THE INFLUENCE OF FRAUD TRIANGLE FACTORS ON REAL EARNINGS MANAG EMENT: MALAYSIAN EVIDENCE

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ABSTRACT

***Purpose**: This study examines the relationship between the factors of pressure, opportunity and rationalization, and the occurrence of real earnings management in Malaysian public listed companies.*

***Design/methodology/approach:** The elements in the fraud triangle model, namely the pressure factor, proxied by financial performance; the opportunity factor, proxied by board independence, multiple directorships and audit quality; and the rationalization factor, proxied by related party transactions and founder on the board, are included to examine their influence on real earnings management. The study used a sample of 557 Malaysian public listed companies over a three-year period from 2017-2019, comprising a total of 1,671 firm-year observations. The agency theory is employed to guide the development of hypotheses in the study. Statistical analyses used in the study to test the hypotheses, include descriptive, correlation and multiple regression analysis.*

***Findings:** The results show that there is a negative and significant association between financial performance, measured by return on assets, and real earnings management. This suggests that firms involved in real earnings management possess significantly poor financial performance. In addition, the result shows that there is a positive and significant association between audit quality, measured by audit firm size, and real earnings management. This indicates that Big 4 firms are unable to adequately restrain the occurrence of real earnings management activities. However, there is no statistical evidence that other factors under the opportunity and rationalization factors play a significant role in the likelihood of real earnings management. Both the control variables, namely firm size and firm leverage, have significant effects on real earnings management. The findings indicate that the occurrence of real earnings management is highly influenced by firms' poor financial performance, which creates pressure on the managers to become involved in misstatement. In addition, the occurrence of real earnings management is influenced by poor monitoring mechanisms, particularly by the external auditor, which provides opportunities for such wrongdoings to occur.*

***Originality/value:** The main value of this paper is the influence of fraud triangle factors, namely pressure, opportunity and rationalization, on the occurrence of real earnings management in Malaysia. The findings of this study provide useful insights for the investors to reassess corporate governance mechanisms, and for the regulators to reconsider the current regulations.*

Keywords: Real Earnings Management, Earnings Management, Fraud Triangle, Malaysia.

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INTRODUCTION

Accounting scandals have caused severe controversy for decades, and these have intensified issues relating to misstatements, such as earnings management and fraudulent financial statements. The exploitation of earnings negatively affects the quality of published financial information, and thus, misrepresents the relationship between reported earnings and stock returns. Such circumstances lead to various issues, in terms of resource efficiency in the economy. Also, it may deceive the firm’s stakeholders regarding its current and future well-being, as the financial report plays an important role in the decision-making process (Healy & Wahlen, 1999). According to Mohamed Yusof et al. (2015), the financial statement represents transparency and productivity in managing financial wealth and spending. In addition, it is considered as a key form of communication with stakeholders, i.e., through the published annual reports (Stanton & Stanton, 2002). Generally, investors are attracted to firms with strong and stable income and fast growth. This in particular, motivates managers to be involved in earnings management in order to overstate financial results, especially during critical times (Dang et al., 2017; Ali et al., 2018). Earnings management is described as a breach of accounting standards and regulations for the firm to have good financial performance, albeit through illegal practices to deceive the stakeholders (Kamal et al., 2016). Although earnings management is permitted up to a certain threshold, over time, it may become a fraudulent financial statement, which is a more severe type of misstatement. Fraudulent financial statement is mainly related to the failure to transparently disclose relevant information, errors in disclosing information, and the manipulation of accounting data. The occurrence of fraudulent financial statement also threatens the credibility of the firm and the public trust of capital markets. Therefore, earnings management activities, which are labelled as unethical practices in Dugan & Gary's study (2016), should be taken seriously. The underlying motive for earnings management in many financial scandals, has greatly affected financial information quality (El Diri, 2017); thus, it is crucial to ensure that financial statements are free from material error and bias.

In the context of the Asia-Pacific, the reports of the Association of Certified Fraud Examiners (ACFE), have revealed that fraud cases have increased extensively over the recent years, and these cases are expected to increase in the future (ACFE, 2018). Malaysia is reported as one of the top five countries with a total number of 19 fraud cases, contributing to a USD195,000 median loss (ACFE, 2020). The Global Economic Crime and Fraud Survey by PWC (2020) mentions that fraud incidences in Malaysia continue to remain high since their last survey in 2018. According to Callao et al. (2014), these high-profile fraud cases have made earnings management a vital issue. A clear example is Enron that has gone bankrupt as a result of illegal earnings management, which consequently led to fraudulent financial statements.

According to the International Standards on Auditing (ISA) 240 (2009), such practices include omissions of figures and disclosure in financial statements and intentional misstatements to mislead the users of the financial statement, thus causing fraudulent financial statement. Besides, the standard acknowledges that the risk factors, namely pressure, opportunity and rationalization, are related to misstatements as stated in the Fraud Triangle Model, by Cressey (1953). Hence, this study examines the issue of earnings management by using a sample of Malaysian Public Listed Companies (PLCs), by including the three main factors in the Fraud Triangle Model. The pressure factor is proxied by poor financial performance; the opportunity factor is proxied by poor governance, such as board independence, multiple directorships and audit quality; while the rationalization factor is proxied by related party transactions and founder on the board.

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Conceptualisation

Earnings management

Prior studies have defined earnings management in a variety of ways. The well-known definition by Healy and Wahlen (1999) is that, "*Earnings management occurs when managers use judgement in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reporting accounting practices*". In other words, earnings management is the deliberate manipulation of actual economic conditions to mislead stakeholders. A recent study by Bansal et al. (2021) has clarified that earnings management occurs when executives use estimation in the transaction preparation to alter the financial statement in order to deceive some stakeholders or to persuade the achievement of contracts based on the accounting data presented.

Callao et al. (2014) argued that despite the well-defined designation, debates on earnings management are still ongoing. According to Adi et al. (2020), earnings management can be viewed from two perspectives: informative and opportunistic. From the informative viewpoint, earnings management is regarded as a tool for presenting personal information about a firm's future performance in financial markets; while from the opportunistic viewpoint perspective, earnings management is seen as an approach used by management to mislead investors on the actual conditions of the firm and also to avoid circumstances that could harm the firm. Thus, by maximizing for personal benefit, the managers will be compensated.

According to Li and Zaiats (2017), some researchers have classified earnings management into three groups, as follows:

1. Beneficial and white earnings management: the flexibility to select the accounting treatment to communicate the managers' understanding of the future cash flow.
2. Neutral and grey earnings management: a choice is made for the accounting treatment that capitalizes solely on the use of administration, making it neither better nor opportunistic.
3. Black earnings management: to diminish or mislead the transparency of financial data, tricks are frequently employed.

Real earnings management

In terms of the technique, earnings management can be divided into two, namely accrual earnings management and real earnings management. Accrual earnings management is carried out through management judgement in the financial statement (Healy & Wahlen, 1999), whereby managers bring their opinion and subjectivity through creative accounting (Rauf et al., 2012). Real earnings management is closely related to the daily operations, whereby managers aim to achieve earnings targets by performing "*activities that deviate from normal business practices*", including overproduction, decreased discretional expenses or relaxed sales credit policies (Roychowdhury, 2006). However, Anagnostopoulou and Tsekrekos (2017) argued that managers may shift from accrual earnings management to real earnings management, because it is more difficult to detect and is less traceable due to its ability to be covered in the normal business events (Alawag, 2020).

As real earnings management can be manipulated by deviating from regular business operations, aggressive price cuts to improve sales and profits, buyback of common stock, decline in discretionary spending, like research and development, advertising, and maintenance, and overproduction to report the reduced cost of goods sold, are all elements of real earnings management. Earnings management actions with no direct cash flow impacts are referred to as accrual earnings management, for instance, deciding whether to write-down

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assets, record or postpone income, capitalize, or spend on specific costs, such as repair expenses and adopting new regulations (Xu et al., 2007).

Several researchers have suggested that managers shift to real earnings management due to the ease with which discretionary-related decisions can be taken, which are less likely to be recognized by the authorities. Further, the burden imposed by auditing and enforcement agencies has diverted the attention of managers to other forms of earnings management. Ewert and Wagenhofer (2005) posited that strict accounting practices cause an increase in real earnings management and a declining practice in accruals earnings management. Real earnings management activities are not investigated by auditors and are harder to spot by investors and regulators.

Through real earnings management, managers take actions that deviate from standard business operations, including relaxed revenue credit practices, reduced discretionary costs or overproduction to meet earnings benchmarks (Roychowdhury, 2006). Many firms with the commitment to satisfy earnings benchmarks for consecutive years, have very few choices or alternatives, but to keep on making up the expenses, including those unreversed expenses generated earlier. Ultimately, these firms may decide to offset those accruals, which lead to committing fraud. Malik (2015) evinced that businesses in the United States are exploiting revenue using real activities to prevent announcing losses or to fulfil investor expectations. This change in earnings management strategies has generated the need to introduce real earnings management to the general public. Talbi et al. (2015) stated that most of the previous research has mainly focused on accruals earnings management, while real earnings management studies are relatively scarce.

Hypotheses Development

Pressure

Firm financial value is commonly used to evaluate firm success; thus, when financial value is inadequate, managers would often execute the real earnings management technique to protect their reputation. It is thus associated with managers' desire to demonstrate the best performance of the firm. Exceeding or at least meeting stakeholders' and shareholders' expectations is the most crucial concern of the managers, which consequently creates pressure for them to focus on the firm's growth and profitability. Arguably, profitability is a critical Key Performance Indicator of the firm's financial performance in the eyes of the stakeholders. Firms with poor financial stability and performance are financially distressed, and this creates strong incentives for the managers to achieve or exceed revenue targets and forecast by analysts (El Diri, 2017); Hasnan et al. (2013) mentioned that the primary reason for the occurrence of fraudulent financial statements is due to firms' poor financial performance; about 95% of fraud cases have been related to financial pressure. Such findings support the earlier study by Bell et al. (1991) that poor financial conditions could encourage unethical managers to enhance the firm's image and financial performance to minimize the likelihood of mass layoffs or to gain as many resources as possible before any dismissal.

Poor financial performance can be an incentive for earnings management, leading to fraudulent financial statement if it is conducted aggressively. Therefore, there is a great motivation for the managers to practice real earnings management when their firm is not doing well (Calderon et al. 2018). Most previous studies have stated that poor financial performance offers managers a strong motive to exploit recorded earnings for various reasons, like preventing violation of the loan arrangement or loss or reduction of earnings. Yang et al. (2016) found that managers will be willing to be involved in earnings

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management by overstating their earnings aggressively when their firm faces financial distress risk. This is because managers are pressured to achieve or exceed the benchmarks set.

Khanh and Nguyen (2018) found that profitability has a significant and positive association with real earnings management. The finding suggests that a higher degree of profitability leads to greater real earnings management activities. This finding is consistent with Fitri et al. (2018), who found that profitability has a significantly positive impact on earnings management. Such findings confirm the claim that managers are encouraged to be involved in operational discretion to boost their firm's efficiency and maximize profit (Roychowdhury, 2006), or to achieve analysts' estimation (Graham et al., 2005). In examining Indonesian mining listed firms, Adi et al. (2020) found that profitability of the firms has little impact on real earnings management. They argued that firms' greater or lesser profit relatively has no impact on real earnings management activities. Baatour, et al. (2017) reported a negative and significant relationship between return on assets (ROA) and real earnings management, which means that firms with lower ROA are more likely to be engaged in real earnings management. Despite the contradictory findings in prior studies, the first hypothesis in this study is:

***H_1*:** *There is a significant relationship between firm's pressure factor (financial performance) and the occurrence of real earnings management in Malaysian PLCs.*

Opportunity

The opportunity for wrongdoing derived from a deficiency in the control mechanisms, makes earnings management activities possible (Mohamed Yusof, 2016). These circumstances occur due to the inefficiency of controls, particularly within the organization, that give rise to the risk of fraud. The firm's board is a crucial component of corporate governance, and should serve as a protective tool against any misconduct in real earnings management. In this study, poor governance, in terms of board independence, multiple directorships and external audit quality, are used as proxies for the opportunity factor.

The lack of independent directors in the firm is one reason that triggers weak corporate governance (Hasnan et al., 2013); Beasley (1996) investigated the Agency Theory hypothesis and found that a larger percentage of outside directors can improve the board's supervision effectiveness. Independent board members have been linked to supervision effectiveness, while non-independent directors have been linked to ineffective supervision. Prior studies examining board independence and earnings management, have found that effective monitoring reduces earnings management, while some have argued that the competency of the board of directors (BOD) is based on their independence (i.e., Dechow et al., 1996; Beasley, 1996). Rajeevan and Ajward (2019) found a negative association, whereby board independence was related to a decline in real earnings management practices in Sri Lanka from 2015 to 2017. However, Kjaerland et al. (2020) reported that there is a positive relationship between the percentage of independent directors on the board and earnings management in Norway, indicating that the incidence of earnings management is commensurate with board independence. Similarly, Dakhlallh et al. (2021), who examined Jordanian firms, found that board independence is positively and significantly correlated with real earnings management. The contradictory findings from prior studies motivated this study to examine the association between board independence and the occurrence of real earnings management.

With regard to multiple directorships, previous research has consistently demonstrated two key concepts: the "*Reputation*" and "*Bussiness*" concepts (Cashman et al., 2012). According to Ferris et al. (2003), as a firm has more interactions with external parties, directors having a variety of relationships with these parties are needed to manage the

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incredibly challenging contractual operations. Using the same rationale, when a firm expands, its activities increase, necessitating the hiring of agents/directors with experience and expertise in raising funds for the benefit of the firm and its shareholders. Busy directors are seen to have these qualities, and it is in the best interests of the firm to employ them. This leads to the "*reputation*" concept, which states that directors who serve on several boards have greater knowledge, skills, competencies, and superior overseeing capabilities, thus contributing greater value to the business. Independent directors with several directorships (busy directors) may contribute many resources to the BOD. Certainly, the knowledge and independence of the board is important, but inadequate for ensuring managers work honestly, truthfully and with integrity (Calderón et al., 2018).

On the opposite end of the busyness concept spectrum, certain directors fail to fulfil their duties due to the lack of attention, concentration and intellectual capability. They either are relatively ineffective in executing surveillance and supervision duties, or they perceive the lack of interest as an opportunity to further their interests. In any case, this increases the risk of profits manipulation in those organizations since managers are not effectively overseen or led by monitoring board members. The "*busyness*" concept asserts that the board directors lack time and motivation to properly fulfil their obligations as directors (Ferris et al., 2003). As a result, managers may benefit from the less efficient supervision and participate in expropriation practices to gain benefits at the expense of the shareholders.

Iturriaga & Rodrguez (2014) posited that multiple directorships may enhance the performance of the firm. Shu et al. (2015) observed a significantly negative correlation between multiple directorships and earnings management as assessed by discretionary accruals. A recent study by Chee & Tham (2021) that examined Singaporean firms, disputes that there is a strong and negative association between multiple directorships and abnormal discretionary accruals, implying that a greater number of directors having multiple directorships on the board, leads to a lesser degree of earnings management. However, using Palestinian listed firms as sample, Saleh et al. (2020) found that multiple directorships do not influence the performance of the firm, suggesting that even if the board possess multiple directorship members, no advantages or costs are exerted on the firm's profitability. Considering the contradictory findings from prior studies, this study examines the association between multiple directorships and the occurrence of real earnings management.

In terms of external monitoring, audit quality is an important mechanism used to track managers' misconduct and help to align the interests of managers and shareholders (Alzoubi, 2017). Nevertheless, the questions on the effects of audit quality on real earnings management remain unanswered due to the mixed findings in previous studies. External audits play a vital role in eliminating information asymmetry between management and shareholders, which is also the source of other agency issues. By checking the fairness and reliability of the financial statement, the audit can improve its accuracy and reduce real earnings management occurrences (Khanh & Nguyen, 2018). One of the most popular indicators of audit quality in auditing literature is the size of the audit firm, which is frequently described as Big 4 vs. non-Big 4 (DeFond & Zhang, 2014). According to Behn et al. (1997), the variation in audit quality between the Big 4 and non-Big 4, is related to their multinational customer base; large audit firms are more likely to improve audit quality and avoid reputational threats. Besides, big firms are also more cautious in controlling earnings management than the non-big firms.

Saleem and Alzoubi (2016) found that firms using the services of Big 4 auditors in Jordan have a substantially lower extent of earnings management. Ozkan (2018), who investigated the relationship between audit quality and earnings management for non-financial firms listed on Borsa Istanbul, discovered that independent auditors and audit industry specialization are significantly and negatively related to the likelihood of earnings

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management, while long-term auditors and client relationships enable firm managers to fully participate in earnings management. The findings substantiate that a high-quality audit is among the most important elements toward reducing earnings management behaviour. According to Kurawa & Aca (2020); Rahman et al. (2020), audit firm size has significantly negative consequences on discretionary accruals, suggesting that firms audited by the Big 4 have lesser discretionary accruals. However, a significantly positive association between audit firm size and earnings management was observed by Yusuf (2021). The findings reveal that audit firm size is insufficient for restraining the earnings management activities of Nigerian publicly traded firms. The above discussion leads to the following hypothesis:

H_2: *There is significant relationship between firm's opportunity factors (H2a: board independence, H2b: multiple directorships, H2c: audit quality) and the occurrence of real earnings management in Malaysian PLCs.*

Rationalization

Rationalization is the extent to which a person-in-charge has a mind-set or ethical principles that would encourage him or her to commit unlawful activity. Once the management has discovered the best opportunity, there will be a desire to practice earnings management (Cressey, 1953). Many individuals who have engaged in fraud, attempt to rationalize unethical acts as being consistent with a moral code of ethics. In this study, related party transactions and existence of founder on the board are used as proxies of rationalization.

Related party transactions arise among the firm's senior executive team, representatives of its BOD, or close family members of these persons, as well as with the firm's associates (Huang & Liu, 2010). Alteration of accounting accruals and distortion of real activities for reaching particular objectives for financial performance, are the two basic approaches to control earnings (Roychowdhury, 2006). The utilization of related party transactions is a strategy that can accomplish the management of declared earnings objectives. Business owners may take advantage of such deals for their gain and seek to hide this by manipulating the financial statement (Habib et al., 2017). From the family firms' perspective, due to the extreme prevalence of the family firms, which is often correlated to low agency costs, and ineffective corporate governance practices, the real worry of mismanaging related party transactions is debatably more intense in developing countries than in developed countries, since the agency costs in these firms are in many circumstances among majority and minority shareholders (Abdullatif, 2016).

According to Arens et al. (2016), related party transactions might be utilized in earnings management and other sorts of deceptive accounting, such as deceptive valuation of these transactions. Offering shares to related parties at a lower price, transfer pricing, selling assets at a profit, and paying ridiculously high payments to senior executive managers, are some of the ways to carry out such transactions (Utama & Utama, 2009). Consequently, the benefits are transferred from minority to majority shareholders. Hasnan and Hussain (2015) reported a significantly positive association between related party transactions and the likelihood of financial restatement; the study suggests that frequent related party transactions lead to a greater likelihood of financial restatement. Focusing on a more severe misstatement sample or fraudulent financial statement, Hasnan et al. (2013) discovered a negative relationship between related party transactions and the incidence of fraud. Thus, it can be concluded that related party transactions are more likely to result in financial restatement due to aggressive accounting, which is classified in the category of earnings management rather than fraudulent accounting. In a later work, Hasnan et al. (2016) evinced that the presence of related party transactions is a possible source of conflict of interest that poses more

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opportunities to expropriate minority shareholders, while manipulating earnings to cover these expropriations. However, there are also studies that have found no correlation between related party transactions and real earnings management (i.e., Alhadab et al., 2020). El-Helaly et al. (2018) claimed that firms that engage in related party transactions are less likely to be involved in real earnings management.

With regards to the existence of founder on the firm's board, Claessens et al. (2000) specified that the founder and his or her heirs have powerful control over the firm. Hasnan, *et al*. (2013) believed that the presence of the founder on the firm's board can also lead to the likelihood of fraudulent financial statement. The founders are the architects who established the firm and have a significant influence on the firm's culture. In particular, the founders, regardless of the ownership interest, may have a greater personal and emotional connection to the firm than anyone else. It is common for the founders to have a deep sense of ownership or power over the organization in order to protect the firm by preventing a publicly declared loss. Consequently, real earnings management can be considered as an effort by the founders to escape embarrassment and prevent self-esteem loss. Hussain et al. (2016) found a significantly positive correlation between the presence of the founder on the board and financial restatement, and claimed that the founder on the board contributes to a deceptive report. Based on the above discussion, this study hypothesizes that:

H_3: *There is significant relationship between firm's rationalization factors (H3a: related party transactions, H3b: founder on the board) and real earnings management in Malaysian PLCs.*

RESEARCH METHODOLOGY

Sample Selection

This research contributes to the literature on factors that influence the PLCs in Malaysia by providing evidence on real earnings management in recent years. The population of this study involves PLCs listed on the Main Market of Bursa Malaysia between 2017 and 2019. The sample covers three recent years to obtain the current real earnings management condition in Malaysia. Table 1 summarizes the sample selection process. There were 783 Malaysian PLCs listed on the Main Market from 2017 until 2019. This population excludes 32 PLCs related to banking, financial institutions, and insurance companies that adopt different accounting policies and financial reporting requirements. A total of 194 firms were excluded from the sample due to the unavailability of data. Therefore, the final sample consists of 1,671 firm-year observations (557 listed firms in three years).

Table 1
SAMPLE SELECTION

Sample Size	Number of firms
Number of firms listed on Bursa Malaysia	783
Banking, financial institutions and insurance companies	(32)
Number of firms with incomplete data	(194)
Final sample	557

Data Collection

This study mainly used secondary sources. The data for pressure, opportunity and rationalization factors and real earnings management were collected through the firms' annual reports. The financial data were retrieved from the firms' financial statements and DataStream, or Thomson Reuter's database, while the non-financial data were extracted from the general information presented in their annual reports.

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Variables Measurement

Table 2 presents the measurement used for the dependent, independent and control variables included in the study.

Table 2
VARIABLES MEASUREMENT

Variable	Abbreviation	Measurement	Reference(s)
Dependent Variable			
Real Earnings Management	REM	The proxies for REM are abnormal cash flow from operations (ABNCFO), abnormal production costs (ABNPROD), and abnormal discretionary expenditure (ABNDISEXP). ABNCFO: Abnormal operating cash flows derived from the variance of actual operating cash flow values divided by total assets one year before testing, are reduced by the cash flows of normal operating activities. ABNPROD: Abnormal production costs derived from the variance in the value of actual production costs divided by total assets one year before testing are reduced by normal production costs. ABNDISEXP: Abnormal discretionary expenses derived from the variance of discretionary cost values divided by total assets one year before testing, are reduced by normal discretionary costs.	Dechow et al. (1996) adopted by Roychowdhury (2006)
Independent Variables			
Return on Assets	ROA	The percentage of profit after tax divided by total assets.	Baatour et al. (2017)
Board Independence	INDBOD	The percentage of outside directors on the board divided by the total number of directors on the board.	Hasnan et al. (2013)
Multiple Directorships	MULBOD	The number of directors having cross-directorships divided by the total number of directors on the board.	Hasnan et al. (2013)
Audit Quality	AUDQ	A dummy variable equal to 1 for Big 4 audit firm, and 0, otherwise.	Khanh and Nguyen (2018)
Related Party Transactions	RPT	The proportion of related party transactions to total assets.	Hasnan et al. (2016)
Founder on the Board	FOUNDER	The number of founders on the board divided by the total number of directors on the board.	Hasnan et al. (2013)
Control Variables			
Firm Size	SIZE	The natural logarithm book value of total assets.	Khanh and Nguyen (2018)
Firm Leverage	LEV	The proportion of total debt to total assets.	Rajeevan and Ajward (2019)

Model

In order to test the hypotheses, this study utilized a regression model to identify the factors associated with real earnings management as follows:

$$REM = \alpha + \beta 1\ ROA + \beta 2\ INDBOD + \beta 3\ MULBOD + \beta 4\ AUDQ + \beta 5\ RPT + \beta 6\ FOUNDER + \beta 7\ SIZE + \beta 8\ LEV + \mathcal{E} \ldots\ldots\ldots (1)$$

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RESULTS AND DISCUSSION

Descriptive Statistics

Table 3
DESCRIPTIVE STATISTICS

	Minimum	Maximum	Mean	Std. Deviation
REM	-0.88	0.98	0.0067	0.12291
ABNCFO	-0.432	0.949	0.00000	0.095491
ABNPROD	-0.726	0.603	0.00000	0.148670
ABNDISEXP	-0.606	0.831	0.00000	0.091076
ROA	-0.804	0.472	0.02308	0.090290
INDBOD	0.111	1.333	0.48315	0.132788
MULBOD	0.000	1.250	0.62952	0.255539
AUDQ	0.000	1.000	0.44345	0.496940
RPT	0.42	1.60	0.8255	0.10272
FOUNDER	0.000	0.667	0.05314	0.098129
SIZE	16.115	25.910	20.35037	1.552006
LEV	0.012	2.664	0.41062	0.219381

Table 3 presents the descriptive statistics of real earnings management and pressure, opportunity, and rationalization variables. As reported in Table 3, the mean value of residuals for the model of Dechow, et al. (1996) and adopted by Roychowdhury (2006), is 0.0067, and the maximum and minimum values of real earnings management for pooled data are 0.98 and -0.88, respectively. The mean values of all three proxies of real earnings management: *ABNCFO*, *ABNPROD* and *ABNDISEXP*, are zero, which indicates that on average, firms do not engage in any form of real earnings management. This is consistent with the estimation model's assumptions and in tandem with previous research (i.e., Huang & Sun, 2017). The maximum and minimum values of the real earnings management proxies, *ABNCFO*, *ABNPROD* and *ABNDISEXP*, are 0.949, 0.603, and 0.831 (max); and -0.432, -0.726, and -0.606 (min).

For the pressure factor, *ROA* on average is 0.023 (2.3%), which demonstrates low profitability relative to total assets. It also shows that the firms did not use their assets efficiently to generate earnings. This circumstance might have become a great motivation for the managers to practice earnings management when the firm did not do well, as per the finding of Yang et al. (2016). The highest percentage of *ROA* is 0.472 (47.2%), while the lowest is -.804 (-80.4%).

With respect to opportunity factors, the results show that the mean of board independence is 0.483 (48.3%), which meets the recommendation of the Malaysian Code on Corporate Governance (MCCG) 2000, that at least one-third of the board must comprise independent non-executive directors. The second opportunity factor, multiple directorships, is relatively high for the entire three-year period, which is at 0.629 (62.9%), and the result is consistent with Hasnan et al. (2016). This indicates that more than half of the board members hold additional directorships in other firms. Such findings are not surprising since multiple directorships are a common practice in Malaysian firms and it is allowed under the Listing Requirement of Bursa Malaysia. As for audit quality, the sample consists of 0.4435 Big 4 firms. Approximately, 44.3% of the sample was audited by the Big 4 auditors, which means less than half of the PLCs.

In terms of rationalization factors, the result indicates that related party transactions of Malaysian PLCs for the selected period seem to be high and significant, with an average of 0.825 (82.5%); the result is also consistent with Hasnan et al. (2016). For the other variable of

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rationalization factor, the founder on the board, the result shows that only 0.053 (5.3%) of the firms have founders sitting on the board.

Correlation Analysis

	REM (1)	ABNCFO (2)	ABNPROD (3)	ABNDISEXP (4)	ROA (5)	INDBOD (6)	MULBOD (7)	AUDQ (8)	RPT (9)	FOUNDER (10)	SIZE (11)	LEV (12)
1	1											
2	.449**	1										
3	.481**	-.338**	1									
4	.086*	.131**	-.614**	1								
5	-.094*	.377**	-.379**	.075*	1							
6	-0.006	-0.041	-0.003	-0.043	-.118**	1						
7	0.025	0.54	-0.019	0.011	0	0.038	1					
8	.116**	.125**	-0.007	0.027	.052*	-0.022	.215**	1				
9	-0.056	0.043	-0.082	0.046	.081**	-0.029	0.023	.079**	1			
10	-0.024	0.053	-0.039	0.018	.067**	-.065**	-.127**	0.047	-.083**	1		
11	.178**	.202**	0.055	-.100**	.135**	-0.046	.262**	.056*	.431**	-.113**	1	
12	.252**	0.034	0.078	0.043	-.215**	.095**	.134**	.082**	.169**	-.064**	.344**	1

Notes: ** and ** denote the significance at the 0.05 and 0.01 levels, respectively.*

Table 4 presents the results of correlation analysis of the studied variables. The statistical results above show the correlation among the dependent, independent and control variables. The correlation matrix shows that all real earnings management proxies are correlated positively with real earnings management, and *ABNDISEXP* shows a significantly small correlation (r=.086*), while *ABNPROD* shows a significantly medium correlation (r=.481**) as *ABNCFO* (r=.449**). This result is consistent with Alhadab & Nguyen (2018), who also reported a positive correlation between all these proxies and real earnings management.

As illustrated in Table 4, there is significant correlation between *ROA* and real earnings management; the coefficient shows negative sign (r=-.094*), suggesting that firms involved in real earnings management, report lower *ROA*. This finding substantiates previous studies by Baatour, et al. (2017) and Alhadab & Nguyen (2018) that have found negative and significant relationships between *ROA* and earnings management. Another variable having significant correlation with real earnings management is audit quality (r=.116**). This positive correlation is consistent with findings in Yusuf (2021), who examined the association between audit firm size and earnings management.

The highest correlation is found between *ABNPROD* and *ABNDISEXP* with coefficient of -.614, significant at the 0.01 level. This suggests that an increase in *ABNPROD* significantly results in a reduction in *ABNDISEXP*. Such finding is not surprising and it indicates that when firms carried out real earnings management through *ABNPROD*, they rarely engaged in real earnings management related to *ABNDISEXP*. Another moderate correlation is also found between *RPT* and *SIZE* at .431 and significant at the 0.01 level. The positive correlation between these variables suggests that larger firms engaged in a greater amount of *RPT*.

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Another interesting finding is regarding the significantly positive correlation between *SIZE* (r=.178**) and *LEV* (r=.252**), and real earnings management. The correlation indicates that larger firms with higher leverage are more likely to be involved in real earnings management than smaller firms with lower leverage. Jensen and Meckling (1976) stated that when the firm size increases, managers' discretion is also greater, resulting in an increase in the agency cost. The possible explanation is that management of a large firm faces more pressure to meet the stakeholders' expectations. Alhadab, *et al.* (2020) added that the presence of debts can lead to earnings management incentives in order to improve creditors' perception.

Multiple Regression Analysis

Table 5
REGRESSION ANALYSIS

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	B		
(Constant)	0.497	0.110		4.510	0.000
ROA	-0.116	0.074	-0.086	-1.563	0.076*
INDBOD	-0.022	0.048	-0.024	-0.465	0.642
MULBOD	0.013	0.026	0.028	0.510	0.611
AUDQ	0.013	0.014	0.091	1.581	0.056*
RPT	0.042	0.062	0.035	0.671	0.502
FOUNDER	-0.043	0.065	-0.035	-0.664	0.507
SIZE	-0.018	0.005	-0.234	-3.730	0.000***
LEV	0.184	0.032	0.331	5.722	0.000***
R Square					0.139

Notes: **, ** and *** denote significance at the 0.10, 0.05 and 0.01 levels, respectively.*

In order to test the hypotheses developed, multiple linear regression was fitted to estimate the occurrence of real earnings management based on the factors of pressure (*ROA*); opportunity (*INDBOD*, *MULBOD* and *AUDQ*); and rationalization (*RPT* and *FOUNDER*). The overall model shows an R-squared value of .139, which means that 13.9% of the variation in real earnings management is explained by the factors. Table 5 reveals that *ROA* and *AUDQ* show significant associations with real earnings management. It is worth noting that the signs of the coefficient of these variables are consistent with expectations. However, there is no statistical evidence to support the associations between INDBOD, MULBOD, RPT and FOUNDER variables and the occurrence of real earnings management.

ROA, which is the proxy for the pressure factor, shows a negative and significant association with real earnings management at the 10% level. This is consistent with the finding in Table 4 that shows a significant correlation between ROA and real earnings management. This suggests that higher value of ROA is associated with lower real earnings management incidence. In other words, most real earnings management incidences are linked to a lower ROA value. Since the study treated this variable as a pressure factor, the later argument prevails. As discussed earlier, poorly performing firms are more prone to be involved in earnings management than the healthy firms because the managers face greater pressure to meet stakeholders' expectations and to maintain their reputation. The result is consistent with Baatour et al. (2017), who revealed that less profitable firms are more likely to be engaged in earnings management. Therefore, hypothesis H1 is supported.

With respect to AUDQ which was measured using audit firm size, a significantly positive association is found between this variable and real earnings management. Since the study used this variable as one of the opportunity factors that leads to the occurrence of real earnings management, a positive coefficient was expected. The opportunity factors symbolise

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poor monitoring mechanisms by internal or external parties that allow wrongdoings to occur. The positive association thus indicates that Big 4 audit firms failed to effectively monitor the occurrence of real earnings management in the study period. The result is consistent with Yusuf (2021), who argued that audit firm size is insufficient to restrain earnings management activities. For that reason, hypothesis *H2c* is supported.

Concerning the other two opportunity factors, *INDBOD* and *MULBOD*, the insignificant association between these variables and real earnings management is probably due to the obligation of PLCs to rules, regulations and practices in Malaysia. For board independence, boards of Malaysian PLCs should comprise one-third independent non-executive directors as per the recommendation of MCCG 2000. Multiple directorships are a common practice in Malaysian firms since it is legally allowed under the Listing Requirement of Bursa Malaysia. The finding on *INDBOD* is consistent with a prior study conducted in Vietnam by Dang et al. (2017), which also shows a negatively insignificant result. Thus, hypotheses *H2a* and *H2b* are rejected

With regards to the rationalization factors, *RPT* and *FOUNDER*, there is no significant association found between these variables and real earnings management. It is worth noting that the sign of the coefficient for *RPT* is consistent with Hasnan & Hussain (2015), who examined Malaysian financial restatements. The coefficient for *FOUNDER* is consistent with Hasnan et al. (2013), who observed Malaysian firms' fraudulent financial statements. Thus, it can be argued that the insignificant findings are influenced by the sample firms and the inter-correlation among the factors included. As this study focuses on the real earnings management sample and fraud triangle factors, the results might differ. Hence, both hypotheses *H3a* and *H3b* are rejected.

Table 5 illustrates that the control variables, *SIZE* and *LEV*, are significantly related to real earnings management at the 1% level. The significantly negative relationship between *SIZE* and real earnings management indicates that small size firms are more likely to engage in real earnings management. Almarayeh et al. (2020) postulated that these firms probably intend to portray good financial performance in order to attract more investors and satisfy the shareholders. Looking from a different perspective, Paiva et al. (2019) argued that large firms are less likely to commit misstatements through real earnings management because these firms possess strong internal control, strict supervision and regulations. For *LEV*, the positive coefficient suggests that firms with high leverage tend to practice misstatement through real earnings management. The finding is consistent with Dang et al. (2017); Adi et al. (2020), who argued that higher leveraged firms are loaded with great pressure and risk on debt burden and financial distress status. This consequently led to the occurrence of real earnings management in order to cover-up the firms' poor performance.

CONCLUSION

In conclusion, the focus of this paper is to investigate the association between factors from the fraud triangle model, namely pressure, opportunity and rationalization, and the occurrence of real earnings management in Malaysia. The study finds that poor financial performance, specifically low ROA, and poor external monitoring, particularly by Big 4 auditors, influenced the occurrence of real earnings management in Malaysian PLCs. The findings of this study are crucial for reducing the real earnings management practices among Malaysian firms, particularly those that are publicly traded. Arguably, aggressive real earnings management may lead to the occurrence of fraudulent financial statement, resulting in negative consequences for various stakeholders, particularly investors and creditors. The occurrence of fraudulent financial statement further threatens the credibility of firms' financial statements and public trust in the capital markets. Hence, strengthening the quality

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of firm's corporate governance in order to secure a reasonable level of firm profitability and adequate level of monitoring, must be employed, and are important to reduce the risk of real earnings management, which is a threat to stakeholders, in particular, and the public, in general.

REFERENCES

Abdullatif, M. (2016). Auditing fair value estimates in developing countries: the case of Jordan. *Asian Journal of Business and Accounting, 9*(2), 101-140.

Adi, S.W., Putri, W.A.P., & Permatasari, W.D. (2020). Profitability, leverage, firm size, liquidity, and total assets turnover on liquidity, and total assets turnover on real earnings management (an empirical study on the mining company classification study on the mining). *Riset Akuntansi dan Keuangan Indonesia, 5*(2), 129-140.

Alawag, G. (2020). Business group opportunism: the difference in real earnings management between parent firms and non-parent firms. *Asian Journal of Accounting Research*.

Alhadab, M., & Nguyen, T. (2018). Corporate diversification and accrual and real earnings management: A non-linear relationship. *Review of Accounting and Finance*.

Alhadab, M., Abdullatif, M., & Mansour, I. (2020). Related party transactions and earnings management in Jordan: the role of ownership structure. *Journal of Financial Reporting and Accounting*.

Ali, M. J., Razzaque, R. M., & Ahmed, K. (2018). Real earnings management and financial statement fraud: evidence from Malaysia. *International Journal of Accounting & Information Management*.

Almarayeh, T.S., Aibar-Guzmán, B., & Abdullatif, M. (2020). Does audit quality influence earnings management in emerging markets? Evidence from Jordan. *Spanish Accounting Review, 23*(1), 64-74.

Alzoubi, E.S.S. (2018). Audit quality, debt financing, and earnings management: Evidence from Jordan. *Journal of International Accounting, Auditing and Taxation, 30*, 69-84.

Anagnostopoulou, S.C., & Tsekrekos, A.E. (2017). The effect of financial leverage on real and accrual-based earnings management. *Accounting and Business Research, 47*(2), 191-236.

Arens, A. A., Elder, R. J., Beasley, M.S., & Hogan, C. E. (2016). Auditing and assurance services. *Auditing and Assurance Services*.

Association of Certified Fraud Examiners (ACFE). (2020, 2018). Report to the nations on occupational fraud and abuse. Austin, TX: ACFE.

Baatour, K., Othman, H. B., & Hussainey, K. (2017). The effect of multiple directorships on real and accrual-based earnings management: Evidence from Saudi listed firms. *Accounting Research Journal, 30*(4), 395-412.

Bansal, M., Ali, A., & Choudhary, B. (2021). Real earnings management and stock returns: moderating role of cross-sectional effects. *Asian Journal of Accounting Research*.

Beasley M.S. (1996). An empirical analysis of the relation between board of directors' composition and financial statements fraud. *An Accounting Review, 71*(4), 443-465.

Behn, B.K., Carcello, J.V., Hermanson, D.R., & Hermanson, R. H. (1997). The determinants of audit client satisfaction among clients of Big 6 firms. *Accounting horizons, 11*(1), 7.

Bell, T.B., Szykowny, S., & Willingham, J.J. (1991). Assessing the likelihood of fraudulent financial reporting: A cascaded logit approach. *Unpublished Manuscript, April*.

Calderon, R., Piñero, R., & Redín, D.M. (2018). Can compliance restart integrity? Toward a harmonized approach. The example of the audit committee. *Business Ethics: A European Review, 27*(2), 195-206.

Callao, S., Jarne, J.I., & Wróblewski, D. (2014). The development of earnings management research. *Zeszyty Teoretyczne Rachunkowosci, 79*, 135-177.

Cashman, G.D., Gillan, S.L., & Jun, C. (2012). Going overboard? On busy directors and firm value. *Journal of Banking & Finance, 36*(12), 3248-3259.

Chee, K.D. and Tham, Y.H. (2021). The role of directors with multiple board seats and earnings quality: A Singapore context. *Journal of Corporate Accounting and Finance, 32(*1), 31-47.

Claessens, S., Djankov, S., & Lang, L. H. (2000). The separation of ownership and control in East Asian corporations. *Journal of financial Economics, 58*(1-2), 81-112.

Cressey, D.R. (1953). *Other people's money; a study of the social psychology of embezzlement*.

Dakhlallh, M.M., Rashid, N., Abdullah, W.A.W., & Shehab, H.J.A. (2021). The moderate effect of audit committee independence on the board structure and real earnings management: Evidence from Jordan. *Journal of Contemporary Issues in Business and Government, 27*(2), 123-133.

Dang, N.H., Hoang, T.V.H., & Tran, M.D. (2017). Factors affecting earnings management: The case of listed firms in Vietnam. *International Journal of Economic Research, 14*(20), 117-134.

Citation Information: Hasnan, S., Othman, N., & Hussain, Q.R.M. (2022). The influence of fraud triangle factors on real earnings management: Malaysian evidence. *Academy of Accounting and Financial Studies Journal, 26*(1), 1-18

Dechow, P.M., Sloan, R.G., & Sweeney, A. P. (1996). Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC. *Contemporary accounting research, 13*(1), 1-36.

DeFond, M., & Zhang, J. (2014). A review of archival auditing research. *Journal of accounting and economics, 58*(2-3), 275-326.

Dugan, M.T., & Taylor, G. (2016). Ethical issues related to earnings management: An instructional case. *Journal of the International Academy for Case Studies, 22*(3), 84.

El Diri, M. (2017). *Introduction to earnings management*. Springer.

El-Helaly, M., Georgiou, I., & Lowe, A.D. (2018). The interplay between related party transactions and earnings management: The role of audit quality. *Journal of International Accounting, Auditing and Taxation, 32*, 47-60.

Ewert, R., & Wagenhofer, A. (2005). Economic effects of tightening accounting standards to restrict earnings management. *The Accounting Review, 80*(4), 1101-1124.

Ferris, S.P., Jagannathan, M., & Pritchard, A.C. (2003). Too busy to mind the business? Monitoring by directors with multiple board appointments. *The Journal of finance, 58*(3), 1087-1111.

Fitri, A. (2018). Pengaruh Good Corporate Governance (GCG), Leverage dan Profitabilitas terhadap Manajemen Laba dengan Ukuran Perusahaan sebagai Variabel Moderating pada Perusahaan Perbankan yang terdaftar di Bursa Efek Indonesia dari Tahun 2012-2016. *International Journal of Research and Review, 5*(9), 49-66.

Habib, A., Muhammadi, A.H., & Jiang, H. (2017). Political connections and related party transactions: Evidence from Indonesia. *The International Journal of Accounting, 52*(1), 45-63.

Hasnan, S., & Hussain, A.R.M. (2015). Factors associated with financial restatements: Evidence from Malaysia. *Journal of Management (UKM Journal of Management), 44*.

Hasnan, S., Daie, M.S., & Hussain, A.R.M. (2016). Related party transactions and earnings quality: does corporate governance matter?. *International Journal of Economics & Management, 10*(2).

Hasnan, S., Rahman, R.A., & Mahenthiran, S. (2013). Management motive, weak governance, earnings management, and fraudulent financial reporting: Malaysian evidence. *Journal of International Accounting Research, 12*(1), 1-27.

Healy, P.M., & Wahlen, J.M. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting horizons, 13*(4), 365-383.

Huang, D.T., & Liu, Z.C. (2010). A study of the relationship between related party transactions and firm value in high technology firms in Taiwan and China. *African Journal of Business Management, 4*(9), 1924-1931.

Huang, X.S., & Sun, L. (2017). Managerial ability and real earnings management. *Advances in accounting, 39*, 91-104.

Hussain, A.R.M., Sanusi, Z.M., Mahenthiran, S., & Hasnan, S. (2016). Management Motives and Firm Financial Misstatements in Malaysia. *International Journal of Economics and Financial Issues, 6*(4S).

International Auditing and Assurance Standards Board (2009). The auditor's responsibilities relating to fraud in an audit of financial statements. *International Standard on Auditing 240. New York: International Federation of Accountants.*

López Iturriaga, F.J., & Morros Rodriguez, I. (2014). Boards of directors and firm performance: the effect of multiple directorships. *Spanish Journal of Finance and Accounting/Revista Espanola de Financiacion y Contabilidad, 43*(2), 177-192.

Jensen, M.C., & Meckling, W.H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics, 3*(4), 305-360.

Kamal, M. E. M., Salleh, M. F. M., & Ahmad, A. (2016). Detecting financial statement fraud by Malaysian public listed companies: The reliability of the Beneish M-Score model. *Management Journal (UKM Journal of Management), 46*.

Khanh, H. T. M., & Nguyen, V. K. (2018). Audit quality, firm characteristics and real earnings management: The case of listed vietnamese firms. *International Journal of Economics and Financial Issues, 8*(4), 243.

Kjærland, F., Haugdal, A.T., Søndergaard, A., & Vågslid, A. (2020). Corporate governance and earnings management in a Nordic perspective: evidence from the Oslo Stock Exchange. *Journal of Risk and Financial Management, 13*(11), 256.

KURAWA, J.M., & ACA, A.I. (2020). Audit Quality and Earnings Management of Listed non-financial Companies in Nigeria. *Global Scientific Journal, 8*(7).

Li, T., & Zaiats, N. (2017). Information environment and earnings management of dual class firms around the world. *Journal of Banking & Finance, 74*, 1-23.

Mohamed Yusof, K. (2016). *Fraudulent financial reporting: An application of fraud models to malaysian public listed companies (Doctoral dissertation, University of Hull)*.

Citation Information: Hasnan, S., Othman, N., & Hussain, Q.R.M. (2022). The influence of fraud triangle factors on real earnings management: Malaysian evidence. *Academy of Accounting and Financial Studies Journal, 26*(1), 1-18

Mohamed Yusof, K., Ahmad Khair, A.H. & Simon, J. (2015). Fraudulent Financial Reporting: An Application of Fraud Models to Malaysian Public Listed Companies. *The Macrotheme Review, 4*(3), 126-145.

Ozkan, A. (2018). Audit quality and earnings management: Evidence from Turkey. *Journal of Social Sciences 68*(23), 67-78.

Paiva, I.S., Lourenço, I.C., & Dias Curto, J. (2019). Earnings management in family versus non-family firms: the influence of analyst coverage. *Spanish Journal of Finance and Accounting/Revista Española de Financiación y Contabilidad, 48*(2), 113-133.

PwC (2020). Global Economic Crime and Fraud Survey 2020: Malaysian report.

Rahman, R. A., Omar, N.H., Osman, A.H., & Zakaria, M. (2020). Do Big Four Auditors Limit Real Earnings Management?.

Rajeevan, S., & Ajward, R. (2019). Board characteristics and earnings management in Sri Lanka. *Journal of Asian Business and Economic Studies, 27(*1), 2-18.

Rauf, F.H.A., Johari, N.H., Buniamin, S., & Rahman, N. R. A. (2012). The impact of company and board characteristics on earnings management: evidence from Malaysia. *Global review of Accounting and Finance, 3*(2), 114-127.

Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of accounting and economics*, *42*(3), 335-370.

Saleh, M.W., Shurafa, R., Shukeri, S.N., Nour, A.I., & Maigosh, Z. S. (2020). The effect of board multiple directorships and CEO characteristics on firm performance: evidence from Palestine. *Journal of Accounting in Emerging Economies*.

Shu, P.G., Yeh, Y.H., Chiu, S.B., & Yang, Y.W. (2015). Board external connectedness and earnings management. *Asia Pacific Management Review, 20*(4), 265-274.

Stanton, P., & Stanton, J. (2002). Corporate annual reports: research perspectives used. *Accounting, Auditing & Accountability Journal*.

Talbi, D., Omri, M.A., Guesmi, K., & Ftiti, Z. (2015). The role of board characteristics in mitigating management opportunism: The case of real earnings management. *Journal of Applied Business Research (JABR), 31*(2), 661-674.

Utama, C.A., & Utama, S. (2009). Stock price reactions to announcements of related party transactions. *Asian Journal of Business and Accounting, 2*(1&2), 1-23.

Xu, R.Z., Taylor, G.K., & Dugan, M.T. (2007). Review of real earnings management literature. *Journal of Accounting Literature, 26*, 195-228.

Yang, T.H., Hsu, J., & Yang, W.B. (2016). Firm's motives behind SEOs, earnings management, and performance. *International Review of Economics & Finance, 43*, 160-169.

Yusuf, A.M. (2021). Effect of Audit Quality on Earnings Management of Listed Consumers Goods Companies in Nigeria. *Fudma Journal of Management Sciences, 3*(1), 1-13.

Citation Information: Hasnan, S., Othman, N., & Hussain, Q.R.M. (2022). The influence of fraud triangle factors on real earnings management: Malaysian evidence. *Academy of Accounting and Financial Studies Journal, 26*(1), 1-18