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Detecting Fraudulent in Financial Statements Using Fraud Pentagon: Analysis of Banking Companies in Indonesia and Thailand

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ABSTRACT

This study aims to analyze the effect of fraud pentagon theory on detecting fraudulent financial statements. Fraud pentagon theory consist of five variables namely pressure, opportunity, rationalization, capability, and arrogance. The sample is banking companies listed on Indonesian and Thailand Stock Exchange with a total of 174 samples companies. The observation period is 3 years during 2020-2022 period. The analysis technique is logistic regression analysis. The results of the analysis in Indonesian banking companies show that only variable capability has significant effect on fraudulent financial statements, while other variables namely pressure, opportunity, rationalization, and arrogance have no significant effect on fraudulent financial statements. The results of the analysis in Thailand banking companies show that only variable pressure has significant effect on fraudulent financial statements, while other variables namely opportunity, rationalization, capability, and arrogance have no significant effect on fraudulent financial statements.

Keywords: *Fraud Pentagon Theory, banking companies, Indonesian Stock Exchange, Thailand Stock Exchange*

INTRODUCTION

The company tries to show best financial statements performance in order to get good impressions and assessments from various interested parties. The purpose to always has an attractive financial statements encourages a company to manipulate certain parts so the company can be valued well. Financial statement fraud can occurs in banking and financial services sector. This statement supported by the data from Association of Certified Fraud Examiners (ACFE). AFCE is a the world's largest anti-fraud organization and a professional organization of fraud examiners which has aim to reduce fraud and corruption worldwide. AFCE survey in 2022 showed that the banking and financial services sector ranked first with the most fraud cases compared to other sectors with 351 cases. The occupational fraud in banking and financial services in Southearn Asia is 20 cases with $100.000 median loss in 12 months median duration.

The Financial Services Authority (FSA) in Wiratmini (2020) compares banking performance in five major countries in ASEAN which is Indonesia, Singapore, Malaysia, Philippines, and Thailand. The results of this comparison show that Indonesia has the highest Capital Adequacy Ratio (CAR) of 23.1% and Thailand took second place with a CAR ratio of 19.05%. The Capital Adequacy Ratio (CAR) is an indicator of how well a bank can meet its obligations. Also known as the capital-to-risk weighted assets ratio (CRAR), the ratio compares capital to risk-weighted assets and is watched by regulators to determine a bank's risk of failure.

Third-party funds represent funds or money originating from customers or residents who invest in several programs, namely deposits, current accounts, and time savings. Third Parties Funds (TPF) is

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the largest source of funds for banks to carry out their operations to distribute credit. Third Parties Funds (TPF) in Thailand is the largest with an increase 11.44% and the second largest is Singapore at 11.2%. Indonesian banks is the third largest, with an increase of 8.39%.

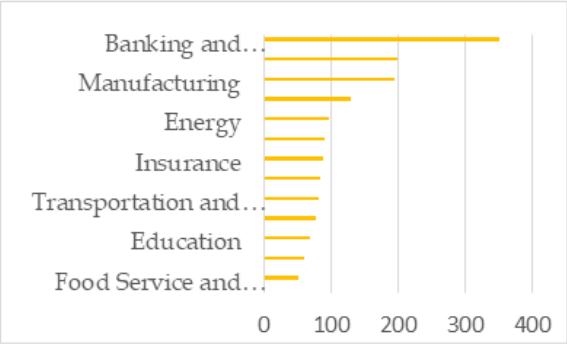

Figure 1. Most Fraud Cases in Various Industry
Source: Association of Certified Fraud Examiners (2022)

Based on the data above, this study uses the banking sector in Indonesia and Thailand as the object of research. Indonesia and Thailand are the two countries with the highest Capital Adequancy Ration (CAR) and three largest Third Funds Parties (TPF) in ASEAN. Fraud case that have gained attention in Indonesian banking sector is Lippo Bank. According to Tuanakota (2013), Lippo Bank engaged in fraudulent activities by generating multiple reports to manipulate the bank's recapitulation from the government. The financial report published on November 28, 2002 stated that Bank Lippo's assets amounted to Rp. 24 trillion and net profit amounted to Rp. 28 billion. In fact, according to a report audited by the audit team from Ernst & Young and Partner (Prasetyo, Sarwoko and Sandjaja) as reported to BEJ (Bursa Efek Jakarta) on December 27, 2002, the total assets is 22.8 trillion and net loss of Rp. 1.3 trillion. Thus, there is a mismatch between the information provided by the management and the auditor.

According to Nation (2023), The International Consortium of Investigative Journalists (ICIJ) published more than 2,000 leaked Suspicious Activity Reports (SARs). They covered about US$2 trillion in potentially corrupt transactions. The suspicious transactions were worth $41 million via Kasikornbank, Bangkok Bank, Krungthai Bank and the Export-Import Bank of Thailand between 2000 to 2017. Bank of Thailand (BOT) assistant governor said that when financial institutions find suspicious transactions, they must report them to the Anti-Money Laundering Office (AMLO) for investigation.

Based on the case occur in Indonesia and Thailand above, it is important for companies to detect financial statement fraud from an early phase. Fraudulent financial statements can be detected by using several theories to explain the analytical methods. The first theory is known as fraud triangle, it was developed by Donald Cressey in 1953. Fraud triangle consist of three components namely pressure, opportunity, and rationalization. The second theory is fraud diamond, it was developed by David Wolfe and Dana Hermanson in 2004. Fraud diamond consist of four components namely pressure, opportunity, rationalization, and capability. The theory established from the two previous model is termed as pentagon fraud. Pentagon fraud was developed by Crowe Howarth 2011 which consist of five elements namely pressure, opportunity, rationalization, capability, and arrogance. The results of research conducted by Hidayah & Saptarini (2019) in banking companies found that there is significant effect on financial statement fraud, contrary to research by Nizarudin, et al., (2022) in manufacturing companies found that there is no significant effect of pressure on financial statement fraud. Research conducted by Fitriyah &

Novita (2021) in manufacturing companies shows that opportunity has significant effect on fraudulent financial statements, in contrast to research conducted by Irfan (2022) in banking companies which states that there is no influence of opportunity on fraudulent financial statements. The results of research conducted by Utami & Saptarini (2019) in banking companies prove that rationalization has influence on financial statement fraud while research conducted by Kusumawati, et al., (2021) in manufacturing companies states that there is no influence of rationalization on financial statement fraud. Research conducted by Evana, *et al.,* (2019) in manufacturing companies found that capability has influence on financial statement fraud, while the results of the research conducted by (Lestari & Henny, 2019) in banking companies shows that capability has no influence on financial statement fraud. The results of research conducted by Yanti (2023) in LQ 45 index companies found that arrogance has influence on financial statement fraud, in contrast to research conducted by Mukhtarudin, *et.al* (2020) in all financial sector companies found that arrogance has no influence on financial statement fraud. There were no consistency from the results of the research that caused this research is still interesting and relevant to be studied. In addition, the opposite results of the variable above give the author attention to re-examine whether the pentagon fraud theory is able to detect fraudulent financial statements. Based on the statements above, this research used fraud pentagon theory to detect financial statement fraud of banking companies in Indonesia and Thailand from 2020 to 2022.

Hypotheses Development

Pressure in Detecting Fraudulent Financial Statement

Financial goals of return on business that will be achieved by the company are often referred to as financial targets. Every company set targets as a measure of the performance to be achieved as well as to assess the success or failure of the work program that has been arranged. Management is required to constantly show good performance for the company in order to achieve the financial targets that have been preplanned. Financial targets are a risk due to strong pressure on management to achieve financial targets upon management or directors' regulations, including the calculation of bonuses and incentives received by employees (SAS No. 99). If the company's financial targets are not achieved as anticipated, the management will attempt to hide it, and one tactic they may use is fraudulent financial statement. The measurement to assess the profit target obtained by the company for the business expensed is ROA (Return On Assets). ROA defines as a comparison between net profit after tax and the total assets of an entity. The higher the ROA earned by a company, the better the company's performance is, and vice versa. The pressures on the achievement of financial targets experienced by the management to achieve its goals include getting a bonus for performance appraisals and maintaining the existence of company performance can lead to the possibility of the influence of pressure on fulfilling financial targets on the fraudulent financial reporting incidence. Research conducted by (Kusumawati, Yuliantoro, & Putri, 2021) ; (Setiawan & Trisnawati, 2022) ; (Rachman, Suhendro, & Azhar, 2023) provide that financial targets affect fraudulent financial statements. On the other hand, research conducted by (Harman & Bernawati, 2020) and (Sari, Pramasheilla, Fachrurrozie, Suryarini1, & Pamungkas, 2020) stated that financial targets does not affect fraudulent financial statements. Based on the description above, the hypothesis developed is:
H_1: Pressure affect on fraudulent financial statements

Opportunity in Detecting Fraudulent in Financial Statements

The nature of the industry is an ideal condition of a company in industrial environment. Nature of industry talks about balances in certain account that are determined based on estimation and personal

judgement (Skousen, et.al, 2009). One indicator of an ideal company is the company's ability to surpress and reduce number of company receivables and increase cash flow receipts. Management can manipulate financial statements by assessment of estimation such as bad debt expense and obsolete so that it could create higher opportunity to do fraudulent financial statements. Fraud can happen because of the opportunities that are available, such as when using accounting estimation of uncollectible accounts and obsolete inventory, all of which are possible to be asssed subjectively by the company. Subjective assessments, in the form of estimates, can provide opportunities for managers to commit fraudulent financial statements. This follows agency theory stating that the existence of asymmetric information between owners (principal) and company (agents) opens opportunities for companies to manipulate their financial statements. Research conducted by Setiawan & Trisnawati (2022) & (Anggraini & Suryani, 2021) stated that nature of industry affect fraudulent financial statements. In the other hand, research by Nizarudin,*et al* (2022) ; Harman & Bernawati (2020) stated that nature of industry does not affect fraudulent in financial statements. Based on the description above, the hypothesis developed is:
H_2: Opportunity affect on fraudulent financial statements

Rationalization in Detecting Fraudulent Financial Statements

Based on SAS No. 99, the relationship between management and auditors is a rationalization of management. Rationalization is a character or set of ethics contained in the management or employees of a company that triggers them to justify their fraud. Rationalization in fraud pentagon theory is one element that can encourage fraud in the company's financial statements. Rationalization means an attitude of justification for a crime committed by himself. This element is an impressive reason to justify fraud and consider fraud as something that is justified and reasonable to do. Rationalization can further be measured by change in auditors. Changes in auditors are rationalization of the organization since they are supposed to assist in concealing the fraud trail discovered by previous auditors. Eliminating fraud trail can be done by companies by changing auditors. If an external auditor is replaced, it is possible for the new auditor to not deeply know about the company, so that fraud that is committed by the management can be covered up more. It shows that when a company changes its external auditor, the new auditor is for covering up fraudulent financial reporting.

The more fraud occurs in a company, the more frequent changes of auditors happened. When Public Accountant Firm of the company is repeatedly changed, it could imply that the company is trying to hide the fact that they committed fraud. Audit failure in a company can happen due to several factors, one of which is a change of auditors in the company. New auditors do not understand the overall condition of the company so it is easier for management to commit fraud that is not detected by the auditors. Therefore, management will continue to carry out fraudulent financial reporting and considers it as natural behavior because the auditor cannot find the fraud.

Research conducted by Utami & Pusparini (2019); Anggraini & Suryani (2021); Harman & Bernawati (2020) stated that changes in auditors has influence on fraudulent financial statements. Research conducted by Kusumawati, et.al (2021); Setiawan & Trisnawati (2022) stated that nature of industry does not affect fraudulent in financial statements. Based on the description above, the hypothesis developed is:
H_3: Rationalization affect on fraudulent financial statements

Changes in Directors in Detecting Fraudulent Financial Statements

Fraud can arise due to the ability of an individual who plays an important role in the company to commit fraud. Individual capability is a personal nature and ability that has an important role. Capability means how much power and capacity of a person to commit fraud. There are several components of capability, including position, brains, confidence, coercion skills, effective lying, and immunity to stress. Several things that need to be considered in the capability are the position of the perpetrator, the capacity to understand and exploit the accounting system, weaknesses in the company's internal control, and high self-confidence in which the perpetrators believe that they will not be detected and the ability to collaborate with other people to cover fraudulent financial reporting actions. Capability is proxied by a change of directors.Change in director can have positive impact in a company for instance, with the new directors wants to make changes or improvements to accounting, financial, and KAP policies. The new directors need better quality of auditors who are able to meet the demands of the company. The new directors conducted various method to improve performance by selecting big four KAPs that were considered to be of higher quality and capable of detecting fraudulent financial reporting.

In the other hand, changes in the board of directors are generally loaded with political content and the interests of certain parties that can trigger the emergence of conflict of interest. This condition will cause stress periods and it will get worsened if the new directors take advantage of their capabilities to commit fraud. The more frequent companies do changes in director, the higher fraudulent financial statements. Someone with high position could be the background of fraud in the financial statements, also concluded that the change of directors did not always bring a positive impact on the company. Changes in directors can indicate fraud. The more frequent frequency of changes of directors in a company can increase the indication of manipulation in financial statements. Research conducted by Kusumawati(2021); Utami & Pusparini (2019); Hidayah & Saptarani (2019) stated that change in directors affect fraudulent in financial statements. In the other hand, research conducted by Rachman, *et.al* (2023) and Nizarudin, *et.al* (2022) stated that change in directors does not affect fraudulent in financial statements. Based on the description above, this following hypothesis is proposed:

H_4: Capability affect on fraudulent financial statements

Arrogance in Detecting Fraudulent Financial Statements

Arrogance is an excessive attitude of individuals to display their rights and pride because they are superior to others. In this study, the arrogance variable is calculated by the frequent number of CEO's pictures, which is the number of CEO photos displayed on the company's annual report. The number of CEO photos displayed in a company's annual report can represent the level of arrogance or superiority. The number of CEO photos in the company's annual report also shows that the CEO wants their status and the glory to be known by the public. This gives an illustration that having a CEO will provide better monitoring results. However this study also considers the possibility that some CEOs prefer to maintain a low profile to hide their fraudulent financial statements activities for public exposure and detection. The prediction with this condition is the smaller frequent number of CEO's images in annual report of the company indicates a higher tendency for CEO's to hide their fraudulent financial statements activities. In the other side, frequent number of CEO in the annual report of the company will make the CEO does not hesitate to undertake fraudulent financial reporting in order to maintain this position. Annual report of a company with greater number of CEO's images, it will increase the arrogance nature. The higher level of arrogance, the higher the likelihood of fraud. The reason is the CEO feels that he has the status and

position that he thinks is crucial and important in the company, so that any rules and internal controls will not apply to him because of his high position and standing. This situation predicts the frequent number of CEO's images in annual report indicates the more arrogant CEO and higher propensity for fraulent financial statements.

Research conducted by Utami & Pusparini (2019); (Yanti, et al., 2023) and (Achmad, Hapsari, & Pamungkas, 2022) stated that frequent number of CEO's picture has positive affect fraudulent in financial statements. In the other side, research conducted by Evana, *et.al* (2019) and (Achmad, Hapsari, & Pamungkas, 2022) stated that frequent number of CEO's picture does not affect fraudulent in financial statements. Based on this description, the hypothesis is formed as follows.

H_5: Arrogance affect on fraudulent financial statements

Research Framework

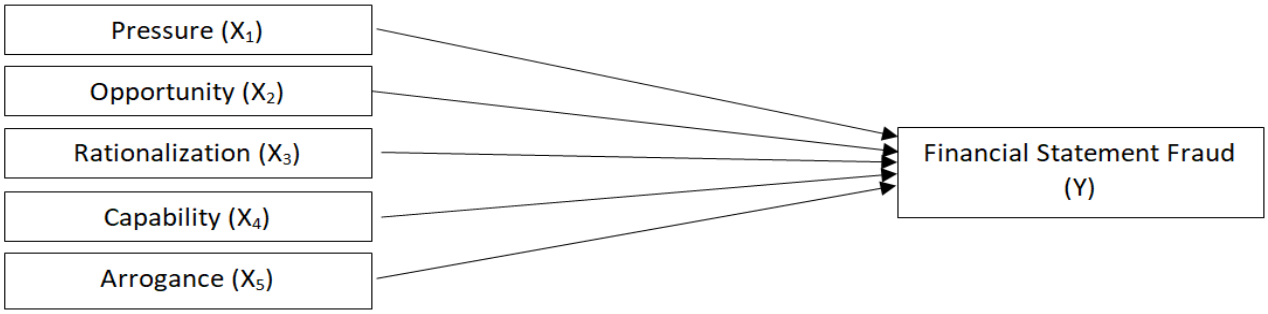

Figure 2. Research Framework

METHOD, DATA, AND ANALYSIS

The dependent variable used in this study is financial statement fraud (FSF). This study uses the F-Score model to detect financial statement fraud. The F-Score formula (Skousen & Twedt, 2009) can be formulated with following equation:

F-Score = Accrual Quality + Financial Performances

The first component namely accrual quality is calculated by RSST (Richardson, Sloan, Soliman, and Tuna).

$$RSST = \frac{\Delta WC + \Delta NCO + \Delta FIN}{Average\ Total\ Assets}$$

WC (Working Capital) = Current Assets – Current Liabilities
NCO (Non-Current Operating Accrual)= (Total Assets – Current Assets – Investment and Advances) – (Total Liabilities – Current Liabilities – Long Term Debt)
FIN (Financial Accrual) = Total Investment – Total Liabilities
ATS (Average Total Asssets) = (Beginning Total Assets + Ending Total Assets)/2

The second component is financial performance. Financial performance can be measured as follows:

Financial Performance = Change in Receivables + Change in Inventories + Change in Cash Sales + Changes in Earnings

$$\text{Change in receivables} = \frac{\Delta\text{Receivables}}{\text{Average Total Assets}}$$

$$\text{Change in inventories} = \frac{\Delta\text{Inventories}}{\text{Average Total Assets}}$$

$$\text{Change in cash sales} = \frac{\Delta Sales}{Sales} - \frac{\Delta Receivables}{Receivables}$$

$$\text{Change in earnings} = \frac{Earnings\ (t)}{Average\ Total\ Asset\ (t)} - \frac{Earnings\ (t-1)}{Average\ Total\ Asset\ (t-1)}$$

Companies that have a F-Score model value of more than 1 means the company has potential to commit fraud on the financial statements, whereas if the F-Score model values is less than 1 , the company has no potential to commit fraud in financial statements.

Fraud pentagon consist of 5 independent variables namely pressure with financial target (ROA) as indicator; opportunity with nature of industry (RECEIVABLE) as indicator; rationalization with change in auditor (AUDCHANGE) as indicator; capability with change in director (DCHANGE) as indicator ; arrogance with frequent number of CEO's picture (CEOPICT) as indicator. The independent variable definition table can be seen below:

Table 1. Operational Definition and Measurements Independent Variables

Variable	Proxy
Pressure	Return on Asset = $\frac{Earnings\ after\ Tax}{Total\ Asset}$
Opportunity	Nature of Industry = $\left(\frac{Receivables}{Sales}\right) - \left(\frac{Receivables\ t-1}{Sales\ t-1}\right)$
Rationalization	Sales in this proxy used interest income Auchange = dummy variable, 1 if the company changed the Public Accounting Firm during the 2020-2022 period and 0 if it did not.
Capability	Change in director = dummy variable, 1 if the company changed directors during the 2013- 2017 period and 0 if it did not.
Arrogance	Number of CEO photos appearing in a company's annual report.

The population of this research includes all firms in the banking industry listed on the Indonesia Stock Exchange and Thailand Stock Exchange from 2020 – 2022 period. The technique used to take samples is using purposive sampling method to obtain 174 sample companies with a study period of three years. The following is a description of the selecting this sample are as follows.

Table 2. Sample Selection Process

No.	Sample Criteria	Indonesia	Thailand
	Banking companies listed on Indonesia Stock Exchange (IDX) and Thailand Stock Exchange (SET) during period 2020- 2022.	47	11
	Not publish audited annual reports on the company's website or the Indonesian Stock Exchange and Thailand Stock Exchange for the during 2020-2022 period.	(0)	(0)
	Not present data related to research variables.	(0)	(0)
	Total companies meet the criteria	47	11
	Multiplied by 3 years	141	33
	Total samples	174	

RESULTS AND DISCUSSION

The descriptive statistic analysis of banking companies in Indonesia Stock Exchange shown below:

Table 3. Descriptive Statistics of Banking Companies in Indonesia

	N	Minimum	Maximum	Mean	Std. Deviation
Pressure (X1)	141	-.18	.08	.0036	.02751
Opportunity (X2)	141	-4.08	16.84	.3741	1.88795
FFS (Y)	141	.00	1.00	.2553	.43759
Valid N (listwise)	141				

Fraudulent financial statements (FFS) is a dependent variable measured by F-Score Model. Based on the results of the descriptive statistic analysis in table 4, the average value (mean) of banking companies in listed on Indonesia Stock Exchange from 2020 – 2022 period is 25.53%. This result shows that banking companies listed on the Indonesia Stock Exchange are less likely to commit fraudulent financial statements. Pressure is excessive situation on management to achieve the financial targets set by the board of directors proxied by Return on Asset (ROA). The average value (mean) of banking companies in Indonesia is 0.36%. The minimum value of banking companies in Indonesia is -1.8% owned by PT Bank IBK Indonesia Tbk in 2020. The maximum value of banking companies in Indonesia is 8% owned by PT Bank BTPN Syariah Tbk in 2022. This result shows that banking companies listing in Indonesia Stock Exchange in three years are lack ability to make a profit. Opportunity is a situation that allows moments for fraudulent to occur. Opportunity is proxied by nature of industry. Nature of Industry is proxied by receivables in current year divided by sales in current year minus receivables in previous year divided by sales in previous year. The average value (mean) of banking companies in Indonesia is 37.41%. The minimum value of banking companies in Indonesia is -408% owned by PT Bank BTPN Tbk in 2022. The maximum value of banking companies in Indonesia is 1,684% owned by PT Bank Aladin Syariah Tbk in 2022. This result shows that banking companies listing in Indonesia Stock Exchange in three years are able to increase interest income. Rationalization is justification of a fraudulent behavior due to a lack of personal integrity. Rationalization is proxied by changes in auditor. The changes in auditor of banking companies in Indonesia are 14 companies and the banking companies that did not change their auditor are 32 companies. This result shows that banking companies listed on the Indonesia Stock Exchange in 3 years tend not to replace external auditors within the 2 years audit period. Capability is an expertise an individual skill to commit fraud. Capability is proxied by changes in director. The changes in director of banking companies in Indonesia are 25 companies and the banking companies that did not change their director are 22 companies. This result shows that banking companies listed on Indonesia the Stock Exchange in three years tend to change their directors. Arrogance is a superiority attitude to trigger the possibility of fraud. Arrogance is proxied by the frequent number of CEO's pictures. **T**he banking companies in Indonesia which have a number of CEO's pictures less than equal to one are 6 companies and more than one CEO's pictures are 41 companies. This result shows that banking companies listed on Indonesia the Stock Exchange in three years tend not to add the CEO's picture in annual report.

The descriptive statistic analysis of banking companies in Thailand Stock Exchange shown below:

Table 4. Descriptive Statistics of Banking Companies in Thailand

	N	Minimum	Maximum	Mean	Std. Deviation
Pressure (X1)	33	.003	.056	.01370	.012616
Opportunity (X2)	33	-2.085	4.119	.99085	1.514817
FFS (Y)	33	.000	1.000	.12121	.331434
Valid N (listwise)	33				

Fraudulent financial statements is a dependent variable measured by F-Score Model. The average value (mean) of banking companies in listed on Thailand Stock Exchange from 2020 – 2022 period is 12.12%. This result shows that banking companies listed on the Thailand Stock Exchange are less likely to commit fraudulent financial statements. Pressure is excessive situation on management to achieve the financial targets set by the board of directors proxied by Return on Asset (ROA). The average value (mean) of banking companies in Thailand is 13.70%. The minimum value of banking companies in Thailand is 0.3% owned by CIMB Thai Bank Public Company Limited in 2020. The maximum value of banking companies in Thailand is 5.6% owned by Thanachart Capital Public Company Limited in 2020. This result shows that banking companies listing in Thailand Stock Exchange in three years are able to make a profit. Opportunity is a situation that allows moments for fraudulent to occur. Opportunity is proxied by nature of industry. Nature of Industry is proxied by receivables in current year divided by sales in current year minus receivables in previous year divided by sales in previous year. The average value (mean) of banking companies in Thailand is 99.08%. The minimum value of banking companies in Thailand is -208.5% owned by Krung Thai Bank Public Company Limited in 2022. The maximum value of banking companies in Thailand is 411.9% owned by Krung Thai Bank Public Company Limited in 2021. This result shows that banking companies listing in Thailand Stock Exchange in three years are able to increase interest income. Rationalization is justification of a fraudulent behavior due to a lack of personal integrity. Rationalization is proxied by changes in auditor. The changes in auditor of banking companies in Thailand is only 1 company and the banking companies that did not change their auditor are 10 companies. This result shows that banking companies listed on the Thailand Stock Exchange in three years tend not to replace external auditors within the two years audit period. Capability is an expertise an individual skill to commit fraud. Capability is proxied by changes in director. The changes in director of banking companies in in Thailand are 3 companies and the banking companies that did not change their director are 8 companies. This result shows that banking companies listed on Thailand the Stock Exchange in three years tend not to change their directors. Arrogance is a superiority attitude to trigger the possibility of fraud. Arrogance is proxied by the frequent number of CEO's pictures. The banking companies in Thailand which have a number of CEO's pictures less than equal to one are 3 companies and more than one CEO's pictures are 7 companies. This result shows that banking companies listed on Thailand the Stock Exchange in three years tend not to add the CEO's picture in annual report.

Logistic Regression Test

Likehood Test

The function of the Likehood test is to find out whether the independent variable can improve predictions against the dependent variable better than by chance. Testing this by comparing – 2Log Initial

Likehood with -2Log Likehood End. If there is a decrease in the value of Likehood, then the regression model is good and fits with the data.

H_o: Hypothesized model fit with the data

H_a: Hypothesized model does not fit with the data

Table 5. Likehood Test of Banking Companies in Indonesia

Iteration History[a,b,c]

Iteration		-2 Log likelihood	Coefficients
			Constant
Step 0	1	160.434	-.979
	2	160.205	-1.069
	3	160.205	-1.070
	4	160.205	-1.070

a. Constant is included in the model.

b. Initial -2 Log Likelihood: 160,205

c. Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Iteration History[a,b,c,d]

Iteration		-2 Log likelihood	Coefficients					
			Constant	Pressure	Opportunity	Rationalizatio	Capability	Arrogance
Step 1	1	152.121	-1.300	3.473	.138	.070	.714	.029
	2	151.050	-1.543	6.842	.192	.106	.882	.037
	3	151.031	-1.567	7.622	.205	.111	.897	.036
	4	151.031	-1.568	7.642	.206	.111	.897	.036
	5	151.031	-1.568	7.642	.206	.111	.897	.036

a. Method: Enter

b. Constant is included in the model.

c. Initial -2 Log Likelihood: 160,205

d. Estimation terminated at iteration number 5 because parameter estimates changed by less than ,001.

Based on the likehood test above, the statistic value -2LogL with constant value only is 160.434 and when the statistic value added five variables, the -2LogL is 151.031. There is decreasing value by 9.403, so H_O is accepted and the model fit with the data.

Table 6. Likehood Test of Banking Companies in Thailand

Iteration History[a,b,c]

Iteration		-2 Log likelihood	Coefficients
			Constant
Step 0	1	25.233	-1.515
	2	24.392	-1.914
	3	24.376	-1.979
	4	24.376	-1.981
	5	24.376	-1.981

a. Constant is included in the model.

b. Initial -2 Log Likelihood: 24,376

c. Estimation terminated at iteration number 5 because parameter estimates changed by less than ,001.

Iteration History[a,b,c,d]

Iteration		-2 Log likelihood	Coefficients				
			Constant	Pressure	Opportunity	Capability	Arrogance
Step 1	1	20.016	-2.487	58.767	.103	-.592	.103
	2	17.539	-3.485	83.238	.191	-1.333	.102
	3	17.183	-3.851	92.668	.251	-2.290	.058
	4	17.116	-3.896	94.090	.266	-3.312	.036
	5	17.093	-3.896	94.135	.266	-4.321	.034
	6	17.085	-3.896	94.135	.266	-5.325	.034
	7	17.082	-3.896	94.135	.266	-6.326	.034
	8	17.081	-3.896	94.135	.266	-7.326	.034
	9	17.080	-3.896	94.135	.266	-8.326	.034
	10	17.080	-3.896	94.135	.266	-9.327	.034
	11	17.080	-3.896	94.135	.266	-10.327	.034
	12	17.080	-3.896	94.135	.266	-11.327	.034
	13	17.080	-3.896	94.135	.266	-12.327	.034
	14	17.080	-3.896	94.135	.266	-13.327	.034
	15	17.080	-3.896	94.135	.266	-14.327	.034
	16	17.080	-3.896	94.135	.266	-15.327	.034
	17	17.080	-3.896	94.135	.266	-16.327	.034
	18	17.080	-3.896	94.135	.266	-17.327	.034
	19	17.080	-3.896	94.135	.266	-18.327	.034
	20	17.080	-3.896	94.135	.266	-19.327	.034

a. Method: Enter

b. Constant is included in the model.

Based on the likehood test above, the statistic value -2LogL with constant value only is 25.233 and when the statistic value added five variables, the -2LogL is 17.080. There is decreasing value by 8.153, so H_o is accepted and the model fit with the data.

Coefficient Determinant Test (Pseudo R^2)

The function of this test is to find if the independent variables can explain the dependent variable. The following are the results of the regression coefficient test.

Table 7. Cox & Snell R Square and Nagelkerke R Square of Banking Companies in Indonesia

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	151.031[a]	.063	.093

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than ,001.

The value of Cox Snell R Square is 0.063 and Nagelkerke R Square is 0.093 that means variability of the dependent variable which can be explained by the variability of the independent variables is of 9.3%.

Table 8. Cox & Snell R Square and Nagelkerke R Square in Thailand Banking Companies

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	17.080[a]	.198	.380

a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

The value of Cox Snell R Square is 0.193 and Nagelkerke R Square is 0.380 that means variability of the dependent variable which can be explained by the variability of the independent variables is of 38%

Feasibility Test (Hosmer and Lemeshow Goodness of Fit Test)

The data and model used need to be tested first to find out the difference. If there is no difference between the data and model, then it can be stated that the model is fit. The results of Hosmer and Lemeshow Goodness of Fit Test test is either accepted or rejected**.** The Hosmer and Lemeshow Goodness of Fit Test value is rejected if the value < 0.05 and accepted if the value > 0.05.

Table 9. Hosmer and Lemeshow Test in Indonesia Banking Companies

Step	Chi-square	df	Sig.
1	12.380	8	.135

Based on the table, the result of Hosmer and Lemeshow Goodness of Fit Test shows a chi-square score of 12.380 and significance probability is 0.135 which means the value is higher than 0.05. It can be concluded that the model is accepted.

Table 10. Hosmer and Lemeshow Test in Thailand Banking Companies

Step	Chi-square	df	Sig.
1	8.198	8	.414

Based on the table above, the result of Hosmer and Lemeshow Goodness of Fit Test shows a chi-square score of 8.198 and significance probability is 0.414 which means the value is higher than 0.05. It can be concluded that the model is accepted.

Classification Table

Classification table of 2 x 2 calculates the correct estimated value and incorrect estimated value. The value is 1 if there is a fraudulent financial statements and 0 if there is no fraudulent financial statements.

Table 11. Classification Table of Banking Companies in Indonesia

Observed			Predicted		
			FFS		Percentage Correct
			0	1	
Step 1	FFS	0	105	0	100.0
		1	34	2	5.6
	Overall Percentage				75.9

a. The cut value is ,500

Based on the table, the result of predictions in Indonesia banking companies that do not experience fraud (code 0) are 105 banks, while the result of observed are 105 banks. This classification accuracy of this result is 100% ($\frac{105}{105}$ x 100%). The result of predictions in Indonesia banking companies that experience fraud (code 1) are 36 banks, while the result of observed are 2 banks. This classification accuracy of this result is 5.6% ($\frac{2}{36}$ x 100%) or overall classification accuracy percentage is 75.9%.

Table 12. Classification Table of Banking Companies in Thailand

Observed			Predicted		
			FFS		Percentage Correct
			0	1	
Step 1	FFS	0	29	0	100.0
		1	2	2	50.0
	Overall Percentage				93.9

a. The cut value is ,500

The result of predictions in Thailand banking companies that do not experience fraud (code 0) are 29 banks, while the result of observed are 29 banks. This classification accuracy of this result is 100% ($\frac{29}{29}$ x 100%). The result of predictions in Thailand banking companies that experience fraud (code 1) are 4 banks, while the result of observed are 2 banks. This classification accuracy of this result is 50% (x 100%) or overall classification accuracy percentage is 93.9%.

Wald Test (Partial t Test)

Wald test has a beta coefficient value (β) to determine the partial coefficient of determination. This test is carried out to compare the significance of the Wald test with the significance that has been determined. If the test results show less than 5% or 0.05 then independent variable has an effect on dependent variable, whereas if the test results show more than 0.05 then independent variable has no effect on dependent variable. The following are the results of the Wald test.

Table 13. Wald Test of Banking Companies in Indonesia Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Pressure	7.642	8.978	.725	1	.395	2.083.584
	Opportunity	.206	.136	2.280	1	.131	1.229
	Rationalization	.111	.637	.030	1	.861	1.118
	Capability	.897	.428	4.386	1	.036	2.453
	Arrogance	.036	.336	.011	1	.915	1.036
	Constant	-1.568	.764	4.215	1	.040	.208

a. Variable(s) entered on step 1: Pressure, Opportunity, Rationalization, Capability, Arrogance.

From the table, a logistic regression model can be obtained as follows:

$$\frac{FFS}{1-FFS} \text{ Ln} = -1.568 + 7.642 \text{ Pressure} + 0.206 \text{ Opportunity} + 0.111 \text{ Rationalization} + 0.897 \text{ Capability} + 0.036 \text{ Arrogance} + \varepsilon$$

From the result In Indonesia, the analysis revealed:

The first hypothesis shows a wald value of 0.725 (sig. 0.395). The significance value of 0.725 is bigger than the significance level of 0.05 (5%). So, it can be concluded that the first hypothesis is rejected which means pressure proxied by Return on Asset (ROA) has no significant effect on fraudulent financial statements. Return on Asset is a method for measuring a company's ability to generate profits. The results means small or big value of Return on Asset does not affect the company to conduct fraudulent financial statements. Variable pressure with a positive sign (+) indicates that the higher pressure proxied with ROA, the more a company has a tendency to commit fraudulent in the financial statements.

The second hypothesis shows a wald value of 2.280 (sig. 0.131). The significance value of 0.131 is bigger than the significance level of 0.05 (5%). So, it can be concluded that the second hypothesis is rejected which means opportunity proxied by nature of industry has no significant effect on fraudulent financial statements. Nature of industry is an ideal condition of a company in the industry. This result shows that small or big value of nature of industry is not influence the tendency of the company to commit fraud. Variable opportunity with a positive sign (+) indicates that the higher opportunity proxied with nature of industry, the more a company has a tendency to commit fraudulent in the financial statements.

The third hypothesis shows a wald value of 0.030 (sig. 0.861). The significance value of 0.861 is bigger than the significance level of 0.05 (5%). So, it can be concluded that the third hypothesis is rejected which means rationalization proxied by change in auditor has no significant effect on fraudulent financial statements. Change in auditor is an effort of a company to change the external auditor. This result shows that no matter how often change of external auditor in a company, it does not influence fraudulent financial statements. Variable rationalization with a positive sign (+) indicates that the more companies often change their external auditors, the companies have tendency to commit fraudulent financial statements.

The fourth hypothesis shows a wald value of 4.386 (sig. 0.036). The significance value of 0.036 is lower than the significance level of 0.05 (5%). So, it can be concluded that the fourth hypothesis is accepted which means capability proxied by change in director has a significant effect on fraudulent financial statements. Change of director is an effort of a company to change the composition of the board or recruit new director. This result shows that if the company often change their directors, the company has tendency to commit fraudulent financial statements. Variable capability with a positive sign (+) indicates that the more companies often change their directors, the more companies have tendency to commit fraudulent financial statements.

The fifth hypothesis shows a wald value of 0.011 (sig. 0.915). The significance value of 0.915 is higher than the significance level of 0.05 (5%). So, it can be concluded that the fifth hypothesis is rejected which means arrogance proxied by frequent number of the CEO's pictures does not affect fraudulent financial statements. This result shows that high or low frequency of CEO photos appearing on company annual reports cannot be a trigger for fraudulent financial statements. Variable arrogance with a positive sign (+) indicates that the more CEO's pictures appears in annual report of companies, the more companies have tendency to commit fraudulent financial statements.

Table 14. Wald Test of Banking Companies in Thailand Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Pressure	94.135	42.220	4.971	1	.026	7.629E40
	Opportunity	.266	.514	.267	1	.605	1.305
	Rationalization	.649	4.856E4	.000	1	1.000	1.913
	Capability	-19.503	2.726E4	.000	1	.999	.000
	Arrogance	.034	.796	.002	1	.966	1.035
	Constant	-3.896	1.625	5.750	1	.016	.020

A logistic regression model can be obtained as follows:

$$\mathbf{Ln}\frac{FFS}{1-FFS} \text{ Ln} = -3.896 + 94.135 \text{ Pressure} + 0.266 \text{ Opportunity} + 0.649 \text{ Rationalization} - 19.503 \text{ Capability} + 0.034 \text{ Arrogance} + \varepsilon$$

From the result In Thailand, the analysis revealed:

The first hypothesis shows a wald value of 4.971 (sig. 0.026). The significance value of 0.026 is lower than the significance level of 0.05 (5%). So, it can be concluded that the first hypothesis is accepted which means pressure proxied by Return on Asset (ROA) has a significant effect on fraudulent financial statements. Return on Asset is a measure of the company's operating performance that used to identify how efficient the use of asset owned. The results means the higher financial target (ROA), the higher pressure of the company to conduct fraudulent financial statements. Variable pressure with a positive sign (+) indicates that the higher pressure proxied with ROA, the more a company has a tendency to commit fraudulent in the financial statements.

The second hypothesis shows a wald value of 0.267 (sig. 0.605). The significance value of 0.605 is bigger than the significance level of 0.05 (5%). So, it can be concluded that the second hypothesis is rejected which means opportunity proxied by nature of industry has no significant effect on fraudulent financial statements. Nature of industry is an ideal condition of a company in the industry. This result shows that small or big value of nature of industry is not influence the tendency of the company to commit fraud. Variable opportunity with a positive sign (+) indicates that the higher opportunity proxied with nature of industry, the more a company has a tendency to commit fraudulent in the financial statements.

The third hypothesis shows a wald value of 0.000 (sig. 1.000). The significance value of 1.000 is bigger than the significance level of 0.05 (5%). So, it can be concluded that the third hypothesis is rejected which means rationalization proxied by change in auditor has no significant effect on fraudulent financial statements. Change in auditor is an effort of a company to change the external auditor. This result shows that no matter how often change of external auditor in a company, it does not influence fraudulent financial statements. Variable rationalization with a positive sign (+) indicates that the more companies often change their external auditors, the more companies have tendency to commit fraudulent financial statements.

The fourth hypothesis shows a wald value of 0.000 (sig. 0.999). The significance value of 0.999 is bigger than the significance level of 0.05 (5%). So, it can be concluded that the fourth hypothesis is rejected which means capability has no significant effect on indications of fraudulent financial statements. Change of directors is an effort of a company to change the composition of the board or recruit new directors. This result shows that no matter how often change of directors in a company, it does not influence fraudulent financial statements. Variable capability with a negative sign (-) indicates that the more companies often change their directors, the companies have no tendency to commit fraudulent financial statements.

The fifth hypothesis shows a wald value of 0.002 (sig. 0.966). The significance value of 0.966 is higher than the significance level of 0.05 (5%). So, it can be concluded that the fifth hypothesis is rejected which means arrogance proxied by frequent number of the CEO's pictures does not affect fraudulent financial statements. This result shows that high or low frequency of CEO photos appearing on company annual reports cannot be a trigger for fraudulent financial statements. Variable arrogance with a positive sign (+) indicates that the more CEO's pictures appears in annual report of companies, the more companies have tendency to commit fraudulent financial statements.

CONCLUSION AND SUGGESTIONS

Data taken from Indonesian banking companies found that capability has significant effect on fraudulent financial statements while pressure, opportunity, rationalization, and arrogance has no effect on fraudulent financial statements. Capability proxied by change in director has significant effect on

fraudulent financial statements which show that the change in director require adaptation time or stress period for new director so that fraudulent financial statements by management in a company is hard to be detected while pressure proxied by Return on Asset (ROA), opportunity proxied by nature of industry, rationalization proxied by change in auditor, and arrogance proxied by frequent number of CEO's pictures do not trigger the management to do fraudulent financial statements.

The previous research supporting this results are research conducted by Utami & Pusparini (2019), Faradiza (2019), and Kusumawati, et.al (2021) stated that capability has significant effect on fraudulent financial statements. In the other side, the previous research that support for this results about variables that have no significant effect on fraudulent financial statements are pressure researched by Mukhtaruddin, et.al (2020) and Nizarudin, et.al (2022), opportunity researched by Evana et.al (2019) and Andriani et.al (2022), rationalization researched by Hidayah & Saptarini (2019), and arrogance researched by Khoirunnisa, et.al (2020) and Setiawan & Trisnawati (2022).

Data taken from Thailand banking companies found that pressure has significant effect on fraudulent financial statements while opportunity, rationalization, capability and arrogance has no effect on fraudulent financial statements. Pressure proxied by Return on Asset (ROA) has significant effect on fraudulent financial statements which show that ROA in previous year is already high so that the management will have higher pressure to increase ROA that already high enough by doing fraudulent in financial statements while opportunity proxied by nature of industry, rationalization proxied by change in auditor, capability proxied by change in director, and arrogance proxied by frequent number of CEO's pictures do not trigger the management to do fraudulent financial statements.

The previous research supporting this results are research conducted by Anggraini & Suryani (2021) and Yarana (2023) found that pressure has significant effect on fraudulent financial statements. In the other side, the previous research that support for this results about variables that have no significant effect on fraudulent financial statements are opportunity researched by Evana et.al (2019) and Andriani et.al (2022), rationalization researched by Hidayah & Saptarini (2019) and Rachman et.al (2023), capability researched by Nanda, et.al (2019) and Achmad, et.al (2022), and arrogance researched by Khoirunnisa, et.al (2020) and Setiawan & Trisnawati (2022).

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