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# **The BIG 4 Role in Moderating the Detection of Fraud Pentagon Against Fraudulent Financial Reports (Study on Indonesian Public Sector Government Companies)**

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## **Abstract**

This research aims to analyze the role of Big 4 Firms (EY, PWC, Deloitte, KPMG) in moderating the fraud pentagon effect of pressure, rationalization, opportunity, competence, and arrogance against fraudulent financial reports. Data taken from annual reports included in BUMN20 Index from Indonesian stock exchange during 2016-2018. Using the purposive sampling technique comprise of 66 companies with statistical analysis and regression model by EViews. Results of this research are (1) Financial Stability which measured by Asset Grow as the proxy of Pressure element from Fraud Pentagon, has significant effect to the likelihood of Fraudulent Financial Reports, (2) New proxied of Rationalization which measured by Government Ownership has significant effect to the likelihood of Fraudulent Financial Reports, (3) BIG 4 proven can moderate by weakening the Fraud Pentagon effect to the Fraudulent Financial Reports.

**Keywords:** BUMN; Indonesia; Auditor; Fraud Pentagon; Restatement; Fraudulent Financial Reports.

## **1. Introduction**

### ***1.1. Background***

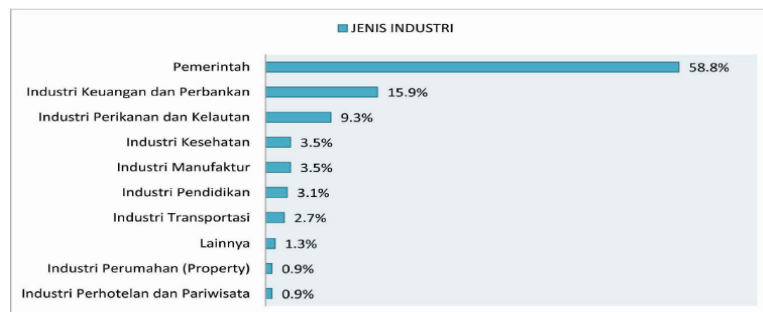
This last three years must be marked as fraud years to Indonesian public, a spotlight for the accountant practitioners, accountant academics, and accountant students as well. There are three big cases of financial reports dragging the BIG 4 accounting firms.

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The first is Ernst & Young (EY-Indonesia) conducted audit failure over PT Indosat Tbk (ISAT) financial statements as of year 2011. For those the Public Company Accounting Oversight Board (PCAOB) issuing sanctions called an “Order instituting disciplinary proceedings, making findings and imposing sanctions”, impact to restatement of audit financial year 2011, and EY agreed to pay a fine worth USD 1 million, announced at 9 February 2017 Washington time [19]. The second is PT Sunprima Nusantara Pembiayaan (SNP Finance) which has been audited with unqualified opinion by Deloitte Indonesia, apparently failed to pay medium term notes interest which not disclosed in its audited financial statements. Losses incurred due to this case are worth of IDR 2,4 billion from the formation of reserves absorbing risk over outstanding credit of 14 banks. As the results, SNP Finance must accept the sanction of being frozen its financing business activities, and OJK as the Indonesian financial services authority give sanctioned by cancellation the registration for public accountant office aside with its two accountants. The third is PT Garuda Indonesia Tbk (GIAA) with the auditors BDO Indonesia investigated by authorities because surprisingly makes unusual profit of USD 809,85 thousand after prior year bear a loss of USD 216,5 million. According of that Indonesian ministry of finance fine a suspension of permits for 12 months to the accountant. OJK fine to the board of directors and commissioners by IDR 100 million each. BEI as the Indonesian stock exchange authorities fine worth of IDR 100 million. And GIAA is required to correct and restate their financial reports within three weeks. Fraudulent Financial Reports (FFR) is the most detrimental type of corporate fraud as reported in a recent global study by the Association of Certified Fraud Examiners and its impact exceeds the financial losses [1]. FFR is more likely to be carried out by management, and sometimes referred to as management fraud [25]. The author in [30] noted that FFR is difficult to detect because it is often done by a team whose highly motivated and possess quality, and has good understanding to avoid internal control activities. However, understanding the motivation behind fraud committed by management is the key of detection [22]. External auditors can assist in detecting fraudulent financial reports, this should be realized if they begin to think beyond the numbers of the the financial statements only, but also pay more attention to management motivation, because that is the key antecedent for fraud [23]. Together with that, Indonesian Association of Certified Fraud Examiners (ACFE) on August 2017 published an article “Survai Fraud Indonesia 2016” resulted that the Indonesian government company is the most harmed sector with fraud practice by 58.8% [2]! This is very embarrassing and being a big work for the government itself and the citizen as well.

Gambar 19 : Industri yang Dirugikan oleh Fraud



Sumber : diolah [2016]

Figure 1: Industry harmed by fraud based on Survai Fraud Indonesia 2016

Therefore this study aim to reveal the trigger of fraudster by taken data sampling from BUMN20 as known as the government index issuer company in the Indonesian stock market.

### 1.2. Agency Theory

The problem of information asymmetry is the basis of any problem of conflict of interest and consequently increases the risk of fraud. Managers have an obligation to convey information in accordance with the actual condition of the company to shareholders, but sometimes the information submitted is not in accordance with the actual situation. So, fraud can occur because it is armed with more information about the company [17]. Information asymmetry is a condition in which agents have more information about a company than principals so managers tend to try to manipulate reported company performance [15]. According to author in [29] who stated that the agency relationship is a contract between managers (agents) with investors (principal). Principal is a shareholder, while the agent means management that manages the company. Principals always desire a high return on investment incurred for the company, while agents have their own interests which is to get compensation and greater results for their performance. This shows that there is a conflict of interest between principals and agents, named capital owners and capital managers or company management. Conflicts of interest between agents and principals are often referred to as conflicts of interest. Agency theory derived by three assumptions: 1) Human which grouped into three: self-interest, bounded rationality and risk aversion. 2) Organizational which grouped into three: conflict as the goal between participants, efficiency as an effectiveness criterion, and information asymmetry between principals and agents. 3) Information which assumed that state of information is a commodity that can be purchased [10]. Conflicts of interest between the principal and the agent lead to the attitude of distrust, because agent will act in the interests of personal interests and not maximize the interests of the principal. This condition provides a great opportunity for agents to commit fraud. Fraud occurs because of human nature, selfishness, having limited thinking power regarding future perceptions (bounded rationality), and always risk averse. Self interest regard to pressure, capabilities, and arrogance factors, on the other side risk averse regard to opportunities and rationalisations factors [4].

### 1.3. Fraud Pentagon

The Fraud Pentagon [16] is the result of the Fraud Triangle [7]. This model was introduced by Crowe Horwath LLP,. Adjusting the current cultural and environmental developments, Crowe's Fraud Pentagon Model adds two elements: (1) Arrogance; and (2) Capability / Competency.



Figure 2: Crowe's Fraud Pentagon

It said that the Fraud Pentagon has a broader fraud scheme and involves manipulation by the CEO and CFO. This is come from the many manipulations of financial reports by the internal company executives because of the authority they have and the easy access to information over financial reports.

Briefly look into the relationship between agency theory and the 5 elements in the fraud model shall be :

1. Pressure: The motivation of management to commit fraud, for example the lack of income earned, the need for a better life, those becomes a trigger for management to act on self-interest.
2. Rationalization: Justification arises in the mind of the offender when the fraud has occurred. This justification arises because of the desire in the perpetrators to remain safe and free from punishment.
3. Opportunity: Creating an opportunity to commit fraud due to weakness of management control. This situation will be used by management to commit fraud in secret as not to be known by others.
4. Competence: The ability that someone has to commit fraud. The existence of self-interest from management to get a lot of benefits for themselves, so they do not act as the benefit of the principal anymore.
5. Arrogance: Haughty attitude that considers someone is capable of cheating. This trait arises because of self-interest in management leads the arrogance even greater, this trait will trigger the emergence of belief that someone will not be known if fraud occurs, while the existing sanctions cannot befall him.

#### 1.4. Fraudulent Financial Reports

Fraudulent Financial Reports (FFR) is the intentional misstatement or omission of a number, or disclosure in a financial statements that aims to deceive users of the financial statements it self [20, 28], while according to [5] FFR is the misstatements or omissions of intentional amounts or disclosures with a view to deceiving users of financial statements. Many cases of fraud in financial statements including those more concerned with the recognition of assets, income or neglect of liabilities. *In the “fraud tree” developed by ACFE, fraudulent financial statements are divided into two parts: (1) Asset or revenue overstatements, and (2) Asset / revenue understatements.*

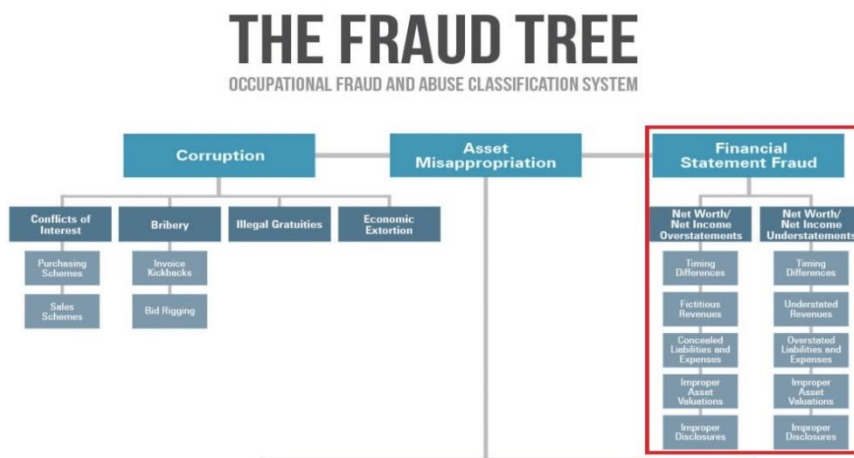


Figure 3: Fraud Tree by ACFE

## **2. Hypothesis Development and Prior Research**

Number of total assets owned by the company is the main attraction for investors, creditors, and other decision makers. When the total assets owned by the company are quite a lot, the company is considered capable of providing maximum returns for investors. But on the reversal, if the total assets have decreased or even negative can make investors, creditors and decision-makers become not interested, because the condition of the company is considered unstable, the company is considered unable to operate properly and not profitable. Research by author in [12] concluded that the financial responsibility was significant to the FFR, this was also supported by author research [8, 4].

H1 : Financial Stability lead to Fraudulent Financial Reports.

External pressure will cause management to seek loans from other parties so that the company can compete with competitors. If the company has high leverage, it means that the company is considered to have a large debt, and the credit risk is high. The higher of credit risk, the higher level concern of creditors to provide loans to companies. Therefore, this has become one of the concerns of the company and is possible to be one of the causes in the emergence of fraudulent financial reporting. Research by author in [8] explained that external pressure has significant effect to FFR, this is corroborated with others research in [11, 24].

H2 : External Pressure lead to Fraudulent Financial Reports.

Authors in [21] developed a variable using the logistic regression analysis that can be used to proxy the size of the pressure and opportunity components based on Cressey's fraud triangle theory and adopted from SAS No. 99 [3]. Based on the results of the analysis, it was concluded that the financial target proxied with the Return on Assets (ROA) proven to have a significant effect on the likelihood of FFR. The emergence of pressure on achieving financial targets to get bonuses on performance results, and maintaining the existence of company performance can raise the possibilities of pressure on achieve financial targets.

H3 : Financial Target lead to Fraudulent Financial Reports.

Research from [8, 11, 14] are used institutional ownership as their measurement, while another researcher [4] put the managerial ownership on her research. However, due to this study taken on government companies, the author assumes when there is government ownership in the company, it will be a kind of rationalization for the management to do the FFR, as reported in the beginning that the government sector is categorized as high level of fraud in Indonesia [2]. This is new measurement for testing the hypothesis.

H4 : Government Ownership lead to Fraudulent Financial Reports.

Change in auditor used by the company can be considered as a way to eliminate traces of fraud which found by the previous auditor. This tendency encourages companies to replace independent auditors. According to SAS No. 99 states that with the presence of auditor change within the company, fraud can be indicated [3]. The former auditors may be more aware in detection of fraud by management, so the possibility of the fraud will be

higher. The results of this analysis supported by other authors in [17, 27].

H5 : Auditor Change lead to Fraudulent Financial Reports.

Ineffective monitoring is a condition in which there is no effective internal control system in the company. SAS No. 99 explained this can occur in the process of financial reporting and internal control due to the dominance of management by one person or small group [3], without any compensation control, ineffective supervision of the board of commissioners and audit committee. Those proven by research from [17].

H6 : Ineffective Monitoring lead to Fraudulent Financial Reports.

Author in [31] suggested that changes in directors are able to cause a stress period which results in more opportunities for fraud. Substitution of directors can be an attempt by the company to improve the performance of the previous directors by changing the composition of the directors, or recruiting new directors who are considered more competent. The change of directors can also indicate a certain political interest to replace the previous board of directors, while on the other hand, the change of directors is considered to reduce effectiveness in performance because it requires more time to adapt to the culture of new directors, research from [12, 18] proved this.

H7 : Director Change lead to Fraudulent Financial Reports.

The number of CEO photos displayed in a company's annual report can represent the level of arrogance or superiority that the CEO has. A CEO tends to want to show everyone the status and position he has in the company because they do not want to lose that status or position (or feel they are not considered), this is accordance with one of the elements as described in Fraud Pentagon [16]. And also supported by others research [8, 12, 17].

H8 : CEO Picture lead to Fraudulent Financial Reports.

Appointment of the external auditor by the company's audit committee is considered able to carry out an independent audits, to avoid conflicts of interest and to ensure the integrity of the audit process. Research on the quality of external auditors focuses on the difference between the selection of audit services from BIG 4 public accounting firms and non BIG 4. The reason for this is that BIG 4 considered to have more ability to detect and reveal reporting errors in management. According to research from [13] shows that external auditors working at large audit firms have more ability to detect fraud compared to companies audited by smaller audit firms.

H9 : BIG 4 mislead to Fraudulent Financial Reports.

As mentioned in prior hypothesis that BIG 4 public accounting firms consist of EY, PWC, Deloitte, KPMG having more ability to detect and reveal reporting errors in management compared to non BIG 4. Hence, the role of BIG 4 is expected to be a deduction (weakening) for the practice of fraud. This is new moderating measurement for hypothesis design.

H10 : BIG 4 weakening the Fraud Pentagon effect to Fraudulent Financial Reports as moderator variable.

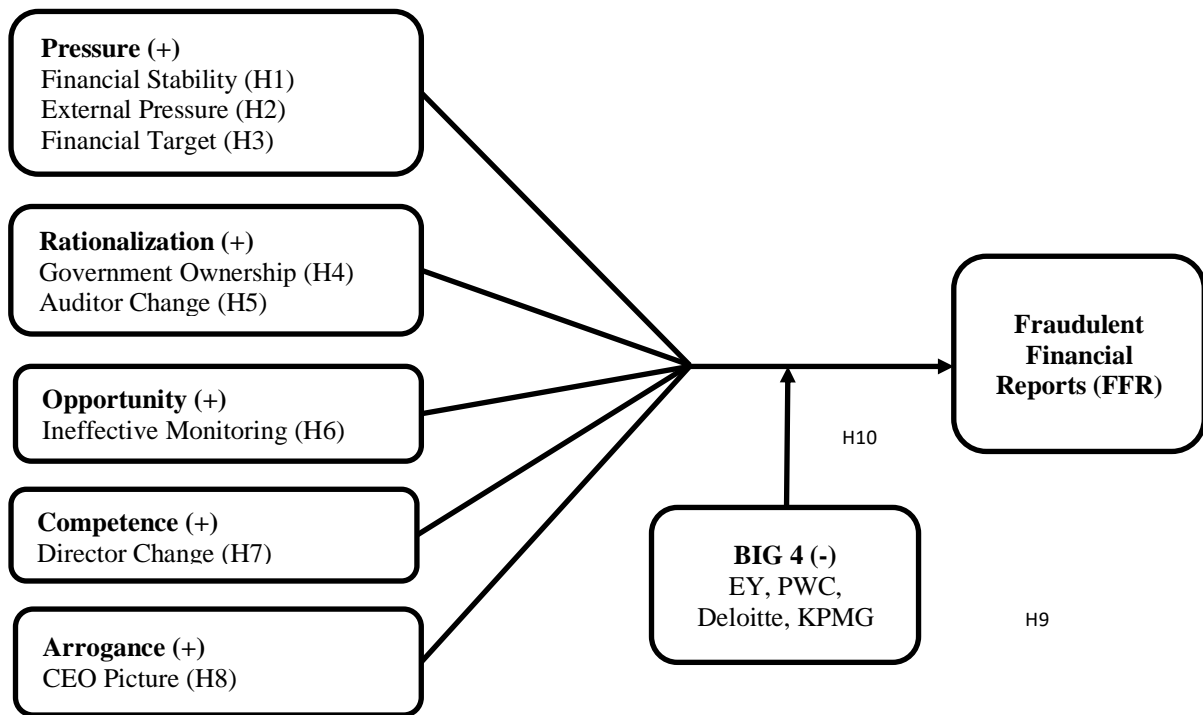


Figure 4: Hypothesis Framework

### 3. Research Methodology

#### 3.1. Population and Sample

This research population is companies listed on the BEI (Indonesian Stock Exchange) within 2016 - 2018. While the samples taken from BUMN as Government Listed Companies as identified by “Persero Tbk”. The sample selection technique used is purposive sampling with the criteria of issuers including in BUMN20 index, hence the total sample is 66 for three years observation.

#### 3.2. Dependent Variable

The dependent variable in this research uses restatement of financial reports as a proxy for fraudulent financial reportings. The authors in [8, 26] explained that restatement can give a signal or a sign of fraud in financial reports. Empirically, fraud that occurred in corporations including banks recently revealed ex-post facto. In line with previous research, restatement was chosen as a proxy for indications of fraud because it is difficult to obtain real data from companies who commit fraud. Companies categorized to restate financial statements are companies who carry out by results from fundamental errors, reclassifications, transactions with special parties, and restatements which are not caused by policy changes and accounting estimates due to the convergence of the Indonesian Financial Accounting Standards (PSAK) and International Financial Reporting Standard (IFRS). The restatement of financial statements is measured using a dummy variable, where code “1” is for showing the company that is restated, and code “0” for non restated.

### 3.3. Independent and Moderating Variable

**Table 1:** Variable Measurement

No	Variable	Model	Measurement	Scale
1	Financial Stability	AGROW	$\frac{\text{Total Aset (t)} - \text{Total Aset (t-1)}}{\text{Total Aset (t-1)}}$	Ratio
2	External Pressure	LEV	$\frac{\text{Total Liability}}{\text{Total Asset}}$	Ratio
3	Financial Target	ROA	$\frac{\text{Net Profit}}{\text{Total Asset}}$	Ratio
4	Government Ownership	GOVSHIP	Percentage of share ownership by the government	Ratio
5	Auditor Change	APCHG	Dummy variable, 1 = Any replacement, 0 = vice versa	Nominal
6	Ineffective Monitoring	IBOC	Percentage of number independent commissioner to total board of commissioner	Ratio
7	Director Change	CBOD	Total directors replacement	Nominal
8	CEO Picture	CEOP	Total CEO photos in annual report	Nominal
9	BIG 4 Firms	BIG4	Dummy variable, 1 = Audit by BIG 4, 0 = vice versa	Nominal

### 3.4. Regression Model

**Table 2:** Regression Model

<p>1. <b>Without Moderating</b></p> $\text{FFR} = \alpha + \beta_1 \text{AGROW} + \beta_2 \text{LEV} + \beta_3 \text{ROA} + \beta_4 \text{GOVSHIP} + \beta_5 \text{APCHG} + \beta_6 \text{IBOC} + \beta_7 \text{CBOD} + \beta_8 \text{CEOP} + \beta_9 \text{BIG4} + \epsilon.$
<p>2. <b>With Moderating</b></p> $\text{FFR} = \alpha + \beta_1 \text{AGROW} * \text{BIG4} + \beta_2 \text{LEV} * \text{BIG4} + \beta_3 \text{ROA} * \text{BIG4} + \beta_4 \text{GOVSHIP} * \text{BIG4} + \beta_5 \text{APCHG} * \text{BIG4} + \beta_6 \text{IBOC} * \text{BIG4} + \beta_7 \text{CBOD} * \text{BIG4} + \beta_8 \text{CEOP} * \text{BIG4} + \epsilon.$

## 4. Results and Discussions

### 4.1. Hypothesis testing without moderation



**Table 3:** Eviews regression result without moderation

Dependent Variable: REST?					
Method: Pooled Least Squares					
Date: 07/27/19 Time: 23:35					
Sample: 2016 2018					
Included observations: 3					
Cross-sections included: 22					
Total pool (balanced) observations: 66					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	
C	-2.655297	1.895160	-1.401094	0.1726	
<b>AGROW?</b>	<b>0.347998</b>	<b>0.163787</b>	<b>2.124707</b>	<b>0.0429</b>	<b>H1</b>
LEV?	-0.907451	1.613473	-0.562421	0.5785	H2
ROA?	-0.020213	0.078072	-0.258897	0.7977	H3
<b>GOVSHIP?</b>	<b>8.522208</b>	<b>4.119971</b>	<b>2.068512</b>	<b>0.0483</b>	<b>H4</b>
APCHG?	-0.176594	0.201519	-0.876316	0.3886	H5
IBOC?	-0.226068	0.977151	-0.231354	0.8188	H6
CBOD?	-0.019280	0.052894	-0.364500	0.7183	H7
CEOP?	0.012211	0.025913	0.471222	0.6413	H8
BIG4?	2.250987	2.029068	1.109370	0.2771	H9

H1 : Hypothesis testing result with prob value 0.0429, indicates that Financial Stability which measured by AGROW as the proxy of Pressure element from Fraud Pentagon, has significant effect to the likelihood of Fraudulent Financial Reports. This is in line with perception that number of total assets owned by the company is the main attraction for the investors, creditors, and other decision makers, when the total assets owned by the company are quite a lot, that is considered capable of providing maximum returns for the investors. This is agree with antecedent study [4, 8, 12].

H2 : Hypothesis testing result with prob value 0.5785, indicates that External Pressure which measured by LEV as the proxy of Pressure element from Fraud Pentagon, doesn't has significant effect to the likelihood of Fraudulent Financial Reports. Antecedent study [8, 11, 24] which indicate the management to seek loans from other parties to compete with competitors, so that the company has high leverage and high credit risk. The higher of credit risk, the higher level concern for creditors to provide loans to companies not proven in this research.

H3 : Hypothesis testing result with prob value 0.7977, indicates that Financial Target which measured by ROA as the proxy of Pressure element from Fraud Pentagon, doesn't has significant effect to the likelihood of Fraudulent Financial Reports. Antecedent study [21] which indicate that the emergence of pressure on achieving financial targets to get bonuses on performance results, and maintaining the existence of company performance

can raise the possibilities of pressure on achieve the financial targets not proven in this research.

H4 : Hypothesis testing result with prob value 0.0483, indicates that Government Ownership which measured by GOVSHIP as the proxy of Rationalization element from Fraud Pentagon, has significant effect to the likelihood of Fraudulent Financial Reports. This proven the author perception when there is a major government ownership in the company, it will become a rationalization for the management to do the FFR. No antecedent study proved this proxy and measurement, hence this shall be a contribution for the next research development.

H5 : Hypothesis testing result with prob value 0.3886, indicates that Auditor Change which measured by APCHG as the proxy of Rationalization element from Fraud Pentagon, doesn't has significant effect to the likelihood of Fraudulent Financial Reports. Antecedent study [17, 27] which indicate that change in auditor used by the company can be considered as a way to eliminate traces of fraud which found by the previous auditor. This tendency encourages companies to replace independent auditors not proven in this research.

H6 : Hypothesis testing result with prob value 0.8188, indicates that Ineffective Monitoring which measured by IBOC as the proxy of Opportunity element from Fraud Pentagon, doesn't has significant effect to the likelihood of Fraudulent Financial Reports. Antecedent study [17] which indicate that if there is no effective internal control design system, less supervision of the board of commissioners and audit committee, fraud can occur in the process of financial reporting due to the dominance of management by one person or small group not proven in this research.

H7 : Hypothesis testing result with prob value 0.7183, indicates that Director Change which measured by CBOD as the proxy of Competence element from Fraud Pentagon, doesn't has significant effect to the likelihood of Fraudulent Financial Reports. Antecedent study [12, 18] which indicate that changes in directors can be an attempt by the company to improve the performance of the previous directors or recruiting new directors who are considered more competent, and considered to reduce effectiveness in performance were able to cause a stress period, because it requires more time to adapt to the culture of the new directors, this lead to more exposure for doing fraud but not proven in this research.

H8 : Hypothesis testing result with prob value 0.6413, indicates that CEO Picture which measured by CEOP as the proxy of Arrogance element from Fraud Pentagon, doesn't has significant effect to the likelihood of Fraudulent Financial Reports. Antecedent study [8, 12, 17] which indicate that number of CEO photos displayed in a company's annual report represent the level of arrogance or superiority from the CEO who tends to show the status and the position, not proven in this research.

H9 : Hypothesis testing result with prob value 0.2771, indicates that BIG 4 accounting firms which measured by BIG4 doesn't has significant effect to the likelihood of Fraudulent Financial Reports. Antecedent study [13] which indicate that BIG 4 as an independent variable directly have more capability to curb the malpractice of financial statements not proven in this research.

#### ***4.2. Hypothesis testing with moderation***

**Table 4:** Eviews regression result with moderation

Dependent Variable: REST?				
Method: Pooled Least Squares				
Date: 07/27/19 Time: 23:35				
Sample: 2016 2018				
Included observations: 3				
Cross-sections included: 22				
Total pool (balanced) observations: 66				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.655297	1.895160	-1.401094	0.1726
<b>AGROWXBIG4?</b>	<b>-0.718402</b>	<b>0.301073</b>	<b>-2.386139</b>	<b>0.0243</b>
LEVXBIG4?	-0.013500	1.992293	-0.006776	0.9946
ROABIG4?	-0.041182	0.083374	-0.493944	0.6253
GOVSHIPXBIG4?	-3.200128	2.846278	-1.124320	0.2708
APCHGXBIG4?	-0.000694	0.284154	-0.002441	0.9981
IBOCXBIG4?	-0.394664	1.396908	-0.282527	0.7797
CBODXBIG4?	-0.008755	0.064326	-0.136096	0.8928
CEOPXBIG4?	-0.021179	0.042781	-0.495048	0.6246

H10 : Hypothesis testing result with negative coefficient and prob value 0.0243, proven that BIG 4 can moderate by weakening the Pressure element (Financial Stability - AGROW) from Fraud Pentagon to the likelihood of Fraudulent Financial Reports. No antecedent study used this moderating variable, hence this shall be a contribution for the next research development. However, appointment external auditor generally consider as commitment from the principal to avoid conflicts of interest and to ensure the integrity of the audit process itself. Research on the quality of external auditors focuses on the selection of audit services from BIG 4 (EY, PWC, Deloitte, KPMG) which considered to have more ability in detecting and revealing the reporting errors in management. Moreover external auditors expected to be able to assist in detecting fraudulent financial reports by give more attention to management motivation as the key antecedent for fraud [23].

## 5. Conclusions and Recommendations

### 5.1. Conclusions

Results of this research shows that (1) Financial Stability which measured Asset Grow as the proxy of Pressure element from Fraud Pentagon has significant effect to the likelihood of Fraudulent Financial Reports, this proven the perception of high value of assets which owned by the company is the main attraction for the investors, creditors, and other decision makers in providing the maximum returns. (2) New proxied of Rationalization which measured by Government Ownership has significant effect to the likelihood of Fraudulent Financial Reports, this proven the author perception when there is a major government ownership in the

company, it will become a rationalization for the management to make up the financial report (3) BIG 4 can moderate by weakening the Fraud Pentagon effect to the Fraudulent Financial Reports, this proven the top tier of accounting firms (EY, PWC, Deloitte, KPMG) are able to avoid conflicts of interest, ensure the integrity of the audit process, and perform higher assurance in detecting and revealing the reporting errors than others.

## **5.2. Recommendations**

This research can develop and modified further by (1) Use the m-scores / beneish model [6] as the FFR measurement. (2) Use the f-scores dechow model [9] as the FFR measurement. (3) Use 5-10 years time series to extent the effect from other independent variables. (4) Use finance or banking institutional for purposive sampling as this is the second high level of fraud sector as reported by ACFE [2]. (5) Use “corruption” as Y variable as this is one of the most important issue in emerging country.

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