

Pentagon Fraud in Mining Companies Before and During COVID-19 Pandemic

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Article Info	Abstract
Received January 3, 2022	<i>The present study intends to determine the differences in the influence of financial targets, external pressure, capability, commissioners, auditor quality, financial stability on fraud, before the pandemic and during the pandemic. The dependent variable in this study is fraud. For the independent variables, the research uses financial target, external pressure, capability, commissioner opportunity, opportunity for auditor quality, financial stability as independent variables. The data was tested with classical assumptions and multiple regression using data from 2019 and 2020. Based on the statistical tests, the external pressure variable has a different effect. External pressure in 2019 had an effect on fraud, while external pressure in 2020 had no effect on fraud. Simultaneously, the data in 2019 proved that financial targets, external pressure, capability, commissioner opportunities, opportunities for auditor quality, financial stability influenced fraud, while the data in 2020 revealed the opposite.</i>
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INTRODUCTION

The action of fraud which generally occurs is not something unaccustomed in the society, due to the fact that fraud has been entrenched in people's lives. In general, fraud is a detrimental matter for many people. A lot of efforts have been made to prevent fraud. Agencies, enterprises, and institutions have created fraud prevention systems, but it still occurs.

Fraud can happen anywhere at anytime, no matter the time and space, including in the situation of COVID-19 pandemic, at which there are many changes and concessions in the audit during the pandemic. Such a situation provides space and opportunity for some individuals to carry out heinous action in

the form of fraud, Rafles (2021). It can be influenced by several factors, categorised as pressure, motivation, opportunity, capability, rationalization, and so on. Likewise, during the pandemic, it appears that there are particular causes for certain individuals or groups to commit fraud. It is undeniable that during the pandemic, there are many changes, starting from the working model, the amount of profit received by the company, the amount of bad debts, and so forth. These changes can be used as an instrument of comparison about the number of frauds that occurs before and during the pandemic.

Many studies have been conducted on the factors that cause fraud. Skousen and Wright (2006) mentioned that fraud triangle is a factor that influences the occurrence of fraud. Cressey (1953), in his initial study, also stated that fraud is associated with opportunity, pressure, and rationalisation, which are now recognised as the fraud triangle. Wolfe and Hermanson (2004) identified that the management's ability to commit fraud can also effect the occurrence of fraud. In the present study, the independent variables were financial stability, commissioner opportunity, financial target, opportunity for auditor quality, capability, and external pressure. The research by Skousen, Smith, and Wright (2008) employed variables of external pressure, audit committee, change of auditor; while the study by Demerjian, Lewis, and Vay (2013) utilised management ability as the measurement.

In order to observe the factors causing fraud within a company, we can function several methods and theories; one of which is the pentagon fraud, applied in mining companies. The mining companies are one of the companies which does not escape the element of fraud. Factors that can be categorised as the cause of fraud in mining companies, before and during the pandemic, are certainly different. It is influenced by different factors and conditions. Furthermore, based on the fraud pentagon, there are five elements generating fraud in companies, namely: pressure, opportunity, rationalization, competence, and arrogance, Dewi (2019). The pentagon fraud theory is more complete, because it investigates the entire sides and point of view of the element factors generating fraud, which is not observed by other fraud theories.

The current research intends to examine the comparison of the element factors that produce fraud, based on the theory of fraud pentagon, observed in the

mining companies, before and during the COVID-19 pandemic. Martina (2020) suggested that there is a significant comparison regarding the causative factors of fraud before and during the pandemic. It is due to the alteration of life patterns during pandemic, starting from the change of work patterns, communication patterns, which certainly affect the community welfare. Logically, the welfare of the individuals who work in the company, and the welfare of the company, provide opportunities for the company to commit fraud, in order to transform the disadvantage into well-being.

METHODS

a. Research Subject dan Object

- a. 1. The subjects in the present study were the mining companies listed on the Indonesian Stock Exchange 2019-2020.
- a.2. The objects in the study were the annual financial reports and independent auditor reports of the mining companies listed in the Indonesian Stock Exchange 2019-2020.

b. Population and Research Sample

b.1. Research Population

The population in the current study was the manufacturing companies listed on the Indonesian Stock Exchange 2019-2020.

b.2. Research Sample

The investigation applied purposive sampling method. By the purposive sampling method, the samples were taken from the population with certain criteria (Jogiyanto 2010:79).

The sample criteria established by the researchers were:

1. The mining companies were consistently registered in the Indonesian Stock Exchange from 2019 until 2020.
2. The mining companies presented financial reports from 2019 up to 2020.
3. The financial statements ended on 31 December, completed with the notes about the financial statements.

4. The financial statements in the sample year have been audited by the Public Accounting Firm.

c. Identification of Research Variables

In this study, three types of variables are specified, namely:

1. Dependent Variable

Dependent variable is a variable whose value depends on other variables. The dependent variable in this study is fraud. Fraud, according to SAS No. 99, is “a broad legal concept and auditors do not make legal determinations of whether fraud has occurred”. Earning management can be measured using discretionary accruals. The present investigation employs discretionary accruals, combined with the Modified Jones model as a measure of fraud.

1. $WC = (\text{Current Assets} - \text{Current Liability})$
2. $NCO = (\text{Total Assets} - \text{Current Assets} - \text{Investment and Advances}) - (\text{Total Liabilities} - \text{Current Liabilities} - \text{Long Term Debt})$
3. $FIN = (\text{Total Investment} - \text{Total Liabilities})$
4. $\text{Average Total Assets} = (\text{Beginning Total Assets} + \text{End Total Assets})/2$
5. $\text{Average Total Assets} = (\text{End Total Assets} - \text{Beginning Total Assets}) / \text{Beginning Total Assets}$
6. $RSST = (WC + NCO + FIN) / \text{Average Total Assets}$

2. Independent Variable

The independent variable is a variable which affects other variables. In this study, the independent variables are financial target (ROA), external pressure (leverage), rationality (change of public accounting firm), capability (replacement of company director), arrogance (frequent number of CEO's pictures), opportunity (number of independent commissioner), opportunity (auditor quality), and financial stability.

d. Statistical Test

Based on the statistical test results, the data for 2019 and 2020 were tested using the classical assumption test, namely normality, heteroscedasticity, and

multicollinearity tests, because each was examined in separation. After the test was completed, the data was examined by the multiple regression test.

RESULTS AND DISCUSSION

Normality Test

The normality test is carried out to ensure that the intended data is normal. The test is conducted for data 2019 and 2020. The asymmp sig result is 0.2 for 2020. The coefficient 0.2 is greater than 0.05. Consequently, the proposed data is concluded to be normally distributed.

Table 1. Normality Test Result of 2020

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Predicted Value
N		36
Normal Parameters ^{a,b}	Mean	22.6273333
	Std. Deviation	30.55289759
Most Extreme Differences	Absolute	.112
	Positive	.112
	Negative	-.086
Test Statistic		.112
Asymp. Sig. (2-tailed)		.200 ^{c,d}

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. This is a lower bound of the true significance.

Source: SPSS Data Processing

The asymp result of 2020 data is 0.2. Since the value is higher than 0.05, the proposed data is normally distributed.

Table 2. Normality Test Result of 2020

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
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N		36
Normal Parameters ^{a,b}	Mean	-20413.1350200
	Std. Deviation	32240.19197000
Most Extreme Differences	Absolute	.086
	Positive	.086
	Negative	-.047
Test Statistic		.086
Asymp. Sig. (2-tailed)		.200 ^{c,d}

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. This is a lower bound of the true significance.

Source: SPSS Data Processing

Grounded on the Kolmogrov Smirnov analysis, data 2019 and 2020 were distributed normally.

Heteroscedasticity Test

“Heteroscedasticity is a condition where the variance (in this case, the residual variance) is not stable or constant” (Gudono 2015:153). The test is carried out with scatterplot.

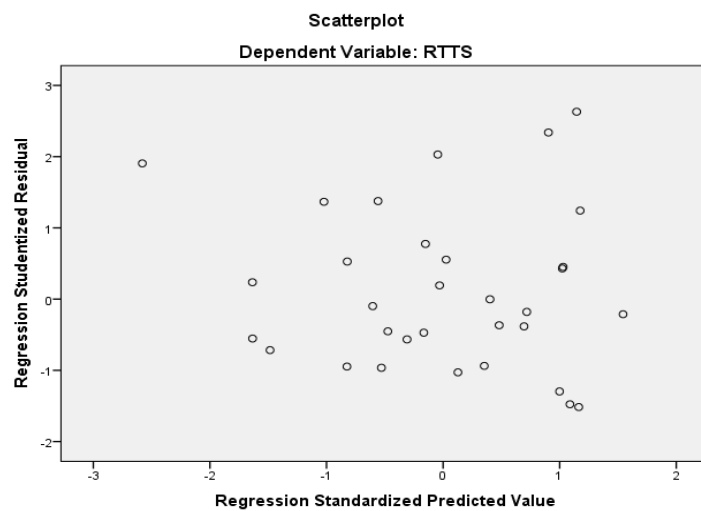


Figure 1. Heteroscedasticity Test of 2020

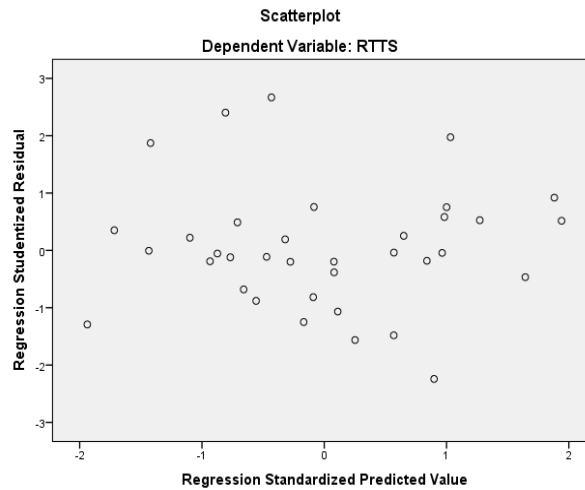


Figure 2. The Heteroscedasticity Test of 2019

Data 2019 and 2020 were free from heteroscedasticity. Based on the scatterplot figure, the data is distributed in various directions. There is not any special pattern from the data, and for that reason it proceeds with the hypothesis testing.

Multicollinearity Test

“If the number of the independent variables is more than one, it is not impossible that between these independent variables, there is a fairly high or significant correlation” (Gudono 2015:156).

Table 3. Multicollinearity Test 2020

Model	Coefficients ^a					Collinearity Statistics	
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Tolerance	VIF
	B	Std. Error	Beta				
1 (Constant)	71.531	64.696		1.106	.278		
Financial_Target	62.355	93.681	.132	.666	.511	.796	1.257
External_Pressure	23.915	69.964	.071	.342	.735	.730	1.369
Capabilitas	-15.755	52.266	-.059	-.301	.765	.811	1.233
Oportunity_Komisaris	-26.303	21.849	-.218	-1.204	.238	.954	1.048

Opportunity_KualitasAuditor	-32.493	41.434	-.154	-.784	.439	.806	1.240
Financial_Stability	1.770	11.692	.030	.151	.881	.798	1.252

a. Dependent Variable: RTTS

Source: SPSS Data Processing

Table 4. Multicollinearity Test 2019

Model	Coefficients ^a					Collinearity Statistics	
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Tolerance	VIF
	B	Std. Error	Beta				
1 (Constant)	.646	.149		4.327	.000		
Financial_Target	-.145	.249	-.154	-.583	.564	.265	3.778
External_Pressure	-.809	.225	-.686	-3.603	.001	.509	1.963
Capabilitas	-.042	.117	-.052	-.362	.720	.893	1.119
Opportunity_Komisaris	.069	.053	.194	1.302	.203	.833	1.201
Opportunity_KualitasAuditor	.097	.091	.159	1.062	.297	.824	1.213
Financial_Stability	-.469	.329	-.314	-1.426	.165	.381	2.627

a. Dependent Variable: RTTS

Source: SPSS Data Processing

The present study employs Tolerance and Variance Inflation Factor or VIF. If the result of the multicollinearity test reveals a tolerance value of more than 0.1 and a VIF of less than 10, it can be concluded that there is not multicollinearity between the independent variables.

Based on the multicollinearity test of data 2019, the results are achieved as follows. The VIF value of the financial target is 1.257; external pressure 1.369; capability 1.233; commissioner opportunity 1.048; opportunity for auditor quality 1.240; financial stability 1.252. Therefore, the VIF for 2019 is less than 10. It indicates zero multicollinearity between the independent variables. Furthermore, the tolerance value of financial target is 0.796; external pressure 0.730; capability 0.811; opportunity for commissioners 0.954; opportunity for auditor quality

0.806; and financial stability 0.798. It is clear that the tolerance for 2019 is more than 0.1. There is zero multicollinearity between the independent variables.

In addition, the examination for data 2020 generated VIF for financial target as many as 3.778; external pressure 1.963; capability 1.119; opportunity for commissioners 1.201; opportunity for auditor quality 1.213; financial stability 2.627. It is obvious that the VIF for 2020 is less than 10. There is zero multicollinearity between the independent variables. The tolerance value of financial target is 0.265; external pressure 0.509; capability 0.893; opportunity for commissioners 0.833; opportunity for auditor quality 0.824; and financial stability 0.381. Accordingly, the tolerance for 2020 is more than 0.1. There is no multicollinearity between the independent variables.

Multiple Linear Regression Test

The testing is conducted using multiple regression test. The first test is carried out by testing data 2020. The F test results yield a significance value by 0.866. The value is greater than 0.05. From the data analysis of 2020, it is obtained that the variables of financial stability, commissioner opportunity, financial target, opportunity for auditor quality, capability, and external pressure do not affect the RTTS variable simultaneously.

Table 5. First Regression Test of Data 2020

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38764605660.000	6	6460767611.000	.328	.917 ^b
	Residual	591419229400.000	30	19713974310.000		
	Total	630183835100.000	36			

a. Dependent Variable: RTTS

b. Predictors: (Constant), Financial_Stability, Capabilitas, Oportunity_Komisaris, Opportunity_KualitasAuditor, External_Pressure, Financial_Target

Table 6. Second Regression Test of Data 2020

Coefficients^a

Model		Unstandardized Coefficients		Standardized	T	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	93245.630	90075.520		1.035	.309
	Financial_Target	88915.028	151896.130	.200	.585	.563
	External_Pressure	-7791.554	137778.040	-.014	-.057	.955
	Capabilitas	-18049.834	71518.220	-.047	-.252	.802
	Oportunity_Komisaris	-27645.042	32246.861	-.166	-.857	.398
	Opportunity_KualitasA uditor	-34657.042	55589.208	-.121	-.623	.538
	Financial_Stability	-151234.852	199913.931	-.217	-.756	.455

a. Dependent Variable: RTTS

The examination towards data 2020 reveals that the variables of financial stability, commissioner opportunity, financial target, opportunity for auditor quality, capability, and external pressure do not impact the RTTS variable. The financial stability variable obtains a significance of 0.563, the opportunity for commissioners 0.398, the financial target 0.563, the opportunity for auditor quality 0.538, the capability 0.802, and the external pressure 0.955. All these variables possess zero effect on the RTTS variable, because the significance value is greater than 0.05.

Table 7. First Regression Test of Data 2019

Model		ANOVA ^a				
		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.316	6	.219	4.188	.004 ^b
	Residual	1.518	29	.052		
	Total	2.834	35			

a. Dependent Variable: RTTS

b. Predictors: (Constant), Financial_Stability, Capabilitas, Oportunity_Komisaris, Opportunity_KualitasAuditor, External_Pressure, Financial_Target

Table 8. Second Regression Test of Data 2019

Model	Unstandardized Coefficients		Standardized Coefficients		T	Sig.
	B	Std. Error	Beta			
1 (Constant)	.802	.276			2.902	.008
Financial_ Target	-.062	.369		-.036	-.168	.868
External_ Pressure	-.193	.284		-.158	-.679	.503
Capabilitas	-.095	.199		-.100	-.476	.638
Oportunity_Ko misaris	-.094	.087		-.210	-1.079	.291
Opportunity_K ualitas Auditor	-.099	.164		-.130	-.605	.551
Financial_ Stability	-.015	.044		-.073	-.343	.735

a. Dependent Variable: RTTS

The examination towards data 2019 is also carried out with a multiple regression analysis. The result of the F test presents a significance of 0.004. The significance is smaller than 0.05. Therefore, the test towards data 2019 implies that the variables of financial stability, commissioner opportunity, financial target, opportunity for auditor quality, capability, and external pressure possess a simultaneous effect on the RTTS variable.

The test results of data 2019 is described as follows. The significance of the financial target variable is 0.564. It is greater than 0.05, so that financial target does not affect RTTS. The significance value of external pressure is 0.001. The value is smaller than 0.05, meaning that external pressure influences RTTS. The significance of capability is 0.720. This significance is greater than 0.05, which means that external pressure variable has no effect on RTTS. Besides, the significance value of opportunity for commissioners is 0.203. The value is greater than 0.05, so opportunity for commissioners does not influence RTTS. The value of opportunity for auditor quality is 0.297. Because the value is greater than 0.05, it has zero effect on the RTTS. Finally, the significance value of financial stability is 0.165. The value is greater than 0.05, implying that financial stability does not influence RTTS. Consequently, it is only the external pressure variable which affects RTTS.

Financial Targets Influence Fraud

From the examination of data 2019, the significance value of the financial target variable is 0.564. The result is greater than 0.05, so that financial target variable has negative effect on the RTTS. Similarly, the test to data 2020 results in the significance value of the financial target variable as many as 0.564. According to Kayoi (2019), financial targets have an influence on fraud. However, Rachmawati (2014) suggested a different opinion that financial targets do not influence fraud.

H1: *Financial targets influence fraud*

External Pressure Influences Fraud

The significance value of external pressure in 2019 is 0.001. Since the result is smaller than 0.05, it means that external pressure influences RTTS. By contrast, the external pressure value in 2020 is 0.955. The result is greater than 0.05, so it does not impact the RTTS. It is clear that there is a different effect for 2019 and 2020. In 2019, the external pressure element influences RTTS, while in 2020, external pressure has no effect on RTTS. Lou and Wang (2009) reported that financial pressure creates a fraud risk.

H2: *External pressure influences fraud*

Capability Influences Fraud

The significance of capability in 2019 is 0.720. Because the value is greater than 0.05, the external pressure variable does not influence RTTS. The significance of capability in 2020 is 0.802. The test for data 2019 and 2020 results the same conclusion, that the capability factor does not have any influence on fraud. Lindasari (2019) suggested that the ability to manage stress can be observed in the replacement of company directors.

H3: *Capability influences fraud*

Commissioner Opportunity Influences Fraud

The significance value of the opportunity for commissioner variable in 2020 is 0.398, while that in 2019 is 0.203. Both values are greater than 0.05, so opportunity for commissioners does not influence RTTS. Based on data 2019 and 2020, opportunity for commissioners possesses zero impact on RTTS. Sari (2020)

mentioned that corporate governance disclosure has an impact on the occurrence of fraud.

H4: *Commissioner opportunity influences fraud*

Opportunity for Auditor Quality Influences Fraud

The significance coefficient for auditor quality opportunity in 2020 is 0.538. In 2019, it is 0.297. It indicates that opportunity for auditor quality does not influence RTTS. Nurjanah (2014) supported that the quality of auditors has potential to generate fraudulent fraud.

H5: *Opportunity for auditor quality influences fraud*

Financial Stability Influences Fraud

In data 2020, the financial stability variable has a significance of 0.563. Meanwhile, that in data 2019 is 0,165. There is not any difference in the data between 2019 and 2020. It means that there is not any significant effect of financial stability on RTTS. According to Jao, Ana, and Exel (2020), there is an influence of financial targets and financial stability on fraud.

H6: *Financial stability influences fraud*

Financial target, external pressure, capability, opportunity for commissioners, opportunity for auditor quality, financial stability influences fraud in 2019-2020

The F test on data 2019 results a significance value as many as 0.004. The significance is smaller than 0.05. It means that in data 2019, the variables of financial stability, commissioner opportunity, financial target, opportunity for auditor quality, capability, and external pressure effects simultaneously on the RTTS variable. By contrast, the results of the F test on the 2020 data yields a significance of 0.866, which is greater than 0.05. It indicates that in data 2020, the variables of financial stability, commissioner opportunity, financial target, opportunity for auditor quality, capability, and external pressure do not have any simultaneous influence on the RTTS variable.

CONCLUSION

The present research aims at determining the difference in the influence of financial targets, external pressure, capability, commissioner opportunity, auditor quality opportunity, and financial stability, on fraud, before and during the COVID-19 pandemic. The study applies RTTS to measure fraud. Based on the statistical test results, there is not any difference in the influence of financial targets, capability, commissioner opportunity, opportunity for auditor quality, and financial stability, on fraud, before the pandemic and during the pandemic.

It is only the external pressure which provides distinctive impacts on fraud. The external pressure factor in 2019 has an impact on fraud, while that in 2020 does not have any influence at all. It occurs because the pandemic results concessions in several agencies. Therefore, the pressure factor for some agencies does not impact at all on fraud. Simultaneously, data 2019 demonstrates that financial target, external pressure, capability, commissioner opportunity, auditor quality opportunity, and financial stability, influence fraud. By contrast, data 2020 presents the opposite, that the factors do not create any impacts on fraud by 2020. Further study is expected to supply more sample during the pandemic, in order that more results can be obtained, because the pandemic period is still on going.

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