

The impact of corporate governance mechanisms and IFRS on earning management in Saudi Arabia

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ABSTRACT

The current research seeks to assess the influence of corporate governance mechanisms and IFRS adoption on compliance with IFRS, earning management, and financial reporting quality (FRQ). A sample comprises 102 Saudi listed firms for the period spanning from 2014 up to 2019 was used. The study used descriptive statistics, correlation analysis and multivariate analysis to estimate the results. The results reveal that while board size, board meeting and foreign ownership had negative effects on compliance with IFRS, board and audit committee independence exhibited a positive effect. Further, the results demonstrate that there was a sign of earning management under IFRS when a performance magnitude was used. The results also indicate that board and audit committee size, audit committee meeting and managerial ownership had significant negative effects on financial reporting quality however, board and audit committee independence showed a significant positive effect. Importantly, the results found that FRQ under IFRS was better than Saudi GAAP. The present research provides practical implications for policy makers, stock market authority, and academicians. More regulatory and disclosure requirements have to be imposed and financial reporting supervisory board need to be formed. The present research provides a novel contribution to IFRS compliance, earning management, financial reporting quality and corporate governance literature. It has a unique contribution as it attempts to investigate this issue in the context of an emerging economy and a recent IFRS adopter; Saudi Arabia that has special country-specific characteristics. The study also provides an evidence by investigating earning management and financial reporting quality under both sets of accounting standards; IFRS and Saudi GAAP.

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1. Introduction

The Saudi Capital Market Authority (SCMA) issued its corporate governance code entitled “Corporate Governance Regulations in the Kingdom of Saudi Arabia” in 2006 and was revised in 2009 (Altuwaijri & Kalyanaraman, 2016; Ghabayen, 2012; Hill et al., 2015; Shehata, 2015). Recently, a revised CG regulation has taken place which has been effective from 2017. The Saudi Corporate Governance Regulations (SCGRs) were voluntary until the beginning of 2009. However, from 2010 it has become mandatory in terms of implementation and reporting for listed companies (Alzahrani, 2013). All listed companies are liable to implement the code on a comply/explain basis generally indicated as a ‘comply or explain’ policy (AlQahtani, 2014; Alzahrani, 2013; Hill et al., 2015; Shehata, 2015). The provisions of the SCGRs require all listed companies to report their adherence and compliance with these provisions and to disclose and justify for non-compliance (Alzahrani, 2013; Hill et al., 2015). In case of

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non-compliance with the provisions of the code, listed companies must justify and report the non-compliance reasons to the SCMA (Shehata, 2015). With regards to accounting standards, in 1986, Saudi Arabia made a crucial move to issue its own national accounting and auditing standards that were primarily adopted from the U.S standards (Al-matari et al., 2012). “Saudi Organization for Certified Public Accountants (SOCPA)” is the successor of the Saudi Accounting Association (SAA) which was the body that responsible for developing accounting standards in Saudi Arabia. All Gulf countries except Saudi Arabia have adopted IFRS and made it mandatory for all companies to prepare their financial reports based on IFRS. For example, Oman has adopted IAS since 1996 and UAE since 1999. Both countries are following IFRS since IAS were replaced by IFRS in 2001 (Ramady, 2012, P. 180). However, in the case of KSA, SOCPA has released a project in 2013 to shift to IFRS. SOCPA has approved a plan by which listed firms other than financial institutions would be mandated to follow SOCPA’s new standards that will be IFRS with some modifications “IFRS as adopted in Saudi Arabia” (PWC, 2014). SOCPA approved an IFRS convergence Plan, called the “SOCPA Project for Transition to International Accounting & Auditing Standards” (Manduca, 2016). Under this plan, financial institutions are required to comply with IFRS as per SAMA requirements. All listed firms are required to comply with IFRS beginning from 2017; and other remaining firms are mandated to comply with IFRS by 2018. “IFRS in Saudi Arabia are similar to the standards issued by the IASB with possible modifications in three respects: adding more disclosure requirements, removing optional treatments; and amending the requirements that contradict Shariah or local law, taking in consideration level of technical and professional preparedness in the Kingdom” (PWC, 2014). The present study investigates the impact of CG mechanisms and IFRS adoption on compliance with IFRS, earning management and financial reporting quality. The study is of three-fold objectives and contributions. Firstly, it seeks to assess the impact of corporate governance mechanisms on compliance with IFRS. Second, the study attempts to investigate the effect of IFRS adoption on earning management and financial reporting quality. Finally, the study compares the impact of corporate governance mechanisms on earning management and financial reporting quality pre- and post-IFRS adoption. Accordingly, the present study has several contributions and implications. It assesses the level of compliance with IFRS mandatory requirements by Saudi companies. Further, it tries to understand the role of corporate governance in curbing earning management practices. In the same context, the study has a unique contribution as it attempts to compare the effect of corporate governance mechanisms on earning management and financial reporting quality under the two sets of accounting standards; IFRS and Saudi GAAP. The study also seeks to evaluate the effect of IFRS adoption and weather the introduction of IFRS in Saudi Arabia has achieved its desired aim of better financial reporting quality. Hence, the study provides valuable insights to regulators, analysts, stock markets, professionals and academicians in this issue. The study introduces empirical evidences related to window dressing in IFRS disclosures and the quality of financial reporting or earnings management and the role of corporate governance mechanisms in this issue in the context of an emerging country; Saudi Arabia. The remainder of the study is organized as follows: section 2 introduces literature review. Section 3 presents the research design and methodology. Section 4 estimates the results and, finally, section 5 presents the conclusions.

2. Literature review

2.1 Board characteristics

Several studies argue that larger board size leads to better monitoring as the board members are diversified, more experienced and more effective (Mambondiani, 2011; Brown et al., 2011; Akhtaruddin et al., 2009). However, some other studies argue that smaller boards are better in terms of communication and coordination (Abbott et al., 2004), better quality information and disclosure levels (Al-Shaer et al., 2017; Juhman, 2017; Al-Akra et al., 2010). Similarly, some studies indicate that board size is linked with IFRS compliance (Juhman, 2017; Al-Akra et al., 2010). Contradictory, Ba-Abbad and Wan- Hussin, (2011) argue that board size is not associated with compliance with IFRS. In the context of FRQ, different studies reported that board size is positively and significantly associated with FRQ (Góis, 2009; Farber, 2005; Ditropoulos & Asteriou, 2010) which contradicts Chalaki et al. (2012) and Ahmed and Duellman (2006) who advocate that board size is insignificantly associated with FRQ. Concerning board independence, (Nelson et al., 2010; Owusu-Ansah & Yeoh, 2005; Samaha et al., 2012) reported that greater board independence is significantly linked with more comprehensive statutory disclosures, reduce the information asymmetry (Botti et al., 2013) and positively associated with FRQ (Bradbury et al., 2006; Koh et al., 2007; Ahmed & Duellman; 2006). Contradictory, some studies (e.g., Cornett et al., 2009; Onuorah et al., 2016) indicate that board independence has a negative relationship with FRQ. However, Petra (2007) reported insignificant association between both. Nemours studies (e.g., Chou et al., 2013; Al-Ghamdi, 2012; Francis et al., 2012; Ntim & Osei, 2011; Habbash, 2010, Modum et al. 2013; Bathula, 2008; García Lara et al., 2009; Chobpichien et al., 2008) indicate that frequency board meetings are essential for protection of shareholders’ interests. They also argue that better board diligence is negatively and significantly linked with earnings management, leads to better disclosure levels. Contradictory, Habbash (2010) reported that meetings frequency may not deter earnings management practices.

2.2. Audit committee attributes

Different studies found that larger audit committee size is significantly and positively linked with FRQ (Al-Ghamdi, 2012), is negatively associated with earnings management (Cornett et al., 2008; Lin & Hwang, 2010), and is positively related to

voluntary disclosure (Akhtaruddin et al., 2009). Differently, it was found that audit committee size has an insignificant effect on earnings management (Baxter & Cotter, 2009) and FRQ (Abbott et al., 2004). On the other hand, several studies indicated that board independence is positively and significantly linked with voluntary disclosure levels (Akhtaruddin et al., 2009; Akhtaruddin & Haron, 2010; Mohamad & Sulong, 2010; Abeysekera, 2010; Yuen et al., 2009), and reduces earnings management (Klein, 2002). Conversely, Lin et al. (2006) and Siregar and Utama (2008) reported that there is no significant association between audit committee independence and reduced earnings management. Further, Ruth et al. (2011) found an insignificant relationship between voluntary disclosures and audit committee independence. Song and Windram (2004) state that the frequency of audit committee meetings increases FRQ and Abbott et al. (2004) reported that it contributes to better IFRS disclosures. Similarly, Ebrahim (2007) advocates that it is associated with a lower incidence of earnings management. Differently, Baxter and Cotter (2009) reveal an insignificant association between the frequency of audit committee meetings and mitigating of earnings management or FRQ.

2.3 Ownership structure

Al-bassam et al. (2018) reported that voluntary disclosure is significantly associated with ownership structure. In the same context, Hambreg et al. (2013), Gordon et al. (2012) and Silva et al. (2012) indicated that there is a positive relationship between IFRS adoption and foreign ownership. Likewise, Yasser et al. (2016) found a positive link between financial disclosure and foreign ownership. Further, several studies report that foreign ownership contributes to better FRQ (Lee et al., 2013; Srithanpong, 2013), and enhances the comparability of IFRS financial statements (DeFond et al., 2011). Further, Lee et al. (2013) and Srithanpong (2013) provided evidences from China and Thailand that there is a significant and positive association between the greater foreign ownership and FRQ under IFRS.

2.4 Audit quality

Street and Gray (2002) and Karim and Ahmed (2005) advocate that there is a positive association between greater IFRS compliance levels and a firm that audited by a Big-Four. Consistently, Onuorah et al. (2016) argue that FRQ is positively and significantly influenced by quality of external audit. However, Davidson et al. (2005) reported that earnings management is not reduced by the presence of a Big 5 auditor. Overall, several prior studies have investigated corporate governance in Saudi Arabia. However, there is a wide variation amongst prior studies of corporate governance in Saudi Arabia (Almqatari et al., 2020). Majority of prior literature of corporate governance in Saudi Arabia discuss firm performance or disclosure issues (e.g., Alajlan, 2015; Rahman & Omar, 2013; Al-Janadi et al., 2016; Al-bassam et al., 2015; Darweesh, 2015; Alzahrani, 2014; Alkahtani, 2013; Al-matari & Al-Matari 2012; Ghabayen 2012). Importantly, these studies have been conducted in the context of Saudi GAAP. However, recently, Saudi Arabia has adopted IFRS for its financial reporting practices. Accordingly, an investigation of IFRS disclosures, earning management and financial reporting quality under the new set of accounting standards is necessary. Further, comparing earning management practices and financial reporting quality under IFRS and Saudi GAAP becomes important as prior studies in this context are limited to the local set of accounting standards. On the other hand, different studies also have been conducted in Saudi Arabia about earning management. For example, Alghamdi (2012) and Habbash and Alghamdi (2015) examined earning management in Saudi companies and reported that the four main incentives for Saudi managers to manage earnings are to increase the amount of remuneration to report a reasonable profit and avoid loss, to obtain a bank loan and to increase share price. Al-Thuneibat et al. (2016) reported that the effect of corporate governance on earnings management is statistically insignificant. They concluded that there is a big question mark on the effectiveness of corporate governance in Saudi Arabia. They also revealed that there is a high degree of compliance with corporate governance requirements, but there is no significant effect on earnings management. In the same context, Alshetwi (2016) found that audit committee members' multiple directorships have statistically insignificant relationship in reduction the level of earnings management in 98 Saudi nonfinancial listed companies. However, Habbash (2019) found that board size and independence are negatively associated with earnings management at significant levels. In the same line, Baatour et al. (2017) provided evidence that earnings management practices increase with the number of multiple directorships. They stated that multiple directorships have a positive and significant effect on real earnings management in the Kingdom of Saudi Arabia. However, they found no significant impact of multiple directorships on accrual-based earnings management. Alsultan (2017) concluded that Big 4 firms have a role in curbing earnings management only in income-decreasing activities. However, Habbash and Alghamdi (2016) indicated that only auditor opinion indicates earnings management practice, they advocate that auditors are powerless in front of managerial opportunistic activities.

Oraby (2017) indicated that accounting accrual-based earnings management strategy is used to manipulate earnings downward but it is not of value relevance because it has no effects on share prices. On the other hand, real activities-based earnings management strategy is statistically significant and of value relevance and it is used to manipulate net income upward. Managers engage in real activities-based earnings management practices to increase net income but investors in Saudi capital market understand these practices and adjust for their decisions by reducing the value relevance of earnings when determining share prices. However, there is a lack of studies that investigate the impact corporate governance on earning management especially after IFRS adoption. The present study has a novel contribution which sought to assess the effect of corporate governance on

earning management pre- and post-IFRS adoption. All prior studies conducted in Saudi Arabia are mainly focused of the effect of corporate governance on earning management but IFRS issue is still new to the Saudi research literature.

3. The proposed study

The present research uses a sample of 102 non-financial companies listed on the Saudi Stock Market (Tadawul) for the period from 2014 up to 2019. The research period covered by the current study is divided into pre and post IFRS adoption. While the period from 2014 up to 2016 was considered as pre-IFRS adoption, the period from 2017 to 2019 is treated as post-IFRS period. The research framework of the present study comprises four dimensions of corporate governance namely; board of directors effectiveness (size, independence and meetings), audit committee effectiveness (size, independence and meetings), ownership (foreign, family and managerial ownership) and audit quality by Big-4. Further, the study included the effect of IFRS adoption as a dummy variable for both periods; pre and post-IFRS adoption (see table 1). All these variables are treated as independent variables which are regressed against the dependent variables; IFRS compliance, earning management and financial reporting quality. Fig. 1 illustrates the research framework of the current study:

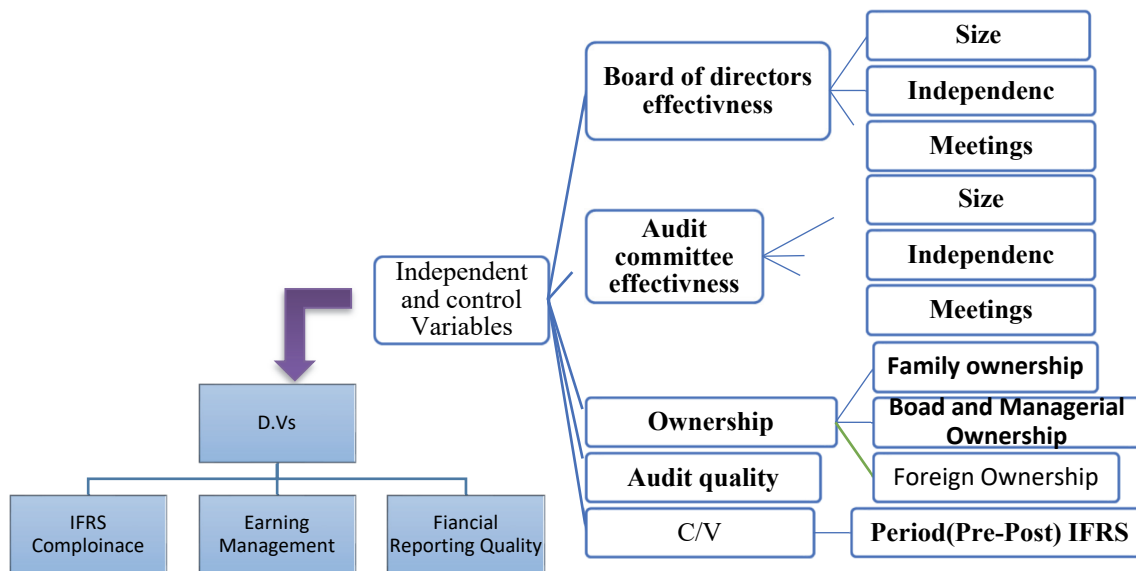


Fig. 1. Research framework

Table 1
Operational Definition of Variables

Variables	Acronym	Description
Dependent variables		
Compliance with IFRS	IFRSC	$PC_j = \frac{\sum_{i=1}^X X_i}{R_i}$
Earning Management	Accrual (A)	Discretionary accruals, Kothari et al. (2005) model as used by (Li et. al, 2018; Habbash & Alghamdi, 2016)
	Accrual (B)	Discretionary accruals, modified Jones model as used by (e.g., Alghamdi, 2012; Dong et al., 2020).
Financial Reporting quality	FRQ	McNichols model (2002)
Independent Variables		
Board Size	BSIZE	“Total No. of the members of B.O.D”
Board Independence	BIND	“No. of Independent board members / total No. of B.O.D”
Board Meetings	BMET	Total No. of meetings attended by all board members/ total No. of meetings held during the year
Audit Committee Size	ACSIZE	Total No. of the members of AC
Audit Committee Independence	ACIND	No. of Independent AC members / total No. of AC members
Audit Committee Meetings	ACDEL	Total No. of meetings attended by all AC members / total No. of meetings held during the year
Audit quality	Big-4	1 if a firm audited by a Big-Four or 0 otherwise
Family ownership	FMOWN	% of shares held by families
Board/managerial ownership	MOWN	% of shares held by board members or management
Foreign ownership	FOWN	% of shares held by foreign investors
IFRS	IFRS	A dummy variable of 1 for post-IFRS adoption and 0 otherwise

a. Measuring Compliance with IFRS

The current study uses a compliance index checklist which is adopted from IASB 2017 and the Deloitte (Big-Four) checklist that summarizes IFRS disclosure requirements issued on 30 April 2017. It comprises 256 mandatory items from 36 standards

which has been compared with similar prior studies in IFRS mandatory disclosure and compliance. Further, the present study uses “Partial Compliance (PC)” method for calculating IFRS disclosures. The study followed Street & Gray (2001) and Al-Shiab (2003) for weighting the compliance index. The formula for PC is as follows:

$$PC_j = \frac{\sum_{i=1}^X X_i}{R_j} \quad (1)$$

PC_j indicates the score of total compliance for an individual company and $0 \leq PC_j \leq 1$. X_i refers to the compliance level with mandatory disclosures of an individual accounting standard. Subsequently, the aggregate of the yielded compliance scores (X) has to be scaled by the aggregate number of the applicable standards for the respective company j i.e. R_j.

b. Measuring Earning Management

The most commonly used method by prior research to estimate earning management is modified Jones model (Dechow et al., 1995). However, Habbash and Alghamdi (2016) used a lagged return on assets as a performance magnitude that recommended by Kothari et al. (2005) to control the heteroscedasticity and misspecification problems. Accordingly, prior studies measure earning management used the modified Jones model with a performance magnitude (e.g., Li et. al, 2018; Habbash & Alghamdi, 2016) or without a performance measure (e.g., Alghamdi, 2012; Dong et. al, 2020). Following these studies, the present study uses both a performance and without performance magnitude to estimate earning management. In this regard, Habbash & Alghamdi (2016) described five steps to reach to the proxy for earnings management which are as follows:

- 1- Estimating total accruals $TACCRUAL_{j,t}$ for a firm j in a year t by the difference between operating earnings $EARN_{j,t}$ for a firm j in a year t and net cash flow from operations $CFO_{j,t}$ for firm j in a year t.

$$TACCRUAL_{j,t} = EARN_{j,t} - CFO_{j,t} \quad (2)$$

- 2- Estimating the industry sectors' magnitude separately for each year as follows:

$$\frac{TACCRUAL_{j,t}}{A_{j,t-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{j,t-1}} + \alpha_2 \frac{\Delta SALE_{j,t} - \Delta REC_{j,t}}{A_{j,t-1}} + \alpha_3 \frac{PPE_{j,t}}{A_{j,t-1}} + \alpha_4 ROA_{j,t-1} + \varepsilon_{j,t} \quad (3)$$

where $TACCRUAL_{j,t}$ denotes the total accruals for a firm j in a year t, $A_{j,t-1}$ is the total assets a firm j in a year t - 1, $\Delta SALE_{j,t}$ is the change in revenues for a firm j in a year t, $\Delta REC_{j,t}$ is the change in accounts receivables fro a firm j in a year t, $PPE_{j,t}$ is property, plant and equipment for a firm j in a year t, $ROA_{j,t-1}$ is the return on assets for a firm j in a year t, and $\varepsilon_{j,t}$ is the residuals.

- 3- Calculation of non-discretionary accruals $NDACCRUAL_{j,t}$ adding coefficients ($\alpha_0, \alpha_1, \alpha_2, \alpha_3$ and α_4) for every industry in the previous Eq. (3):

$$NDACCRUAL_{j,t} = \alpha_0 + \alpha_1 \frac{1}{A_{j,t-1}} + \alpha_2 \frac{\Delta SALE_{j,t} - \Delta REC_{j,t}}{A_{j,t-1}} + \alpha_3 \frac{PPE_{j,t}}{A_{j,t-1}} + \alpha_4 ROA_{j,t-1} \quad (4)$$

- 4- Determining the difference between total accruals $TACCRUAL_{j,t}$ and non-discretionary accruals $NDACCRUAL_{j,t}$:

$$DACCRUAL_{j,t} = TACCRUAL_{j,t} - NDACCRUAL_{j,t} \quad (5)$$

$$ADACCRUAL_{j,t} = |DACCRUAL_{j,t}| \quad (6)$$

c. Measuring Financial Reporting Quality

There are several measure of financial reporting quality. For example, Al-Shaer et al (2017) and Onuorah, et al. (2016) used Jones Model (1991), Li and Wang (2010) and Kardan et al. (2016) employed Dechow and Dichev model (2002), Call et al. (2017), and Gomariz and Ballesta (2013) employed McNichols model (2002), and Chalaki et. al. (2012) utilized Collins and Kothari model (1989) for measuring financial reporting quality. The current study uses McNichols (2002) model to measure FRQ. The model equation is as follows:

$$\frac{TCA_{j,t}}{ASSET_{j,t}} = \beta_0 + \beta_{1,j} + \frac{CFO_{j,t-1}}{ASSET_{j,t}} + \beta_{2,j} \frac{CFO_{j,t}}{ASSET_{j,t}} + \beta_{3,j} \frac{CFO_{j,t+1}}{ASSET_{j,t}} + \beta_{4,j} \frac{\Delta REV_{j,t}}{ASSET_{j,t}} + \beta_{5,j} \frac{PPE_{j,t}}{ASSET_{j,t}} + \varepsilon_{j,t} \quad (7)$$

where; $TCA_{j,t}$ is the total current accruals in year t of a firm j, $CFO_{j,t}$ is the operating cash flows of the current period, $CFO_{j,t-1}$ is the operating cash flows of the previous period, $CFO_{j,t+1}$ is the operating cash flows of the next period, $\Delta REV_{j,t}$ is the change in revenues, $PPE_{j,t}$ is the level of property, plant and equipment and $\epsilon_{j,t}$ is the error term in year t for firm j. All these variables are scaled by lagged total assets $ASSET_{j,t}$.

3.1 Model Specification

The present study is of three-fold objectives; it seeks to assess the impact of corporate governance mechanisms on 1) IFRS compliance, 2) earning management, and 3) financial reporting quality.

a) IFRS Compliance Model Specification

The following model is estimated to assess the effect of corporate governance mechanisms on IFRS compliance:

$$IFRSC_{jt} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BMET_{it} + \beta_4 ACSIZE_{it} + \beta_5 ACSIND_{it} + \beta_6 ACMET_{it} + \beta_7 FMOWN_{it} + \beta_8 BEQ_{it} + \beta_9 AQ_{it} + \epsilon_{it} \quad \text{Model 1}$$

b) Earning Management Model Specification

The present study employs the following models to investigate the effect of corporate governance on earning management. Following is the description of these models:

$$DACCRUAL(A)_{jt} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BMET_{it} + \beta_4 ACSIZE_{it} + \beta_5 ACSIND_{it} + \beta_6 ACMET_{it} + \beta_7 FMOWN_{it} + \beta_8 BEQ_{it} + \beta_9 AQ_{it} + \epsilon_{it} \quad \text{Model 2}$$

$$DACCRUAL(B)_{jt} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BMET_{it} + \beta_4 ACSIZE_{it} + \beta_5 ACSIND_{it} + \beta_6 ACMET_{it} + \beta_7 FMOWN_{it} + \beta_8 BEQ_{it} + \beta_9 AQ_{it} + \epsilon_{it} \quad \text{Model 3}$$

where $DACCRUAL(A \text{ and } B)_{jt}$ are the measures of earning management using a performance magnitude (A) and without a performance magnitude (B). After adding the effect of IFRS adoption as a dummy variable of “1” for IFRS standards and “0” for Saudi GAAP, the following models are used:

$$DACCRUAL(Adummy)_{jt} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BMET_{it} + \beta_4 ACSIZE_{it} + \beta_5 ACSIND_{it} + \beta_6 ACMET_{it} + \beta_7 FMOWN_{it} + \beta_8 BEQ_{it} + \beta_9 AQ_{it} + \beta_{10} IFRS_{it} + \epsilon_{it} \quad \text{Model 4}$$

$$DACCRUAL(Bdummy)_{jt} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BMET_{it} + \beta_4 ACSIZE_{it} + \beta_5 ACSIND_{it} + \beta_6 ACMET_{it} + \beta_7 FMOWN_{it} + \beta_8 BEQ_{it} + \beta_9 AQ_{it} + \beta_{10} IFRS_{it} + \epsilon_{it} \quad \text{Model 5}$$

The same models are also estimated individually for both IFRS and Saudi GAAP as follows:

$$DACCRUAL(Aifrs)_{jt} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BMET_{it} + \beta_4 ACSIZE_{it} + \beta_5 ACSIND_{it} + \beta_6 ACMET_{it} + \beta_7 FMOWN_{it} + \beta_8 BEQ_{it} + \beta_9 AQ_{it} + \epsilon_{it} \quad \text{Model 6}$$

$$DACCRUAL(Bifrs)_{jt} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BMET_{it} + \beta_4 ACSIZE_{it} + \beta_5 ACSIND_{it} + \beta_6 ACMET_{it} + \beta_7 FMOWN_{it} + \beta_8 BEQ_{it} + \beta_9 AQ_{it} + \epsilon_{it} \quad \text{Model 7}$$

$$DACCRUAL(AsGaap)_{jt} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BMET_{it} + \beta_4 ACSIZE_{it} + \beta_5 ACSIND_{it} + \beta_6 ACMET_{it} + \beta_7 FMOWN_{it} + \beta_8 BEQ_{it} + \beta_9 AQ_{it} + \epsilon_{it} \quad \text{Model 8}$$

$$DACCRUAL(BsGaap)_{jt} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BMET_{it} + \beta_4 ACSIZE_{it} + \beta_5 ACSIND_{it} + \beta_6 ACMET_{it} + \beta_7 FMOWN_{it} + \beta_8 BEQ_{it} + \beta_9 AQ_{it} + \epsilon_{it} \quad \text{Model 9}$$

c) Financial Reporting Quality Model Specification

The following models are estimated to investigate the impact of corporate governance mechanisms on FRQ:

$$FRQ_{jt} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BMET_{it} + \beta_4 ACSIZE_{it} + \beta_5 ACSIND_{it} + \beta_6 ACMET_{it} + \beta_7 FMOWN_{it} + \beta_8 BEQ_{it} + \beta_9 AQ_{it} + \varepsilon_{it} \quad \text{Model 10}$$

4. Analysis and discussion

4.1 Descriptive statistics

Table 2 presents descriptive statistics for the collective as well as pre and post-IFRS adoption models. Compliance with IFRS demonstrates that the minimum compliance is 64% with a maximum of 93% and an average compliance 78%. The results show that accruals with a performance magnitude has a minimum value of (0), maximum value of (0.81) with a mean value of (0.074) and standard deviation of (0.130) against a minimum value of (0), a maximum value of (0.741), an average of (0.069) and standards deviation of (0.121). This is consistent with Habbash and Alghamdi (2016) who found that the minimum value of discretionary accrual is (0.00) and the maximum value is (0.78) with an average of (0.10). The results also indicate that board size has an average of 8 members in the board with a minimum of 5 and a maximum of 12 members in the board. Further, the portion of independent members in the board has a mean of 4 members in the board with a minimum of 1 and a maximum of 8 members in the board. This indicates that approximately out of 12 members in the board there are 8 independent members. In the same context, board meetings have a minimum of 2 meetings in the year against 18 meetings in some companies with a mean of 5 meetings in the year.

Table 2
Descriptive Statistics

Variables	Mean	Maximum	Minimum	Std. Dev.
Collective Model: Obs.604				
IFRC	0.78	0.93	0.64	0.05
ACCRUAL	0.00	1.70	-2.97	0.25
ACCRUAL(A)	0.074	0.811	0.00	0.130
ACCRUAL(B)	0.069	0.741	0.00	0.121
BSIZE	8.26	12.00	5.00	1.44
BIND	3.96	8.00	1.00	1.30
BMET	5.42	18.00	2.00	2.15
ACSIZE	3.54	7.00	3.00	0.75
ACIND	1.71	4.00	1.00	0.74
ACMET	5.42	17.00	1.00	1.91
FMOWN	0.019	0.825	0.000	0.084
BEQT	0.067	0.859	0.000	0.129
AQ	0.69	1.00	0.00	0.46
IFRS	0.50	1.00	0.00	0.50
Pre-IFRS Adoption Model:				
ACCRUAL(A)	0.042	0.811	0.00	0.101
ACCRUAL(B)	0.039	0.720	0.00	0.082
BSIZE	8.17	12.00	5.00	1.39
BIND	3.88	8.00	1.00	1.25
BMET	5.39	18.00	2.00	2.27
ACSIZE	3.55	7.00	3.00	0.77
ACIND	1.66	4.00	1.00	0.75
ACMET	5.56	17.00	1.00	2.05
FMOWN	0.036	0.825	0.000	0.119
BEQT	0.065	0.603	0.000	0.119
AQ	0.65	1.00	0.00	0.48
Post-IFRS Adoption Model: Obs. 300				
ACCRUAL(A)	0.032	0.791	0.00	0.081
ACCRUAL(B)	0.030	0.741	0.00	0.091
BSIZE	8.36	12.00	5.00	1.49
BIND	4.04	8.00	1.00	1.35
BMET	5.43	15.00	2.00	1.96
ACSIZE	3.53	7.00	3.00	0.73
ACIND	1.76	4.00	1.00	0.74
ACMET	5.26	12.00	1.00	1.66
FMOWN	0.022	0.825	0.000	0.098
BEQT	0.073	0.700	0.000	0.142
AQ	0.73	1.00	0.00	0.44

Note: IFRS is compliance with IFRS, ACCRUAL(A) is discretionary accruals measured by Kothari et al. (2005), ACCRUAL(B) is discretionary accruals measured by modified Jones model, FRQ is financial reporting quality, BSIZE is board size, BIND is board independence, BMET is board meetings, ACSIZE is audit committee size, ACIND is audit committee independence, ACMET audit committee meetings, Big-4 is audit quality, FOWN is foreign ownership, FMOWN is family ownership, MOWN is managerial ownership, and IFRS is a dummy variable of 1 for post-IFRS adoption and 0 otherwise.

With regards to audit committee attributes, the results show that audit committee size ranges between a minimum of 3 members, a maximum of 7 members and an average of 4 members. Further, the portion of independent members in the audit committee has a minimum of 1 member, a maximum of 4 members with a mean of 2 independent members in audit committees. In the same line, the meetings of audit committee have a mean value of 5 meetings a year with a minimum of 1 meeting and a maximum of 17 meetings in some companies.

Audit quality has a minimum value if (0.00) which indicates companies that are audit by Non-Big-4, a maximum value of (1) which represents companies that are audited by a Big-4 with a mean of (0.69) which signifies that 69% of the sample and / or the time period from 2014 to 2019 companies were audited by Big-4. In the same quest, IFRS indicates a dummy variable of 1 for post-IFRS period and 0 otherwise. Managerial ownership has a minimum ownership of (0.000), maximum of (0.86) and a mean of (0.067). Further, family ownership has a minimum ownership of (0.000), maximum of (0.825) and a mean of (0.019).

Comparing descriptive statistics of pre and post-IFRS adoption, it is observed that the average values of discretionary accruals are higher in the post-IFRS than pre-IFRS periods. Further, the average values of audit committee meetings and size, managerial ownership and family ownership are greater in case of post-IFRS adoption however, board size, independence, meetings, audit committee independence, and IFRS have higher mean values in pre-IFRS adoption period.

4.2 Correlation analysis

The results in Table 3 presents an analysis of correlation between the dependent and independent variables.

Table 3
Correlation Analysis

Collective Model: Obs.604												
	IFRS	BSIZE	BIND	BMET	ACSIZE	ACIND	ACMET	FOWN	FMOWN	BEQT	AQ	SECTOR
IFRS	1.00											
BSIZE	-0.07	1.00										
BIND	-0.06	0.33	1.00									
BMET	-0.02	-0.09	0.00	1.00								
ACSIZE	-0.01	0.32	0.12	0.13	1.00							
ACIND	0.06	0.01	0.11	0.10	0.11	1.00						
ACMET	0.06	0.03	0.08	0.23	0.06	0.04	1.00					
FOWN	0.07	-0.12	-0.07	-0.04	-0.09	0.01	-0.04	1.00				
FMOWN	-0.08	0.18	0.07	0.09	0.12	0.13	-0.01	-0.06	1.00			
BEQT	0.00	0.09	-0.07	-0.03	0.14	0.12	-0.01	0.01	0.03	1.00		
AQ	-0.08	0.22	-0.16	0.05	0.10	-0.07	0.03	-0.06	0.07	0.07	1.00	
SECTOR	0.00	-0.14	0.10	-0.11	-0.18	-0.04	-0.06	-0.04	0.10	0.04	-0.10	1.00
Pre-IFRS Adoption Model: Obs. 304												
Variables	ACCRUAL(A)	ACCRUAL(B)	ACIND	ACMET	ACSIZE	AQ	BEQT	BIND	BSIZE	BMET	FMOWN	
ACCRUAL(A)	1.00											
ACCRUAL(B)	1.00	1.00										
ACIND	0.08	0.08	1.00									
ACMET	0.02	0.02	0.05	1.00								
ACSIZE	0.02	0.02	0.07	0.00	1.00							
AQ	-0.06	-0.05	-0.08	0.15	0.11	1.00						
BEQT	0.04	0.04	0.07	0.03	0.15	0.07	1.00					
BIND	-0.04	-0.05	0.11	0.09	0.12	-0.08	-0.09	1.00				
BSIZE	0.10	0.08	0.11	0.14	0.06	0.11	-0.01	-0.09	1.00			
BMET	-0.03	-0.03	0.07	0.09	0.34	0.25	0.07	0.37	-0.14	1.00		
FMOWN	0.01	0.01	0.10	-0.06	0.12	0.07	-0.04	0.08	0.04	0.21	1.00	
Post-IFRS Adoption Model: Obs. 300												
Variables	ACCRUAL(A)	ACCRUAL(B)	ACIND	ACMET	ACSIZE	AQ	BEQT	BIND	BSIZE	BMET	FMOWN	
ACCRUAL(A)	1.00											
ACCRUAL(B)	0.36	1.00										
ACIND	-0.05	-0.08	1.00									
ACMET	0.01	0.10	0.03	1.00								
ACSIZE	0.01	-0.06	0.16	0.11	1.00							
AQ	-0.06	-0.14	-0.06	-0.04	0.10	1.00						
BEQT	-0.04	-0.10	0.18	-0.06	0.14	0.07	1.00					
BIND	-0.01	0.05	0.11	0.06	0.12	-0.23	-0.04	1.00				
BSIZE	-0.01	-0.01	-0.06	-0.09	0.29	0.22	0.12	0.28	1.00			
BMET	-0.02	-0.05	0.08	0.24	0.20	0.03	-0.06	0.07	-0.08	1.00		
FMOWN	-0.04	0.03	0.14	0.02	0.13	0.06	0.10	0.06	0.17	0.13	1.00	

Note: IFRS is compliance with IFRS, ACCRUAL(A) is discretionary accruals measured by Kothari et al. (2005), ACCRUAL(B) is discretionary accruals measured by modified Jones model, FRQ is financial reporting quality, BSIZE is board size, BIND is board independence, BMET is board meetings, ACSIZE is audit committee size, ACIND is audit committee independence, ACMET audit committee meetings, Big-4 is audit quality, FOWN is foreign ownership, FMOWN is family ownership, MOWN is managerial ownership, and IFRS is a dummy variable of 1 for post-IFRS adoption and 0 otherwise.

In the collective model, the results show that audit committee independence, size, audit quality, board independence and size, and IFRS have a negative correlation with the magnitude of earning managements (ACCRUAL(B)). This indicates that there is a negative relationship between audit committee independence, size, audit quality, board independence and size, and IFRS and earning management. However, ACCRUAL(A) has a positive association with all variables except for audit quality which has a negative correlation. With regards to pre and post-IFRS adoption, the results show that only audit quality, board size and independence have a negative association with both magnitudes of earning management however in the pre-IFRS adoption period, majority of the variables in post-IFRS adoption period have negative link with both magnitudes of earning management.

4.3 Results and discussion

a. Impact of CG mechanisms on Compliance with IFRS

The results in table (4) demonstrate the impact of corporate governance mechanisms on compliance with IFRS. The results reveal that board characteristics namely, board size (BSIZE) and board meeting (BMET) have a significant effect on compliance with IFRS at the level of 1% (P values = 0.000 <0.01). This effect is negative which is indicated by a negative coefficient ($\beta = -0.008$ and -0.033 respectively). This is inconsistent with Ba-Abbad and Wan- Hussin (2011), Juhman (2017), Holland (2006), and Al-Akra et al. (2010) who found that the level of IFRS compliance is significantly influenced by board size. Further, the results regarding board meetings contradict Brick and Chidambaran, (2004) and Abdullah et al. (2015) who reported a significant association between the frequency of board meetings and the levels of disclosure requirements. However, the results show that board independence (BIND) has a significant positive effect on compliance with IFRS at the level of 1% (P values = 0.000 < 0.01) with a positive coefficient ($\beta = 0.011$). This is in line with (Patelli & Prencipe, 2007; Arcay et al., 2005; Huafang & Jianguo, 2007) who concluded that board independence increases disclosure levels. With regards to audit committee attributes, the results indicate that among audit committee attributes only audit committee independence (ACIND) exhibits a significant positive effect on compliance with IFRS at the level of 1% (P values = 0.000 <0.01). These results are similar to Juhman (2017), Al-Akra et al., (2010) and Carcello and Neal (2003) who reported a significant link between disclosure index and AC independence. However, both audit committee size (ACSIZE) and meetings (ACMET) have insignificant effect on compliance with IFRS at any level of significance 1%, 5% and 10% (P values > 0.10). Abdullah et al. (2015) indicated that there is an insignificant association between the frequency of AC meetings and the level of mandatory disclosure requirements. The results show that foreign ownership (FOWN) has a significant effect on compliance with IFRS at the level of 1% (P values = 0.000 <0.01). This effect is negative which is indicated by a negative coefficient ($\beta = -0.001$). Several studies in this regard reported that there is a significant and positive relationship between IFRS compliance and foreign ownership (e.g., Bova & Pereira, 2012; Gordon et al., 2012; Beneish et al., 2012). This could be attributed to the low level of foreign investments and limitations to foreign ownership in some companies. Further, this could be affected by a dominant family ownership in some companies. Both family (FMOWN) and board ownership (BEQ) have insignificant effect on compliance with IFRS at any level of significance 1%, 5% and 10% (P values > 0.10). Finally, audit quality (AQ) by Big-4 exhibits insignificant effect on compliance with IFRS. This is in line with Fekete et al. (2008) and Street and Gray (2001) who reported that there is no significant impact of auditor type. Furthermore, sector as a dummy variable of 1 for manufacturing industries and 0 otherwise shows that there is insignificant difference in compliance with IFRS between manufacturing sector and service or commercial sectors. In general, the model is fit which is significant at the level of 1% (P values = 0.000 <0.01). Further, the adjusted R² is 13% which signifies that the predictors in the model explain 13% of the variability of compliance with IFRS.

Table 4

Impact of CG mechanisms on Compliance with IFRS (Model 1)

Variable	Estimates	Variable	Estimates
C	34.673(0.879***)	ACMET	-0.205 (0.000)
BSIZE	-3.113 (-0.008***)	FOWN	-3.566(-0.001***)
BIND	4.054(0.011***)	FMOWN	0.899(0.001)
BMET	-0.033***(-4.495)	BEQT	-0.618(-0.001)
ACSIZE	-0.707(-0.003)	AQ	0.391(0.003)
ACIND	3.389(0.014***)	SECTOR	-0.782(-0.001)

R-squared = 0.158 Adjusted R-squared = 0.127 F-statistic = 5.016 (0.000)

Note: BSIZE is board size, BIND is board independence, BMET is board meetings, ACSIZE is audit committee size, ACIND is audit committee independence, ACMET audit committee size meetings, Big-4 is audit quality, FOWN is foreign ownership, FMOWN is family ownership, MOWN is managerial ownership, and SECTOR is a dummy variable of 1 for and 0 otherwise.

b. The Impact of CG mechanisms and IFRS on Earning Management

Table 5 shows the results of regression analysis for collective model with and without a dummy variable of IFRS. The results demonstrate four columns of regression analysis, the first two columns are for collective model using discretionary accruals with firm performance magnitude (ACCRUAL(A)) and the other two columns are for collective model of discretionary accruals without firm performance magnitude (ACCRUAL(B)). Concerning ACCRUAL(A), the results show that board meeting (BMET), audit committee independence (ACIND) and meetings (ACMET) have statistically significant effect at the level of 1% on discretionary accruals. While (ACMET) indicates statistically significant negative effect on earning management, board meetings (BMET), and audit committee independence (ACIND) have statistically significant positive impact on earning management. This indicates that board meeting (BMET) and audit committee independence do not reduce earning management. Comparatively, board meeting (BMET), audit committee independence (ACIND) and meetings (ACMET) exhibit same effect in the IFRS Model ACCRUAL(A). This contradicts (Chou et al., 2013; Al-Ghamdi, 2012; Francis et al., 2012) who found that board diligence associated negatively with earning management and also inconsistent with Klein (2002) and Agrawal and Chadha (2005) who reported that independence of audit committee is a critical for lower incidence of earnings restatement.

However, (Lin et al., 2006; Peasnell, et al., 2005; Osma & Noguer, 2007; Siregar & Utama, 2008; Xie et al., 2003) indicated that independent audit committees is not significantly linked with decreased earnings management levels.

Audit committee size (ACSIZE) and board size (BSIZE) exhibit statistically significant effect on earning management. Audit committee size (ACSIZE) indicate statistically significant negative ($\beta = -0.01$) effect at the level of 10% on earning management. This is consistent with (Yang & Krishnan, 2005; Cornett et al., 2008; Lin et al., 2006; Lin & Hwang, 2010) who indicated that large audit committee is negatively linked with earnings management. Board size (BSIZE) exhibit statistically positive significant impact on earning management. This signifies that audit committee size associate negatively with earning management however, board size link positively with earning management. This could be attributed to that board size is higher than audit committee size which indicate that earning management is linked positively with greater board size. With regards to IFRS, the results show that there is statistically significant positive effect on earning management at the level of 1%. This could be due to that earning management is measured using a performance magnitude.

Table 5
Regression Analysis of the Impact of CG and IFRS on Earning Management

Variable	Collective model: Discretionary Accruals with firm performance		Collective model: Discretionary Accruals without firm	
	Collective Model ACCRUAL(A)	Dummy Model	Collective Model	Dummy Model
	Coefficient	Coefficient	Coefficient	Coefficient
C	-0.06 -1.18	-0.08** -2.12	0.11** 2.63	0.06 1.57
BSIZE	0.01 0.99	0.01*** 3.28	-0.01* -1.84	0.00 -0.79
BIND	-0.01 -1.53	0.00 -0.79	0.02** 2.15	0.02** 2.63
BMET	0.01*** 4.12	0.01*** 4.03	0.00 -0.43	0.00 -0.06
ACSIZE	0.00 -0.45	-0.01* -1.73	0.00 -1.09	0.00 -0.23
ACIND	0.03*** 2.93	0.02*** 2.95	-0.03*** -7.30	-0.03*** -6.99
ACMET	-0.01*** -3.33	-0.01*** -4.36	0.00** -2.12	0.00*** -3.83
FMOWN	0.00 0.08	0.00 -0.16	0.00 -1.09	0.00 -0.87
BEQT	0.00*** 3.17	0.00*** 6.03	0.00** 2.46	0.00 0.71
AQ	-0.01 -0.63	-0.01 -1.21	-0.04*** -5.54	-0.03*** -3.38
IFRS		0.03*** 6.15		-0.02** -2.67
R-squared	0.31	0.34	0.30	0.31
Adjusted R-squared	0.16	0.19	0.15	0.15
F-statistic	2.05	2.28	1.93	1.99
Prob(F-statistic)	0.00	0.00	0.00	0.00

Note: ACCRUAL(A) is discretionary accruals measured by Kothari et al. (2005), ACCRUAL(B) is discretionary accruals measured by modified Jones model, BSZE is board size, BIND is board independence, BMET is board meetings, ACSIZE is audit committee size, ACIND is audit committee independence, ACMET audit committee size meetings, Big-4 is audit quality, FOWN is family ownership, MOWN is managerial ownership, and IFRS is a dummy variable of 1 for post-IFRS adoption and 0 otherwise.

As far as ACCRUAL(B) is concerned, the results demonstrate that audit committee independence (ACIND) and audit quality by Big-4 have statistically significant negative effect on discretionary accruals in the collective model as well as IFRS model. This is consistent with Klein (2002), Agrawal and Chadha (2005), and Bradbury et al. (2006) who found a negative association between audit committee independence and earning management. However, audit committee meetings (ACMET) and board independence (BIND) have statistically significant positive effect on earning management at the level of 5%. This means that when discretionary accruals is used as a measure for earning management without performance magnitude, audit committee independence (ACIND) and audit quality by Big-4 are linked negatively with earning management. This is consistent with (Klein, 2002; Benkel, et al., 2006; Niu, 2006; Iqbal and Strong, 2010) who advocate that a greater portion of board independence in the board reduces the level of earnings management. Further, the results show that managerial ownership has a significant positive effect on earning management at the level of 5%. Furthermore, IFRS exhibit statistically significant negative impact on earning management at the level of 5% which indicates that IFRS contributed to reducing earning management (only when discretionary accruals are measured without performance magnitude).

Table 6**Regression Analysis of the impact of CG mechanisms on earning management Pre-Post-IFRS Adoption**

Variable	ACCRUAL(A) IFRS	ACCRUAL(B) IFRS	ACCRUAL(A) GAAP	ACCRUAL(B) GAAP
	Coefficient	Coefficient	Coefficient	Coefficient
C	0.25*** 3.29	0.30*** 4.50	0.15*** 4.55	0.04*** 4.34
BSIZE	-0.02** -2.80	-0.02*** -3.50	-0.01*** -7.09	0.00 -1.00
BIND	-0.05*** -5.72	-0.06*** -7.55	0.00 0.18	-0.00*** 3.01
BMET	0.02*** 5.60	0.01*** 4.45	0.00** -2.07	0.00*** -6.04
ACSIZE	0.00 -0.10	0.00 0.04	0.00 0.44	0.00 -1.35
ACIND	0.01 1.02	0.01 0.96	-0.03*** -3.31	-0.01*** -22.95
ACMET	-0.02*** -4.34	-0.02*** -5.01	0.00 1.40	0.00*** 19.29
FMOWN	0.00 1.17	0.00 1.35	0.00 -0.54	0.00*** 13.60
BEQ	0.00** 2.56	0.00*** 2.91	0.00** -2.80	0.00*** -3.10
AQ	0.05*** 4.60	0.05*** 4.77	-0.03*** -5.09	-0.02*** -10.03
R-squared	0.71	0.78	0.46	0.19
Adjusted R-squared	0.55	0.65	0.15	0.17
F-statistic	4.30	6.17	1.49	7.63
Prob(F-statistic)	0.00	0.00	0.01	0.00

Note: ACCRUAL(A) is discretionary accruals measured by Kothari et al. (2005), ACCRUAL(B) is discretionary accruals measured by modified Jones model, BSIZE is board size, BIND is board independence, BMET is board meetings, ACSIZE is audit committee size, ACIND is audit committee independence, ACMET audit committee size meetings, Big-4 is audit quality, FOWN is family ownership, MOWN is managerial ownership, and IFRS is a dummy variable of 1 for post-IFRS adoption and 0 otherwise.

Overall, the model fit of ACCRUAL(A) indicate that the adjusted R square in case of the collective model is 31% as compared to IFRS model which has an adjusted R square of 34%. This indicates that the variables in IFRS model contribute 34% of the variability of discretionary accruals as compared to 31% in the collective model. Similarly, ACCRUAL(B) models show that the variables in IFRS model explain 31% of the variability of discretionary accruals as compared to 30% in case of the collective model. Further, P value of all models conducted (P values = 0.000 < 0.01) indicates that the models are fit. Tables 6 demonstrates the impact of corporate governance mechanisms on earning management under the two sets of accounting standards; IFRS and Saudi GAAP. Concerning IFRS, the results demonstrate that there is no difference in the impact of corporate governance mechanisms on earning management from performance magnitude discretionary accruals ACCRUAL (A) to non-performance magnitude discretionary accruals ACCRUAL (B). The results indicate that board size (BSIZE), board independence (BIND), and audit committee meetings (ACMET) have statistically significant negative influence at the level of 1% (P value = 0.000 < 0.01) on both measures of earning management. Further, the results show that audit quality by Big-4 and managerial ownership (MOWN) have statistically significant positive effect at the level of 1% (P value = 0.000 < 0.01) on discretionary accruals ACCRUAL (A) and ACCRUAL (B). This indicates that BIND, BSIZE and ACMET contribute positively to reduce earning management under IFRS but Big-4 and managerial ownership (MOWN) do not. With regards to Saudi GAAP, the results reveal that there is a slight difference in the impact of corporate governance mechanisms on earning management from performance magnitude discretionary accruals ACCRUAL (A) to non-performance magnitude discretionary accruals ACCRUAL (B). Board size (BSIZE), and audit committee independence (ACIND) exhibit statistically significant negative impact at the level of 1% (P value = 0.000 < 0.01) on discretionary accruals ACCRUAL (A). However, board meetings (BMET) and managerial ownership exhibit statistically significant positive impact at the level of 5% (P value < 0.05) on discretionary accruals ACCRUAL (A). This indicates that board meetings (BMET) and managerial ownership (MOWN) associate positively with earning management under Saudi GAAP using performance magnitude model. From the other hand, the results also reveal that board independence (BIND), audit quality by Big-4, and audit committee independence (ACIND) indicate statistically significant negative impact at the level of 1% (P value = 0.000 < 0.01) on discretionary accruals ACCRUAL (B). However, board meetings (BMET), managerial ownership (MOWN), audit committee meetings (ACMET), and family ownership (FOWN) exhibit statistically significant positive impact at the level of 1% (P value = 0.000 < 0.01) on discretionary accruals using Non-performance magnitude measure ACCRUAL (B). Cheung et al. (2013) stated that FRQ in Australia is influenced by early adoption of IFRS in 2005. In this context, Bodle et al. (2016) found that IFRS predicts bankruptcy for bankrupt firms more accurately than AGAAP. Further, they reported that the switch from AGAAP to IFRS enhances the quality of financial statements contents for predicting bankruptcy. Likewise, Müller (2014) revealed an improvement in the quality of consolidated statements as a result

of IFRS adoption, suggesting that adoption of IFRS in Europe led to better disclosure, transparency and compliance with Corporate Governance Principle of OECD. Kamil and Yu (2015) indicated that adoption of the new substantially IFRS-convergent accounting standards in China results in better FRQ addressing the effect of regulatory environments on earnings management and FRQ of firms in the pre- and post-IFRS adoption periods in both countries.

c. Impact of CG mechanisms on FRQ

The results in Table 7 demonstrate the effect of corporate governance mechanisms on financial reporting quality (FRQ). The results reveal that board size (BSIZE) has a significant effect on FRQ at the level of 10% (P values = 0.07 < 0.10). This effect is negative which is indicated by a negative coefficient ($\beta = -0.007$). The results also show that board meeting (BMET) has insignificant effect on FRQ (P values < 0.10). However, board independence (BIND) exhibits a significant positive effect on FRQ at the level of 1% (P values = 0.000 < 0.01) with a positive coefficient ($\beta = 0.009$). Further, the results show that audit committee attributes (ACSIZE, ACIND, and ACMET) have a significant effect on FRQ at the level of 1% (P values = 0.000 < 0.01). While both audit committee size (ACSIZE) and meetings (ACMET) exhibit a negative effect ($\beta = -0.004$ and -0.009 respectively), audit committee independence (ACIND) has a significant positive effect ($\beta = 0.001$). Furthermore, the results reveal that among ownership structure variables, only board equity (BEQ) exhibits a significant effect on FRQ at the level of 1% (P values = 0.000 < 0.01) with a negative coefficient ($\beta = -0.018$) indicating that it has a significant negative effect. However, both family and foreign ownerships have an insignificant effect.

Table 7
Impact of CG mechanisms on FRQ

Variable	Estimates	Variable	Estimates
C	3.895 (0.122***)	BSIZE	-1.805(-0.007*)
BIND	3.350(0.009***)	BMET	-0.671(-0.002)
ACSIZE	-4.016(-0.009***)	ACIND	4.803(0.001***)
ACMET	-2.979(-0.004***)	FOWN	-1.524(-0.001)
FMOWN	0.484(0.000)	BEQT	-3.795(-0.018***)
AQ	-1.269(-0.022)	IFRS	3.678(0.021***)

R-squared = 0.403 Adjusted R-squared = 0.266 S.E. of regression = 0.325 F-statistic = 2.948(0.000)

Note: ACCRUAL(A) is discretionary accruals measured by Kothari et al. (2005), ACCRUAL(B) is discretionary accruals measured by modified Jones model, BSIZE is board size, BIND is board independence, BMET is board meetings, ACSIZE is audit committee size, ACIND is audit committee independence, ACMET audit committee size meetings, Big-4 is audit quality, FOWN is foreign ownership, FMOWN is family ownership, MOWN is managerial ownership, and IFRS is a dummy variable of 1 for post-IFRS adoption and 0 otherwise.

Moreover, the results show that audit quality (AQ) by Big-4 has no significant effect at any level of significance 1%, 5% and 10% (P values 0.10). Importantly, the results show that there is a significant difference of FRQ from pre-IFRS adoption to post-IFRS adoption which is indicated by the estimates of IFRS. IFRS denotes a dummy variable of 0 for pre-IFRS adoption and 1 for post-IFRS adoption, the results show that IFRS is significant at the level of 1% (P values = 0.000 < 0.01) with a positive coefficient ($\beta = 0.021$) indicating that FRQ under IFRS is better than Saudi GAAP. Cohen et al. (2004) advocated that the most important functions of corporate governance are to ensure the quality of financial reporting process. Similarly, Fairuz (2009) concluded that after controlling for political influence, weak corporate governance is associated with low FRQ. However, evidence and findings on the relationship between corporate governance mechanisms and FRQ in prior literature are mixed. While some studies in favor of the existence of a positive impact or association between corporate governance mechanisms and FRQ (Tan et al. 2013; Johl et al., 2013; Chandar et al., 2012; Zheng, 2008; Baxter, 2007; Kali & Omri, 2011; Kardan et al., 2016) but, some studies reported a negative or no relationship between corporate governance mechanisms and FRQ (Chalaki et al., 2012; Vafeas, 2000; Ahmed et al., 2006; Bradbury et al., 2006). Overall, the model is fit which is significant at the level of 1% (P values = 0.000 < 0.01). Further, the adjusted R² is 27% which indicates that the predictors in the model contribute 27% of the variation of FRQ.

4. Conclusion

current research investigates the impact of corporate governance mechanisms and IFRS on IFRS compliance, earning management and financial reporting quality. A sample of 102 Saudi listed firms from 2014 up to 2019 was used. Board size, independence, meetings, audit committee size, independence, meetings, audit quality, foreign, managerial and family ownership have been treated as corporate governance mechanisms which have been regressed along with IFRS against discretionary accruals as a measure of earning management. Two measures of discretionary accruals have been used; performance (Kothari et al (1995) and non-performance magnitude (modified Jones model) measures. Importantly, IFRS was used as a dummy variable for the period from 2017 to 2019 which considered as post-IFRS adoption and the period from 2014 to 2016 which treated as pre-IFRS adoption (Saudi GAAP). With regards to the impact of corporate governance mechanisms on compliance with IFRS, the results revealed that BSIZE and BMET have a negative significant effect however, BIND exhibited a significant positive effect on compliance with IFRS. Further, the results indicated that ACIND has a significant positive effect and FOWN

has a significant negative effect however, all other variables; ACSIZE, ACMET, FMOWN, BEQ, and AQ are found to have insignificant effect on compliance with IFRS. The results revealed that while audit committee meetings (ACMET) have a significant negative effect on earning management using a performance magnitude (Kothari et al (1995)), board meeting (BMET), and audit committee independence (ACIND) have a significant positive effect. Comparatively, when IFRS effect is considered, board meeting (BMET), audit committee independence (ACIND) and meetings (ACMET) exhibited same effect on earning management. However, audit committee size (ACSIZE) was found to have a negative effect but, board size (BSIZE) indicated a significant positive impact on earning management. Importantly, IFRS was found to have a positive effect on earning management. This could be due to that earning management is measured using a performance magnitude. As far as non-performance magnitude (modified Jones model) was used, the results showed that audit committee independence (ACIND) and audit quality by Big-4 have statistically significant negative effect on discretionary accruals in the collective model as well as IFRS model. However, audit committee meetings (ACMET) and board independence (BIND) have statistically significant positive effect on earning management. This means that when discretionary accruals is used as a measure for earning management without performance magnitude, audit committee independence (ACIND) and audit quality by Big-4 are linked negatively with earning management. Further, the results found that managerial ownership do not reduce the incidence of earning management because its effect is found to be positive. Furthermore, IFRS exhibit statistically significant negative impact on earning management which indicates that IFRS contributed to reducing earning management (only when discretionary accruals are measured without performance magnitude). Concerning IFRS, the results demonstrate that there is no difference in the impact of corporate governance mechanisms on earning management from performance magnitude discretionary accruals ACCRUAL (A) to non-performance magnitude discretionary accruals ACCRUAL (B). The results indicated that BIND, BSIZE and ACMET contribute positively to reduce earning management under IFRS but Big-4 and managerial ownership (MOWN) do not. With regards to Saudi GAAP, the results revealed that board meeting (BMET) and managerial ownership (MOWN) associate positively with earning management under Saudi GAAP using performance magnitude. From the other hand, the results also indicated that board independence (BIND), audit quality by Big-4, and audit committee independence (ACIND) indicate statistically significant negative impact on discretionary accruals (Non-performance magnitude model). However, board meetings (BMET), managerial ownership (MOWN), audit committee meetings (ACMET), and family ownership (FOWN) exhibit statistically significant positive impact on discretionary accruals using Non-performance magnitude measure. Concerning FRQ, the results revealed that BSIZE, ACSIZE, ACMET, and BEQ has a significant negative effect on FRQ however, BIND and ACIND exhibited a significant positive effect on FRQ. Further, the results revealed that BMET, FMOWN, FOWN, and AQ by Big-4 have insignificant effect on FRQ. Importantly, the results found that FRQ under IFRS is better than Saudi GAAP.

Policy Implications Towards 2030 Vision

Based on the findings, the present study offers multiple platforms and implications for policy makers, analysts, firms' managements, stock market authority and academicians. Essentially, with the recent adoption of IFRS by Saudi Arabia and with a dearth of research studies that address different issues after IFRS adoption, the present study introduces substantial policy implications. The results derived from the current study warn regulators especially, SOCPA about the desired effects from introducing IFRS in Saudi Arabia. Compliance with IFRS by listed companies still questionable as there is no oversight and supervisory body for financial reporting in Saudi Arabia. Accordingly, regulators and other bodies; SOCPA and Stock market authority shall constitute an oversight and supervisory body in Saudi Arabia that oversee financial reporting and impose certain rules and requirements for financial reporting. It is suggested that an oversight body which is equivalent to the Financial Reporting Council of the UK could be constituted.

An effective financial reporting system is very important for the vision on 2030. Accordingly, forming an oversight and supervisory body for financial reporting is expected to enhance the transparency and better financial reporting quality leading to attraction of foreign investors. Further, an efficient corporate governance framework is essential for 2030 vision. Hence, stock market authority shall regularly oversee the disclosure of corporate governance practices of listed firms. Auditor certificate for corporate governance requirements as per Saudi corporate governance regulations could be another possible policy action that stock market authority may impose. Further, chief executive officer or/and chief financial officer certificate on corporate governance practices shall be imposed also by stock market authority for effective governance framework in Saudi Arabia.

Another possible implication is that stock market authority and SOCPA shall direct companies for more training and IFRS capacity buildings. SOCPA has started the journey in this field however, companies board members, audit committee members, auditors and academicians shall work together for more training and IFRS education in Saudi Arabia.

Limitations and directions for future research

The present study is limited to a sample of 102 listed firms with a time frame for the period from 2014 up to 2019. Further, the study constrained itself to a number of corporate governance mechanisms namely; board size, independence, meetings, audit committee size independence, meetings, audit quality, foreign, managerial and family ownership. Future studies may increase

the sample, the time period, taking in consideration the other variables of corporate governance. Foreign and institutional ownership, board and audit committee expertise, board, audit committee and management remuneration and compensation are some possible streams for future research. Future research also is suggested to conduct research on integrated reporting and narrative reporting in Saudi Arabia.

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