


THE EFFECT OF AUDIT QUALITY ON FRAUD REDUCTION: A MODERATING ROLE OF INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS) ADOPTION IN MALAYSIA AND INDONESIA

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ARTICLE INFO	ABSTRACT
<p>Article history:</p> <p>Received 17 March 2023</p> <p>Accepted 12 June 2023</p>	<p>Purpose: This study examines the relationship between audit quality and fraud reduction as well as investigates the adoption of IFRS in developing countries which is Malaysia and Indonesia to provide a comparison between IFRS adopter (Malaysia) and non-adopter (Indonesia) countries in the relationship between audit quality and fraud reduction.</p>
<p>Keywords:</p> <p>Auditors; Fraud Reduction; Financial Statements; Fraudulent; Defrauded; F-score; M-score; Misstatements.</p>	<p>Theoretical framework: This study applies two main theories; Policeman Theory and Institutional Theory.</p> <p>Design/methodology/approach: The research data covers listed companies in Malaysia and Indonesia. The total number of firms is 643 from the year 2015 to 2020 with 2502 total observations.</p>
	<p>Findings: The findings indicate that audit tenure, return on assets (ROA) and size have a significant and positive relationship in the reduction of fraud in Malaysia but audit fee, leverage and size have a significant and negative relationship in the reduction of fraud in Malaysia. Similarly, this study found that audit fee, leverage, return on assets (ROA) and audit tenure has a positive and significant relationship in the reduction of fraud in Indonesia. Besides, size have a negative and significant relationship in the reduction of fraud in Indonesia. This study also found that IFRS has a moderate effect on the relationship between audit fees and audit tenure towards fraud reduction in Malaysia and Indonesia.</p> <p>Research, Practical & Social implications: Future studies are encouraged to examine the effects of Sharia Compliance on the quality of audit processes and the reduction of fraud, especially in areas where Islamic finance is common. It is also suggested that future research should expand the statistical methods used beyond the Ordinary Least Squares (OLS) model to potentially include Logistic Regression Models (LRM). This could lead to a significant improvement in the accuracy and dependability of the research outcomes.</p> <p>Originality/value: The study provides valuable insights into the relationship between audit quality and fraud reduction, as well as the moderating effect of IFRS in Malaysia and Indonesia. The findings have significant practical implications for policymakers, companies, and auditors looking to improve the regulation of auditing practices and reduce the occurrence of fraud.</p> <p>Doi: https://doi.org/10.26668/businessreview/2023.v8i6.2181</p>

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O EFEITO DA QUALIDADE DA AUDITORIA NA REDUÇÃO DE FRAUDES: UM PAPEL MODERADOR DA ADOÇÃO DAS NORMAS INTERNACIONAIS DE RELATÓRIOS FINANCEIROS (IFRS) NA MALÁSIA E NA INDONÉSIA

RESUMO

Objetivo: Este estudo examina a relação entre a qualidade da auditoria e a redução da fraude, bem como investiga a adoção das IFRS nos países em desenvolvimento, que são a Malásia e a Indonésia, para fornecer uma comparação entre os países que adotam as IFRS (Malásia) e os que não adotam (Indonésia) na relação entre a qualidade da auditoria e a redução da fraude.

Estrutura teórica: Este estudo aplica duas teorias principais: Teoria do Policial e Teoria Institucional.

Projeto/metodologia/abordagem: Os dados da pesquisa abrangem empresas listadas na Malásia e na Indonésia. O número total de empresas é de 643 entre os anos de 2015 e 2020, com um total de 2.502 observações.

Resultados: Os resultados indicam que a duração da auditoria, o retorno sobre os ativos (ROA) e o tamanho têm uma relação significativa e positiva com a redução da fraude na Malásia, mas os honorários de auditoria, a alavancagem e o tamanho têm uma relação significativa e negativa com a redução da fraude na Malásia. Da mesma forma, este estudo constatou que os honorários de auditoria, a alavancagem, o retorno sobre os ativos (ROA) e a duração da auditoria têm uma relação positiva e significativa na redução da fraude na Indonésia. Além disso, o tamanho tem uma relação negativa e significativa com a redução da fraude na Indonésia. Este estudo também constatou que o IFRS tem um efeito moderado sobre a relação entre os honorários de auditoria e a permanência na auditoria para a redução da fraude na Malásia e na Indonésia.

Implicações sociais, práticas e de pesquisa: Recomenda-se que estudos futuros examinem os efeitos da conformidade com a Sharia sobre a qualidade dos processos de auditoria e a redução de fraudes, especialmente em áreas em que as finanças islâmicas são comuns. Sugere-se também que pesquisas futuras expandam os métodos estatísticos usados além do modelo de Mínimos Quadrados Ordinários (OLS) para incluir potencialmente Modelos de Regressão Logística (LRM). Isso poderia levar a um aprimoramento significativo da precisão e da confiabilidade dos resultados da pesquisa.

Originalidade/valor: O estudo fornece informações valiosas sobre a relação entre a qualidade da auditoria e a redução da fraude, bem como o efeito moderador das IFRS na Malásia e na Indonésia. Os resultados têm implicações práticas significativas para os formuladores de políticas, empresas e auditores que buscam melhorar a regulamentação das práticas de auditoria e reduzir a ocorrência de fraudes.

Palavras-chave: Auditores, Redução de Fraudes, Demonstrações Financeiras, Fraudulentas, Defraudadas, Pontuação F, Pontuação M, Declarações Errôneas.

EL EFECTO DE LA CALIDAD DE LA AUDITORÍA EN LA REDUCCIÓN DEL FRAUDE: EL PAPEL MODERADOR DE LA ADOCIÓN DE LAS NORMAS INTERNACIONALES DE INFORMACIÓN FINANCIERA (NIIF) EN MALASIA E INDONESIA

RESUMEN

Propósito: Este estudio examina la relación entre la calidad de la auditoría y la reducción del fraude, e investiga la adopción de las NIIF en los países en desarrollo, que son Malasia e Indonesia, para proporcionar una comparación entre los países que adoptan las NIIF (Malasia) y los que no (Indonesia) en la relación entre la calidad de la auditoría y la reducción del fraude.

Marco teórico: Este estudio aplica dos teorías principales: la teoría policial y la teoría institucional.

Diseño/metodología/enfoque: Los datos de la investigación abarcan las empresas que cotizan en bolsa en Malasia e Indonesia. El número total de empresas es de 643 entre los años 2015 y 2020, con un total de 2.502 observaciones.

Resultados: Los resultados indican que la duración de la auditoría, el rendimiento de los activos (ROA) y el tamaño tienen una relación significativa y positiva con la reducción del fraude en Malasia, pero los honorarios de auditoría, el apalancamiento y el tamaño tienen una relación significativa y negativa con la reducción del fraude en Malasia. Del mismo modo, este estudio encontró que los honorarios de auditoría, el apalancamiento, el rendimiento de los activos (ROA) y la duración de la auditoría tienen una relación positiva y significativa en la reducción del fraude en Indonesia. Además, el tamaño tiene una relación negativa y significativa con la reducción del fraude en Indonesia. Este estudio también encontró que las NIIF tienen un efecto moderado en la relación entre los honorarios de auditoría y la duración de la auditoría para la reducción del fraude en Malasia e Indonesia.

Investigación, implicaciones prácticas y sociales: Se anima a que futuros estudios examinen los efectos del cumplimiento de la sharia en la calidad de los procesos de auditoría y la reducción del fraude, especialmente en áreas donde las finanzas islámicas son habituales. También se sugiere que las investigaciones futuras amplíen los métodos estadísticos utilizados más allá del modelo de mínimos cuadrados ordinarios (MCO) para incluir

potencialmente modelos de regresión logística (MRL). Esto podría mejorar significativamente la precisión y fiabilidad de los resultados de la investigación.

Originalidad/valor: El estudio proporciona información valiosa sobre la relación entre la calidad de la auditoría y la reducción del fraude, así como sobre el efecto moderador de las NIIF en Malasia e Indonesia. Las conclusiones tienen importantes implicaciones prácticas para los responsables políticos, las empresas y los auditores que tratan de mejorar la regulación de las prácticas de auditoría y reducir la incidencia del fraude.

Palabras clave: Auditores, Reducción del Fraude, Estados Financieros, Fraudulentos, Defraudados, Puntuación F, Puntuación M, Declaraciones Erróneas.

INTRODUCTION

According to Webster's Ninth New Collegiate Dictionary (1990, p.490) fraud can be defined as an "intentional perversion of truth to induce another to part with something of value or to surrender a legal right" or as "an act of deceiving or misrepresenting". No definite and invariable rule can be laid down as a general proposition in defining fraud, as it includes surprise, trickery, cunning, and unfair ways by which another is cheated. This study from now onward calls fraudulent to those groups who obtained, done by or were involved in deception. This study also calls defrauded to those who are affected negatively by fraud. One of the mentioned effective ways by previous studies to detect and reduce fraud is the auditing process with high quality (Hakami et al., 2020). Therefore, it might be crucial to practically test the effect of audit quality in fraud reduction. This study goes to contributes to previous studies on finding the effect of audit quality as one of the factors that can consider for fraud reduction. The findings of this study also may have important implications for developing countries since previous studies (Clarina & Fitriany, 2019a; Fully & David, 2020) show that they are facing fraud enhancement.

Besides audit quality, IFRS is also considered by previous studies as an effective factor in fraud reduction. The International Financial Reporting Standard (IFRS) is a globally recognized financial reporting standard that can attract more investors to locations with higher financial information quality (Owusu et al., 2017). Many countries implement IFRS to increase transparency, comparability, disclosure, and reliability of financial information (Guerreiro et al., 2020; Toumeh & Yahya, 2019). Recently, one of the interesting issues that are more frequently has been analysed and discussed in the accounting field is the International Financial Reporting Standards (IFRS) (Nejad, 2019). While many studies have examined the impact of IFRS on the quality of accounting information and transparency, there are limited studies that compare the effect of audit quality on fraud reduction between IFRS adopters and non-IFRS adopter's countries (Adhariani & Siregar, 2018; Mensah, 2020; Nadhir & Wardhani, 2019).

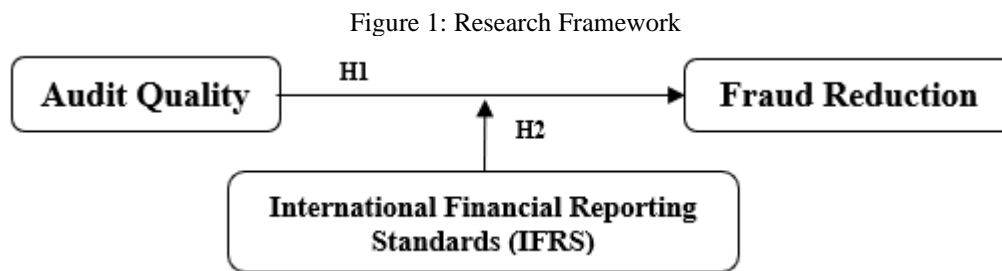
There are 50 Muslim countries in the world that follow Islamic rules known as Sharia Law. Most research on fraud has been done in developed countries, but it's important to understand that fraud in any form is prohibited in Islamic law (Jabbar & Ab Halim, 2015). The strict prohibition against fraud can be found in the Qur'an and authentic hadiths of the Prophet Muhammad (PBUH), which are the primary sources of Islamic law (Jabbar & Ab Halim, 2015). The Accounting and Auditing Organization for Islamic Financial Institutions has developed specific standards and guidelines to prevent and detect fraud in Islamic financial institutions (AAOIFI, 2014). It's important for everyone involved in these institutions to work together to prevent fraud and maintain the integrity of the system.

Therefore, it is necessary to identify the factors that can help countries control fraud. One way to enhance financial information quality is by improving audit quality, and another is by adopting IFRS (Mensah, 2020; Nadhir & Wardhani, 2019). This study examines the effect of audit quality on fraud reduction and provides a comparison between IFRS adopters and non-IFRS adopters countries to show the importance of IFRS on the relationship between audit quality and fraud reduction.

The primary objective of this study is to investigate the importance of IFRS adoption by exploring the impact of audit quality on fraud reduction. Specifically, this research aims to achieve two main objectives. The first objective is to examine the effect of audit quality on fraud reduction, while the second objective is to assess the moderating role of IFRS on this relationship. By analysing these objectives, this study aims to provide insights into the potential effectiveness of IFRS adoption in reducing fraudulent activities, as well as the role of audit quality in achieving this goal.

LITERATURE REVIEW

This study applies two main theories "Policeman Theory" theory to explain how audit quality affects fraud reduction also this study applies the "Institutional Theory" theory to explain how IFRS affects the relationship between audit quality and fraud reduction which could be different before and after IFRS implementation. This study has a total of three variables independent variable, dependent variable, and moderator. The independent variable of this study is Audit Quality, and the Dependent variable is Fraud Reduction the Moderator variable of this study is International Financial Reporting Standards (IFRS) as shown the in Figure 1.



Source: Prepared by the authors (2023)

Fraud Reduction

Fraud is a crime that brings many sectors, businesses as well as individuals, too many disadvantages that have long-term effects (Rajgopal et al., 2020). According to (Umar, Fauziah, et al., 2019) fraud is explained as an action done purposefully by individuals from different fields to gain different benefits through illegal or illegitimate ways. These perpetrators can be from company management, holding roles in the high level of governance, or employees of the company. Fraud consists of the intentional falsification of financial statements, which creates a misconception about the capital of the company and misleads the shareholder, and investors, for instance, overstating revenue, unrecorded expenses, misstating values of assets and liabilities (Hakami et al., 2020; Indah et al., 2020). However, an activity that can be carried out by one individual, multiple individuals, or a business firm, as well as those groups that obtained, done by, or involved in deception are called fraudulent. On the other hand, a person who commits fraud has essentially deceived somebody to dishonestly gain a benefit, or cause loss and is affected negatively by fraud is known as defrauded.

There are different measurements of accounting fraud namely, misstatement, materiality manipulation, intent, bankruptcy, etc., Misstatement can be when accounting transactions are stated incorrectly, and the materiality in fraud is the significance of the amount or the transaction that has been amended as a fraudulent activity.

Hence, there are numerous fraud detection models such as F-score, M-score, artificial intelligence algorithms, etc. (Hakami et al., 2020) studied the fraud detection gap between the auditor and fraud detection models, the sample from Gulf Cooperation Council. The fraud detection models they implemented in their study are Beneish M-score, Dechow F-score, and Altman Z-score. They also state that the Beneish M-model can detect financial statements fraud better for companies associated with local audit firms as compared to international audit firms. Therefore, it is evident that F-score and M-score are reliable models to detect financial statements frauds, and those models are also implemented in this study (Abdullah et al., 2022).

Audit Quality and Fraud Reduction

Audit quality is the ability of an auditor to be able to produce a financial statement that is accurate and trustworthy for the different types of financial statement users (Lennox, 2005). This is to uncover any fraud that could have occurred and could have different effects such as the reduction of the act (Indrasti & Karlina, 2020). The act of fraud is a criminal offence that results from many defrauding who are victims of this act, resulting in a situation that may cause long-term damages (Matsumura & Tucker, 1992). Therefore, this study attempts to fill the gap as follows. According to the previous studies' findings, there are mixed results on the relationship between audit quality and fraud reduction. Some of them show a negative relationship between audit quality and fraud reduction such as (Clarina & Fitriany, 2019; Fully & David, 2020). Some of them also show that there is no relationship between audit quality and fraud reduction such as (Umar, Fauziah, et al., 2019; Zamzami et al., 2017).

Audit Fees

Audit fees are a commonly used attribute to evaluate the impact on audit quality (Ettredge et al., 2014). Ettredge et al. (2014) investigated the association of audit fee pressure to audit quality during the recession period in 2008 and found that fee pressure is positively and significantly associated with accounting misstatements. Asthana and Boone (2012) also studied the relationship between bargaining power between an auditor and the client, and audit quality. Studies have found that higher audit fees are associated with a higher level of audit quality (Cameran et al., 2020; Zhang et al., 2019). However, the relationship between audit fees and audit quality is complex, and different schools of thought exist regarding this relationship. Karsemeijer (2012) suggests that higher audit fees could compromise the independence of the auditor, while Ettredge et al. (2007) propose that lower audit fees could lead to auditors overlooking material misstatements or allowing management to engage in aggressive income smoothing (Rahman et al., 2023).

Audit Tenure

Audit tenure, as a variable for determining audit quality, has been extensively researched. Studies have shown that longer tenures improve auditors' understanding of the client's business, enhancing their ability to detect material misstatements (Manry et al., 2008; Jackson et al., 2008). However, research also indicates that long-term tenures can lead to lower-quality audits, as auditors may become complacent (Jackson et al., 2008). The optimal audit

tenure for detecting material misstatements is suggested to be five years (Jackson et al., 2008). Auditor switching and mandatory audit firm rotation are suggested solutions to maintain audit quality (Harber & Marx, 2020), although the effectiveness of the latter is debated (Zhang, 2018; Manry et al., 2008; Jackson et al., 2008). Therefore, audit tenure is an important variable for determining audit quality, but other initiatives should also be considered to address concerns about auditor independence and audit quality, including periodic external quality reviews and more frequent rotations of audit partners (Jackson et al., 2008).

Big 5 & Non-Big 5

In this literature review, the focus is on the factors that affect audit quality, specifically the impact of big-five and non-big-five audit firms, pre-audit earnings quality, earnings management, auditor size, audit tenure, and audit fees. The literature suggests that big 4 auditors do not necessarily provide better audit quality compared to non-big 4 auditors. Chen et al. (2020) found that big 4 auditors are less likely to make income-decreasing audit adjustments than non-big 4 auditors, and audit adjustments proposed by non-big 4 auditors enhance earnings quality while results are mixed for big 4 auditors. These findings suggest that the impact of big-five and non-big-five audit firms on audit quality is complex and may depend on the specific context. The big-five audit firms are expected to provide higher audit quality. Another factor affecting audit quality is the audit report lag, which is the time between the company's financial year-end and the date of the auditor's report. This finding indicates that the use of large public accounting firms has a positive effect on audit quality, as shorter audit report lags suggest that auditors have more time to review financial statements, which increases the reliability of financial information. However, recent high-profile financial reporting failures have raised doubts about whether audit quality at large public accounting firms remains high. Yang et al. (2020) found that lower audit quality is associated with more accounting flexibility, indicating that pre-audit earnings quality is a vital determinant of audit quality.

IFRS Implementation

International Financial Reporting Standards (IFRS) have become a widely implemented set of accounting standards across the world. Developed by the International Accounting Standards Board (IASB), these standards are intended to promote high-quality, transparent, and comparable financial reporting. The adoption of IFRS has been viewed as a measure to address fraud through the medium of auditing. The implementation of IFRS has shown a positive impact

on improving the country's economy (Zaidi & Paz, 2015). It provides clear accounting standards across the country, which can help promote economic growth. Previous studies have shown that the implementation of IFRS also benefits in reducing fraud through the improvement of auditing resulting in high auditing quality (Khlif, 2016; Nadhir & Wardhani, 2019). In addition, IFRS can facilitate cross-border comparisons, increase reporting transparency, decrease information costs, and reduce information asymmetry. The adoption of IFRS enhances audit quality and helps in reducing fraud. The adoption of IFRS in developing countries can improve the quality of standards as well as reduce the expense and time of preparing financial statements. It is necessary to compare the moderating effect of IFRS on the relationship between audit quality and fraud reduction before and after IFRS implementation.

DATA AND METHODOLOGIES

The purpose of this study is to examine the impact of International Financial Reporting Standards (IFRS) adoption on the financial performance of small and medium-sized enterprises (SMEs) in Malaysia and Indonesia. To achieve this objective, the researcher collected data using Definitive Data Stream software, focusing on the period from 2015 to 2020, which is after the mandatory IFRS adoption in Malaysia in 2012. At the beginning of the study, the researcher collected a total of 2,502 observations for Malaysia and Indonesia. The data was then transferred into panel data and categorized into three main categories: Company Name, Country Name, and Year. After cleaning and removing financial data that was not available in the Data Stream, the remaining data totaled 1,113 observations for Malaysia and Indonesia. To obtain more accurate financial information, the researcher used the company's name and downloaded their annual reports from the Bursa Malaysia website and Indonesian Stock Exchange for five years. This study's findings are expected to contribute to the understanding of the impact of IFRS adoption on SMEs' financial performance in Malaysia and Indonesia, which may help policymakers and business owners in these countries make more informed decisions.

Population

This study focuses on the effect of audit quality on fraud reduction as well as the moderating role of IFRS in two main developing Muslim countries Malaysia and Indonesia. Therefore, this study selected two different countries, one as IFRS adopter and the other non-IFRS adopter to investigate the relationship between audit quality and fraud reduction and the

moderating role of IFRS before and after the adoption of IFRS. The study population for this research includes all the registered companies listed in Malaysia and Indonesia stock exchange.

Sampling Design and Frame

This cross-sectional study examines the impact of IFRS adoption on the financial performance of companies in developing Muslim countries, specifically Malaysia and Indonesia. Data was collected from 331 companies registered between 2015 and 2020. The study investigates the relationship between AQ and FR and the moderating effect of IFRS on this relationship using two main models. Results can inform policymakers and auditors to improve AQ and reduce fraud in developing Muslim countries.

Research Model

This study investigates the relationship between audit quality (AQ) and fraud reduction (FR) in Malaysia and Indonesia, using two main models for each hypothesis. Model 1 examines this relationship using M-Score and F-Score, running separately for each country and for comparison purposes. Model 2 investigates the moderating effect of International Financial Reporting Standards (IFRS) on AQ and FR, combining the data for both countries to understand the effect of IFRS adoption on fraud reduction. The difference between Model 1 and Model 2 is that Model 2 includes variables for IFRS and the interaction between IFRS and AQ as a moderator variable. The study's findings can provide insights on improving AQ and reducing fraud, benefiting policymakers and auditors.

Hypothesis 1

$$FR_{it} = \beta_0 + \beta_1 AT_{it} + B_2 AF_{it} + B_3 B5_{it} + B_4 Lev_{it} + B_5 Prof_{it} + B_6 Size_{it} + B_7 Roa_{it} + \epsilon_{it} \quad M1$$

Hypothesis 2

$$FR_{it} = \beta_0 + \beta_1 AT_{it} + B_2 AF_{it} + B_3 B5_{it} + B_4 Ctrl_{it} + B_5 IFRS_{it} + B_6 (IFRS * AQ)_{it} + \epsilon_{it} \quad M2$$

Where;

FR Fraud reduction which is measured by Beneish M-Score and F-Score (details are provided Table 1)

AT Audit tenure being the number of years that companies hired the same auditors as previous years (details are provided Table 1)?

AF Audit fees that are the companies' payment to the auditors/ audit expenditure

B5 If the auditors are from Big-5 audit companies, 1 otherwise 0 (details are provided Table 1).

Lev Leverage which is measured by total assets divided by total liabilities (details are provided Table 1).

Prof Profitability which is measured by total sales (details are provided Table 1).

Size Size which is measured by total assets (details are provided Table 1).

Roa Return on assets which is measured by income continuing operation divided by total assets (details are provided Table 1)?

IFRS which is measured by 1 means using IFRS standards otherwise,0

Table 1 Variables Measurement

Variables Names	Attributes	Measurements
<i>Dependent Variable</i>		Using the Benish M-score model to evaluate the probability of manipulation. M-score value = $-4.84 + 0.92 * DSRI + 0.528 * GMI + 0.404 * AQI + 0.892 * SGI + 0.115 * DEPI - 0.172 * SGAI + 4.679 * TATA - 0.327 * LVG$.
Fraud	Benish M-score model	
	Dechow F-score model	Using Dechow F-score model to evaluate the probability of misstatement. 1 misstatement financial statement. Otherwise, OF-score value = $-7.893 + 0.790Rsst-acc + 2.518Chrec + 1.191Chinv + 1.979Softassets + 0.171Chcs - 0.932Chroa + 1.092Issue$.
<i>Independent Variable</i>	Audit Tenure	Auditor period time in the same company from 2015 to 2020 use 1 to 5.
	Audit Fee	The amount paid by the company to receive audit service.
Audit Quality	Big 5 & Non-Big 5	Dummy Variable, Companies audited by Big 5 1, otherwise 0.
<i>Moderator</i>	International Financial Reporting Standards	Dummy Variable, 1 for IFRS adopter (Malaysia) and 0 IFRS non-adopter (Indonesia) otherwise.
IFRS	Audit Size	Size is measured by the total assets of the company.
	Return on Assets	Return on assets which is measured by income continuing operation divided by total assets of the company.
<i>Control Variables</i>	Profitability	Profitability is measured by total sales of the company generate annually.
	Leverage	Term Leverage refers to the use of debt (borrowed capital) to undertake an investment or project. Leverage is measured by total assets and divided by total liabilities of the company.

Source: Prepared by the authors (2023)

RESULTS AND DISCUSSION

Descriptive Statistics

Descriptive analysis is a crucial step in the data analysis process that summarizes the data and identifies potential issues such as outliers and deviations from basic assumptions for regression analysis. However, in this study, as can be seen in the below Table 2 which presents the descriptive statistic of this study. Table 2, and Table 3, provide descriptive statistics before and after outlier treatment for Malaysia and Indonesia. Table 4 shows the descriptive statistics for combination of both countries respectively (Malaysia & Indonesia).

According to this study, the descriptive statistics showed that before outlier treatment, there were 979 observations with extremely high values considered outliers, leading to a non-normal distribution of the data. In Panel A, (before outlier treatments) of Table 2, for all the variables, the values of skewness range start from 19.498 to (-2.331) while the values for kurtosis range from 577.244 to 1.032, indicating a non-normal data distribution. Based on panel B (after outlier treatments) of table 2, the values of skewness range from 4.405 to (-17.366) while the values for kurtosis range from 37.170 to 1.065, this also indicates a non-normal data

distribution as well as the number of observations has also improved in Panel B from 979 reduced to 650 observations.

Therefore, this study applied outlier treatment techniques, including Z-score, Mahalanobies, and Logarithm, were applied to remove the outliers and improve the distribution, resulting in improved values for skewness and kurtosis, though still not normally distributed. Previous research has indicated that these values do not cause a bias in regression estimates. The descriptive analysis and outlier treatment techniques ensure the accuracy of the results in regression analysis.

Whereas Table 4 shows the descriptive statistics results for the combination of Malaysia and Indonesia. Panel A shows the descriptive statistics test results before outliers and Panel B shows the descriptive statistics test results after removing outliers. According to Panel A the total observations is 1699 and it has reduced in Panel B to 1197 observations. Furthermore, the value of skewness and kurtosis value indicates that the data consist of outliers such as in Panel A the skewness value range are from 20.898 to -0.027 also the value of kurtosis range from 627.118 to 1.001 which indicate that data is non-normal distribution. While in Panel B (after treating outliers) shows that the skewness values have reduced and the range is 6.179 to -0.092, kurtosis value also reduced, and the range is from 48.960 to 1.620 this indicates that the data is non-normal distribution. However, these values are close to normal distribution several studies (Hayes, 2009), (Jafaridehkordi & Rahim, 2014) have revealed that although the values are not normal, however, such values are most unlikely to result in a biased estimate of regression coefficients. Subsequently, the new descriptive statistics show much better results. It explains that now the sample size is more symmetrical. Therefore, this study data sample size is reliable for this study to implement the statistical models.

Table 2. Descriptive Statistics Result for Malaysia before and after Outlier Treatment

	F	M	AF	AT	B5	IFRS	LEV	PRO	ROA	SIZE
Panel A										
Mean	4.240	1.570	286118.400	3.246	0.544	0.879	3.328	1132158.000	0.022	0.672
Median	4.000	0.202	170800.000	3.000	1.000	1.000	0.965	307373.000	0.024	0.552
Maximum	8.000	3933.811	4401000.000	5.000	1.000	1.000	585.009	21548322.000	0.429	6.599
Minimum	0.000	-2462.284	-247000.000	1.000	0.000	0.000	-0.799	505.000	-0.579	-0.109
Skewness							19.498	4.563	-0.697	3.069
Kurtosis							408.672	26.359	12.403	22.081
Obs	979	979	979	979	979	979	979	979	979	979
Panel B										
Mean	4.252	0.162	5.343	3.335	5.343	0.937	1.249	5.434	0.022	0.628
Median	4.000	0.276	5.327	3.000	5.327	1.000	0.949	5.454	0.024	0.565
Maximum	8.000	17.058	6.240	5.000	6.240	1.000	13.145	6.962	0.187	1.889
Minimum	0.000	-145.687	4.415	1.000	0.000	0.000	0.010	3.597	-0.162	-0.109
Skewness							4.405	-0.091	-0.310	0.621
Kurtosis							29.697	2.895	3.756	2.914
Obs	650	650	650	650	650	650	650	650	650	650

Panel A is before outlier treatment, Panel B is after outlier treatment. F is fraud that is measured by Dechow f-score, M is manipulation that is measured by Benish m-score, AT is auditor period that is measured by number of years auditor work for same audit/accounting companies. Big5 is five big audit firms (Deloitte, KPMG, Ernst&Young, PWC, BDO) that is measured by client company using big five audit service 1, otherwise 0. AF is the amount paid for the auditor service; LEV is a leverage of the company is measured by total assets divided by total liabilities of the company; ROA is return on assets is measured by income continuing operation divided by total assets. Size that is measured by the total assets of the company.

Source: Prepared by the authors (2023)

Table 3: Descriptive Statistics Results for Indonesia before and after Outliers Treatment

	F	M	AF	AT	B5	LEV	PROF	ROA	SIZE
Panel A									
Mean	4.892	5.387	1210747.000	3.085	0.322	3.343	9330000000.000	0.031	598.156
Median	5.000	5.327	158412.100	3.000	0.000	0.963	2910000000.000	0.029	148.211
Maximum	8.000	62.811	136000000.000	5.000	1.000	915.783	23900000000.000	0.535	55993.110
Minimum	0.000	-291.999	0.000	1.000	0.000	-1.715	11276672.000	-0.653	28.852
Skewness						24.966	6.599	-0.751	12.516
Kurtosis						649.966	59.069	15.819	180.266
Obs	720	720	720	720	720	720	720	720	720
Panel B									
Mean	4.851	5.235	5.477	3.143	0.354	1.217	9.559	2.256	2.256

Median	5.000	5.354	5.440	3.000	0.000	0.965	9.566	2.159	2.159
Maximum	8.000	62.811	8.089	5.000	1.000	9.573	11.314	3.937	3.937
Minimum	0.000	-291.999	3.149	1.000	0.000	0.002	7.636	1.460	1.460
Skewness						4.609	-0.242	0.276	0.960
Kurtosis						26.235	2.924	5.070	4.550
Obs	463	463	463	463	463	463	463	463	463

Panel A is before outlier treatment, Panel B is after outlier treatment. F is fraud that is measured by Dechow f-score, M is manipulation that is measured by Benish m-score, AT is auditor period that is measured by number of years auditor work for same audit/accounting companies. Big5 is five big audit firms (Deloitte, KPMG, Enrst&Young, PWC, BDO) that is measured by client company using big five audit service 1, otherwise 0. AF is the amount paid for the auditor service; LEV is a leverage of the company is measured by total assets divided by total liabilities of the company; ROA is return on assets is measured by income continuing operation divided by total assets. Size that is measured by the total assets of the company.

Source: Prepared by the authors (2023)

Table 4: Descriptive Statistics for combined observation of Malaysia and Indonesia Before and After Outliers treatment

	F	M	AF	AT	B5	LEV	PROF	ROA	SIZE	IFRS
Panel A										
Mean	4.516	3.188	677956.100	3.178	0.450	3.334	3950000000.000	0.026	253.873	0.507
Median	5.000	2.519	165106.000	3.000	0.000	0.964	1632595.000	0.026	1.109	1.000
Maximum	8.000	3933.811	136000000.000	5.000	1.000	915.783	239000000000.000	0.535	55993.110	1.000
Minimum	0.000	-2462.284	-247000.000	1.000	0.000	-1.715	505.000	-0.653	-0.109	0.000
Skewness						23.710	9.669	-0.703	19.148	
Kurtosis						627.118	126.586	14.574	421.341	
Obs	1699	1699	1699	1699	1699	1699	1699	1699	1699	1699
Panel B										
Mean	4.456	2.389	5.441	3.251	0.473	1.349	7.004	0.029	0.635	0.561
Median	4.000	2.243	5.373	3.000	0.000	0.964	5.991	0.028	-0.001	1.000
Maximum	8.000	28.179	7.159	5.000	1.000	20.140	11.379	0.284	3.779	1.000
Minimum	0.000	-119.646	3.778	1.000	0.000	-1.173	2.703	-0.234	-1.966	0.000
Skewness						6.179	0.447	-0.092	0.448	
Kurtosis						48.960	1.626	5.399	1.620	
Obs	1197	1197	1197	1197	1197	1197	1197	1197	1197	1197

Panel A is before outlier treatment, Panel B is after outlier treatment. F is fraud that is measured by Dechow f-score, M is manipulation that is measured by Benish m-score, AT is auditor period that is measured by number of years auditor work for same audit/accounting companies. Big5 is five big audit firms (Deloitte, KPMG, Enrst&Young, PWC, BDO) that is measured by client company using big five audit service 1, otherwise 0. AF is the amount paid for the auditor service; LEV is a leverage of the company is measured by total assets divided by total liabilities of the company; ROA is return on assets is measured by income continuing operation divided by total assets. Size that is measured by the total assets of the company.

Source: Prepared by the authors (2023)

Correlation Matrix Results Analysis

Combination of malaysia and indonesia

Table 5 shows the correlation test results for the combined data of Malaysia and Indonesia. Profitability and size are highly correlated, and there is also a significant negative correlation between profitability and IFRS. Additionally, some variables have negative correlations, but they are not significant. The study identified multicollinearity between profitability and size, as well as profitability and IFRS, which occurs when the correlation value is more than 0.8 or less than -0.8. Therefore, to generate more accurate model results, profitability will be removed from the combined section of Malaysia & Indonesia.

Table 5: Correlation Matrix Between Variables for Malaysia and Indonesia

Correlatio	F	M	AT	B5	AF	LEV	PROF	SIZE	ROA	IFRS
F	1.000									
M	0.111	1.000								
AT	-0.180	-0.072	1.000							
B5	-0.003	-0.121	0.105	1.000						
AF	0.074	0.064	0.038	0.117	1.000					
LEVE	-0.097	-0.120	0.021	-0.003	-0.057	1.000				
PROF	0.178	0.513	-0.052	-0.146	0.358	-0.069	1.000			
SIZE	0.146	0.515	-0.070	-0.199	0.171	-0.052	0.913	1.000		
ROA	0.327	-0.167	-0.037	-0.058	0.047	-0.026	0.224	0.163	1.000	
IFRS	-0.148	-0.393	0.112	0.149	-0.193	0.061	-0.826	-0.085	-0.132	1.000

Source: Prepared by the authors (2023)

Malaysia

Table 6 presents the results of the first hypothesis, examining the relationship between audit quality and fraud reduction. The model indicates a significant relationship between audit quality and fraud reduction, with a low p-value of 0.000 and an R square value of 0.146. Audit fee and leverage have a significant impact on financial statement manipulation, with a negative coefficient for audit fee and leverage. Additionally, has a significant positive relationship with financial statement fraud, while size has a significant positive relationship with financial statement manipulation. Audit tenure, B5, and return on assets have no significant relationship with the M-score. The Durbin-Watson test indicates no autocorrelation in the residuals. These results are consistent with previous studies by Asthana and Boone (2012), Mao et al. (2020), Lenard and Alam (2004).

Table 6: Results of 1st hypothesis, the relationship between audit quality and fraud reduction (measured by F-score and M-score) in Malaysia)

Variable	Coefficient	Fraud		Manipulation		
		t-Statistic	Prob.	Coefficient	t-Statistic	Prob.
AT	0.162	2.268	0.0238**	0.192	0.720	0.472
Big5	0.557	0.647	0.518	-2.430	-0.992	0.322
AF	-1.760	-1.669`	0.0958*	-2.035	-1.972	0.0492**
LEVE	-0.438	-7.111	0.000***	-0.360	-6.937	0.000***
PROF	3.247	4.018	0.000***	8.842	2.702	0.0071***
ROA	21.817	9.355	0.000***	2.118	0.674	0.501
SIZE	-1.633	-2.543	0.0113**	2.574	1.708	0.0882*
Adj R ²	0.263			0.146		
F-stat	2.151			1.550		
D-W	2.005			2.112		

$$FR_{it} = \beta_0 + \beta_1 AT_{it} + B_2 AF_{it} + B_3 B5_{it} + B_4 Lev_{it} + B_5 Prof_{it} + B_6 Size_{it} + B_7 Roa_{it} + \epsilon_{it}$$

Source: Prepared by the authors (2023)

INDONESIA

The significance level was set at 0.05, with a corresponding 95% confidence level. The results from the F-score model showed that the independent variables (IVs) accounted for 29% of the fraud in financial statements in Indonesia, as indicated by the adjusted R-square value of 0.290. The Durbin-Watson test showed no autocorrelation in the residuals. The F-statistics were statistically significant with a p-value of $0.000 < 0.05$, indicating a robust model performance. Only one IV, B5, had no statistically significant relationship with the F-score (p-value of $0.429 > 0.10$). The remaining IVs, Audit Tenure, Audit Fee, Leverage, Profitability, Size, and ROA showed a statistically significant relationship with the F-score. Lower audit tenure and lower audit fee were associated with higher fraud, higher leverage was associated with more fraud, higher profitability was associated with less fraud, smaller firms were associated with more fraud, and higher ROA was associated with more fraud. These findings align with previous studies such as (Lennox & Pittman, 2010); (Hakami et al., 2020), (Bachrach & Farrell, 1985); (Ettredge et al., 2014); (Larune et al., 2021); (Aghghaleh & 2014). that have found that audit tenure, audit fee, leverage, profitability, size, and roa play a role in the reduction of fraud in financial statements. The M-score model results showed a statistically significant model performance with a F-statistics of 2.224 and a p-value of $0.000 < 0.05$, but none of the IVs had a statistically significant relationship with the M-score (all p-values greater than 0.05). These results contribute to the understanding of the relationship between audit quality and fraud reduction in Indonesia and add to the existing literature in the field.

Table 7: Results of 1st hypothesis, the relationship between audit quality and fraud reduction (measured by F-score and M-score) in Indonesia)

Variable	Fraud			Manipulation		
	Coefficient	t-Statistic	Prob.	Coefficient	t-Statistic	Prob.
AT	-0.661	-2.344	0.0197**	1.183	1.512	0.132
Big5	0.626	0.793	0.429	-1.169	-0.986	0.325
AF	0.539	2.590	0.010**	-0.301	-0.583	0.561
LEVE	0.138	1.874	0.0618*	-0.174	-0.729	0.466
ROA	13.335	-7.459	0.000***	65.780	0.974	0.331
SIZE	-7.688	14.058	0.000***	-7.631	1.510	0.132
Adj R ²	0.290			0.290		
F-stat	2.417			2.224		
D-W	2.830			1.938		

$$FR_{it} = \beta_0 + \beta_1 AT_{it} + B_2 AF_{it} + B_3 B5_{it} + B_4 Lev_{it} + B_5 Size_{it} + B_6 Roa_{it} + \epsilon_{it}$$

*, **, *** Represent significance at the 10, 5, and 1 percent levels, respectively. FR is Dechow f-score and Benish m-score, AT is auditor period; Big5 is five big audit firms (Deloitte, KPMG, Enrst&Young, PWC, BDO); AF is the amount paid for the auditor service; LEV is a leverage of the company is measured by total assets divided by total liabilities of the company, ROA is return on assets is measured by income continuing operation divided by total assets; White robust standard errors are used to control for heteroscedasticity.

Source: Prepared by the authors (2023)

Combination of Malaysia & Indonesia

The study aimed to investigate the relationship between audit quality, fraud, and the moderating role of IFRS in Malaysia and Indonesia. The results, presented in Table 8, showed that the independent variables explained 39.4% of the fraud in the combined data. The Durbin-Watson test showed no autocorrelation in the residuals and the overall model performance was statistically significant (F-statistics 1.620, p-value of 0.000<0.05). The results showed that IFRS had a negative and significant relationship with fraud (p-value of 0.0761<0.10, coefficient of -0.580), indicating that IFRS decreased the chances of fraud in financial statements. This result is in line with previous studies that have found that IFRS has a positive impact on reducing fraud in financial statements. Audit tenure also had a negative and significant relationship with fraud (p-value of 0.0802<0.10, coefficient of -0.276), while audit fee had a positive and significant relationship with fraud (p-value of 0.0905<0.10, coefficient of 0.564). Leverage and size had negative and significant relationships with fraud (leverage p-value of 0.04<0.05, coefficient of -0.040; size p-value of 0.0036<0.05, coefficient of -1.111), and ROA had a positive and significant relationship with fraud (p-value of 0.00<0.05, coefficient of 12.896). These findings add to the existing literature on the relationship between audit quality, IFRS, and fraud in financial statements.

Table 8: Results of 1st hypothesis, the relationship between audit quality and fraud reduction for Malaysia and Indonesia with consideration of IFRS

Fraud			
Variable	Coefficient	t-Statistic	Prob.
IFRS	-0.580	-1.776	0.0761*
AT	-0.276	-1.751	0.0802*
Big5	0.230	0.628	0.530
AF	0.564	2.590	0.0905*
LEVE	-0.040	-2.033	0.0423**
ROA	12.896	24.122	0.000***
SIZE	-1.111	-2.916	0.0036***
Adj R ²	0.394		
F-stat	1.620		
D-W	2.586		

$$FR_{it} = \beta_0 + \beta_1 AT_{it} + \beta_2 AF_{it} + \beta_3 B5_{it} + \beta_4 Ctrl_{it} + \beta_5 IFRS_{it} + \beta_6 (IFRS * AQ)_{it} + \epsilon_{it}$$

Source: Prepared by the authors (2023)

The table 9 shows the results generated with consideration of IFRS on relationship between audit tenure and fraud to investigate the audit quality impact to fraud. The adjusted r-square value shows 0.451 which indicates that all independent variables explain by 45.1% of the fraud. Durbin-Watson is acceptable range as it is close to 2 which is 2.726, hence no autocorrelation found. The overall performance of the model is statistically significant with F-statistics P value is 0.000 < 0.05. IFRS (P < 0.05), Audit Tenure (P < 0.05) have a significant effect on Fraud. Although, IFRS coefficient is -3.602 and audit tenure coefficient gives -0.813, the result indicates that both independent variables have a negative and significant relationship towards fraud in financial statements in Malaysian and Indonesia. The independent variable IFRS_AT gives a coefficient of 0.942 and (P < 0.05), the results says that there is a positive and significant relationship with fraud. As IFRS and audit tenure increases the higher chances for the fraud to take place in financial statements.

Table 9: Results for 2nd hypothesis fraud and moderating effect of IFRS on relationships between AT and Fraud

Fraud			
Variable	Coefficient	t-Statistic	Prob.
IFRS	-3.602	-5.649	0.000***
IFRS_AT	0.942	3.279	0.0011***
AT	-0.813	-2.609	0.0092***
LEVE	-0.047	-2.387	0.0172**
SIZE	-0.883	-2.932	0.0035***
ROA	12.304	30.489	0.000***
R-sq	0.451		
F-stat	2.059		
D-W	2.726		

$$FR_{it} = \beta_0 + \beta_1 AT_{it} + \beta_2 AF_{it} + \beta_3 B5_{it} + \beta_4 Ctrl_{it} + \beta_5 IFRS_{it} + \beta_6 (IFRS * AQ)_{it} + \epsilon_{it}$$

Source: Prepared by the authors (2023)

The table 10 shows the results generated Fraud and moderating effect of IFRS on relationship between B5 and Fraud to investigate the audit quality impact to fraud. The adjusted r-square value shows 0.374 which indicates that all independent variables explain by 37.4% of the fraud. Durbin-Watson is acceptable range as it is close to 2 which is 2.533, hence no autocorrelation found. The overall performance of the model is statistically significant with F-statistics P value is $0.000 < 0.05$. Firstly, IFRS coefficient is -1.123 and $P < 0.05$, which signifies that there is a negative and significant relationship towards fraud and IFRS in Malaysia and Indonesia. Additionally, B5 ($P > 0.05$) and IFRS_B5 ($P > 0.05$), which can be interpreted that these two IVs are insignificant towards fraud in financial statements.

Table 10: Results for 2nd hypothesis fraud and moderating effect of IFRS on relationship between B5 and Fraud

Fraud				
Variables	Coefficient	t-Statistic	Prob.	
IFRS	-1.123	-2.671	0.0077***	
B5	-0.165	-0.422	0.673	
IFRS_B5	0.085	0.355	0.723	
LEVE	-0.048	-2.107	0.0354**	
SIZE	-0.855	-1.732	0.0836*	
ROA	14.335	11.419	0.000***	
R-squ	0.374			
F-stat	1.496			
D-W	2.533			

$$FR_{it} = \beta_0 + \beta_1 AT_{it} + \beta_2 AF_{it} + \beta_3 B5_{it} + \beta_4 Ctrl_{it} + \beta_5 IFRS_{it} + \beta_6 (IFRS * AQ)_{it} + \epsilon_{it}$$

Source: Prepared by the authors (2023)

The table 11 shows the results generated manipulation with consideration of IFRS to investigate the audit quality impact to manipulation of financial statements. The adjusted r-square value shows 0.730 which indicates that all independent variables explain by 73% of the manipulation. Durbin-Watson is acceptable range as it is close to 2 which is 1.961, hence no autocorrelation found. The overall performance of the model is statistically significant with F-statistics P value is $0.000 < 0.05$. The coefficient table 4.13 shows independent variables namely, IFRS -1.971 ($P < 0.05$), Audit tenure -0.278 ($P < 0.05$), Audit fee -0.776 ($P < 0.05$) and leverage -0.265 ($P < 0.05$) have a negative and significant relationship towards manipulation of financial statements. Furthermore, the IV size have a positive and significant relationship towards manipulation with a coefficient value of 5.61 and p values < 0.05 . Additionally, the IVs B5 ($P > 0.05$) and ROA ($P > 0.05$), indicates that these two variables are insignificant towards explaining the manipulation in financial statements in combined data for Malaysian and Indonesia.

Table 11: Results of 2nd hypothesis, the relationship between audit quality and manipulation for Malaysia and Indonesia with consideration of IFRS

Manipulation				
Variables	Coefficient	t-Statistic	Prob.	
IFRS	-1.971	-2.400	0.0166**	
AT	-0.278	-4.009	0.0001***	
B5	-0.534	-0.454	0.650	
AF	-0.776	-5.292	0.000***	
LEVE	-0.265	-6.397	0.000***	
SIZE	5.613	9.137	0.000***	
ROA	-5.844	-1.257	0.209	
R-squ	0.730			
F-stat	6.742			
D-W	1.961			
$M_{it} = \beta_0 + \beta_1 AT_{it} + \beta_2 AF_{it} + \beta_3 B5_{it} + \beta_4 Ctrl_{it} + \beta_5 IFRS_{it} + \beta_6 (IFRS * AQ)_{it} + \epsilon_{it}$				

Source: Prepared by the authors (2023)

CONCLUSION

In conclusion, this study has made a significant contribution to the current understanding of the relationship between audit quality and fraud reduction, as well as the moderating effect of International Financial Reporting Standards (IFRS) in Malaysia and Indonesia. The results indicate that several key factors, including audit tenure, return on assets (ROA), audit fee, leverage, and size, play a significant role in reducing fraud in these countries. Moreover, the study highlights the role of IFRS in either strengthening or weakening the relationship between audit quality and fraud reduction.

However, it is important to note that the adoption of IFRS and the use of Big 5 audit firms alone may not be sufficient in preventing fraud. The study suggests that additional measures, such as improved corporate governance practices, are necessary to enhance the effectiveness of auditing practices and prevent fraudulent activities. In light of these findings, the study provides valuable insights for policymakers, companies, and researchers looking to improve the regulation of auditing practices, enhance financial reporting, and reduce the occurrence of fraud.

Firstly, the study was limited to only two countries, Malaysia and Indonesia, and future research should consider a more diverse range of countries to enhance the robustness of the results. Secondly, the study relied solely on the Ordinary Least Square (OLS) model for analysis, and future research could benefit from the use of alternative statistical techniques, such as logistic regression models, to improve the reliability of the findings.

In conclusion, this study provides a valuable contribution to the field of audit quality and fraud reduction, and serves as a reference for policymakers, companies, and researchers looking

to enhance their understanding of these topics. The limitations of the study should be taken into consideration by future researchers, who should aim to expand the scope of their studies and employ alternative statistical techniques to improve the robustness of the results.

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