diamond: Considering the four elements of fraud. *CPA Journal*, (December 2014), 38–42. <https://doi.org/DOI>
- [54]. Wu, W., Johan, S. A., & Rui, O. M. (2014). Institutional investors, political connections, and the incidence of regulatory enforcement against corporate fraud. *Journal of Business Ethics*, 134(4), 709–726. <https://doi.org/10.1007/s10551-014-2392-4>
- [55]. Zaki, N. M. (2017). The appropriateness of fraud triangle and diamond models in assessing the likelihood of fraudulent financial statements - An empirical study in firms listed in the Egyptian stock exchange. *International Journal of Social Science and Economic Research*, 2(2), 2403–2433. Retrieved from www.ijsser.org
- [56]. Zara, G., & Farrington, D. P. (2016). Chronic offenders and the syndrome of antisociality: Offending is a minor feature! *Irish Probation Journal*, 13, 40–64. Retrieved from <https://www.researchgate.net/publication/310766844>
- [57]. Zmijewski, M. E. (1984). Methodological issues related to the estimation of financial distress prediction models. *Journal of Accounting Research*, 22, 59–80. <https://doi.org/10.2307/2490860>

Christian, Natalis. "Behavioral Strategy Analysis Using the Fraud Diamond Theory Approach To Detecting Corporate Fraud in Indonesia." *International Journal of Business and Management Invention (IJBMI)*, vol. 09(04), 2020, pp 66-74.