

Examining Occupational Fraud Risk Elements : Evidence from the Banking Industry in Malaysia

Marzlin Marzuki^{1*}, Muslimah Mohd Jamil², Siti Sakinah Azizan³, Tarmizi Ismail⁴

^{1,2,3} Faculty of Accountancy, Universiti Teknologi MARA, Kedah Branch, Malaysia

⁴ Public Bank Berhad, Penang, Malaysia

*corresponding author: marzlinm@uitm.edu.my

ABSTRACT

ARTICLE HISTORY

Received:

18 July 2024

Accepted:

3 October 2024

Published:

4 November 2024

KEYWORDS

Fraud risk

Occupational fraud

Fraud Diamond Theory

Banking industry

Malaysia

The present state of the global economy justifies discussions about occupational fraud. According to PricewaterhouseCoopers's 2020 study, there is still a high incidence of fraud in Malaysia, 68% of which is committed by employees, and 35% of which is committed through external collusion. Asset misappropriation, bribery and corruption, customer fraud, and cybercrime are the top four disruptive fraud events Malaysian organisations have encountered in the past two years. Thus, financial organisations are thought to be more susceptible to fraud since they deal with large sums of cash on a regular basis. The purpose of this paper is to determine the risk elements on the occurrence of occupational fraud in the Malaysian banking industry. The Fraud Diamond Theory (Wolfe & Hermanson, 2004) is applied as the theoretical foundation for the research. Using data from a questionnaire survey of 94 employees of Malaysia's top three banks, multiple regression is used in this study to examine the relationships between the various hypotheses. The findings of this study reported that pressure, opportunity, and rationalisation were the main factors in occupational fraud occurrence in Malaysian financial institutions. This suggests that only these three elements of the Fraud Diamond Theory have a significant impact on the likelihood of occupational fraud. The implications of this research are for policy makers, industry players and consumers.

e-ISSN 2600-7274

© 2024 Universiti Teknologi MARA Cawangan Pulau Pinang

This open access article is distributed under a Creative Commons Attribution-Non-commercial 4.0 International (CC BY-NC 4.0) license.

<https://creativecommons.org/licenses/by-nc/4.0/>



1. INTRODUCTION

Occupational fraud presents a significant challenge to the stability and credibility of financial institutions, particularly within the banking sector, where trust and reliability are paramount. The impact of such fraud extends far beyond mere financial losses, as it tarnishes reputations, undermines goodwill, and strains customer relationships. Whether originating from internal or external sources, actors within organisations possess the potential to engage in deceptive practices, thereby posing a pervasive threat to the integrity of financial institutions. Prior studies by Ramazani & Rafiei Atani (2010) and Skousen & Wright (2008) have shed light on the concerning escalation of employee fraud, highlighting its adverse effects on financial reporting, customer confidence, and employee morale. Additionally, research by Chen et al. (2013) and Akindede (2011) has demonstrated how instances of employee fraud erode investor trust and disrupt capital markets, impeding economic growth, particularly in emerging economies.

PricewaterhouseCoopers's (PwC) Global Economic Crime and Fraud Survey 2020 underscored the persistent rise of fraud rates, significantly impacting businesses worldwide. With reported losses averaging USD 42 billion, fraud is posing a substantial threat to companies. The primary types of fraud include customer fraud, cybercrime, asset misappropriation, and bribery, with additional forms of fraud also on the rise. This trend continued in PwC's 2022 global study, with cybercrime, customer fraud, and asset misappropriation remaining prevalent concerns. Notably, internal actors, external actors, and collusions between both were identified as the main perpetrators of severe or disruptive fraud incidents. In line with these findings, the Association of Certified Fraud Examiners (ACFE) highlighted in its 2018 Report to the Nation on Global Study on Fraud and Abuse that organisations worldwide are losing an estimated 5% of their annual income to fraud. Moreover, the report noted that private companies and small businesses are disproportionately affected, accounting for 42% of fraud occurrences compared to large corporations, government entities, and non-profit organisations. The absence of robust internal control mechanisms emerged as a significant contributing factor to these losses, emphasizing the critical need for effective fraud prevention and detection measures across all sectors. The Southeast Asia (SEA) edition of PwC's 2022 survey revealed that asset misappropriation, customer fraud, and cybercrime were the top three fraud types, with collusion between internal and external groups being the primary offender. Employees were involved in about two-thirds of incidents in SEA countries, including Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam.

In Malaysia, despite a significant prevalence of fraud according to PwC's 2020 report, other SEA nations experienced a decrease in fraud levels between 2018 and 2020. Malaysia's fraud occurrence rate rose from 41% in 2018 to 43% in 2020, while the SEA saw a decrease to 39%. To address fraud, the Malaysian government amended the Malaysia Anti-Corruption Commission (MACC) Act, introducing a new clause addressing corporate liability for occupational fraud in commercial organisations. Effective June 1st, 2020, Section 17A of the MACC Act aims to promote ethical corporate conduct and good governance principles, holding commercial organisations accountable unless they demonstrate sufficient preventive measures against corruption committed by their employees or associates. Instances of fraud among bank employees continue to make headlines, with reports frequently appearing in newspapers. For example, Free Malaysia Today reported on May 5, 2021, that eight individuals, including six financial institution employees, were apprehended for submitting fraudulent documents to secure personal financing, resulting in losses of RM4.7 million. Another case, highlighted by

The Star on June 16, 2021, involved a bank employee allegedly soliciting bribes in connection with more than 110 bank loans totalling RM18 million issued over the past two years.

The overall objective of this study is to examine the factors that affect the occurrence of occupational fraud. In doing so, we assess the following four (4) elements as predictors of the occurrence of occupational fraud; pressure; opportunity; rationalisation; and capability were selected based on Fraud Diamond Theory (Wolfe and Hermanson, 2004) and past empirical studies on occupational fraud (Basheka & Bisangabasaija, 2010; Cromwel & Thurman, 2003; Kazeman et al., 2019; Rae & Subramaniam, 2008; Salehi et al., 2009; Suhat et al., 2017; Kazeman et al., 2019). Pressure refers to job pressure and personal financial status where the pressure to steal assets may develop when there are commitments to meet the financial expectations of third parties and pressure from the entity's financial performance. While opportunity refers to the lack of internal control, and supervision by the organisation that lead the bank workers to conduct fraud. Rationalisation relates to the justifiable action by the potential fraudsters to assume that they are honest and reliable perpetually. Lastly, capability refers to the job position, and self-confidence of the bank workers who is knowledgeable and have a solid understanding of the organisation's control.

Based on the questionnaire survey of 94 bank workers in Malaysia, suggests a positive and significant relationship exist between the three (3) out of the four (4) elements of the Fraud Diamond Theory and the occurrence of occupational fraud. The three (3) elements are pressure (Job pressure, Personal financial status); opportunity (Internal control, Supervision); and rationalisation (Justifiable action). This study contributes to the literature in at least two ways. First, previous fraud studies have concentrated on financial statement fraud (Rezaee, 2005; Hooper & Forneli, 2010) and public sector fraud (Sanusi et al., 2015) in developing nations (Smith, 2005). The present study complements this literature by providing empirical evidence on how risk element affects occupational fraud in the Malaysian banking sector. It also concurs with prior findings to evaluate employee fraud in the banking sector incorporating ethical values into the fraud triangle theory (Ratmono & Frendy, 2022; Said et al., 2017). Second, this study fills a gap in the literature by focusing on occupational fraud within Malaysia's banking sector, a developing nation in the South-East Asian region. While prior research has primarily targeted India and Nigeria (Mangala and Soni, 2023), our investigation provides timely insights into the factors influencing fraud occurrence. Given the severe consequences of occupational fraud, understanding its dynamics in Malaysia is crucial for informing tailored prevention and detection strategies.

The remainder of the paper is structured as follows: The next section presents the literature review, which includes the development of four specific sets of hypotheses. Subsequent sections detail the research methodology and discuss the results. The final section of the paper offers the conclusion and addresses the study's limitations, along with providing suggestions for further research.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

The conceptual framework for this study is based on Wolfe and Hermanson's (2004) Fraud Diamond Theory. This theory describes four factors that exist in every fraudulent situation, such as Pressure, which is an external need that makes people do wrong; Opportunities,

situations that support various frauds; Rationalisation, namely justification of the behaviour of certain parties who commit fraud; Capability that is special skill or capability to commit fraud.

The first construct of the fraud diamond theory is perceived pressure which encompasses various factors such as workplace stress and personal financial strain, as indicated in the literature. In the specific context of the banking and financial sector, prior studies (e.g., Kazemian et al., 2019; Mangala & Soni, 2023; Md Isa et al., 2024; Ratmono & Frendy, 2022;) have highlighted instances where employees may feel compelled to engage in fraudulent activities, particularly when facing obligations to meet third-party financial expectations or pressure stemming from the entity's financial performance. Thus, the first hypothesis can be written as follow:

H₁: Pressure (Job pressure, personal financial status) has a significantly positive influence on the occurrence of occupational fraud in the Malaysian banking industry.

The second construct in the Fraud Diamond Theory is perceived opportunity, with internal control and supervision serving as examples. A number of previous empirical studies (Chen & Elder, 2007; Kassem, 2022; Kazemian et al., 2019; Purnamasari & Oktaroza, 2015; Ratmono & Frendy, 2022; Said et al., 2017) have backed the significant positive correlation between the aspects of opportunity and fraud incidences. Nonetheless, a study by Md Isa et al. (2024) challenges this notion, indicating that there is no significant relationship between opportunity and asset misappropriation, suggesting that fraud may occur even when opportunities are perceived to be limited. Therefore, the second hypothesis can be written as follow:

H₂: Opportunity (Internal control, Supervision) has a significantly positive influence on the occurrence of occupational fraud in the Malaysian banking industry.

The third construct in fraud diamond theory is rationalisation. The literature emphasised that it is unlikely that a person will engage in fraud if they are unable to defend their unethical behaviour. In addition, Nelson et al., (2002) examined a number of fraud cases and the effects of employee fraud on various business sectors, including the banking and financial industry, and came to the conclusion that rationalisation allows fraudsters to perpetually assume that they are honest and reliable (Asmah et al., 2019; Kazemian et al., 2019). However, Md Isa et al. (2024) found no significant relationship between rationalisation and asset misappropriation, indicating that rationalisation may not always be a critical factor in explaining fraudulent behavior in this context. Thus, the third hypothesis can be written as follow:

H₃: Rationalisation (Justifiable action) has a significantly positive influence on the occurrence of occupational fraud in the Malaysian banking industry.

The Fraud Diamond Theory's final construct is capability. Examples of this construct include job status and self-confidence. Furthermore, several fraud cases in recent years have been committed by cunning, knowledgeable, and experienced fraudsters who have a thorough grasp of the organisation's control (Avortri & Agbanyo, 2020; Kazemian et al., 2019; Md Isa et al., 2024; Ratmono & Frendy, 2022). As a result, the fourth hypotheses can be written as follow:

H₄: Capability (Job position, Self-confidence) has a significantly positive influence on the occurrence of occupational fraud in the Malaysian banking industry.

In order to prevent occupational fraud from occurring, it is crucial to access and secure risk elements that are founded on the Fraud Diamond Theory's construct. In this regard, the construct from the fraud diamond theory to be used, namely pressure, opportunity, rationalisation and capability, with seven variables, has been identified to be applied as a proxy of measurement. The seven independent variables are job pressure, personal financial status, internal control, supervision, justifiable action, job position and self-confidence. Figure 1 provides the conceptual framework for this study with the development of hypothesised relationships discussed above.

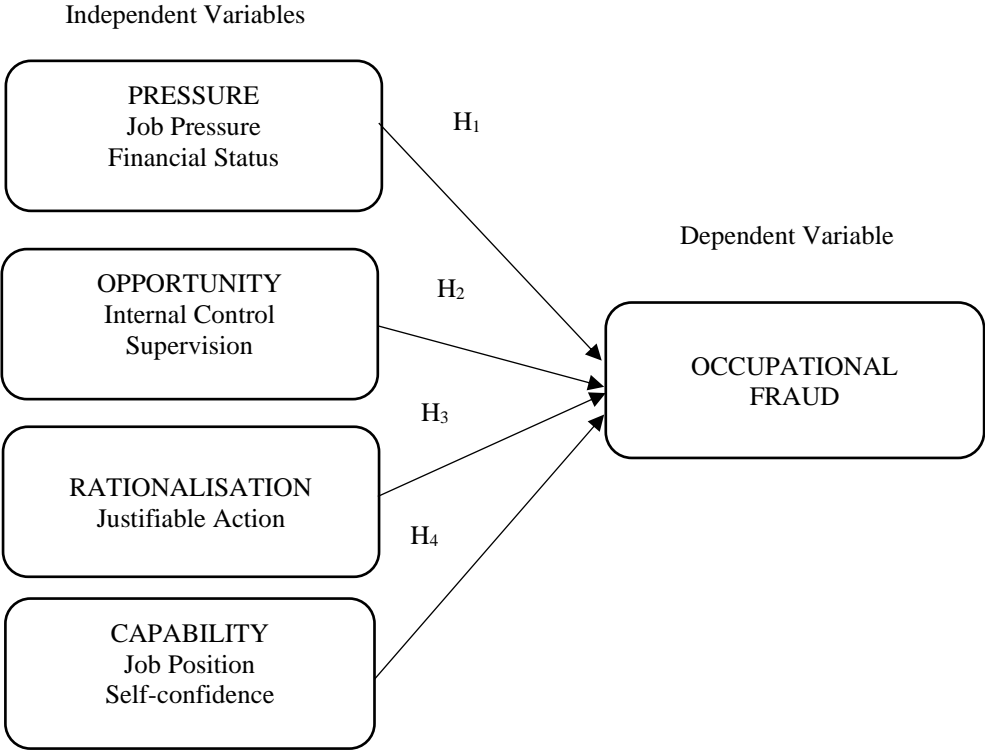


Figure 1: Conceptual Framework

3. RESEARCH METHOD

This study utilises a survey approach to gather information from respondents, elucidating the study's constructs and analysing their interrelationships. The research is centered on individuals, with the unit of analysis being at the individual level. The target group comprises personnel employed in Malaysian financial institutions. To ensure significant results representative of the industry, participants for the unit analysis were selected from employees of financial services organisations.

Employees from Malaysia's top three banks, Maybank, CIMB Bank, and Public Bank, were selected as respondents for the research, regardless of their position or title. These banks have been designated by Bank Negara Malaysia (BNM) as domestic systemically important banks (D-SIBs), which could significantly impact Malaysia's economy and financial system if they encounter financial distress. Therefore, by sampling employees from these banks, a representative cross-section of the entire banking sector is obtained. All levels of employees from Maybank, CIMB Bank, and Public Bank are included in the study, except those responsible for compliance and audit duties.

According to the 2020 Brand Finance report and official bank websites, Maybank employs 43,000, CIMB Bank 38,000, and Public Bank 18,000, totaling 99,000 employees. The sample size of approximately 384 Malaysian bank employees was determined using the Krejcie and Morgan (1970) table. Green (1991) recommends a minimum sample size of $N > 50 + 8m$, with four independent variables (IVs) in this study, necessitating a minimum sample size of 82 to fairly represent the Malaysian banking workforce.

The purpose of this study is to determine the relationship between the independent and dependent variables and how they influence one another. This research adapts the previous research measurement during the conduct of this research. The calculation employs the 5-point Likert scale interval for all variables based on prior study. Table 1 lists all the factors and how they were measured.

Table 1: Measurement of Variables

Variable	Measurement	Author
<i>Dependent Variable</i>		
Occupational Fraud	Total losses	Napel (2013)
	Number or percentage	ACFE (2018)
<i>Independent Variable 1</i>		
Pressure	Job pressure	Suhat et al. (2017)
	Personal financial status	Salehi et al. (2009)
<i>Independent Variable 2</i>		
Opportunity	Lack of internal control	Rae & Subramaniam (2008)
	Inadequate supervision	Mohd-Sanusi et al. (2015)
<i>Independent Variable 3</i>		
Rationalisation	Justifiable action	Cromwel & Thurman (2003)
<i>Independent Variable 4</i>		
Capability	Job position	Basheka & Bisangabasaija (2010)
	Self-confidence	Kazeman et al. (2019)

In the study, questionnaires were used as the primary method for gathering data from respondents. The questionnaires were adapted based on previous studies. The questionnaires were distributed in Google Form format in Google Drive, the best internet-based survey tool, to reach the respondent, who works for one of Malaysia's top three (3) banks. The cover letter and questionnaires were distributed to the recipients via the LinkedIn and WhatsApp platforms, respectively, along with the online questionnaires in the shape of Google Forms surveys. Responses were automatically recorded in Google Forms, ensuring real-time accuracy. After the survey period, the data were extracted into Microsoft Excel for organization and cleaning, then exported to IBM SPSS (Statistical Package for the Social Sciences) for statistical analysis, ensuring efficient data management throughout the process.

The questionnaire consisted of six (6) main sections, sections A, B, C, D, E and F. The first section (Section A) is about the demographic profile of the respondents, such as age, gender, marital status, education level and designation. A categorical scale type of question will be used in this section. The second section (Section B) regards the dependent variable of occupational

fraud. The third to sixth sections (Sections C to F), about the independent variables respectively, are pressure, opportunity, rationalisation and capability. The second section until the sixth section (Sections B to F) will require the respondents to indicate their level of agreement with each of the questions on a 5-point Likert scale (1 is for strongly disagree, 2 is disagree, 3 is neutral, 4 is agree and 5 is strongly agree).

Prior to performing data analysis, it is important to ensure that the questionnaires are answered completely and to exclude any that are insufficiently completed. The collected data will be scrutinized using IBM SPSS version 23 software. First, the data will be analyzed using descriptive statistics to evaluate and explain the characteristics of the tested variables, namely pressure, opportunity, rationalisation, capability, and occurrences of occupational fraud. This initial step provides a foundational understanding of the data distribution and central tendencies, which are essential for interpreting subsequent analyses. A suitable data analysis approach will then be selected based on the information derived from the data. Next, a reliability test will be conducted to assess the internal consistency of the scales using the Cronbach's alpha coefficient. This step ensures that our constructs are measured reliably, which is critical for enhancing the validity of our findings regarding the predictors of occupational fraud. Following this, a normality test will evaluate the distribution of each variable, using histograms to visually assess whether the scores are normally distributed. Establishing normality is important for validating the assumptions underlying many statistical analyses, including regression. Ideally, the scores on each variable should exhibit a normal distribution (Pallant, 2016). The next step involves correlation analysis, wherein Pearson's correlation coefficient will be employed to examine the relationships between the independent variables and the dependent variable (occupational fraud occurrences). This analysis will help identify significant associations between the predictors and the outcome, thus contributing to our understanding of the factors influencing occupational fraud. Finally, multiple linear regression will be utilized to test the underlying hypotheses of this research study. This analysis allows us to determine the predictive power of the independent variables (pressure, opportunity, rationalisation, and capability) on the occurrence of occupational fraud. By quantifying these relationships, we can draw conclusions about the relative importance of each predictor in influencing fraud risk.

4. FINDINGS AND DISCUSSION

The descriptive analysis provides information regarding demographic variables, namely the respondents' gender, age, marital status, level of education, occupation, work department and the number of years in service as shown in Table 2. Majority of respondents are female (n = 50, 53.2%), and the highest number of respondents were aged between 30 to 40 years old, with 28 respondents (29.8%). In terms of marital status, most of the respondents are married (n = 66, 70.2%) and 40.4% (n = 38) of the respondents have attained a Bachelor's Degree qualification. More than half of respondents (n= 54, 57.4%) had worked as an officer or executives and most of the respondents have been servicing the bank for more than 10 years which is 63.8% (n = 60). This suggests that most respondents have a adequate amount of expertise working in the banking industry.

Table 2: Demographic Profile

	Variable	Frequency (N = 94)	Percentage (%)
Gender	Male	44	46.8
	Female	50	53.2

Age	18 – 29 years old	23	24.5
	30 – 40 years old	28	29.8
	41 – 50 years old	25	26.6
	> 50 years old	18	19.1
Marital status	Single	21	22.3
	Married	66	70.2
	Divorced	5	5.3
	Widowed	2	2.1
Level of Education	SPM	17	18.1
	Diploma	18	19.1
	Bachelor's Degree	38	40.4
	Master's Degree	19	20.2
	Professional Certificate	2	2.1
Occupation	Clerk / Teller	14	14.9
	Officer / Executive	54	57.4
	Manager	21	22.3
	Others	5	5.3
Department	Front-line / Counter	10	10.6
	Retail loan / Hire-purchase	33	35.1
	Marketing	9	9.6
	Back Office	30	31.9
	Others	12	12.8
Years working	< 1 year	9	9.6
	1 – 5 years	17	18.1
	6 – 10 years	8	8.5
	> 10 years	60	63.8

4.1 Level of occupational fraud

Table 3 below shows the item results for occupational fraud, which consists of six selected questions. The scoring from this question is derived from calculating the fraud risk among the respondents.

Table 3: Occupational Fraud Level

Item	Mean	Standard Deviation	Interpretation
I have seen/believed that there is a return from customers to bank employees for providing services/bank loans to the customers.	2.83	1.419	Medium Low
I have seen/believed that there are customers who have easier access to lending without going through a sufficient analysis process.	2.39	1.322	Medium Low
I have seen/believed that there is an abuse of office assets for personal purposes (printers, computers, etc.).	2.88	1.327	Medium Low
I have seen/believed that there are people who borrow or steal teller cash, customer deposit money, ATM machine money stock.	2.23	1.299	Medium Low
I believe there is information that is concealed or presented incorrectly on the financial statements of this institution.	2.17	1.233	Medium Low
I am aware of frequent misstatements and are corrected a few days later.	2.51	1.233	Medium Low

Total	2.5035	0.902	Medium Low
-------	--------	-------	------------

Based on Table 3, every single item of occupational risk was at a medium low level of the mean score. The items with medium low mean values are “I have seen /believed that there is a return from customers to bank employees for providing services/bank loans to the customers.” (mean = 2.83, SD = 1.419), item “I have seen/believed that there are customers who have easier access in lending without going through a sufficient analysis process.” (mean = 2.39, SD = 1.322), item “I have seen/believed that there is an abuse of office assets for personal purposes (printers, computers, etc.).” (mean = 2.88, SD = 1.327), item “I have seen/believed that there are people who borrow or steal teller cash, customer deposit money, ATM machine money stock.” (mean = 2.23, SD = 1.299), item “I believe there is information that is concealed or presented incorrectly on the financial statements of this institution.” (mean = 2.17, SD = 1.233), and item “I am aware of frequent misstatements and are corrected a few days later.” (mean = 2.51, SD = 1.233). Overall, the level of occupational fraud is at medium low level (mean = 2.5035, SD = 0.902).

4.2 Level of Pressure

Table 4 depicts the item results for pressure which consists of seven selected questions. The scoring from this question is derived from calculating the fraud risk among the respondents.

Table 4: Pressure Level

Item	Mean	Standard Deviation	Interpretation
Management set the target of achieving KPI too high.	3.83	0.991	Medium High
There are consequences that I will incur if I cannot meet the targets set (reduced bonuses, fines, sanctions, etc.).	3.68	1.049	Medium High
I am experiencing or am aware that my co-worker is experiencing financial difficulties (over-indebtedness or failure to pay instalments).	2.78	1.246	Medium Low
I am experiencing or know that my co-worker is facing unexpected expenses (illness, accident, etc.).	3.01	1.083	Medium High
I am depressed about my workload being too heavy.	3.21	1.181	Medium High
I have to reduce my expenses to make sure I have enough for the month.	3.59	1.121	Medium High
I am the main financial backbone of the family.	3.78	1.193	Medium High
Total	3.4103	0.7342	Medium High

Based on the Table 4, six items of pressure are at medium high level and one medium low level. The items with medium high mean values are “Management set the target of achieving KPI too high.” (mean = 3.83, SD = 0.991), item “There are consequences that I will incur if I cannot meet the targets set (reduced bonuses, fines, sanctions, etc.).” (mean = 3.68, SD = 1.049), item “I am experiencing or know that my co-worker is facing unexpected expenses (illness, accident, etc.).” (mean = 3.01, SD = 1.083), item “I am depressed about my workload being too heavy.” (mean = 3.21, SD = 1.181), item “I have to reduce my expenses to make sure I have enough for the month.” (mean = 3.59, SD = 1.121) and item “I am the main financial backbone of the family.” (mean = 3,78, SD = 1.193). The medium low level is the item “I am experiencing or am aware that my co-worker is experiencing financial difficulties (over indebtedness, or failure to pay instalments).” (mean = 2.78, SD = 1.246). Overall, the level of pressure was at medium high level (mean = 3.4103, SD = 0.7342).

4.3 Level of Opportunity

Table 5 below shows the item results for the opportunity, which consists of seven selected questions. The scoring from this question is derived from calculating the fraud risk among the respondents.

Table 5: Opportunity Level

Item	Mean	Standard Deviation	Interpretation
Transactions can be made without sufficient authorization.	1.93	1.229	Low
Transactions are often input inconsistent with the correct accounting period (Credit agreements this month are input next month, fees/miscellaneous income this month are input next month or vice versa, etc.).	2.13	1.211	Medium Low
The separation of duties and responsibilities between officers/staff is less clear.	2.78	1.361	Medium Low
There are areas that are not reachable by CCTV.	3.34	1.214	Medium High
Regulations, procedures, and instructions are not well documented.	2.60	1.355	Medium Low
Supervision, control, and review of audits are not done adequately and routinely.	2.22	1.254	Medium Low
In my opinion, there is a lack of an active supervision system to ensure that all employees carry out their duties in accordance with the standard operating procedures.	2.64	1.43	Medium Low
Total	2.5182	0.98996	Medium Low

Based on Table 5, six items of opportunity are at medium low, and one item is at medium high and low level. The item at medium high was item “There are areas that are not reachable by CCTV.” (mean = 3.34, SD = 1.214). The item at the low level of mean was item “Transactions can be made without sufficient authorization.” (mean = 1.93, SD = 1.229). The items with medium low are item “Transactions are often input inconsistent with the correct accounting period (Credit agreements this month are input next month, fees/miscellaneous income this month are input next month or vice versa, etc).” (mean = 2.13, SD = 1.211), item “The separation of duties and responsibilities between officers/staff is less clear.” (mean = 2.78, SD = 1.361), item “Regulations, procedures, and instructions are not well documented.” (mean = 2.60, SD = 1.355), item “Supervision, control, and review of audits are not done adequately and routinely.” (mean = 2.22, SD = 1.254), and item “In my opinion, there is a lack of an active supervision system in ensuring that all employees carry out their duties in accordance with the standard operating procedures.” (mean = 2.64, SD = 1.43). Overall, the level of opportunity was at medium low level (mean = 2.5182, SD = 0.98996).

4.4 Level of Rationalisation

Table 6 below shows the item results for rationalisation, which consists of seven selected questions. The scoring from this question is derived from calculating the fraud risk among the respondents.

Table 6: Rationalisation Level

Item	Mean	Standard Deviation	Interpretation
------	------	--------------------	----------------

In my opinion, the salary I receive is too low compared to the risks, number of tasks, and responsibilities I have in the company.	3.34	1.169	Medium High
No one will be harmed if I use money or office assets for personal purposes.	1.60	0.976	Low
I believe that giving or gifts from customers, vendors, or co-workers is a form of appreciation for the good service I have provided.	2.02	1.145	Medium Low
I have to accept the discretion or leeway of certain rules in order to achieve my targets or complete my obligations.	2.48	1.242	Medium Low
I think that if I steal a little money or bank assets, the bank will not go bankrupt.	1.50	0.959	Low
I feel that it is okay to borrow office assets as long as they are returned intact or undamaged.	1.64	0.937	Low
I deserve a reward for what I've done for the bank, which I haven't received.	2.86	1.292	Medium Low
Total	2.2052	0.74821	Medium Low

Based on Table 6, three items with medium low level, three items with low level and one item at medium high level of mean score. The item at medium high was item “In my opinion, the salary I receive is too low compared to the risks, number of tasks, and responsibilities I have in the company.” (mean = 3.34, SD = 1.169). The items at low level are item “No one will be harmed if I use money or office assets for personal purposes.” (mean = 1.60, SD = 0.976), item “I think that if I steal a little money or bank assets, the bank will not go bankrupt.” (mean = 1.50, SD = 0.959) and item “I feel that it is okay to borrow office assets as long as they are returned intact or undamaged.” (mean = 1.64, SD = 0.937). The items with medium low are item “I believe that giving or gifts from customers, vendors, or co-workers is a form of appreciation for the good service I have provided.” (mean = 2.02, SD = 1.145), item “I have to accept the discretion or leeway of certain rules in order to achieve my targets or complete my obligations.” (mean = 2.48, SD = 1.242) and item “I deserve a reward for what I've done for the bank, which I haven't received.” (mean = 2.86, SD = 1.292). Overall, the level of rationalisation was at a medium low level (mean = 2.2052, SD = 0.74821).

4.5 Level of Capability

Table 7 below shows the item results for capability, which consists of five selected questions. The scoring from this question is derived from calculating the fraud risk among the respondents.

Table 7: Capability Level

Item	Mean	Standard Deviation	Interpretation
With my current position, it is possible for me to commit fraud.	1.89	1.196	Low
I understand in depth the internal controls related to my current position.	3.95	1.061	Medium High
I have the technical know-how to operate a bank computer system.	3.34	1.187	Medium High
I am able to perform transactions independently.	2.85	1.437	Medium Low
My definition about what is right or wrong depends entirely on my personal belief.	2.81	1.386	Medium Low
Total	2.9681	0.71138	Medium Low

Based on Table 7, two items at medium low level and medium high, and one at low level. The items with low mean values are item “With my current position, it is possible for me to commit fraud.” (mean = 1.89, SD = 1.196). The items with medium high mean values are item “I understand in depth the internal controls related to my current position.” (mean = 3.95, SD = 1.061) and item “I have the technical know-how to operate a bank computer system.” (mean = 3.34, SD = 1.187). The items with medium low mean values are item “I am able to perform transactions independently.” (mean = 2.85, SD = 1.437) and item “My definition about what is right or wrong depends entirely on my personal belief.” (mean = 2.81, SD = 1.386). Overall, the level of rationalisation is at medium low level (mean = 2.9681, SD = 0.71138).

4.6 Reliability Analysis and Normality of The Data

As shown in the Table 8, there are six (6) items under occupational fraud, seven (7) items each under pressure, opportunity and rationalisation and five (5) items under capability. The Cronbach’s alpha computed for each variable is reliable even though capability has below 0.6. The values of Cronbach’s alpha are 0.78, 0.774, 0.893, 0.799 and 0.465, respectively, for occupational fraud, pressure, opportunity, rationalisation and capability. As the value of skewness is within the range between -0.408 to 0.541, and kurtosis is within the value between -0.891 to 0.347, all variables were considered normal.

Table 8: Reliability Statistics

Variables	Cronbach’s Alpha	N of items	Skewness	Kurtosis
Occupational Fraud	0.78	6	0.049	-0.891
Pressure	0.774	7	-0.093	-0.129
Opportunity	0.893	7	0.309	-0.659
Rationalisation	0.799	7	0.541	0.237
Capability	0.465	5	-0.408	0.347

4.7 Correlation Analysis

In this study, the Pearson correlation coefficient is used to examine the strengths of the relationship between independent variables with the dependent variable. Table 9 depicts the results of the correlation analysis that examined the relationship between pressure, opportunity, rationalisation, capability and occupational fraud.

Table 9: Correlation between Independent and Dependent Variables

		Pressure	Opportunity	Rationalisation	Capability	Occupational fraud
Pressure	Pearson	1				
	Corr.					
	Sig.					
Opportunity	N	94				
	Pearson	.420**	1			
	Corr.					
Rationalisation	Sig.	.000				
	N	94	94			
	Pearson	.448**	.487**	1		
Capability	Corr.					
	Sig.	.000	.000			
	N	94	94	94		
Occupational fraud	Pearson	.233*	.106	.317**	1	
	Corr.					

	Sig.	.024	.310	.002		
	N	94	94	94	94	
Occupational fraud	Pearson Corr.	.517**	.662**	.561**	.255*	1
	Sig.	.000	.000	.000	.013	
	N	94	94	94	94	94

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

The correlation between pressure with occupational fraud is $r = 0.517$, which indicates there is a moderate relationship between these two variables. The p -value = 0.000 is less than 0.01. The values can be concluded as there was a significant relationship between pressure with occupational fraud. The correlation between opportunity and occupational fraud is $r = 0.662$, indicating a moderate relationship between these two variables. The p -value = 0.000 is less than 0.01. The values can be concluded as there was a significant relationship between opportunity with occupational fraud. The correlation between rationalisation and occupational fraud is $r = 0.561$, indicating a moderate relationship between these two variables. The p -value = 0.000 is less than 0.01. The values can be concluded as there was a significant relationship between rationalisation with occupational fraud. The correlation between capability and occupational fraud is $r = 0.255$, indicating a low relationship between these two variables. The p -value = 0.013 is less than 0.05. The values can be concluded as there was a significant relationship between capability with occupational fraud.

4.8 Multiple Linear Regression Analysis

Table 10 illustrates the results of multiple linear regression for pressure, opportunity, rationalisation, and capability with occupational fraud. All the values of tolerance are greater than 0.1 ($Tol > 0.1$) and VIF are less than 10 ($VIF < 10$). Hence, no multicollinearity problem exists, and independent variables are not correlated to each other. The regression results indicate that all independent variables explained 55.6% of the occupational fraud relationship intention ($R^2 = 0.556$, $F = 27.82$, p -value = 0.000 < 0.05). The F -statistic (27.82) and the corresponding p -value were significant (0.000). Since the p -value (Sig.) for pressure, opportunity, rationalisation = 0.014, 0.000 and 0.016 is less than 0.05, all the three (3) hypotheses (H_1 , H_2 , and H_3) were supported. Therefore, the study concludes that there is a significant positive influence on the occurrence of occupational fraud with pressure (job pressure, personal financial status), opportunity (internal control, supervision), and rationalisation (justifiable action). However, for capability, since the p -value (Sig.) = 0.234 is more than 0.05, the hypothesis (H_4) is not supported. Therefore, the study concludes that there is no significant positive influence on the occurrence of occupational fraud with capability (job position and self-confidence).

Table 10: Multiple Regression Analysis

Model		Standardised Coefficients			Collinearity Statistics		
		B	Std. Error	t	Sig.	Tolerance	VIF
1	(Constant)		.366	-.902	.370		
	Pressure	.206	.101	2.500	.014	.734	1.363
	Opportunity	.460	.077	5.473	.000	.706	1.416
	Rationalisation	.216	.106	2.456	.016	.644	1.553
	Capability	.090	.095	1.198	.234	.882	1.134

R	0.745
R ²	0.556
F-statistic (p-value)	27.82
Significance at p < 0.000	

a. Dependent Variable: Occupational fraud

4.9 Discussions of Hypothesis Testing Result

The study revealed that pressure (job pressure, personal financial status), opportunity (internal control, supervision), and rationalisation (justifiable action) all significantly influence the occurrence of occupational fraud. However, capability (job position, self-confidence) did not demonstrate significant effects on fraud occurrence. An employee may commit fraud under the impact of work pressure, such as a demanding workload, high KPI targets established by management, and penalties like reduced bonuses, fines, and sanctions if the targets are not met. Personal financial issues, such as excessive debt and missed monthly payments, may have promoted elements of occupational fraud. The employees will have room and chance to commit fraud because of the lax internal controls and the absence of supervision. As a result of the perceived pressure and perceived opportunity factors, the fraudster readily used their own defence for why they should commit fraud. However, the research found that even if an employee had the ability to commit fraud, their job status and level of confidence did not justify it.

The findings of this study reveal that only three components of the Fraud Diamond Theory significantly influence the likelihood of occupational fraud incidents in Malaysian financial institutions: pressure, opportunity, and rationalisation. These results corroborate previous studies by Wolfe and Hermanson (2004) and Albrecht et al. (2010). However, capability was not found to be a significant distinguishing factor between fraudsters and non-fraudsters. Job position and self-confidence did not impact the likelihood of committing fraud, even when employees possessed the necessary skills. This finding is consistent with Wolfe and Hermanson's (2004) research, which similarly concluded that capability was not a significant factor. While this study focused exclusively on Malaysian financial institutions, its implications suggest that addressing pressure, opportunity, and rationalisation can effectively mitigate fraud in other industries and contexts. Nonetheless, the relationship between capability and fraud may be influenced by additional factors such as the specific nature of the fraud scheme or the organisational culture in which it occurs.

5. CONCLUSIONS, LIMITATIONS AND FUTURE RESEARCH

This study identified a significant relationship between perceived pressure, opportunity, and rationalisation with the occurrence of occupational fraud in the Malaysian banking industry, while no correlation was found between perceived capability and fraud incidents. The findings provide valuable insights for both international and national industry stakeholders. These insights can guide management and regulatory authorities in developing effective strategies to enhance bank performance and strengthen risk management practices. Moreover, the study sheds light on the patterns and trends of fraud risk factors, offering a deeper understanding of occupational fraud within the sector.

Despite the contribution of this study, it was discovered that it had some limitations. One of the limitations is the sample size for this study is 94 employees from the top three banks in

Malaysia. Some respondents were not interested in becoming a sample since they were busy with their daily tasks and job. In addition to this, some respondents declined to click the survey link received via WhatsApp because they were suspicious of scammers. The data from three major Malaysian banks were used to perform this study. Even though the sample size was completely reliable, this research could have also looked into other Malaysian banks. There could be bias and poor judgment in this research. The questionnaire gauge respondents to rate each variable on a 5-point Likert measure. This could have led to respondents giving their arbitrary views, which could have led to inaccurate data. As this study only included the top three (3) banks in Malaysia, future research could perform a similar study on a broader population scale. This is essential for obtaining a more general analysis that can be used in other sectors with similar activity.

Other researchers might broaden the risk variables beyond just the Fraud Diamond Theory's framework. It would be fascinating to compare the number of fraud components in two or more different businesses or industries. Future researchers are advised to conduct studies comparing Malaysia's present situation with that of another country in a comparable setting.

APPENDIX

Survey instrument (Questionnaire)

Section A: DEMOGRAPHIC. Instruction: Please tick (✓) the appropriate answers.

1. Gender.

Male.

Female.

2. Age.

18 - 29 years old.

30 - 40 years old.

41 - 50 years old.

>50 years old.

3. Marital status.

Single.

Married.

Divorced.

Widowed.

4. Level of Education.

SPM.

Diploma.

Bachelor's Degree.

Master's Degree.

Professional Certificate.

5. Occupation.

Clerk/Teller.

Officer/Executive.

Manager.

Others. Please Specify.

6. Department.

- Front-line/Counter.
- Retail loan/Hire-purchase.
- Marketing.
- Back office.
- Others. Please Specify.

7. Number of years working.

- <1 year.
- 1 - 5 years.
- 6 - 10 years.
- > 10 years.

Instruction : Please tick (√) the appropriate answers.

** SD: Strongly Disagree, D: Disagree, N: Neutral, A: Agree, SA: Strongly Agree.

No	Description	SD	D	N	A	SA
Section B: OCCUPATIONAL FRAUD.						
1	I have seen/believed that there is a return from customers to bank employees for providing services/bank loans to the customers.					
2	I have seen/believed that there are customers who have easier access in lending without going through a sufficient analysis process.					
3	I have seen/believed that there is an abuse of office assets for personal purposes (printers, computers, etc.).					
4	I have seen/believed that there are people who borrow or steal teller cash, customer deposit money, ATM machine money stock.					
5	I believe there is information that is concealed or presented incorrectly on the financial statements of this institution.					
6	I am aware of frequent misstatements and are corrected a few days later.					
Section C: PRESSURE.						
1	Management set the target of achieving KPI too high.					
2	There are consequences that I will incur if I cannot meet the targets set (reduced bonuses, fines, sanctions, etc.).					
3	I am experiencing or am aware that my co-worker is experiencing financial difficulties (over indebtedness, or failure to pay installments).					
4	I am experiencing or know that my co-worker is facing unexpected expenses (illness, accident, etc.).					
5	I am depressed about my workload being too heavy.					
6	I have to reduce my expenses to make sure I have enough for the month.					
7	I am the main financial backbone of the family.					
Section D: OPPORTUNITY.						
1	In my opinion, the salary I receive is too low compared to the risks, number of tasks, and responsibilities I have in the company.					
2	No one will be harmed if I use money or office assets for personal purposes.					
3	I believe that giving or gifts from customers, vendors, or co-workers is a form of appreciation for the good service I have provided.					
4	I have to accept the discretion or leeway of certain rules in order to achieve my targets or complete my obligations.					
5	I think that if I steal a little money or bank assets, the bank will not go bankrupt.					

6	I feel that it is okay to borrow office assets as long as they are returned intact or undamaged.					
7	I deserve a reward for what I've done for the bank, which I haven't received.					
Section E: RATIONALISATION.						
1	In my opinion, the salary I receive is too low compared to the risks, number of tasks, and responsibilities I have in the company.					
2	No one will be harmed if I use money or office assets for personal purposes.					
3	I believe that giving or gifts from customers, vendors, or co-workers is a form of appreciation for the good service I have provided.					
4	I have to accept the discretion or leeway of certain rules in order to achieve my targets or complete my obligations.					
5	I think that if I steal a little money or bank assets, the bank will not go bankrupt.					
6	I feel that it is okay to borrow office assets as long as they are returned intact or undamaged.					
7	I deserve a reward for what I've done for the bank, which I haven't received.					
Section F: CAPACITY.						
1	With my current position, it is possible for me to commit fraud.					
2	I understand in depth the internal controls related to my current position.					
3	I have the technical know-how to operate a bank computer system.					
4	I am able to perform transactions independently.					
5	My definition about what is right or wrong depends entirely on my personal belief.					

ACKNOWLEDGEMENTS

The authors would like to acknowledge Universiti Teknologi Mara (UiTM), Kedah Branch, and the Faculty of Accountancy, Universiti Teknologi MARA, for their generous provision of research facilities. This research was conducted without funding from any external party.

AUTHORS' CONTRIBUTIONS

MM and MMJ carried out the introduction and literature review sections. TI collected and refined the data and performed data analysis using SPSS and multiple regression. MM and SSA wrote the discussion and implication sections. All authors read and approved the final manuscript.

CONFLICT OF INTEREST STATEMENT

None declared.

6. REFERENCES

- Akindede, R. I. (2011). Fraud as a negative catalyst in the Nigerian banking industry. *Journal of Emerging Trends in Economics and Management Sciences*, 2(5), 357-363.
- Albrecht, C., Turnbull, C., Zhang, Y., & Skousen, C. J. (2010). The relationship between South Korean chaebols and fraud. *Management Research Review*, 33(3), 257-268.
- Asmah, A. E., Atuilik, W. A., & Ofori, D. (2019). Antecedents and consequences of staff related fraud in the Ghanaian banking industry. *Journal of Financial Crime*, 26(3), 669–682.

- Association of Certified Fraud Examiners (ACFE) (2018). Report to the nations on occupational fraud and abuse. Austin, TX: ACFE.
- Avortri, C., & Agbanyo, R. (2020). Determinants of management fraud in the banking sector of Ghana: The perspective of the diamond fraud theory. *Journal of Financial Crime*, 28(1), 142-155.
- Basheka, B. C., & Bisangabasaija, E. (2010). Determinants of unethical public procurement in local government systems of Uganda: A case study. *International Journal of Procurement Management*, 3(1), 91-104.
- Brand Finance (2020, January). Global 500. https://brandfinance.com/wp-content/uploads/1/brand_finance_global_500_2020_preview.pdf
- Chen, J., Cumming, D. J., Hou, W., & Lee, E. (2013). Executive integrity, audit opinion, and fraud in Chinese listed firms. *Emerging Markets Review*, 15, 72-91.
- Chen, K.Y. & Edler, R.J. (2007). Fraud risk factors and the likelihood of fraudulent financial reporting: Evidence from statement on Auditing Standards No. 43 in Taiwan. Syracuse University Whitman School of Management Syracuse.
- Cromwell, P., & Thurman, Q. (2003). The devil made me do it: Use of neutralizations by shoplifters. *Deviant Behavior*, 24(6), 535-550.
- Free Malaysia Today (2021, May 5). Bank officers among 8 held over fraud involving RM4.7 mil. <https://www.freemalaysiatoday.com/category/nation/2021/05/05/bank-officers-among-8-held-over-fraud-involving-rm4-7mil/>
- Green, S.B. (1991). How many subject does it take to do a regression analysis?. *Multivariate Behavioral Research*, 26, 499-510.
- Hooper, J. M., & Fornelli, C. M. (2010). Deterring and detecting financial reporting fraud - A platform for action. Center for Audit Quality, Washington D.C.
- Kassem, R. (2022). Elucidating corporate governance's impact and role in countering fraud. *Corporate Governance*, 2, (7), 1523-1546.
- Kazemian, S., Said, J., Hady Nia, E., & Vakilifard, H. (2019). Examining fraud risk factors on asset misappropriation: Evidence from the Iranian banking industry. *Journal of Financial Crime*, 26(2), 447-463.
- Krejcie, R.V. & Morgan, D.W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30, 607-610.
- Malaysia Anti-Corruption Commission (MACC), https://www.sprm.gov.my/images/Press_Release/Section_17AOfMACCAct2009Amendment2018ComesIntoForceToday.pdf.
- Mangala, D., & Soni, D. (2023). A systematic literature review on frauds in banking sector. *Journal of Financial Crime*, 30(1), 285-301.
- Md Isa, F.H., Alias, N., Mohd Ali, M., Haron, N.H., Mohamed Sadique, R. B., & Johan, N. (2024). Factors influencing asset misappropriation in financial institutions: The application of fraud diamond theory. *Edelweiss Applied Science and Technology*, 8(5), 131-143. doi:10.55214/25768484.v8i5.1670
- Mohd-Sanusi, Z., Mohamed, N., Omar, N., & Mohd-Nassir, M. D. (2015). Effects of internal controls, fraud motives and experience in assessing likelihood of fraud risk. *Journal of Economics, Business and Management*, 3(2), 32-45.
- Napel, T. K. (2013). Risk factors of occupational fraud: A study of member institutions of the National Association of Independent Colleges and Universities. University Of South Dakota.

- Nelson, N.W., Elliot, J.A. & Tarpley, R.L. (2002). Evidence from auditors about managers' and auditors' earnings management decisions, *The Accounting Review*, 77, 175-202, 2002.
- Pallant, J. (2016). *SPSS survival manual: A step by step guide to data analysis using SPSS Program* (6th ed). London, UK: McGraw–Hill Education.
- PricewaterhouseCoopers. (2020). Global economic crime and fraud survey: Pulling fraud out of the shadows. <https://www.pwc.com/gx/en/services/advisory/forensics/economic-crime-survey.html>
- PricewaterhouseCoopers. (2022). Global economic crime and fraud survey: The rise of the resilience imperative. <https://www.pwc.com/gx/en/services/advisory/forensics/economic-crime-survey.html>
- Purnamasari, P. & Oktaroza, M.L. (2015). Influence of employee fraud on asset misappropriation analysed by fraud diamond dimension, in *2015 International Conference on Accounting Studies*, 2015.
- Rae, K., & Subramaniam, N. (2008). Quality of internal control procedures: Antecedents and moderating effect on organisational justice and employee fraud. *Managerial Auditing Journal*, 23(2), 104-124.
- Ramazani, M., & Rafiei Atani. H. (2010). Iranian accountants' conception of the prevention methods of fraud and offering some recommendations to reduce fraud in Iran. *Global Journal of Management and Business Research*, 10(6), 31-45.
- Ratmono, D., & Frendy. (2022). Examining the fraud diamond theory through ethical culture variables: A study of regional development banks in Indonesia. *Cogent Business & Management*, 9(1), 2117161. doi: 10.1080/23311975.2022.2117161
- Rezaee, Z. (2005). Causes, consequences, and deterrence of financial statement fraud. *Critical Perspectives on Accounting*, 16, 277–298.
- Said, J., Alam, M.M., Ramli, M. & Rafidi, M. (2017). Integrating ethical values into fraud triangle theory in assessing employee fraud: Evidence from the Malaysian banking industry. *Journal of International Studies*, 10(2), 170-184. doi: 10.14254/2071-8330.2017/10-2/13.
- Salehi, M., Mansoury, A., & Pirayesh, R. (2009). Firm size and audit regulation and fraud detection: Empirical evidence from Iran. *ABAC Journal*, 29(1), 53-65.
- Sanusi, Z.M., Rameli, M.N.F. & Isa, Y.M. (2015). Fraud schemes in the banking institutions: Prevention measures to avoid severe financial loss. *Procedia Economics and Finance*, 28, 107-113.
- Skousen, C., & Wright, C. (2008). Contemporaneous risk factors and the prediction of financial statement fraud. *Journal of Forensic Accounting*, 9(1), 37-61.
- Smith, T. (2005). Institutional and social investors find common ground. *Journal of Investing*, 14(3), 57–65.
- Suhat, S., Umami, F.D., & Yogisutanti, G. (2017). Relationship between job stress and fraud risk on employees at the National Eye Centre Hospital X, *Proceedings of the International Conference on Applied Science and Health*, 1, 1-6.
- The Star (2021, June 16). Another bank employee held in kickback scandal. <https://www.thestar.com.my/news/nation/2021/06/16/another-bank-employee-held-in-kickback-scandal>
- Wolfe, D. T., & Hermanson, D. R. (2004). The fraud diamond: Considering the four elements of fraud. *The CPA Journal*, 74(12), 38.

AUTHORS BIOGRAPHY

Dr. Marzlin Marzuki, a senior lecturer at the Faculty of Accountancy, Universiti Teknologi MARA, Kedah Branch. She excels in accounting education and fraud research. She has contributed significantly through journal articles, academic books, and newsletters, with a focus on innovative teaching methodologies and critical issues in accounting.

Dr. Muslimah Mohd Jamil is an accounting lecturer at University Teknologi MARA Kedah Branch. She obtained Bachelor of Accountancy from International Islamic University Malaysia (IIUM), Master of Accountancy from Universiti Teknologi MARA (UiTM) and Doctor of Philosophy from Science University of Malaysia (USM). The current research interest is the accounting, auditing, zakat accounting and Islamic banking and finance.

Ms. Siti Sakinah Azizan is a senior lecturer at the Faculty of Accountancy, Universiti Teknologi MARA, Kedah Branch. She has published journal articles, an academic book, and newsletters on financial reporting, accounting education, and corporate governance. Her current research interests include artificial intelligence (AI) in education and AI in risk management.

Mr. Tarmizi Ismail is an Assistant Manager at Public Bank Berhad with a unique blend of expertise in retail loans, specifically the hire-purchase product, covering all aspects including marketing, loan processing, and disbursement. Holding a master's in forensic accounting and financial criminology from Universiti Teknologi MARA (UiTM), he is passionate about compliance, AML, fraud management, and financial crime.