Influence of IFRS Adoption on Earnings Management Through the Moderating Role of Audit Quality: Evidence from KSA and UAE

Ahmed Fadhil Saleh[1]♣, Siwar Ellouz[2] and Ridha Ali Abdullah[3]
[1]University's Presidency, University of Anbar, Anbar, Iraq
[2]Higher Business School, University of Sfax, Sfax, Tunisia
[3]College of Administration and Economic, University of Anbar, Anbar, Iraq

ABSTRACT

The purpose of the study was to explore influence of IFRS adoption on earnings management (EM) and the role of audit quality (AQ), represented by big 4 audit firms. Also, the role of AQ as a moderator in the association between IFRS and EM. The financial data of 97 non-financial listed firms were taken from DataStream and audited with the Saudi Stock Exchange and the Emirates Stock Exchange for the period 2011-2021. The financial data was analyzed using Kothari et al., (2005) model regarding to AEM and Roychowdhury, (2006) with regard to REM. The results indicated a negative significant effect that IFRS contributes to reduce AEM and REM. Besides, audit quality had the same influence on EM. The findings, furthermore, revealed a positive insignificant relationship of the moderating role of AQ which meant that the big4 firms did not anticipate to reduce the EM. This might be due to a lack of local financial and accounting professionals in line with the requirements of major-4 audit companies or the higher costs when relying on big 4 auditing firms. This study opens valuable insights to relevant parties, including government bodies, local standard-setters, shareholders, and emerging markets that have a similar environment.

Keywords: IFRS, Audit Quality, Earnings Management Based on Discretionary Accruals, Real Activities

ARTICLE INFO

Article History:
Received: 17 March 2024
Accepted: 22 September 2024
Available online: 1 April 2025

♣ Corresponding Author: Ahmed Fadhil Saleh; University's Presidency, University of Anbar, Anbar, Iraq; Email: Ahmedf.saleh@uoanbar.edu.iq

INTRODUCTION

Accounting uses financial statements to provide information about a firm. A standard language for financial reporting is desired by utilizers of financial reports due to the complicated nature of corporate operations and their reporting. More than 140 states have adopted the International Financial Reporting Standards, which was issued by the IASB based on the requirement as a distinct set of accounting rules for everyone involved (IFRS, 2024). Other nations are voluntarily adopting IFRS. One of the objectives of these standards is to control the manipulation of accounting figures by managers that would serve to achieve personal motivations at the expense of financial report quality (Tariq, 2021). One essential factor in determining the FRQ is leveling earnings. The general belief is that unmanaged profits reflect the quality and relevance of accounting information (Hashed & Almaqtari, 2021a; Houcine et al., 2022). They highlighted the FRQ in several folds: genuine representation of reality and the economic environment, comparability and relevance, and information asymmetry.

The literature proposes that IFRS adoption is an essential procedure more than GAAP due to several considerations regarding the international common economic language and disclosure requirement (Herath & Alsulmi, 2017). Saleh et al., (2020) believe that international financial reporting standards make managers more committed in terms of providing accessible and comparable information, thereby reducing the likelihood of managing profits (Saleh et al., 2020, 2025; Saleh & Ellouz, 2024). In contrast, Ahmed et al. (2013) examined the mandatory effect of IFRS adoption after 2005 on accounting quality in 20 countries that had adopted IFRS compared to countries that had not. The outcome revealed a rise in income-smoothing, aggressive accrual reporting, a reduction, and delay in the loss recognition by managers in firms that adopted IFRS other than benchmark firms. In other words, the authors argued that IFRS adoption had led to a reduction in accounting quality, unlike what was expected.

Doukakis (2014) studied the mandatory impact of IFRS on 22 European countries to see how the level of EMP was affected. His findings showed that AEM and REM were not significantly influenced. The effect of IFRS adoption on EMP is not conclusive, especially for emerging

economies, as discussed in earlier studies. The listed KSA firms have started to transform to IFRS since the beginning of 2017 and non-listed firms are mandated to comply in the year after (Almaqtari et al., 2021). UAE companies, except banking and insurance sectors, have, on the other hand, started introducing financial statements in compliance with IFRS since the end of 2016 (Grassa, 2021).

Moreover, AQ can significantly impact the magnitude of EMP, given that auditors are crucial in guaranteeing the accuracy of financial data (Al Zoubi, 2016; Allehaidan, 2021; Alzoubi, 2018; Mohammad et al., 2020). The agency theory discusses the relationship amongst ownership and corporate administration, highlighting potential conflicts of interest among stakeholders (Al-Zaqeba et al., 2022; Boshnak, 2021; Hasan et al., 2022; Nalarreason et al., 2019). In 1976, Jensen and WilliamMeckling described agency relationships as contractual agreements between managers and agents with individual goals, suggesting that agents could not always behave in the principal's best interest (Al-Zaqeba et al., 2022; Firnanti et al., 2019; Hasan et al., 2022).

Several studies have been introduced, primarily in developed economics, regarding IFRS, AQ, and EM. However, these topics in developing economies are rarely examined. The current study, which builds upon a previous study by Al Zoubi (2016); Maha Nasser Allehaidan (2021); Tariq Hasan et al. (2020), aimed to analyze the moderating influence of AQ on the IFRS's adoption effect on AEM and REM in a less developed economy such as KSA and UAE. Those countries have been selected for great similarity in terms of customs, traditions, and regulations, as well as the timing of the adoption of IFRS unlike the rest of the Arabic Gulf countries. The researcher also tried to learn the international accounting standards' view of domestic law in those countries, i.e., what is known as 'the law of zakat'. Both IFRS and AQ were given dummy variables (0) for the period before adoption and (1) otherwise. Therefore, IFRS and AQ were expected to restrict accounting information asymmetry by opportunistic managerial behavior which influenced the FRQ in those economies (Houcine et al., 2022; Widagdo et al., 2023).

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

Profits reflect the efficiency of the firm's management and the effectiveness of its strategy to generate growth and financial returns for shareholders and investors. The profits generally represent the figures shown in the financial lists that have a circulation, namely, informative and stewardship (Boshnak, 2021; Enyi et al., 2019; Kvatashidze, 2019). The first one results from the separation of management from ownership (Kustono & Effendi, 2016). Through a financial list, shareholders can monitor the impact of administrative decisions in order to assess incentives in accordance with their interests (Al-Zaqeba et al., 2022). As a result, Watts and Zimmerman (1986) explained that the objective of financial reports is to reduce the agency's conflict and restrict administration from acting on behalf of the agent. In addition, by offering a higher quality than GAAP, IFRS would limit information asymmetries, and thus enhance both of FRQ and the efficiency of capital investment (Hashed & Almaqtari, 2021b). By guaranteeing comparability and integrity of the annual financial reporting, to minimize the extent of earnings manipulation, the adoption of IFRS may provide greater accounting quality (Cugova & Cug, 2021). Several studies provided notable evidence of a decline in EM with IFRS in several nations (Basah, 2021; Hasan & Rahman, 2020; Klann & Beuren, 2018; Kutin, 2021). However, Jeanjean and Stolowy (2008) implied that ceasing to use EM may not be the best way to achieve the goal of IFRS implementation. Consequently, by guaranteeing greater transparency and the accuracy of financial data, the implementation of IFRS and improved audit quality could decrease the degree of EM (Allehaidan, 2021; Mohammad et al., 2020).

IFRS's Compliance and Earnings Management Practices

The quality of the accounting standard in place prior to the enactment of IFRS, a nation's legislative and political system, and incentives pertaining to the accounting information quality are the three main country-specific elements that influence the effective implementation of IFRS (Mohammad et al., 2020). Prior research (Hasan & Rahman, 2020; Hlel et al., 2020; Kaaya & Abdul Noorbasha, 2017; Saleh et al., 2020) looked at how the accounting information quality aggregated into the financial reports changed when domestic accounting principles were replaced with IFRS. It has been noted

that companies using IFRS generate better financial reports and manipulate earnings less. A number of studies have revealed that EM was widely used in Arabic Gulf countries like KSA and UAE's various industries prior to the compliance of IFRS (Abdelqader et al., 2023; Al Anssari & Al-tamimi, 2023; Almaqtari et al., 2021; Haider et al., 2019; Hashed & Almaqtari, 2021b; Zehri et al., 2023). Drawing from the previously mentioned discussion, it is likely that using the IFRS in KSA and UAE will probably result in a decrease in EM's techniques by increasing transparency and comparability (Saleh et al., 2021; Saleh & Ellouz, 2024). Hence, the research hypotheses were:

H1a: IFRS implementation negatively influences the profit management-discretionary accruals.
H1b: IFRS implementation negatively influences real profit management.

The Quality of Audit and Earnings Management Practices

According to Hasan (2022), the accounting literature nowadays suggested that audit quality, can be characterized either directly-based on the auditor's background and qualifications or indirectly based on an equivalent created from study outcomes or implicit features. Malihi et al. (2012) claimed that the AQ could represent a good indicator of the auditor's capacity to spot significant omissions and accounting mistakes in the financial statements. One crucial tool for regulating down managers' opportunistic behavior is the expertise of the external auditor (Almansour, 2019). The competence and objectivity of independent auditors have a significant influence on the AQ, and this could be correlated with the size of the audit company (Al Zoubi, 2016). As a result, a crucial factor in determining the AQ is the audit firm's size or magnitude (Big 4 audit firm). Previous research indicates that the big audit firms, now big4 while they were known as big8, assure a high-quality audit of the financial reports and minimize EM (Allehaidan, 2021; Siala & Jarboui, 2019). In contrast, a big 4 audit firm affiliation, as a choice to AQ, could possibly not be capable of affecting EM, as researchers such as Khanh and Nguyen (2018) have shown no correlation between EMP and audit quality. Current studies by Alzoubi (2018) and Mohammad et al. (2020) investigated the negative correlation of auditing quality (big4) on the magnitude of EM. They ended up finding that Big4 had a vital role in EM's reduction (Saleh & Ellouz, 2024). Therefore, the research assumed that:

H2a: Audit quality negatively influences the magnitude of profit management-discretionary accruals.

H2b: Audit quality negatively influences the magnitude of real profit management.

The Association between IFRS and EMP through the Moderating Role of Audit Quality

Numerous studies have been conducted about IFRS's compliance, AQ, and EM. Nevertheless, few studies have touched on these three objectives within the same structure. This study analyzed each of the IFRS and the audit quality influence on EM in both AEM and REM. As far as the author is aware, this is one of the few attempts that sought to analyze how audit quality influenced the moderating relationship between EM's magnitude and IFRS in developing economies, particularly KSA and UAE. Prior studies have documented that the higher the quality of the audit, the lower the earnings management (Allehaidan, 2021; Alzoubi, 2018; Firnanti et al., 2019; Hlel et al., 2020). Furthermore, a few studies have examined the moderating role of AQ on the EM influence from different points of view (Mohammad et al., 2020; Siala & Jarboui, 2019). As stated by Tariq Hasan et al. (2020) who illustrated that AQ plays a significant moderating role among IFRS and EM in emerging markets, this study, thus, assumed that;

H3a: Audit quality moderates the association between IFRS adoption and AEM.

H3b: Audit quality moderates the association between IFRS adoption and REM.

STUDY METHODOLOGY

Study Sample

The present research, which included 11 years prior to and following the adoption of IFRS in KSA and UAE, focused on the non-financial listed companies of the Saudi Stock Exchange (Tadawul) and Dubai Financial Market (DFM). The financial, insurance, and banking sectors were excluded from the study due to their own legislation. Yearly financial reporting of a total of 97 firms were chosen for the study and the firms must be listed on

the Tadawul and DFM and fully participated in the capital market during the years 2011–2021. Multiple regression analysis was performed using the two-way fixed method of E-views 12 and STATA 17 software. The study consisted of 97*11, i.e., 1067 firm year observations. Table 1 represents the details of our selected sample size.

Table 1: Sampled Firm's Distribution

Sector	*Total Sample*		Saudi Arabia		United Arab Emirates	
	No. of firms	%	No. of firms	%	No. of firms	%
Industrial / Basic Materials	29	29.9	28	38.9	1	4
Basic materials	11	11.3	2	2.8	9	36
Consumer Services	8	8.2	5	6.9	3	12
Telecommunications	7	7.2	5	6.9	2	8
Real Estate	7	7.2	3	4.2	4	16
Food production	6	6.2	6	8.3	-	-
Health Care	5	5.2	3	4.2	2	8
Capital goods	5	5.2	5	6.9	-	-
Energy	4	4.1	2	2.8	2	8
Food segmentation	3	3.1	3	4.2	-	-
Luxury goods retailing	3	3.1	3	4.2	-	-
Business & Professional Services	2	2.1	2	2.8	-	-
Long-term goods	2	2.1	2	2.8	-	-
Services/food products	2	2.1	1	1.4	1	4
Services/transportation	1	1	-	-	1	4
Media & Entertainment	1	1	1	1.4	-	-
Public utility	1	1	1	1.4	-	-
Total	97	-	72	74.2%	25	25.8%

Source: The authors

Study Models and Variables Definition

The main objective is to investigate how the implementation of IFRS influenced EM considering the magnitude of AQ as moderator impact in KSA and UAE. Figure 1, illustrates the theoretical structure of the study. The data analyzed by the panel regression models in order to assess the hypothesis. The regression models took into account the following factors: IFRS as an independent variable, REM and AEM as dependent variables, and AQ as a moderating variable in addition to control variables.

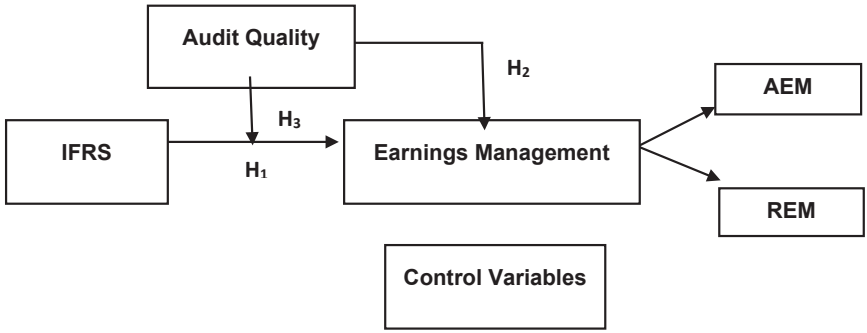

Figure 1: The Theoretical Structure of the Study

The control variables were taken as an extension of previous studies (Abdelqader et al., 2023; Hasan, 2022; Hashed & Almaqtari, 2021b; Molla et al., 2021; Zehri et al., 2023), which included the company's volume of assets (FS), debts that reflected operational leverage, annual sales growth, and ROA. Thus, three stepwise linear models were created to reflect the hypotheses to demonstrate the influence of the variance while expanding the study model by taking into account other dimensions.

First hypothesis model is the effect of IFRS adoption on EM

$$AEM_{ijt} = \alpha_0 + \alpha_1 IFRS_{ijt} + \alpha_2 FS_{ijt} + \alpha_{43} LEV_{ijt} + \alpha_{54} SG_{ijt} + \alpha_5 ROA_{ijt} + \sum_{i=1}^{N} firms + \sum_{t=1}^{n} years + \varepsilon_t \quad \textbf{(1a)}$$

$$REM_{ijt} = \alpha_0 + \alpha_1 IFRS_{ijt} + \alpha_2 FS_{ijt} + \alpha_{43} LEV_{ijt} + \alpha_{54} SG_{ijt} + \alpha_5 ROA_{ijt} + \sum_{i=1}^{N} firms + \sum_{t=1}^{n} years + \varepsilon_t \quad \textbf{(1b)}$$

Second model hypothesis is the auditing quality effect of (Accruals and Real earnings management).

$$AEM_{ijt} = \theta_0 + \theta_1 AQ_{ijt} + \theta_2 FS_{ijt} + \theta_3 LEV_{ijt} + \theta_4 SG_{ijt} + \theta_5 ROA_{ijt} + \sum_{i=1}^{N} firms + \sum_{t=1}^{n} years + \epsilon_t \quad \textbf{(2a)}$$

$$REM_{ijt} = \gamma_0 + \gamma_1 AQ_{ijt} + \gamma_2 FS_{ijt} + \gamma_3 LEV_{ijt} + \gamma_4 SG_{ijt} + \gamma_5 ROA_{ijt} + \sum_{i=1}^{N} firms + \sum_{t=1}^{n} years + \epsilon_t \quad \textbf{(2b)}$$

Third hypothesis model is about the moderating effect of AQ on the association among IFRS and (AEM and REM).

$$AEM_{ijt} = \eta_0 + \eta_1 (IFRS \times AQ)_{ijt} + \eta_2 IFRS_{ijt} + \eta_3 AQ_{ijt} + \eta_4 LEV_{ijt} + \eta_5 SG_{ijt} + \eta_6 ROA_{ijt} + \sum_{i=1}^{N} firms + \sum_{t=1}^{n} years + \epsilon_t \quad \textbf{(3a)}$$

$$REM_{ijt} = \chi_0 + \chi_1 (IFRS \times AQ)_{ijt} + \chi_2 IFRS_{ijt} + \chi_3 AQ_{ijt} + \chi_4 LEV_{ijt} + \chi_5 SG_{ijt} + \chi_6 ROA_{ijt} + \sum_{i=1}^{N} firms + \sum_{t=1}^{n} years + \epsilon_t \quad \textbf{(3b)}$$

The use of regression equations in the above models was in line with the approach developed by (Baron & Kenny, 1986; Hasan et al., 2022; and Kateb, 2023) to examine the moderating impact of a variable ,in this case, AQ. The coefficient of IFRS in equation 1 indicated how the adoption of IFRS will turn out; a positive (negative) coefficient indicated that it will have a higher (lower) impact on EM. The equations (2a and 2b), however, reflected the impact of AQ on EM (AEM and REM). While, an association between IFRS * EM in terms of the interacting variable AQ is shown in equations (3a and 3b)**.**

Table 2: Study Variable Explanation in The Regression Model

Variables	Measurement	Expected sign
	AEM of firm 'i' in period 't', calculated by Kothari. et.al (2005).	N/A
	The values of PROD, CFO and SG&A as alternative of REM by Roychowdhury,(2006)	N/A

Dummy (0) for pre-IFRS, 2011-16 and (1) post-IFRS, 2017-21.	Negative
Dummy variable (1) if the frim was audited by big4 and (0) otherwise.	Negative
The log of overall assets	
The proportion of all assets to entire obligations	N/A
Annual percentage of	
The proportion of net earnings divided by total assets	

Source: The authors

Measurements of Models

Kothari et al., (2005) and AEM

Prior literature has highlighted that accruals are used to influence accounting practices, including revenue and cost recognition, asset write-downs, and accounting estimate modifications (Hassan, 2023). Total accruals, which are broken down into normal accruals and abnormal accruals, are derived from the reduction of operating cash flow and net income. Studies, such as Al-Zaqeba et al. (2022) have documented that the modified Jones model (1995) was well fitted to deduct the estimated discretionary accruals. Other authors such (Allehaidan, 2021; Almaharmeh et al., 2021; Collins. et al., 2017; Mohammed et al., 2023; Shauchi, 2016; Umer et al., 2020) concluded that the Kothari et al. (2005) is more appropriate to estimate the DA regarding to firm performance. Hence, to get more accuracy in our overall sample, we considered the year, industry, and firm as fixed effects in terms of the accrual- based and real activates estimations (Viana et al., 2023).

To measure the EM level, instead of signed DA we utilized the absolute discretionally accruals (|DACC|) considering that administrators may utilize both directions of either decreasing and increasing techniques of the earnings (Hasan et al., 2022; Kateb, 2023; and Schipper, 1989). In accordance with many previous studies, the study used the Kothari model, which was based on the modified Jones model where the ROA represented the ratio between net profit and total assets. The DA was calculated based on the following steps:

First step is to calculate the total assets (TA) for the selected study sample using the equation below.

$$TACC_{it} = NI_{it} - CFO_{it} \quad \text{.....(1)}$$

Where:

$TACC_{it}$: Total accruals of the company (i)in year (t)
NI_{it}: Net income of the company (i)in year (t)
CFO_{it}: Cash flow from firm's operations (i)in year (t)

Second identification of (α1,α2,α3,α4) to calculate NDA in order to determine the DA at a later date. Therefore, the Kothari model, which uses ROA a measure of the firm's performance, was utilized based on the following equation:

$$\frac{TA_t}{A_{t-1}} = \alpha 1\left(\frac{1}{A_{t-1}}\right) + \alpha 2\left(\frac{\Delta REV_t - \Delta REC_t}{A_{t-1}}\right) + \alpha 3\left(\frac{PPE_t}{A_{t-1}}\right) + \alpha 4 ROA_{t-1} + \varepsilon_t \quad \text{..... (2)}$$

Based on this equation, $TACC_t$ scales via lagged total assets with several variables such ΔREV_t which revenues change of the year (t), ΔREV_t receivables change of the year (t), PPE_t, and ROA. Then the coefficients of those variables were taken from the yearly financial statements for the period 2011- 2021 to calculate the NDA in equation (3) of step (3).

Third Calculating the NDA in equation (3) as below to identify DA in last step.

$$\frac{NDA_t}{A_{t-1}} = \alpha 1\left(\frac{1}{A_{t-1}}\right) + \alpha 2\left(\frac{\Delta REV_t - \Delta REC_t}{A_{t-1}}\right) + \alpha 3\left(\frac{PPE_t}{A_{t-1}}\right) + \alpha 4 ROA_{t-1} \quad \text{.....(3)}$$

Fourth, we finally calculated the variance between TA and NDA to get the DA which did not consist of operating activities, that usually represented the EMP as shown in equation (4) bellow.

$$\frac{DA_t}{A_{t-1}} = \frac{TA_t}{A_{t-1}} - \frac{NDA_t}{A_{t-1}} \quad \text{..... (4)}$$

Roychowdhury, (2006) model and REM

Evidence from previous studies have shown that administrators' discretion in financial disclosure is not limited by accounting estimates, it could also be affected by real management operations procedures (Daniel et al., 2008). Based on Doukakis (2014) and Roychowdhury (2006), most strategies that could be taken by managers in this manner are i) accelerated sales to increase current period earnings through sales discounts or credit term, ii) reducing COGS to increase production to get as high an operating margin as they can, and iii) decreasing SG & A expenses to raise the reported earnings in the financial statement. These three metrics have been used by many studies (Almaharmeh et al., 2021; Doukakis, 2014; Ghaleb et al., 2020; Hassan, 2023; Mohammad et al., 2020; Saleh et al., 2021; C. Viana & Lourenço, 2022; Viana et al., 2023; Yasmine, 2022). Hence, the study proposed Roychowdhury (2006) to identify the EM that resulted from real activities as shown below:

$$\frac{CFO_{it}}{ASSETS_{t-1}} = \alpha 0 + \alpha 1\left(\frac{1}{ASSETS_{t-1}}\right) + \alpha 2\left(\frac{SALES}{ASSETS_{t-1}}\right) + \alpha 3\left(\frac{\Delta SALES_t}{ASSETS_{t-1}}\right) + \varepsilon_t \quad \text{..... (5)}$$

Where, CFOit = Cash flows from activities as reported in the cash flow sheet.

$$\frac{PROD_{it}}{ASSETS_{t-1}} = \alpha 0 + \alpha 1\left(\frac{1}{ASSETS_{t-1}}\right) + \alpha 2\left(\frac{SALES}{A_{t-1}}\right) + \alpha 3\left(\frac{\Delta SALES_t}{ASSETS_{t-1}}\right) + \alpha 3\left(\frac{\Delta SALES_{t-1}}{ASSETS_{t-1}}\right) + \varepsilon_t \quad \text{..... (6)}$$

Where $Prod_t$ = Production costs were calculated as the total of change in inventory from year t-1 to year t plus the sum of COGS.

$$\frac{disex_{it}}{ASSETS_{t-1}} = \alpha 0 + \alpha 1\left(\frac{1}{ASSETS_{t-1}}\right) + \alpha 2\left(\frac{SALES_t}{A_{t-1}}\right) + \alpha 3\left(\frac{\Delta SALES_t}{ASSETS_{t-1}}\right) + \varepsilon_t \quad \text{..... (7)}$$

SG& At = normal expenses are expressed as selling, general, and administrative exp. for period t.

REM was identified, similar to the studies of Hasan et al. (2022), Hasan and Rahman, (2020), and Tariq Hasan et al. (2020). The usual rate of production costs, CFO, and discretionary expenditures were assessed using equations 5,6, and 7, respectively; the variance between these estimated values and the real values was evaluated as abnormal. Consequently, abnormal operating cash flow and abnormal cost spending were multiplied by a negative one (-1) to provide an interpretation (Mohammad et al., 2020; Viana et al., 2023). Hence, when those metrics value was higher than zero, it meant the likelihood that the company would manipulate earnings (Abdelqader et al., 2023; Kharashgah et al., 2019; Saleh et al., 2021).

THE INTERPRETATION OF ANALYSIS AND FINDINGS

Descriptive Analysis

Based on the results obtained as shown in Table 3 below, AEM had a negative value of -0.488. This included the fact that Saudi and UAE companies had managed their profits down for most of the study period. In contrast, REM had a positive value of 0.482, meaning that firms had managed their real earnings up during most of the study period. The outcome showed that the mean of IFRS adoption was 0.495, since IFRS was a dummy variable that took (1) if adopted and (0) otherwise. Thus, 50% of the study observations in IFRS were adopted when preparing financial reports. This is similar to study of Abdelqader et al., (2021). As shown in Table 3 company size ranged from 4.531- 8.53 with a medium of 6.360. Whereas, the mean audit quality was 0.399, indicating that 39.9% of the sample companies financial reporting were audited by the big4 audit firms. The mean of leverage (0.427), which included the total liability of the companies was 42.7% of the total assets. These companies also achieved heterogeneous sales growth rates ranging from an economic contraction (negative sales growth) of up to -100% to an economic boom (positive sales growth) of up to 13,834%. This sales volatility is normal as a result of business cycles, hence, the sales growth medium reached 2.7% annually. Finally, the mean of ROA was 3.8%. These results are similar to Allehaidan, (2021) Mohammad et al., (2020).

Table 3: Descriptive Summary Statistics, 2011-2021

	Unit	Obs.	Median	Med	Std. Dev.	Min	Max
Accrual Based EM (AEM)	(scale)	1067	-0.464	-0.488	0.399	-4.577	5.978
Real Earnings Management (REM)	*(scale)*	1067	0.759	0.482	1.307	-7.743	29.76
IFRS Adoption	*(dummy)*	1067	0.495	0	0.498	0	1
Auditing quality (AQ)	*(dummy)*	1067	0.399	0	0.490	0	1
Firm Size (FS)	*(scale)*	1063	6.491	6.360	0.764	4.281	8.531
Leverage (LEV)	*(%)*	1065	0.426	0.427	0.213	0	1.025
Sales Growth (SG)	*(%)*	1065	21.59	2.748	435.1	-100	13834
Return on Assets (ROA)	*(%)*	1067	0.034	0.038	0.208	-5.816	0.758

***Note*:** a, b, c represent significance at 1%, 5% and 10% respectively.

Correlation Matrix and VIF Test

According to Anderson (1990), correlation coefficients that are greater than 70% may indicate that the model may be exposed to the issue of multicollinearity. Accordingly, there was no possibility of a multicollinearity issue among in the study variables since the VIF values as shown in Table 4 were not more than 3. This is consistent with prior studies (Jacoby et al., 2019; Mohammad et al., 2020; Pallant, 2020; Saleh & Ellouz, 2024). As for the initial trends that can be expected from the strength of correlation relationships; IFRS can be implied to adversely affect profit management, especially AEM. Furthermore, AQ can play a significant moderating role in the magnitude of EM.

Table 4: Correlation Matrix Between Study Variables, *2011-2021*

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
AEM	(1)	1							
REM	(2)	-0.037	1						
IFRS	(3)	-0.119[a]	-0.038	1					
FS	(4)	0.069[b]	-0.169[a]	0.008	1				
AQ	(5)	-0.068[b]	-0.085[a]	0.048	0.159[a]	1			
LEV	(6)	-0.108[a]	0.120[a]	0.064[b]	0.364[a]	0.032	1		
SG	(7)	-0.018	0.006	-0.026	-0.046	0.031	-0.031	1	
ROA	(8)	0.339[a]	-0.030	-0.144[a]	0.139[a]	0.083[a]	-0.141	-0.170[a]	1

***Note*:** a, b, c represent significance at 1%, 5% and 10% respectively.

As already explained, before processing any regression, its quality should first be ascertained and it must be free of various multicollinearity

problems[1] to check if the results are correctly obtained. This was done by using different diagnostic tests such as variable inflation factor (VIF), (Jamal, 2017), as are shown in Tables 5 and 6, Adib and Xianzhi (2019).

Table 5: Variance Infliation Factors (VIF) Tests Used in Model (1)

	AEM			REM		
Variable	**Coefficient Variance**	**Uncentered VIF**	**Centered VIF**	**Coefficient Variance**	**Uncentered VIF**	**Centered VIF**
IFRS	0.001126	7.399118	4.023095	0.009507	7.416061	3.996551
AQ	0.000332	1.907592	1.146006	0.002802	1.880785	1.134614
FS	0.000153	94.21668	1.259172	0.001261	91.45653	1.221889
LEV	0.002111	6.919827	1.365089	0.016001	6.189707	1.219888
SG	3.82E-10	1.007711	1.005870	3.18E-09	1.042388	1.039811
ROA	0.009011	1.500305	1.298728	0.015266	1.151049	1.122866

VIF test showed no problem of autocorrelation between the independent variables, as the VIF of all the independent variables in the two regressions was less than 5 (Hasan & Rahman, 2020). Accordingly, these two regressions were estimated utilizing the white cross-section standard errors, and the firm GLS weights, which were effective in eliminating endogeneity and serial correlation problems through the revision of the standard deviation. Consequently, the resulting capabilities were highly efficient and reliable. Therefore, the issue of multicollinearity and normality, was not a problem due to the large size of the study sample. (Adib & Xianzhi, 2019; DeBoskey & Luo, 2018; Mbir et al., 2021; Meangbua et al., 2019; Mohammad et al., 2020).

1 Allison, P. (2012). When can you safely ignore multicollinearity? Retrieved January 18, 2024, from https://statisticalhorizons.com/multicollinearity

Table 6: Diagnostic Tests Used in Model (1)

Tests used	Accrual Based EM (AEM)	Real Earnings Management (REM)
White's test for heteroscedasticity	274.643 (0.000)***	346.576 (0.000)***
Wooldridge test for serial correlation	3.02332 (0.003)***	35.7441 (0.000)***
Pesaran CD for cross-section dependence	-1.86808 (0.062)*	12.2839 (0.000)***
Jarque-Bera for normality	228.960 (0.000)***	1476.35 (0.000)***
Chow test for structural breakpoint	19.2291 (0.316)	33.3781 (0.000)***
Omitting variables test	9.15491 (0.000)***	11.3286 (0.000)***
RESET test for function form specification	20.6784 (0.000)***	19.2139 (0.000)***
Non-linearity test (squared terms)	149.751 (0.000)***	112.215 (0.000)***
Non-linearity test (log terms)	9.84150 (0.002)***	3.59711 (0.058)*

***Note*:** ***, **, * represent significance at 1%, 5% and 10% respectively.

The Measurement Issues

Estimating the study model, nevertheless, requires determining the most appropriate standard method with the study data and sample. This could be done through the identification tests, and the findings are illustrated in the following Table. As shown in Table 7 the residual variance test and Breusch-Pagan for regressions were statistically significant at 1%, which implied that the model of fixed or random effects was better than the OLS model. It also indicated that there were individual differences between the sample companies, i.e. the firms and data were not homoscedasticity (Hasan & Rahman, 2020). Therefore, the Hausman test was used to compare and examine which one, either FEM or REM was statistically significant for both regressions. Furthermore, the Time test was also statistically significant which showed that time affected the relationship, i.e. that the study sample was variant according to firm's nature and age (Allehaidan, 2021). Accordingly, the most appropriate data measurement method was the 2-way fixed effects (Adib & Xianzhi, 2019; Mbir et al., 2021; Meangbua et al., 2019; Torres-Reyna, 2017).

Table 7: Specifications Tests Used in Modes (1)

Tests used		Accrual Based EM (AEM)		Real Earnings Management (REM)	
Residual variance test	(Pooled OLS versus FEM)	F(96, 948):	22.239 (0.000)***	F(96, 937):	61.524 (0.000)***
Breusch-Pagan test	(Pooled OLS versus REM)	Chi-square (1):	1870.6 (0.000)***	Chi-square (1):	2682.7 (0.000)***
Hausman test	(REM versus FEM)	Chi-square (7):	42.549 (0.000)***	Chi-square (7):	13.516 (0.060)*
Time test	(Time effects)	Chi-square (9):	65.533 (0.000)***	Chi-square (9):	66.884 (0.000)***

Regression Analysis

The results of the research model, which utilized Panel-Corrected Standard Errors (PCSE) to regress the independent, dependent, moderating, and control variables against two proxies for managing earnings, are shown in Table 8. Every model in the study had an R- squared value that was greater than 22% and significant at 1%. The results of equations (1.a) and (3.b) demonstrated a negative effect on normal accruals **(-**0.0593) in the light of IFRS implementation and REM (-0.063274). The coefficient values of both were significant at 1% Boucher et al. (2014). Those outcomes implied that IFRS adoption contributed to a reduction in both types of EM. The outcomes align with the literature by Mohammad et al., (2020).

Table 8: Regressions' Outcome Utilizing PCSE

	Reg.1.a	Reg.2.a	Reg.3.a	Reg.1.b	Reg.2.b	Reg.3.b
Variables		**AEM**			**REM**	
IFRS	(-0.059290) 0.0000***		(-0.025429) 0.1324	**(-0.063274) 0.0032*** **		(-0.009718) 0.7291
AQ		**(-0.064807) 0.0000*** **	(-0.061487) 0.0002***		**(-0.040571) 0.0550***	(-0.064108) 0.0187**
IFRS*AQ			(0.007958) 0.7254			(0.038922) 0.3090
FS	(0.004667) 0.5699	(0.023266) 0.0091***	(0.005174) 0.5355	(-0.241148) 0.0000***	(-0.541021) 0.0000***	(-0.241071) 0.0000***
LEV	(0.003508) 0.9117	(-0.058895) 0.1399	(-0.008226) 0.7974	(0.729952) 0.0000***	(0.638369) 0.0000***	(0.768341) 0.0000***
SG	(1.530000) 0.9956	(-1.410000) 0.2385	(-7.39000) 0.9791	(-7.48000) 0.0546*	(-6.490000) 0.0531*	(-7.070000) 0.0627*
ROA	(1.257079) 0.0000***	(0.999426) 0.0001***	(1.199781) 0.0000***	(0.449578) 0.0006***	(0.562512) 0.0000***	(0.498761) 0.0002***

Firms	(-8.800000) 0.9682	(-0.000270) 0.1012	(8.9600000) 0.9680	(-0.001132) 0.0037**	(-0.011363) 0.0004***	(0.001234) 0.0016***
Years	(0.000220) 0.0000***	(0.000180) 0.0000***	(0.230000) 0.0000***	(0.000968) 0.0000***	(0.001966) 0.0000***	(0.620000) 0.0000***
OBS.	1067	1067	1067	1067	1067	1067
No. of firms	97	97	97	97	97	97
R- squared	0.239402	0.237377	0.226484	0.307046	0.304992	0.286692

***, **, * statistical significance at 1%, 5% and 10% levels respectively.

Nevertheless, the equations (2.a) and (2.b) refer to how EM could be affected by audit quality. Those regressions findings indicated a negative association on AEM at the1% significance levels and 10% significance regarding REM. These results are similar to prior studies (Hasan, 2022; Hashed & Almaqtari, 2021b; Kutin, 2021; Viana et al., 2023). This indicated that audit quality contributed to a lower level of AEM (Allehaidan, 2021; Almaqtari et al., 2021; Habbash & Alghamdi, 2016; Kateb, 2023), and the big4 audit firms in KSA and UAE also involved a minimizing degree of EM with regard to REM as in the study of Mohammed et al., (2023). With regard to equations (3a) and (3b), it can be said that the findings reflected that the AQ did not exercise a modified role in the relationship between IFRS and EM neither on an accrual basis nor on a real activity basis. The reason for this is the significant positive effect, which means refusing to accept the nihilistic hypothesis and accepting the alternative hypothesis which is consistent with a study by Gerged et al., (2021) and Rusmin, R. et al., (2014). Thus it was concluded that quality auditing as a modified factor did not limit EMP in its various forms in KSA and UAE. In addition, the significant effect of both the year and ROA factor can be observed during the study models.

CONCLUSION

The purpose of the current research was to explore IFRS adoption influence on earnings management (EM) in one hand and audit quality (AQ) role on earnings management (EM) on the other hand. And also the AQ as a moderating role on the association between IFRS and EM. The financial data of 97 non-financial listed firms were taken from DataStream and audited with the Saudi Stock Exchange and the Emirates Stock Exchange for the

period 2011-2021. The financial data was analyzed by using the model from Kothari et al., (2005) regarding to AEM and Roychowdhury, (2006) in respect of REM. The results indicated a negative significant effect that IFRS contributed to reduced AEM and REM. Besides, audit quality had the same influence on EM. The findings, furthermore, revealed a positive insignificant relationship of moderating role of AQ which meant that **big4** firms were not anticipated to reduce the EM. This is due either to the lack of local financial and accounting professionals in line with the requirements of major-4 audit companies or for high costs when relying on big 4 auditing firms. Theoretical implications of the current study open valuable insights to relevant parties, including government bodies, local standard-setters, shareholders, and emerging markets that have a similar environment. The study suggests using other variables such as Corporate Social Responsibility and making a comparison between developed and emerging markets to discover EMP directions.

DECLARATION OF INTERESTED

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

DECLARATION OF FUNDING

The authors per witness that No funding was received for this research.

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