Management Fraud Propensity Factors, Governance Interactions and Earnings Manipulation: a Case of Malaysian Public Listed Companies

Mohamad Ezrien Mohamad Kamal, Mohd Fairuz Md Salleh, Azlina Ahmad

*Abstract***: This study aims to determine Management Fraud Propensity Factors of Fraud Triangle and International Standards on Auditing no: 240 (ISA 240) relationship with earning manipulation. It also examines potential moderating effect of Corporate Governance, measured by index as proxy to opportunity on relationship between Management Fraud Propensity Factors and Earning Manipulation. Samples of this study consisted of 504 firm-year observations comprising of 252 earnings manipulating firms matched with 252 non-earnings manipulating firms based on industry, year and size. Corporate governance disclosure was measured using corporate governance index (CGI), replicated from ASEAN Corporate Governance Scorecard (ACGSC) components. Management fraud propensity factors (pressure/ incentives, opportunity, rationalization/ attitude) were examined using logistical regression to assess relationship with earnings manipulation. This study is unique as it utilised CGI as proxy for opportunity, replacing limited numerous governance attributes commonly used argued for deficiency in portraying existing linkage within corporate governance ecosystem. CGI was also tested on its potential moderating effect on relationship between management fraud propensity factors (pressure/ incentives; rationalization/ attitude) and earnings manipulation, in line with Agency Theory. Results revealed management fraud propensity factors of pressure/incentives (recurring negative cash flows from operation, rapid growth, unusual profitability, need for financing), opportunity (corporate governance index) and rationalisation/attitudes (management interest on earnings trend) significantly related with earnings manipulation. Contradictory to expectation, CGI also showed significant positive interaction on strengthening relationship between pressure-related fraud propensity factors due to recurring negative cash flows from operations and earnings manipulation. Possible explanation is firms with strong corporate governance but experiencing weak financial standings are constantly pressured by shareholders to meet their interests which driven management to manipulate profit. This study provides tools to regulators to stay vigilant of firms with characteristics of potential earnings manipulation engagement and useful in providing insights to shareholders for selecting stocks not prone to earnings manipulation.**

Keywords: Management Fraud Propensity Factors, Governance Interactions, Earnings Manipulation.

I. INTRODUCTION AND LITERATURE REVIEW

Fraudulent financial reporting still penetrating corporate governance defences, ending up as headlines on global news networks. Recent scandals subjected to fraud investigations involved Toshiba Corporation, in 2015 which had its profits overstated by USD 1.2 billion within seven years (Yan, 2015), and Tesco plc for overstating its profit in first half 2014 and the past 2 years by £265 million (Jenny, 2014). The scheme is the costliest type of fraud with median loss valued at USD 1 million (Association of Certified Fraud Examiners 2014). This is also in line with Committee of Sponsoring Organizations of the Treadway Commission (COSO, 2010) report on financial statements fraud in United States, which shown an increasing trend of 347 cases within a decade of 2007 – 1998 in comparison to 294 cases in the past decade of 1997 – 1987. The ramifications of such scandals led to decline in share market price, bankruptcy, disposals of material assets and termination from stock market trading (Center for Audit Quality 2010; COSO 2010). Bursa Malaysia in year 2015 as evidenced in its website, had reported a total of 14 companies found misstating their financial statements from 2012 to 2015, on top of recent scandals brought by Megan Media Holdings Bhd, Mems Technology Bhd, Transmile Group Bhd, Axis Incorporation Bhd and Silver Bird Bhd. Despite the formation of ASEAN Corporate Governance Scorecard and Malaysian Codes of Corporate Governance in 2011 and 2012 respectively, financial statements misstatements still persist. Furthermore, past studies suggested majority of financial statements fraud were due to earnings manipulation (Abdullah et al. 2010; Beneish, Lee & Nichols 2013; COSO 2010; Kamal, Salleh and Ahmad 2016; USGAO 2013; (Shanmugam et al. 2019a)). The practice involves violation of accounting rules by management through deliberate misstatements scheme on financial statements to positively reflect company's financial performance (Beneish 1999; Magrath & Weld 2002).

Management Fraud Propensity Factors, Governance Interactions and Earnings Manipulation: A Case of Malaysian Public Listed Companies

Prior studies also identified management fraud propensity factors that significantly related with financial statements fraud (Aghghaleh, Iskandar & Mohamed 2014; Apostolou, Hassell, Webber & Sumners 2001; Beasley 1996; Bell, & Carcello 2000; Hansen, McDonald, Messier & Bell 1996; Hasnan, Abdul Rahman & Mahenthiran 2013; Kaminski, Wetzel & Guan 2004; Loebbecke, Eining & Wilingham 1989; Lou & Wang 2009; Nieschwietz, Schultz & Zimbelman 2000; Persons 1995; Skousen & Wright 2008; Summers & Sweeney 1998; Wilks & Zimbelman 2004). Nevertheless, only few of these research adopted the three fraud triangle dimensions in its full form (Wilks and Zimbelman 2004;Skousen and Wright 2008;Lou and Wang 2009;Aghghaleh et al. 2014), with mixed results. The rest tend to focus more on either Opportunity or both Opportunity and Pressure dimensions only, while neglecting Rationalization. Hence, further study in area of earning manipulation, as part of fraudulent financial reporting utilising fraud triangle theory in its full three dimensions form still relevant due to limited number of researches with mixed outcomes.

Most prior studies on relationship of management fraud propensity factors and fraudulent financial reporting measured corporate governance as proxy to opportunity by dividing it into separate different attributes of audit committee, chairman duality, related party transactions and board of directors instead of in aggregate(Aghghaleh, Iskandar & Mohamed 2014; Apostolou, Hassell, Webber & Sumners 2001; Beasley 1996; Bell, & Carcello 2000; Hansen, McDonald, Messier & Bell 1996; Hasnan, Abdul Rahman & Mahenthiran 2013; Kaminski, Wetzel & Guan 2004; Loebbecke, Eining & Wilingham 1989; Lou & Wang 2009; Nieschwietz, Schultz & Zimbelman 2000; Persons 1995; Skousen & Wright 2008; Summers & Sweeney 1998; Wilks & Zimbelman 2004, Mosuin, Tuan Mat, Ghani, Alzeban, & Gunardi, 2019). Such approach may not meticulously portray precise details of corporate governance as intended. This is because effective corporate governance requires linkage of all parties involved within the governance systems, through coalitions of internal parties, external parties and board members (Huse 2007), hence by adopting several measures of corporate governance attributes separately can cancel off linkage between corporate governance mechanism at work (Schnyder, 2012).Furthermore, corporate governance comprises of interrelated components of internal and external mechanisms which are complex and more than what limited individual governance attributes can measure (Gaio & Raposo, 2014). In addition, each different separate individual substitutes measuring corporate governance has constraints to quantify and deprive the entire components of corporate governance at work (Larcker & Richardson, 2004). Thus, to overcome limitation in measurement of corporate governance as stated, this study proposes utilisation of Corporate Governance Index (CGI) as one aggregate measurement of corporate governance at work to proxy Opportunity. Prior limited studies which adopted index to measure corporate governance can be seen in Bebchuk, Cohen and Ferrell (2009), Brown and Caylor (2006), Gompers et al. (2003), Jiang, Lee and Anandarajan (2008), Leventis and Dimitropoulos (2012), and Gaio and Raposo (2014). Nevertheless, their studies on corporate governance were directed to earnings quality rather than fraudulent financial reporting, in addition to the index adopted being unique to US and UK practices. Hence, this study utilises an index, formulated from items in ASEAN Corporate Governance Scorecard 2011 (ACGS 2011) to measure corporate governance as proxy to opportunity. ACGS 2011 is used as foundation for constructing Corporate Governance Index as it was designed as reference of best practice for all companies within ASEAN countries.

In line with Agency Theory, Bryant & Davis (2012) argued that Corporate Governance can be adopted as policy to amend rules within which the agent operates and to fulfil principals' expectations. It reduces opportunity for engagement in financial fraud (Rezaee, 2005) and increases integrity in financial reporting (Kalbers 2009; OECD 2004; Securities Commission Malaysia 2012; Shanmugam et al. 2019b). Both pressure/ incentives and rationalization drive perpetrator to leverage on opportunity available to engage fraud (Wolfe & Hermanson 2004), while corporate governance slims that opportunity as argued by Rezaee (2005). Thus, in line with above argument, which is anecdotal in nature, this study intends to empirically demonstrate whether corporate governance, as a proxy to opportunity could mitigate relationship between management fraud propensity factors and earning manipulation.

Hence, this study aims to determine Management Fraud Propensity Factors of Fraud Triangle relationship with earning manipulation practice. It also examines potential moderating effect of Corporate Governance, measured by index as proxy to opportunity on relationship between Management Fraud Propensity Factors and Earning Manipulation. Findings from this study will be beneficial to stakeholders in understanding the impact that corporate governance policy has in reducing tendency for management in fulfilling their self-interest from committing fraudulent financial reporting via earning manipulation.

II. CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

Frauds comprised of three common characteristics (Cressey 1953). Firstly, opportunity exists for fraudster to commit fraud. Secondly, there is a pressure/ incentives or perceived non-sharable financial need for fraudster. Thirdly, rationalisation/ attitude by fraudster that their personal codes of ethics is coherent with their fraudulent act. These traits formed up a fraud triangle that is critical in identifying factors constantly existing in fraud. Fraud triangle theory was widely supported and used by audit professionals including standards' setters as tool for detecting fraud (Kassem & Higson 2012). This is evidenced in the revised "International Standard on Auditing 240 (ISA 240): The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements" issued by International Auditing Standards Board in 2009 which clarified that for financial statements fraud to take place, three factors of pressure/incentives, perceived opportunity, and rationalization/attitudes to commit fraud need to exist.

It also serves as an aid to understand antecedents to fraud (Dorminey, Fleming, Kranacher & Riley 2012).

Poor oversight by those charged with governance over internal control and financial reporting creates the gap or opportunity for management to engage fraudulent financial reporting (ISA240 2009). This lead to conflict of interest between managers and shareholders depicted in agency theory by Jensen and Meckling (1976). It can be reduced by either improving incentive structures for agents or increasing monitoring, control and oversight of managers through its board of directors (BOD) to align interest of owners with managers (Bryant & Davis, 2012). Thus, corporate governance mechanism with effective oversight by those charged with governance may reduce opportunity for fraud. While fraud triangle theory explains how opportunity allows commission of fraud by perpetrator that succumbed to pressure and rationalisation, agency theory clarifies function of corporate governance which reduces such opportunity for fraud. In another words, agency theory complements fraud triangle theory through corporate governance to explain how opportunity could interact against management fraud propensity factors and fraudulent financial reporting.

Most fraudulent financial reporting involved earnings manipulation. For instance, COSO (2010) found 61% of corporates fraudulent reporting scandals resulted from misstatement in revenue recognition. Another study by United States Government Accountability Office (2013) also found more than 50% of restatement cases in both exempt and non-exempt companies in United States from 2005 to 2011 were caused by misstatements in expenses and revenue recognition. In addition, Abdullah et al. (2010) investigated incidence of financial restatements among Malaysian public listed companies from 2002 to 2005 and discovered 54% of restatement cases derived from misstatements in revenue and expenses. Furthermore, facts provided by Bursa Malaysia in its website revealed 24 companies found misstating their financial statements from year 2012 to 2016,subsequent to formation of ACGSC and MCCG 2012.Kamal, Salleh and Ahmad (2016) also revealed 71% to 82% of Malaysian companies that committed fraud had engaged earnings manipulation.

A. Incentives/ Pressure to Commit Fraudulent Financial Reporting When Financial Stability or Profitability Is Threatened by Economic, Industry, Company Operating Condition

Management may encounter pressure/ incentives to engage earnings manipulation when company's financial stability or profitability is declining as a result of economic, industry and its operating condition. This can be signalled by 'recurring negative cash flows from operation' and 'rapid growth or unusual profitability'.

1) Recurring Negative Cash Flows from Operation

Company that reports earnings or earnings growth when cash flow from operation is negative may indicate it is having trouble with financial stability or profitability (ISA2402009). In addition, continuous negative operating cash flow over several periods in a row behind operating income can signal earnings manipulation (Gerard, 2013). This is also supported by Lou and Wang (2009) who found significant difference in recurring negative operating cash flow between fraud and non-fraud companies within two consecutive years. Furthermore, companies committing financial statements fraud were found to experience negative net cash flow from operation before the year fraud being identified (COSO 2010). Rather than that, Chen and Elder (2007) revealed strong positive relationship between negative operating cash flow and fraudulent financial reporting when analysing correlation of financial ratios. In addition, companies that manipulate earnings tend to have poor cash flow performance compared to those that did not (Beneish 1997). Thus, following hypothesis is formed:

H_1: Positive relationship exists between companies experiencing recurring negative cash flows from operations (RNCFOP) and earnings manipulation practice (EMP).

2) Rapid Growth or Unusual Profitability and Operating Conditions

Company experiencing rapid growth or unusual profitability compared to others within similar industry could signal problem with financial stability and profitability, which may lead to fraudulent financial reporting (ISA240 2009). Furthermore, unusual profitability may result from rapid growth in revenue as higher revenue can lead to increase in profitability. Skousen and Wright (2008) had proxied 'rapid growth or unusual profitability' with 'change in sales growth and industrial average sales growth' and found 'change in sales growth and industrial average sales growth' to be significantly different between fraud and non-fraud firms. Furthermore, Summers and Sweeney (1998) also found significant difference in terms of sustained growth in sales before fraud detection year between fraud firms and non-fraud firms. In addition, profit inconsistency against other firms in similar industry were significantly different between firms that committed fraud and those that did not (Loebbecke et al., 1989). Rather than that, rapid growth can also be measured by increase in total assets amount in comparison to related industry as shown by Lou and Wang (2009) who had found significant difference in terms of rapid growth based on assets values between fraud and non-fraud firms. Furthermore, Bell and Carcello (2000) revealed that company experiencing rapid growth to be significantly related with financial statements fraud. Thus, following hypotheses are formed:

H_{2a}: Relationship exists between companies that experiencing rapid growth or unusual profitability proxied by 'change in sales growth over industrial average sales growth' (SGROWP) and earnings manipulation practice (EMP).

H_{2b}: Relationship exists between companies that experiencing rapid growth proxied by 'growth rate in assets greater than industry median' (HIGHGP)and earnings manipulation practice (EMP).

ISA240 (2009) also stated financial stability or profitability of a company can be threatened by its operating conditions, which may trigger financial statements fraud.

Previous studies had adopted both Asset Turnover and Receivables Turnover Ratio to depict firm's operational conditions. This is because Asset Turnover ratio indicates firm's ability to generate revenue by utilising its assets efficiently (Warren & Reeve, 2007), and Receivable Turnover ratio shows availability of cash flows for a firm to finance its operation due to efficient collection from credit customers (Reider, 2002). In line with this, Persons (1995) had applied SALTA (sales over total assets) to reflect firm's operating efficiency as proxy for operating conditions and found significant positive relationship with fraudulent financial reporting. On top of that, Skousen and Wright (2008) had applied both SALTA (sales over total assets) and SALAR (sales over accounts receivable) to proxy firms' operating conditions and found both to be significantly different between fraud and non-fraud companies. In addition, despite both SALTA and SALAR being useful in measuring firm's operating efficiency, they are also beneficial in assessing likelihood of financial statements fraud (Golden et al. 2006). Furthermore Coenen (2008) argued that management attempt to overstate revenue will lead to unusual effect on account receivable, which may later assist in fraud detection, in view of SALAR (sales over accounts receivable). Thus, following hypotheses are formed:

H$_{2c}$: Relationship exists between companies operating conditions proxied by 'sales over total assets' (SALTAP) and earnings manipulation practice (EMP).

H$_{2d}$: Relationship exists between companies operating conditions proxied by 'sales over accounts receivable' (SALARP) and earnings manipulation practice.

B. Incentives/ Pressure to Commit Fraudulent Financial Reporting When Management Faces Excessive Pressure to Meet Expectations and Financial Targets Of 3rd Parties and Those Charged with Governance

Management may encounter pressure/ incentives to engage earnings manipulation when it is facing excessive pressure to fulfil financial targets and expectations of third parties and those charged with governance. Such incentives can be generated from 'pressure to meet profitability and trend level', having insufficient internal funding to finance operation and development, and failure to meet debt covenants and exchange listing requirements.

1) Pressure to Meet Profitability and Trend Level

Company's management facing pressure to meet profitability or trend level as expected by third parties and those charged with governance may be under excessive force to manipulate financial statements (ISA240 2009). Return on Assets (ROA) is widely used to evaluate managers' performance by those charged with governance and third party (Wiersema, 2006), as ROA measures management efficiency in utilizing company's assets allocated by all capital providers comprising of creditors, bondholders and shareholders to generate earnings (Porter & Norton, 2015). Thus, net income amount in ROA is subject to potential manipulation by management (Bragg, 2007), to portray favourable performance. In order to measure profitability and trend level target, Return on Assets ratio (ROA) had been adopted as proxy by Summers and Sweeney (1998) and Skousen and

Wright (2008) and was found to be significantly different between fraud and non-fraud companies, while showing significant positive relationship with fraudulent financial reporting (Summers and Sweeney 1998). However, Skousen and Wright (2008) had not found significant difference nor any relationship between Return on Assets (ROA) and financial statements fraud while both Dechow et al. (2011) and Perols and Lougee (2011) had revealed Return on Assets (ROA) is declining when financial statements manipulation takes place. Thus, the following hypothesis is formed:

H$_3$: Relationship exists between companies management facing pressure to meet profitability or trend level as expected by third parties and those charged with governance proxied by 'Return on Assets' (ROAP) and earnings manipulation practice (EMP).

2) Inadequate Internal Funding to Finance Operation and Development

Company's management in need of additional debt or equity financing to stay competitive and to finance research and development programs or capital expenditure, may be under pressure to commit financial statements fraud (ISA240 2009). Furthermore, managers tendency towards committing financial statements fraud is reduced when internal funding is sufficiently available. This was supported by Skousen and Wright (2008) who revealed significant difference in companies' free cash flows from operation still available after deducting cash dividends and capital expenditure between fraud and non-fraud companies. Thus, following hypothesis is formed:

H$_4$: Relationship exists between companies under pressure to obtain additional financing proxied by FREECP (free cash flows from operation still available after considering cash dividends and capital expenditure) and earnings manipulation practice (EMP).

3) Failure to Meet Debt Covenants and Exchange Listing Requirements

Company's management can be under pressure to manipulate financial statements to convey major ability in meeting exchange listing requirements and debts covenants requirements (ISA240 2009). Lou and Wang (2009), had used leverage ratio to measure compliance with debts covenants requirements and found significant positive relation between leverage and financial statements fraud. Furthermore, Press and Weintrop (1990) argued that management difficulty in complying with company's debt covenant is associated with the likelihood for management to overstate earnings, and found significant relationship between leverage and earnings overstatement. Nevertheless, both Skousen and Wright (2008) and Defond and Jiambalvo (1991), had not found any difference nor relationship between leverage level and financial statements fraud. Thus, following hypothesis is formed:

H$_5$: Relationship exists between companies under pressure to manipulate financial statements to convey major ability in meeting exchange listing requirements and debts covenants requirements proxied by 'leverage ratio' (TDTE) and earnings manipulation practice (EMP).

C. Incentives/ Pressure to Commit Fraudulent Financial Reporting When Personal Financial Situation of Management or Those Charged with Governance Is Threatened by Entity's Financial Performance

Management may encounter pressure/ incentives to engage earnings manipulation when its personal financial situation is under threat by company's poor financial performance. Such pressure may result from management or those charged with governance holding significant financial interest within a company.

1) Management Holding Significant Financial Interest in Company

Management or those charged with governance holding significant financial interest in the company can be pressured to manipulate financial statements when they are threatened with the company's financial performance (ISA240 2009). Skousen and Wright (2008) had found significant difference in share ownership by management between fraud firms and non-fraud firms and significant negative relationship of management share ownership and fraudulent financial reporting. However, when share ownership by management at 5% and beyond was considered, the results showed significant positive relationship with financial statements fraud. In another word incidence of fraud increases when management owned large portion of firm's shares. Rather than that, Dunn (2004) found positive significant relationship between management director ownership and fraudulent financial reporting. Furthermore according to Dunn (2004), Dechow et al. (1996) and Beasley (1996), insider management tend to have large ownership interest in companies that engage financial statements fraud. Thus, in line with above arguments, the following hypothesis is formed:

H$_{6a}$: Relationship exists between Management holding financial interest within the company (OWNP) and earnings manipulation practice (EMP).

H$_{6b}$: Relationship exists between management holding 5% or more financial interest within the company (FIVEOWNP) and earnings manipulation practice (EMP).

D. Opportunity to Commit Fraudulent Financial Reporting Due to Entity's Nature of Industry and Operations, Ineffective Monitoring of Management, And Weak Internal Control Components

Management has opportunity of engaging earnings manipulation when the monitoring and internal control systems of a company is weak, and its nature of operation is subject to high inherent risk. Such weaknesses in monitoring and internal control can be observed from its compliance with corporate governance codes.

1) Deficiency in Corporate Governance Mechanism

Management of the company may have opportunity to commit financial statements fraud when there is ineffective oversight by those charged with governance over internal control and financial reporting systems; when there is deficiency in internal control; when management is dominated by small group or individual; and due to entity's nature of industry or operations (ISA240 2009). Leventis and Dimitropoulos (2012) and Jiang et al. (2008), had found significant relationship between strong corporate governance mechanism measured by governance index and high earnings quality. This contradicted with the study by Gaio and Raposo (2014) who discovered significant negative relationship between corporate governance rating and earnings quality. In line with this following hypothesis is formed.

H$_7$: Relationship exists between opportunity for fraud proxied by Corporate Governance Index (CGI) and earnings manipulation practice (EMP).

E. Attitudes/ Rationalization to Commit Fraudulent Financial Reporting

Management may rationalize to engage earnings manipulation when there is history of violations on rules and regulations as seen in required restatements on financial statements, having strained relationship with auditors and involves aggressively in increasing earnings trend.

1) History of Violations or Required Restatements on Financial Statements

Circumstances where there were known history of securities and other laws violations by the company, and any claims made on the entity, management and those charged with governance, alleging fraud may highlight management rationalization or attitudes towards fraudulent financial reporting (ISA240 2009). Such circumstances, when proxied with number of required restatements in the past 2 years prior to fraud year revealed significant positive connection with fraudulent financial reporting (Lou & Wang, 2009). This was also supported by Abbott et al. (2004) who have found significant positive relationship between number of restatement cases prior to fraud and fraudulent financial reporting. Thus, following hypothesis is formed:

H$_8$: Positive relationship exists between number of required restatements in the past 2 years encountered by entity (RSTR) and earnings manipulation practice (EMP).

2) Strained Relationship between Management and Auditors

Strained relationship between external auditor and company's management as observed through frequent dispute with current or predecessor auditor, restriction by management on the auditor's scope of work and management attempts to influence auditor's job scope may signal management rationalisation and attitude towards fraudulent financial reporting (ISA240 2009). The strained relationship has been proxied with the incident of auditor change in the last 2 years prior to fraud year by Lou and Wang (2009) who found significant positive relationship with financial statements fraud. Furthermore according to George (2004), failure of audit, for instance in detecting fraud is significantly more likely to occur when the company change auditor. In addition, company that is under pressure due to financial distress condition is more likely to change its auditor (Abdul Nasser, Wahid, Syed Mustapha Nazri, & Hudaib, 2006).

Thus, the following hypothesis is formed based on the above arguments:

H₉: Positive relationship exists between the incidence of auditor change in the past 2 years prior to fraud detection (AUDCHGR) and earnings manipulation practice (EMP).

3) Management Aggressively Increasing Earnings Trend

Company's management having excessive interest in increasing or maintaining earnings trend to achieve unrealistic forecast may have rationalisation or attitudes towards fraudulent financial reporting (ISA240 2009). This is supported by Francis and Krishnan (1999), who revealed that high discretionary accruals attempted by management is likely to result in the external auditor to issue modified audit opinion. Furthermore, as argued by Skousen and Wright (2008), discretionary accruals as measured by total accrual over total assets (TATA), may be used to measure management rationalisation, which is reflective of their decision making to aggressively increase earnings trend. Nevertheless, Skousen and Wright (2008) failed to find any significant relationship between accrual as proxied by TATA and financial statements fraud. Thus, the following hypothesis is formed based on the above arguments:

H₁₀: Relationship exists between excessive interest by management to increase earnings trend through accruals (TATAR) and earnings manipulation practice (EMP).

F. Corporate Governance Index Moderating Effect on Relationship between Management Fraud Propensity Factors and Earning Manipulation

In line with Agency Theory, Bryant & Davis (2012) argued that Corporate Governance can be adopted as policy to amend rules within which the agent operates and to fulfil principals expectations. It reduces opportunity for engagement in financial fraud (Rezaee, 2005) and increases integrity in financial reporting (Kalbers 2009; OECD 2004; Securities Commission Malaysia 2012). Both pressure/ incentives and rationalization drive perpetrator to leverage on opportunity available to engage fraud (Wolfe & Hermanson 2004), while corporate governance slims that opportunity as argued by Rezaee (2005).

Opportunity is the doorway for fraud pressure/ incentives to realize into fraud occurrence (Cressey 1953). In another word, fraud cannot occur unless opportunity is present as argued by Center for Audit Quality (2010). Such increase in opportunity for perpetrator to engage in financial statements fraud derives from ineffective corporate governance (Rezaee, 2005). This is because strong corporate governance mechanism adopted by a company in line with corporate governance codes of best practices can increase accounting integrity and financial reporting reliability (Kalbers 2009; OECD 2004; Securities Commission Malaysia 2012), which is expected to reduce management tendency to engage earnings manipulation. In addition, conflict of interest by managers can be reduced with the implementation of effective corporate governance (Gompers et al., 2003). This is because, good corporate governance conduct that put strong emphasis on fraud prevention and deterrence may reduce opportunity for fraud from taking place by demotivating individuals from engaging deception (ISA240, 2009). In line with argument posed by fraud triangle theory and Agency theory, the following hypothesis is formed:

H₁₁: Opportunity for fraud proxied by corporate governance index (CGI) has a moderating effect on the relationship between management fraud propensity factors derived from pressure/incentives and rationalization and earning manipulation practice (EMP).

III. METHODOLOGY

This study covers period from 2012 to 2013 as they were subsequent to the year of introduction of ASEAN Corporate Governance Scorecard and Malaysian Corporate Governance blue print in 2011.Furthermore, Malaysian public listed companies were required to comply with International Financial Reporting Standards (IFRS) beginning 2012 by Malaysian Accounting Standards Board (MASB), which may lead to risk of misstatements during conversion (Tie 2011; Harrington 2006).

The research population includes companies listed on the Main Board of Bursa Malaysia in 2012 and 2013, excluding finance sector, REITS, and closed-end fund, due to their unique features, business operations, and differences in rules and regulatory requirements. Based on Bursa Malaysia's list of public listed companies as at 31 December 2012 and 31 December 2013 in (http://www.bursamalaysia.com), 921 and 911 companies were listed respectively, making a total of 1832 firm-year observations. Among these, 221 firm-year observations (2012 = 113; 2013 = 108) categorised under ACE Market were excluded from the samples, leaving only listed companies from the main board of 1611 (2012 = 808; 2013 = 803). Furthermore, 102 firm-year observations (2012 = 50; 2013 = 52) categorised within Finance, REITS, and Closed-end fund sectors were taken out from the main board samples. The remaining samples of 1509 (2012 = 758; 2013 = 751) were further analysed to ensure sufficient data available for application of the Beneish M-score model to detect earnings manipulation. 104 (2012 = 67; 2013 = 37) were further excluded from the samples due to insufficient data, leaving a total of 1405 firm- year observations (2012 = 691; 2013 = 714) from the main board. Beneish M-score model was applied on 1405 firm-year observations and their scores were compared against the cut-off point of -1.78 (a score greater than -1.78 indicates earnings manipulation practice by firms) as proposed by Beneish et al. (2013) and Beneish (1999). Hence, 135 and 117 companies were detected with earnings manipulation in 2012 and 2013 respectively, making up a total of 252 firm-year observations.

Next, to create a comparison group, non-earning manipulating firms were identified that are similar to earning manipulating firms based on size, industry and year. Each earning manipulating firm was matched with non-earning manipulating firm in accordance to following attributes, in line with Beasley (1996):

1. Firm Size. Non-earning manipulating firms are considered similar in size if the total assets is within + 30 percent of the total assets for earning manipulating firms in the year preceding year of earning manipulation detected.

2. Industry. Non-earning manipulation firms are matched against earning manipulating firms based on similar type of industry as classified on Bursa Malaysia's main board.

3. Year. Non-earning manipulating firm was included in the final sample if it matched with earning manipulating firm year and financial statements data were available for that period.

Both earning manipulating firms and non-earning manipulating firms do not differ significantly based on total assets and being matched closely based on type of industry and year. In determining whether earning manipulating firms and non-earning manipulating firms differ significantly based on Total Assets, paired t-tests for means and Wilcoxon matched-pair sign-rank test for medians were performed. The result revealed no statistically significant differences exist (p=0.10). In total, 504 firm-year observations were taken as sample for this study.

Table 1: Sample selection

	Number of firms 2012	Number of firms 2013	Number of firm-year observations
Total PLCs of Bursa Malaysia as at 31 December	921	911	1832
Less: PLCs listed in ACE market	(113)	(108)	(221)
Total PLCs from the Main board	808	803	1611
Less: Finance sector	(33)	(34)	(67)
Less: REITS	(16)	(17)	(33)
Less: Closed-end fund	(1)	(1)	(2)
Non-Financial PLCs from the main board	758	751	1509
Less: PLCs with insufficient or unsuitable financial data to apply Beneish M-score model	(67)	(37)	(104)
Total PLCs from the main board taken as samples for Beneish M-score application	691	714	1405
PLCs detected with earnings manipulation	135	117	252
PLCs not detected with earnings manipulation matched based on industry, year and size of total assets	135	117	252
Total earnings manipulation and non-earnings manipulation PLCs used as samples	270	234	504

Pressure/ incentives fraud propensity factors were represented by three areas of 1) threat on financial stability or profitability, 2) expectation of third parties and those charged with governance, and 3) significant financial interest in the entity, as spelled out in ISA240 (2009). Area 1) threat on financial stability or profitability was proxied by 5 variables of 'difference in sales growth and industrial average change in sales' (SGROWP), 'difference in assets growth and industrial average change in assets' (HIGHGP), 'recurring negative cash flows from operations' (RNCFOP), 'sales to total assets ratio' (SALTAP), and 'sales to accounts receivable ratio' (SALARP). As for area 2) expectation of third parties and those charged with governance were represented by 'return on assets ratio' (ROAP), 'free cash flow' (FREECP), 'leverage

ratio' (TDTE). For area 3) significant financial interest in the entity was reflected by 'management share ownership' (OWNP) and 'management owning more than 5% shares' (FIVEOWNP). Rationalisation/ attitudes fraud propensity factors were represented by 3 variables. They were 'number of financial statements restatements required in the last 2 years' (RSTR), 'auditor switching in the last 2 years (AUDCHGR), and 'total accrual to total assets ratio' (TATAR).

Opportunity fraud propensity factors was proxied by corporate governance index. The index was replicated from components of ASEAN Corporate Governance Scorecard (ACGSC), which contains latest codes of best practices of world standard and local regulations on corporate governance. All components of ACGSC that were relevant in measuring corporate governance disclosure in published annual report were included in corporate governance index. Data pertaining to governance were extracted from annual report to measure the score of aggregate corporate governance index in total. Each item listed on the corporate governance index was identified and compared against the governance disclosure made in the annual report. If such item matched the disclosure, it was given '1' and if no match, '0' was given. In addition, if any of corporate governance index's item had a constant uniform score of either 1 or 0 throughout the whole samples studied, that item was excluded from the index calculation. The aggregate corporate governance index score was later computed in total. In order to ensure the measurement of CGI score on each sample is done with fairness and without bias, it was subjected to test by three review experts selected among academicians from tertiary institutions. They were required to assess suitable CGI score for several samples used in this study. Total CGI score assessed by each of review expert was then compared against the actual total score measured by the researcher to identify differences in assessment of CGI score. Rationalisation for differences in assessment of CGI between researcher and review experts were discussed to consider any discrepancies in the assessment made by the researcher to obtain a more accurate measurement. As a result, the variances in CGI score between review experts and the researcher were reduced to 5% which is deemed as acceptable and not apparent. The decision to set variance level of 5% as cut-off point for consistency test among three expert reviews was consistent with (Zikmund, Babin, Carr & Griffin 2010) who argued 5% is the most common acceptable amount of error without distorting the result.

Control variables in this study comprised of 'log total assets size of company (SIZEC)', 'related party transactions relative to total sales (RPTO)', 'foreign sales relative to total sales (FOREIGNO)' and 'percentage of founder on Board of Directors (FOUNDRO)'.

A. Variables and Measurement

Binomial logistic regression was adopted as the nature of dependant variable is binary with only two potential outcomes to be coded as 1 for earnings manipulation event and 0 for non-earnings manipulation event as determined by Beneish M-score model.

M-score model based on research by Beneish et al. (2013). Earning Manipulation is determined using Beneish

M-score model in line with Beneish et al. (2013) and Beneish (1999) as depicted:

M-Score = $-4.84 + 0.92 DSRI + 0.528 GMI + 0.404 AQI + 0.892 SGI + 0.115 DEPI - 0.172 SGAI + 4.679 ACCRUALS - 0.327 LVGI$ [1]

Where:

DSRI	:	Days' Sales in Receivables Index. This measures the ratio of days' sales in receivables versus prior year as an indicator of revenue inflation.
GMI	:	Gross Margin Index. This is measured as the ratio of gross margin prior year versus current year. A firm with poorer prospects is more likely to manipulate earnings.
AQI	:	Asset Quality Index. Asset quality is measured as the ratio of non-current assets other than plant, property and equipment to total assets, versus prior year. It intends to measure the company's risk propensity to capitalise cost.
SGI	:	Sales Growth Index. This measures the ratio of sales versus prior year. While sales growth is not itself a measure of manipulation, the evidence suggests that growth companies are likely to find themselves under pressure to manipulate in order to keep up appearances.
DEPI	:	Depreciation Index. This is measured as the ratio of the rate of depreciation prior year versus current year. A slower rate of depreciation may mean that the firm is revising useful asset life assumptions upwards, or adopting a new method that is income friendly.
SGAI	:	Sales, General and Administrative expenses Index. This measures the ratio of SGA expenses to the prior year. This is used on the assumption that analysts would interpret a disproportionate increase in sales as a negative signal about firms' future prospects
LVGI	:	Leverage Index. This measures the ratio of total debt to total assets versus prior year. It is intended to capture debt covenants incentives for earnings manipulation
ACCRUALS	:	Accruals ratio. This is measured by computing the difference between net income before extraordinary items and cash flow from operations in proportion to total assets. Its purpose is to uncover instances when accounting profits not sufficiently backed by cash profits, which signals earnings manipulation.

The formula used to calculate the Beneish M-score's variables indices based on Beneish et al. (2013) and Beneish (1999) is as follows:

DSRI	=	$\dfrac{\text{Receivables}_t / \text{Sales}_t}{\text{Receivables}_{t-1} / \text{Sales}_{t-1}}$
GMI	=	$\dfrac{(\text{Sales}_{t-1} - \text{Cost of goods sold}_{t-1}) / \text{Sales}_{t-1}}{(\text{Sales}_t - \text{Cost of goods sold}_t) / \text{Sales}_t}$
AQI	=	$\dfrac{(1 - \text{Current Assets}_t + \text{PP\&E}_t) / \text{Total Assets}_t}{(1 - \text{Current Assets}_{t-1} + \text{PP\&E}_{t-1}) / \text{Total Assets}_{t-1}}$
SGI	=	$\dfrac{\text{Sales}_t}{\text{Sales}_{t-1}}$
DEPI	=	$\dfrac{\text{Depreciation}_{t-1} / (\text{Depreciation}_{t-1} + \text{PP\&E}_{t-1})}{\text{Depreciation}_t / (\text{Depreciation}_t + \text{PP\&E}_t)}$
SGAI	=	$\dfrac{\text{Sales, general and administrative expense}_t / \text{Sales}_t}{\text{Sales, general and administrative expense}_{t-1} / \text{Sales}_{t-1}}$
LVGI	=	$\dfrac{(\text{LTD}_t + \text{Current Liabilities}_t) / \text{Total Assets}_t}{(\text{LTD}_{t-1} + \text{Current Liabilities}_{t-1}) / \text{Total Assets}_{t-1}}$
ACCRUALS	=	$\dfrac{\text{Net income before extraordinary items} - \text{operating cash flow}}{\text{Total Asstes}}$

This study adopted the Beneish M-score of greater than -1.78 in line with Beneish, Lee, and Nichols (2013) to identify company that engaged earnings manipulation. Data and information required for the computation of Beneish M-score were obtained and extracted directly from financial statements, statement of cash flow position and notes to the accounts of the company, downloaded together with the annual report from Bursa Malaysia's website. Those public listed companies detected with M-score of greater than -1.78 were deemed as earnings manipulation firms and assigned with a score of 1, or 0 if the score was equivalent to or smaller than -1.78 for the measurement of non-earning manipulation firms.

Variables and corresponding measurements used in this study were as follows:

EM P	:	Earnings manipulation practice by firm, coded as 1 if firm commits, 0 otherwise.
RN CF OP	:	Recurring negative cash flow from operations for year t-1 and year t-2 coded as 1, otherwise 0
SG RO WP	:	Sales growth – industrial average change in sales

HIGHGP	:	Change in assets – industrial median change in assets; 1 if change > median industrial change, 0 otherwise
SALTAP	:	Sales to total assets ratio
SALARP	:	Sales to accounts receivable ratio
ROAP	:	Net Income b4 extraordinary items t-1 / Total Assets t
FREECP	:	Net cash flow from operation - cash div - capex
TDTE	:	Leverage ratio of total debt to total equity
OWNP	:	Shares owned by management / common shares outstanding
FIVEOWNP	:	Cumulative percentage ownership by management if > 5% coded as 1, otherwise 0
CGIO	:	Corporate governance index score
RSTR	:	number of earnings-affected restatements in past 2 years
AUDCHGR	:	1 if change in auditor in 2 years prior event year; 0 = no change in auditor
TATAR	:	Total accrual/ Total assets = [(wc(cy)-wc(py))-(cash(cy)-cash(py)) + (taxpayable(cy)-taxpyble(py)) + (current ltd(cy)-current ltd(py))-Depr(cy)]/Total assets (cy)
SIZEC	:	Control variable of log total assets size
RPTO	:	Control variable of related party transactions / total sales
FOREIGNO	:	Control variable of foreign sales / total sales
FOUNDRO	:	Control variable percentage of founder on Board of Directors

IV. RESULTS AND DISCUSSIONS

Public listed companies detected with earnings manipulation in 2012 and 2013 were presented in table 5.1. In 2012, 135 out of 691 companies listed on the main board of Bursa Malaysia detected with earnings manipulation. This represented about 19.53% of the listed companies on year 2012, which was slightly higher than year 2013 by 3.15%. In year 2013, 117 out of 714 companies (16.38%) on the main board detected with earnings manipulation.

Table 2 Tabulation of earnings manipulation firms and non-earnings manipulation firms for year 2012 and 2013 by Bursa Malaysia's sector as identified by Beneish M-score model.

Sector / Year	2012				2013			
	Number of Earnings manipulation firms	%	Total companies by sectors	% of Earnings manipulation firms within sector	Number of Earnings manipulation firms	%	Total companies by sectors	% of Earnings manipulation firms within sector
Consumer product	23	17	122	18.8	14	11.96	122	11.47
Industrial product	40	29.6	223	17.9	24	20.51	228	10.52
Construction	11	8.1	40	27.5	15	12.82	41	36.58
Trading	24	17.7	157	15.28	29	24.78	170	17.05
Properties	22	16.3	76	28.94	21	17.9	79	26.58
Plantation	7	5.1	38	18.42	8	6.83	38	21.05
Hotels	0	0	4	0	0	0	4	0
Technology	7	5.1	25	28	5	4.27	26	19.23
Infrastructure	1	0.74	6	16.66	1	0.85	6	16.66
Total	135	100	691	19.53	117	100	714	16.38

A. Correlation Coefficient Test and Multicollinearity

Correlation coefficient testrevealed7 covariates having significant relationship with earnings manipulation (SGROWP, SALARP, RNCFOP, FREECP, CGI, TATAR at p-value < 0.01, FIVEOWNP at p-value < 0.05). They were tested for multicollinearity effect using multicollinearity diagnostics such as spearman rank order correlation matrix, tolerance value and variance inflation factor (VIF). Initially, the r coefficient of each covariate in the spearman rank order correlation matrix was observed and compared against the cut-off point of $r \geq 0.9$, in line with Pallant (2011)with none of the covariates has $r \geq 0.9$. Next step was to assess the tolerance and VIF score of each covariate to detect multicollinearity. Each covariate tolerance score was compared against the cut-off limit of Tolerance ≤ 0.1 as suggested by Miles and Shevlin (2001), Pallant (2011) and Menard (2001) who suggested Tolerance ≤ 0.2 to indicate severe multicollinearity. None of the covariates has tolerance equal or lesser to 0.2. The VIF score for every covariate was observed to ensure it did not exceed VIF ≥ 10 (Miles & Shevlin 2001; Pallant 2011) and VIF ≥ 1.5 (Greene 2002). 2 covariates namely OWNP and FIVEOWNP displayed VIF of 2.28 and 2.36 respectively and hence one of the covariates (OWNP) was taken out to reduce the multicollinearity effect.

B. Selection of Covariates

Covariates chosen for inclusion into the model were based on purposeful selection method as suggested by Hosmer et al. (2013). All variables having p-value equal or smaller than 0.25 in univariate analysis were selected into the model. Further test was done to confirm none of covariates removed having any confounding effect on other variables in the model. Finally, 6 independent variables namely SGROWP, SALARP,

Retrieval Number: C6455098319/2019©BEIESP
DOI:10.35940/ijrte.C6455.098319
Journal Website: www.ijrte.org

8657

Published By:
Blue Eyes Intelligence Engineering
& Sciences Publication

FREECP, RNCFOP, CGI and TATAR were selected to be included into the model. Hence, the model before moderating effect is as follows:

$$EMP = B_0 + \beta_1 RNCFOP + \beta_2 SGROWP + \beta_3 SALARP + \beta_4 FREECP + \beta_5 CGIO + \beta_6 TATAR + \epsilon$$

(Equation 5.1)

Where:

EMP	:	Earnings manipulation practice by firm, coded as 1 if firm commits, 0 otherwise.
RNCFOP	:	Recurring negative cash flow from operations for year t-1 and year t-2 coded as 1, otherwise 0
SGROWP	:	Sales growth – industrial average change in sales
SALARP	:	Sales to accounts receivable ratio
FREECP	:	Net cash flow from operation - cash div - capex
CGIO	:	Corporate governance index score
TATAR	:	Total accrual/ Total assets = [(wc(cy)-wc(py))-(cash(cy)-cash(py)) + (taxpayable(cy)-taxpyble(py)) + (current ltd(cy)-current ltd(py))-Depr(cy)]/Total assets (cy)

Table 3: Logistic regression model with significant covariates having p-value <0.10

Logistic regression						Number of obs = 504
						LR chi2(6) = 194.20
Log likelihood = -252.24589						Prob > chi2 = 0.0000
						Pseudo R2 = 0.2779
EMP	Coef.	Std. Err.	z	P>|z|	[95%	Conf. Interval]
SALARP#	-.2967775	.1290957	-2.30	0.022	-.5498004	-.0437546
FREECP#	-6.176932	1.088071	-5.68	0.000	-8.309512	-4.044352
RNCFOP	.7142192	.3638888	1.96	0.050	.0010101	1.427428
SGROWP	1.103007	.2586164	4.27	0.000	.596128	1.609886
CGIO	-3.387736	1.20463	-2.81	0.005	-5.748768	-1.026704
TATAR#	.0245505	.0048173	5.10	0.000	.0151088	.0339923
_cons	4.300842	.9880536	4.35	0.000	2.364292	6.237391

The model as in equation 5.1 was further tested for further potential interacting effect by CGIO, a proxy to opportunity on other variables representing pressure (SALARP, FREECP, RNCFOP, SGROWP) and rationalisation (TATAR), in line with Agency Theory argument that corporate governance streamlined agent's behaviour in line with principals' objectives. Thus, model 2 with interacting effect for this study is as follows:

$$EMP = B_0 + \beta_1 RNCFOP + \beta_2 SGROWP + \beta_3 SALARP + \beta_4 FREECP + \beta_5 CGIO + \beta_6 TATAR + \beta_7(RNCFOP*CGIO) + \beta_8(SGROWP*CGIO) + \beta_9(SALARP*CGIO) + \beta_{10}(FREECP*CGIO) + \beta_{11}(TATAR*CGIO)$$

(Equation 5.2)

EMP	:	Earnings manipulation practice by firm, coded as 1 if firm commits, 0 otherwise.
RNCFOP	:	Recurring negative cash flow from operations for year t-1 and year t-2 coded as 1, otherwise 0
SGROWP	:	Sales growth – industrial average change in sales
SALARP	:	Sales to accounts receivable ratio
FREECP	:	Net cash flow from operation - cash div - capex
CGIO	:	Corporate governance index score
TATAR	:	Total accrual/ Total assets = [(wc(cy)-wc(py))-(cash(cy)-cash(py)) + (taxpayable(cy)-taxpyble(py)) + (current ltd(cy)-current ltd(py))-Depr(cy)]/Total assets (cy)
RNCFOP*CGIO	:	Interaction of governance mechanism on recurring negative cash flows
SGROWP*CGIO	:	Interaction of governance mechanism on sales growth vs industry average sales growth
SALARP*CGIO	:	Interaction of governance mechanism on sales/ accounts receivable ratio
FREECP*CGIO	:	Interaction of governance mechanism on free cash flow after dividend and capex
TATAR*CGIO	:	Interaction of governance mechanism on total accrual/ total assets ratio

Table 4 shows a logistic regression model after inclusion of interaction terms. One interaction term namely, CGI x RNCFOP showed interaction at p-value = 0.010, which was significant at p-value<0.05, before performing further logistic regression diagnostic.

Table 4 : Results of interaction effect on management fraund propensity factors

EMP	No of obs = 504		No of obs = 504		No of obs = 504		No of obs = 504		No of obs = 504	
	z	P>|z|	z	P>|z|	z	P>|z|	z	P>|z|	z	P>|z|
SALARP#	-2.04	0.041	-2.27	0.023	-2.30	0.021	-2.27	0.023	-2.37	0.018
FREECP#	-5.56	0.000	-5.69	0.000	-5.71	0.000	-5.12	0.000	-5.70	0.000
SGROWP#	4.28	0.000	4.25	0.000	4.49	0.000	4.28	0.000	4.26	0.000
RNCFOP	2.44	0.015	1.88	0.060	1.96	0.050	1.93	0.053	1.88	0.060
CGI	-1.84	0.066	-2.33	0.020	-0.70	0.482	-2.79	0.005	-2.64	0.008
TATAR#	4.94	0.000	5.17	0.000	5.08	0.000	5.09	0.000	5.05	0.000
CGI x RNCFOP	2.57	0.010								
CGI x TATAR			1.03	0.301						
CGI x SGROWP					1.03	0.304				
CGI x FREECP							0.34	0.734		
CGI x SALARP									-0.82	0.410

Interaction term's CGI x RNCFOP was included into the improved logistic model. As for the rest of interactions consisting of CGI x SALARP, CGI x FREECP, CGI x SGROWP, and CGI x TATAR were not significant at p-value exceeding 0.10, and thus excluded from the improved model.

A goodness of fit of data was employed to verify whether the model fits the observations' data well. The log likelihood chi-square of the model was significant at p-value = 0.0000 which meant the multivariate logistic regression model as a whole is statistically significant and generally fits the data. Further test was employed using Hosmer and Lemeshow's goodness of fit test which produce large p-value if the model is a good fit as revealed in the existing model at 0.5869.

Another technique of assessing the model good fit is to plot ROC curve for the current logistic model. The ROC curve for the current model with interaction terms lies above the 45-degree line reference, which provided evidence of good fit of data. The area under ROC curve = 0.8355 indicated that 83.55% of observations have been correctly classified by the current model, which was within the range of (0.8≤ROC<0.9).

Thus, the current model with interaction terms have excellent fit of data.

C. Binary Logistic Regression Results for Management Fraud Propensity Factors

RNCFOP showed significant positive relationship with earnings manipulation. Recurring negative cash flows from operations experienced by a company may indicate pressure faced by management to engage financial statement fraud to overcome negative result in cash flow position. This is in line with Gerard (2013) who reckoned earnings manipulation can be signalled by company experiencing negative operating cash flow over periods in a row while reporting profit. It is also consistent with Chen and Elder (2007) who found strong positive relationship between negative operating cash flow and fraudulent financial reporting. Rather than that, this is in line with Beneish (1997) and COSO (2010) that firms experiencing recurring negative cash flows tend to manipulate its earnings. Thus, hypothesis H1 is supported.

Significant positive relationship also existed between company experiencing rapid growth or unusual profitability as proxied by SGROWP and earnings manipulation. Company with high growth trend as proxied by high sales growth over the industry may indicate pressure faced by management in engaging earnings manipulation in order to be parallel with the industry. Bell and Carcello (2000) had discovered significant relationship between company experiencing rapid growth and financial statements fraud. Furthermore, management is concerned on bolstering firm's performance to meet growth expectation within industry through fraud means (KPMG 2016). Thus, hypothesis H2a is accepted and supported.

Company's operating conditions proxied by SALARP displayed significant negative relationship with earnings manipulation. This signifies that a company with high SALARP (sales over accounts receivable) tend to have lower likelihood of earnings manipulation. This is because financial statements fraud scheme usually involved overstatement of revenue through accounts receivable by management (Coenen 2008). In other words, higher SALARP may indicate lower pressure encountered by management due to good operating condition resulted from efficient receivable collection policy. Thus, hypothesis H2d is accepted and supported. Significant negative relationship also existed between a circumstance where a company is being under pressure to seek for additional financing as proxied by FREECP (free cash flows from operation still available after considering cash dividends and capital expenditure) and earnings manipulation. The result signified that a company with high FREECP tend to have lesser pressure to seek for additional financing and has lower likelihood of committing earnings manipulation. This finding supported International Standards on Auditing number 240 (ISA 240) that company in need of obtaining additional financing when internal fund is insufficient tend to commit financial statements fraud. Thus, hypothesis H4 is accepted and supported.

There was also significant negative relationship between opportunity for fraud proxied by CGI (corporate governance index score) and earnings manipulation. This finding may emphasise that company with low fraud opportunity signified by strong corporate governance mechanism measured with corporate governance index score tend to have lower likelihood of earnings manipulation. This is in line with ISA 240, which mentioned that ineffective management monitoring and weak internal control that resulted from weak corporate governance mechanism tend to open up the opportunity for management to commit financial statements fraud. Rather than that, this finding is also consistent with Leventis and Dimitropoulos (2012) and Jiang et al. (2008) who found positive significant relationship between corporate governance mechanism as measured by corporate governance index and high earnings quality. Thus, hypothesis H7 is accepted.

TATAR displayed significant positive relationship with earnings manipulation. This may emphasise that company's management with excessive interest to increase earnings through accruals tend to have high likelihood of earnings manipulation. This is in line with ISA 240, which mentioned that management of a company who is having excessive interest in increasing earnings trend tend to have attitudes or rationalisation towards committing financial statements fraud. Thus, hypothesis H10 is accepted.

D. Binary Logistic Regression Results for Corporate Governance Interaction

The result in table 5.4 revealed significant positive interaction of CGI x RNCFOP at p-value < 0.05, with earnings manipulation. Further, the interaction of CGI x RNCFOP (corporate governance index and recurring negative cash flows from operation) has an increasing effect on the positive relationship between RNCFOP (recurring negative cash flows from operation) and EMP (earnings manipulation) as observed in the increase of RNCFOP's positive coefficient before and after interaction effect (from 0.7142 to 1.1022). This finding contradicts expectation that CGI interactions with RNCFOP would result moderation on relationship between pressure / incentives for fraud due to recurring negative cash flows and earnings manipulation. This can be explained such that when company encountered recurring negative cash flows from operations over two consecutive periods, this put pressure on management to manipulate earnings. Nevertheless, strong corporate governance mechanism which proxied fraud opportunity increases further pressure and incentives for management to engage earnings manipulation as evidenced on stronger relationship between RNCFOP and EMP after interaction effect. This can be explained based on Lambert and Sponem (2005) argument that companies with strong corporate governance attracted more short-term institutional investors that tend to increase their share prices volatility. This however led to increase in shareholders' pressure on invested firms with weak financial standing, which in turn drove incentive for their management to pursue earnings manipulation to meet market expectation. Such firms with weak financial standing can be gauged based on their cash flow position which is considered as the main trustworthy indicator relied by most investors subsequent to era of accounting debacles (Mulford & Comiskey, 2005). Furthermore Lehmann (2016) found that firms with strong corporate governance were aggressively involved in earnings manipulation compared to firms with weak governance due to corporate governance role which pressure management to act in shareholders' interest. In addition,

similar case can be observed in Satyam scandal where despite being awarded with numerous accolades for outstanding governance and corporate accountability, its management was caught committing financial statements fraud (Agrawal, 2009).

Nevertheless, only RNCFOP was found to have interaction effect with CGI. The rest was not true for other significant management fraud propensity factors such as SALARP, FREECP, SGROWP and TATAR. Some of the reasons that distort CGI potential interaction with other significant management fraud propensity factors may be due to following. Firstly according to Kaplan (2010), despite having rigid corporate governance rules such as the Sarbanes Oxley Act (SOX) in the United States (US), earnings manipulation cases by corporations are on the rise since the SOX implementation, as management still prioritise maximization of their compensation and the need to meet market expectation. This may be due to the fact that management had foreseen by meeting stakeholders' interests such as fulfilling market expectation and their compensation needs would also mean they had fulfilled part of corporate governance objective, thus allowing earnings manipulation to take place. Secondly, corporate governance mechanism itself is also seen as the main reason for corporate failure due to over emphasis on overcoming corporate misconduct through stringent legislation and rules which did not had a desired outcome (KPMG, 2016). For instance, as argued by KPMG, the implementation of improved corporate governance structure has been in the form of checklist exercise of compliance, which does not transform the mindsets of management, and those charged with governance to be aware of their main responsibilities. Thus, due to these reasons, corporate governance itself may be seen as one of the reasons for corporate failure in preventing fraud. Hence, hypothesis H11is supported for interaction effect by CGI on RNCFOP.

E. Multivariate Logistic Regression Robustness Check

The robustness of the regression model with interaction terms was further tested. First method involved removal of three covariates from the model one at a time and altogether at once, in line with Beneish (1999). Three main covariates namely SALARP, TATAR, and SGROWP were selected for this process. Initial step involved removing SALARP from the model with the rest of the remaining covariates still remain significant. The next step was to take out TATAR only which resulted in all remaining covariates still remain significant. Then, SGROWP was taken out resulting in similar result. The three covariates were also taken out from the model at once and the result still showed significant p-value among remaining covariates as per **Table 5**. Thus, the logistic regression model is very robust towards the removal of covariates from the model.

Table 5: Results of model robustness test after removal of selected covariates from the model one at a time and altogether

EMP	Full model		Remove SALARP		Remove TATAR		Remove SGROWP		Remove 3 covariates	
	z	P>|z|	z	P>|z|	Z	P>|z|	z	P>|z|	z	P>|z|
SALARP#	-2.04	0.041			-2.54	0.011	-1.94	0.052		
FREECP#	-5.56	0.000	-5.59	0.000	-5.72	0.000	-5.28	0.000	-5.47	0.000
SGROWP	4.28	0.000	4.30	0.000	4.68	0.000				
RNCFOP	2.44	0.015	2.78	0.005	2.43	0.015	2.53	0.012	3.11	0.002
CGI	-1.84	0.066	-1.91	0.056	-2.00	0.045	-2.15	0.031	-2.49	0.013
TATAR#	4.94	0.000	5.15	0.000			6.21	0.000		
CGI x RNCFOP	2.57	0.010	2.72	0.006	2.83	0.005	2.62	0.009	2.93	0.003

The second method was to replace CGI with 5 individual governance attributes that were normally used in past studies comprising of board independence, directors cross-directorship, audit committee size, number of audit committee meeting, and audit committee independence as per **Table 6**.

Table 6: Results of logistic regression upon replacement of CGI with 5 governance individual attributes

Logistic regression					Number of obs = 504	
					LR chi2(10) = 205.10	
Log likelihood = -246.79382					Prob > chi2 = 0.0000	
					Pseudo R2 = 0.2936	
EMP	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
SALARP#	-.2786707	.1331872	-2.09	0.036	-.5397128	-.0176286
FREECP#	-5.854674	1.090216	-5.37	0.000	-7.991459	-3.717889
RNCFOP	1.341973	.4863093	2.76	0.006	.3888244	2.295122
SGROWP	1.131233	.2622306	4.31	0.000	.6172709	1.645196
BODINDO	-2.111507	1.147849	-1.84	0.066	-4.361249	.1382348
CROSSDIRO	.5092507	.4539956	1.12	0.262	-.3805642	1.399066
AUDCSIZO	1.760014	1.223276	1.44	0.150	-.6375629	4.15759
AUDCOMINDO	1.440311	.8237529	1.75	0.080	-.1742146	3.054838
AUDMEETO	-.0454806	.096387	-0.47	0.637	-.2343957	.1434344
TATAR#	.0240316	.004872	4.93	0.000	.0144826	.0335806
CGIxRNCFOP	18.66965	6.094397	3.06	0.002	6.724854	30.61445
_cons	1.010253	1.144383	0.88	0.377	-1.232697	3.253204

All of the existing covariates in the logistic regression model still remained significant at p-value <0.05, even after CGI being replaced with 5 governance attributes. Thus, it can also be concluded that the current logistical regression model with interaction terms is very robust against the replacement and inclusion of new covariates into the model.

Retrieval Number: C6455098319/2019©BEIESP
DOI:10.35940/ijrte.C6455.098319
Journal Website: www.ijrte.org

8660

Published By:
Blue Eyes Intelligence Engineering
& Sciences Publication

V. CONCLUSIONS

Earnings manipulation was prevalent among Malaysian public listed companies subsequent to introduction of ASEAN Corporate Governance Scorecard and Malaysian codes of corporate governance 2012. In addition, ISA 240's fraud triangle dimensions were useful in generating management fraud propensity factors that mostly related with earnings manipulation. Furthermore, opportunity-related fraud propensity factors proxied by corporate governance index showed significant interacting effect on the relationship between 'recurring negative cash flows from operations' (RNCFOP) and earnings manipulation. The interaction also increased further the strength of relationship between RNCFOP and earnings manipulation. The model is robust against removal of 3 main covariates from its structure and against replacement of corporate governance index by 5 individual governance attributes.

VI. LIMITATIONS OF THE STUDY AND AREA FOR FUTURE RESEARCH

Beneish M-score model was used to detect earnings manipulation which may not be 100% accurate compared to identifying misstatement cases provided in public announcement by enforcement authorities. Nevertheless, enforcement authorities are prejudiced in selecting potential fraud companies to be investigated (Dechow et al. 2011), allowing many fraud and misstating firms not investigated. They also rely on whistle-blower to alert them to investigate. Beneish M-score model was selected due to proven reliability and accuracy in detecting earnings manipulation and prominent fraudulent reporting scandals in the United States at 76% and 71% rate respectively. Furthermore, Kamal et al. (2016) found that the model is reliable in detecting financial statements fraud cases within the range of 71% to 82%. Nevertheless, Beneish M-Score model can incorrectly classify 13.8% of earnings manipulation firms as non-earnings manipulation firms when the total M-score cut-off point is greater than -1.78. In addition, the model can be used to analyse financial statement data of the public listed companies only but not private limited companies.

Opportunity for fraud was proxied by CGI, which was measured from corporate governance disclosure provided within annual report. There can be other potential factors that can lead to opportunity for fraud on top of corporate governance deficiency. Nevertheless, CGI is deemed suitable to proxy opportunity for the following reasons. Firstly, most of opportunity-related risk factors provided in ISA 240 are part of deficient corporate governance mechanism, which validates the adoption of CGI to proxy fraud opportunity. Secondly, most prior studies had adopted corporate governance attributes to proxy for fraud opportunity. CGI may be more suitable than individual governance attributes as it combines all corporate governance elements within company to determine accurately the quality of overall governance conduct and take into consideration overall decisions by all parties involved. Another limitation is on the measurement of CGI, based on company's disclosure regarding corporate governance mechanism in annual report. There is no evidence to support that statement of corporate governance disclosure provided by company in annual report portrays actual governance practice in action, as there is no verification from independent third party. However corporate governance disclosure can indicate the emphasis placed on governance by the board to achieve better results for their shareholders and customers, as well as being indirect measure of quality of conduct within company. The following limitation is relating to management fraud propensity factors based on the three dimensions of pressure/incentives, opportunity and rationalisation, which were centred on fraud risk factors provided by ISA 240. This was considered despite the fact that there can be many other potential factors that may influence management to engage fraud. Nevertheless, it was considered relevant as it was issued by recognised professional body of auditing as reference for statutory auditors. In addition, the proxies used for management fraud propensity factors were based on past studies. In contrast, there may be better proxies available to portray such variables of interest. Further study that can be attempted is by assessing earnings manipulation practice, management fraud propensity factors and corporate governance mechanism of firms within ASEAN region for comparative study purpose. In addition, the effect of governance mechanism interaction on the relationship between ASEAN firms' management fraud propensity factors and earnings manipulation can be examined and compared with Malaysian result. Future study may also consider adopting fraud diamond theory sets of factors as management fraud propensity factors instead of fraud triangle theory.

REFERENCES

1. Abbott, L. J., Parker, S., & Peters, G. F. (2004). Audit Committee Characteristics and Restatements. AUDITING: A Journal of Practice & Theory, 23(1), 69–87. doi:10.2308/aud.2004.23.1.69
2. Abdul Nasser, A. T., Wahid, E., Syed Mustapha Nazri, S. N. F., & Hudaib, M. (2006). Auditor-client relationship: the case of audit tenure and auditor switching in Malaysia. Managerial Auditing Journal, 21(7), 724–737. doi:10.1108/02686900610680512
3. Abdullah, S. N., Mohamad Yusof, N. Z., & Mohamad Nor, M. N. (2010). Financial restatements and corporate governance among Malaysian listed companies. Managerial Auditing Journal, 25(6), 526–552. doi:10.1108/02686901011054854
4. Aghghaleh, S. F., Iskandar, T. M., & Mohamed, Z. M. (2014). Fraud Risk Factors of Fraud Triangle and the Likelihood of Fraud Occurrence : Evidence from Malaysia. Information Management and Business Review, 6(1), 1–7.
5. Agrawal, S. (2009). Beat This: Satyam Won Awards For Corporate Governance, Internal Audit. newscorpvccircle. Retrieved from https://www.vccircle.com/beat-satyam-won-awards-corp-governance-internal-audit/
6. Allen, M. (2007). The Sage Encyclopedia of Communication Research Methods. Sage Publications inc.
7. Apostolou, B. A., Hassell, J. M., Webber, S. A., & Sumners, G. E. (2001). The relative importance of management fraud risk factors. Behavioral Research in Accounting, 13, 1.
8. Association of Certified Fraud Examiners. (2014). Report to The Nations on Occupational Fraud and Abuse. 2014 Global Fraud Study. Retrieved from http://www.acfe.com/rttn/docs/2014-report-to-nations.pdf

9. Beasley, M. S. (1996). An empirical analysis of the relation between the board of director composition and finantatement fraud. The Accounting Review, 71(4), 443–465.

10. Bebchuk, L., Cohen, A., & Ferrell, A. (2009). What Matters in Corporate Governance. Review of Financial Studies, 22(2), 783–827. doi:http://dx.doi.org/10.2139/ssrn.593423

11. Bell, T. B., & Carcello, J. V. (2000). A Decision Aid for Assessing the Likelihood of Fraudulent Financial Reporting. AUDITING: A Journal of Practice & Theory, 19(1), 169–184. doi:10.2308/aud.2000.19.1.169

12. Beneish, M. D. (1997). Detecting GAAP violation: implications for assessing earnings management among firms with extreme financial performance. Journal of Accounting and Public Policy, 16(3), 271–309. Retrieved from http://linkinghub.elsevier.com/retrieve/pii/S0278425497000239

13. Beneish, M. D. (1999). The Detection of Earnings Manipulation. Financial Analysts Journal, 55(5), 24–36. doi:10.2469/faj.v55.n5.2296

14. Beneish, M. D., Lee, C. M. C., & Nichols, D. C. (2013). Earnings Manipulation and Expected Returns. Financial Analysts Journal, 69(2), 57–82. doi:10.2469/faj.v69.n2.1

15. Bragg, S. M. (2007). The New CFO Financial Leadership Manual (2nd ed.). John Wiley & Sons Inc Hoboken New Jersey.

16. Brown, L. D., & Caylor, M. L. (2006). Corporate governance and firm valuation. Journal of Accounting and Public Policy, 25(4), 409–434. doi:10.1016/j.jaccpubpol.2006.05.005

17. Bryant, P., & Davis, C. (2012). Regulated change effects on boards of directors: a look at agency theory and resource dependency theory. Academy of Strategic Management Journal, 11(2), 1–16.

18. Center for Audit Quality. (2010). Deterring and Detecting Financial Reporting Fraud; A platform for action. Retrieved from www.TheCAQ.org

19. Chen, K. Y., & Elder, R. J. (2007). Fraud Risk Factors and the likelihood of fraudulent financial reporting: Evidence from Statement on Auditing Standards No. 43 in Taiwan. In Working Paper. National Taiwan University and Syracuse University, 36. (No. 36).

20. Coenen, T. L. (2008). Expert Fraud investigation A step-by-step guide. John Wiley & Sons, Inc. Hoboken New Jersey.

21. Congalton, R. G., & Green, H. (2009). Assessing the Accuracy of Remotely Sensed Data. Principles and Practices (2nd ed.). CRS Press.

22. COSO. (2010). Fraudulent Financial Reporting: 1998 - 2007, an analysis of U.S. Public Companies Committee of Sponsoring Organizations of the Treadway Commission.

23. Cressey, D. R. (1953). Other People's Money A Study in the Social Psychology of Embezzlement. The Free Press.

24. Dechow, P. M., Ge, W., Larson, C. R., & Sloan, R. G. (2011). Predicting Material Accounting Misstatements. Contemporary Accounting ResearchRecherche Comptable Contemporaine, 28(1), 17–82. doi:10.1111/j.1911-3846.2010.01041.x

25. 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.

26. Defond, M. L., & Jiambalvo, J. (1991). Incidence and Circumstances of Accounting Errors. The Accounting Review, 3(66), 643–655. doi:10.2307/247814

27. Dorminey, J., Fleming, a. S., Kranacher, M.-J., & Riley, R. a. (2012). The Evolution of Fraud Theory. Issues in Accounting Education, 27(2), 555–579. doi:10.2308/iace-50131

28. Dunn, P. (2004). The Impact of Insider Power on Fraudulent Financial Reporting. Journal of Management, 30(3), 397–412. doi:10.1016/j.jm.2003.02.004

29. Francis, J. R., & Krishnan, J. (1999). Accounting Accruals and Auditor Reporting Conservatism. Contemporary Accounting Research, 16(1), 135–165. doi:10.1111/j.1911-3846.1999.tb00577.x

30. Gaio, C., & Raposo, C. C. (2014). Corporate Governance and Earnings Quality : International Evidence. Journal of Accounting and Finance, 14(3), 52–74.

31. George, N. (2004). Auditor Rotation and the Quality of Audits. The CPA Journal, 74(12), 22–26. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=15290378&site=eds-live

32. Gerard, M. Z. (2013). Financial Statements Fraud, Strategies for Detection and Investigation. John Wiley & sons inc, Hoboken New Jersey.

33. Gompers, P. A., Ishii, J. l., & Metrick, A. (2003). Corporate governance and equity prices. Quaterly Journal of Economics, 118(February), 107–155.

34. Greene, W. H. (2002). Econometric Analysis (Fifth.). Prentice Hall, Upper Saddle River, New Jersey 07458.

35. Hansen, J. V., McDonald, J. B., Messier, W. F., & Bell, T. B. (1996). A generalized qualitative-response model and the analysis of management fraud. Management Science, 42(7), 1022.

36. Harrington, C. (2006). Atleast Companies Are Listening: Fraud Risk Assessment. Fraud Magazine a Publication of ACFE. Retrieved from http://www.fraud-magazine.com/article.aspx?id=4294967631

37. Hasnan, S., Abdul Rahman, R., & Mahenthiran, S. (2013). Management Motive, Weak Governance, Earnings Management and Fraudulent Financial Reporting: Malaysian Evidence. Journal of International Accounting Research, 12(1), 1–27. doi:http://dx.doi.org/10.2308/jiar50353

38. Hosmer, D. W. J., Lemeshow, S., & Sturdivant, R. X. (2013). Applied logistic regression (3rd ed.). John Wiley & Sons Inc.

39. Huse, M. (2007). Boards, Governance and Value Creation: The Human Side of Corporate Governance. Cambridge University Press.

40. ISA240. (2009). International Standard on Auditing 240 The auditor's responsibilities relating to fraud in an audit of Financial Statements (pp. 155–197). Retrieved from http://www.ifac.org/sites/default/files/downloads/a012-2010-iaasb-handbook-isa-240.pdf

41. Jenny, A. (2014). Tesco Accounting Scandal Draws Scrutiny of Serious Fraud Office in Britain. The New York Times. Retrieved from www.nytimes.com/2014/10/30/business/international/another-british-watchdog-opens-inquiry-into-tesco-accounting-scandal.html?_r=0

42. 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.

43. Jiang, W., Lee, P., & Anandarajan, A. (2008). The association between corporate governance and earnings quality: Further evidence using the GOV-Score. Advances in Accounting, Incorporating Advances in International Accounting, 24(2), 191–201. doi:10.1016/j.adiac.2008.08.011

44. Kalbers, L. P. (2009). Fraudulent financial reporting, corporate governance and ethics: 1987-2007. Review of Accounting and Finance, 8(2), 187–209. doi:10.1108/14757700910959510

45. 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. Jurnal Pengurusan, 46, 2016.

46. Kaminski, K. A., Wetzel, T. S., & Guan, L. (2004). Can financial ratios detect fraudulent financial reporting ? Managerial Auditing Journal, 19(1), 15. doi:10.1108/02686900410509802

47. Kaplan, J. A. (2010). Why Corporate Fraud is On The Rise. Forbes. Retrieved from https://www.forbes.com/2010/06/10/corporate-fraud-executive-compensation-personal-finance-risk-list-2-10-kaplan.html

48. Kassem, R., & Higson, A. (2012). The New Fraud Triangle Model. Journal of Emerging Trends in Economics and Management Sciences (JETEMS), 3(3), 191–195.

49. KPMG. (2016). Corporate Failures, Forensic. Retrieved from https://assets.kpmg.com/content/dam/kpmg/pdf/2016/05/Corporate-Failures.pdf

50. Lambert, C., & Sponem, S. (2005). Corporate governance and profit manipulation : a French field study. Critical Perspectives on Accounting, 16, 717–748. doi:10.1016/j.cpa.2003.08.008

51. Larcker, D. F., & Richardson, S. A. (2004). Fees Paid to Audit Firms , Accrual Choices , and Corporate Governance. Journal of Accounting Research, 42(3), 625–658.

52. Lehmann, N. (2016). The role of corporate governance in shaping accruals manipulation prior to acquisitions. Accounting and Business Research, 46, 36.

53. Leventis, S., & Dimitropoulos, P. (2012). The role of corporate governance in earnings management : experience from US banks. Journal of Applied Accounting Research, 13(2), 161–177. doi:10.1108/09675421211254858

54. Loebbecke, J. K., Eining, M., & Willingham, J. J. (1989). Auditors' experience with material irregularities frequency, nature, and detectability. Auditing, 9, 1.

55. Lou, Y., & Wang, M. (2009). Fraud risk factor of the fraud triangle assessing the likelihood of fraudulent financial reporting. Journal of Business & Economics Research, 7(2), 61–78. Retrieved from http://journals.cluteonline.com/index.php/JBER/article/viewArticle/2262

56. Menard, S. (2001). Applied Logistic Regression Analysis (2nd ed.). SAGE Publications, Thousand Oaks.
57. Miles, J., & Shevlin, M. (2001). Applying Regression and Correlation, A Guide for Students and Researchers. SAGE Publications Ltd.
58. Mosuin, E., Tuan Mat, T.Z., Ghani, E.K., Alzeban, A.A & Gunardi, A. (2019), Accountants' acceptance of accrual accounting systems in the public sector and its influence on motivation, satisfaction and performance, Management Science Letters, 9(5), 695-712
59. Mulford, C. W., & Comiskey, E. E. (2005). Uncovering Substantive Financial Performance. John wiley & Sons inc.
60. Nieschwietz, R. J., Schultz, J. J., & Zimbelman, M. F. (2000). Empirical research on external auditors ' detection of financial statement fraud. Journal of Accounting Literature, 19, 190–246.
61. Organisation For Economic Co-operation and Development. (2004). OECD Principles of Corporate Governance 2004. OECD Publications.
62. Pallant, J. (2010). Spss survival manual. Allen & Unwin.
63. Perols, J. L., & Lougee, B. a. (2011). The relation between earnings management and financial statement fraud. Advances in Accounting, 27(1), 39–53. doi:10.1016/j.adiac.2010.10.004
64. Persons, O. S. (1995). Using financial statement data to identify factors associated with Fraudulent Financial Reporting. Journal of Applied Business Research, 11(3), 38.
65. Porter, G. A., & Norton, C. L. (2015). Financial Accounting, The impact on Decision Maker. Cengage Learning.
66. Press, E. G., & Weintrop, J. B. (1990). Accounting-based constraints in public and private debt agreements. Their association with leverage and impact on accounting choice. Journal of Accounting and Economics, 12(1-3), 65–95. doi:10.1016/0165-4101(90)90042-3
67. Reider, R. (2002). Operational Review: Maximum Results at Efficient Cost (3rd ed.). John Wiley & Sons Inc.
68. Rezaee, Z. (2005). Causes, consequences, and deterence of financial statement fraud. Critical Perspectives on Accounting, 16(3), 277–298. doi:10.1016/S1045-2354(03)00072-8
69. Schnyder, G. (2012). Measuring Corporate Governance: Lessons from the "Bundles Approach." Social Science Research Network (SSRN), (438). doi:http://dx.doi.org/10.2139/ssrn.2220616
70. Securities Commission Malaysia. (2012). Malaysian Code on Corporate Governance 2012. Securities Commission Malaysia. Retrieved from www.sc.com.my
71. Shanmugam, L., Yassin, S. F. & Khalid, F. 2019a. Incorporating the Elements of Computational Thinking into the Mobile Application Development Life Cycle (MADLC) Model (5): 815–824.
72. Shanmugam, L., Yassin, S. F. & Khalid, F. 2019b. Enhancing Students ' Motivation to Learn Computational Thinking through Mobile Application Development Module (M-CT) (5): 1293–1303.
73. Skousen, C. J., & Wright, C. J. (2008). Contemporaneous Risk Factors and The Prediction of Financial Statement Fraud. Journal of Forensic Accounting, 9(1), 37–62.
74. Summers, S. L., & Sweeney, J. T. (1998). Fraudulently misstated financial statements and insider trading : An empirical analysis. The Accounting Review, 73(1), 131.
75. Tie, R. (2011). Fraud's worst enemy: A Strong Code of Ethics. Fraud Magazine, a Publication of ACFE. Retrieved from http://www.fraud-magazine.com/article.aspx?id=4294969523
76. Warren, C. S., & Reeve, J. M. (2007). Financial and Managerial Accounting. Thomson South Western.
77. Wiersema, W. (2006). Manufacturing, Distribution & Retail Guide. CCH incorporated.
78. Wilks, T. J., & Zimbelman, M. F. (2004). Decomposition of Fraud-Risk Assessments and Auditors' Sensitivity to Fraud Cues. Contemporary Accounting Research, 21(3), 719–745. doi:10.1506/HGXP-4DBH-59D1-3FHJ
79. Wolfe, D. T., & Hermanson, D. R. (2004). The Fraud Diamond : Considering the Four Elements of Fraud. The CPA Journal, 2(December), 38–42.
80. Yan, S. (2015). Toshiba CEO resigns over $1.2 billion accounting scandal. CNN Money. Retrieved from money.cnn.com/2-15/07/21/investing/toshiba-ceo-resigns/

AUTHORS PROFILE

First Author: Mohamad Ezrien Bin Mohamad Kamal (e-mail: mohdezrien@uitm.edu.my) is a senior lecturer at Faculty of Accountancy, Universiti Teknologi MARA, Selangor, Malaysia. He has 16 years of teaching experience in the field of Auditing, Strategic Management and Corporate Financial Reporting and 3 years working experience in Corporate Financial Reporting at a public listed company.

Second Author: Mohd Fairuz Md Salleh (e-mail: fairuz@ukm.edu.my) is a senior lecturer at Faculty of Economics and Management, Universiti Kebangsaan Malaysia. His areas of expertise are Corporate Financial Reporting, Corporate Governance and Political studies.

Third Author: Azlina Ahmad (e-mail: azlina@ukm.edu.my) is a senior lecturer at Faculty of Economics and Management, Universiti Kebangsaan Malaysia. Her areas of expertise are Corporate Financial Reporting, Corporate Governance and Political studies.