IFRS Adoption and Financial Reporting Quality in the MENA Region

Abstract

- **Purpose:** Global interest in adopting the International Financial Reporting Standards (IFRS) has risen rapidly, however, Middle Eastern and North African (MENA) countries have reacted differently towards the international diffusion. The purpose of this study is to examine the impact of the IFRS adoption/rejection decision on the quality of MENA region firms' financial reporting.
- **Study design/methodology/approach**: The quality of accounting is examined through five metrics models in order to measure earnings smoothing, managing earnings towards a target, and timely loss recognition. The research sample consists of nine countries over a period of ten years (2006 to 2015) resulting in 3,040 firm-year observations in the main phase, and 2,580 firm-year observations in the additional analysis.
- **Findings**: The findings reveal that the overall sample of IFRS adopters in the MENA region have benefited from the adoption of IFRS, as the results show that there is a reduction in earnings management for IFRS adopters in comparison to local standards adopters. The sub-sample analyses also reveal that firms that adopted IFRS, in both the rentier (oil-dependent states) and non-rentier states, have a higher financial reporting quality than non-IFRS adopters. However, the magnitude of the financial reporting quality was higher for IFRS adopters in rentier states.
- **Originality/value**: The findings of this study contribute to the literature by revealing that countries with medium levels of governance quality have benefited the most from the IFRS adoption, while IFRS adopters in countries with stronger governance quality demonstrate lower financial reporting quality.
- **Research limitations**: Similarly to previous research in this field, this study adopts a strict sample selection approach. Such an approach may limit the sample size, although the researchers have taken every possible step to ensure the use of an adequate sample size. The researchers acknowledge the strict period of ten years, despite having stated its rationale and importance of a more extended period to the quest of the paper.
- **Practical implications:** This research provides valuable input by evaluating the current status of MENA region firms' financial reporting quality, based on their followed accounting regime. The implications of this paper result in better-informed decisions for investors as the information contents of the annual reports enhance comparisons that facilitate the further flow of investments. This research also provides significant insight into the International Accounting Standards Board (IASB). The findings of this study will assist the IASB in understanding the MENA region by measuring the consequences of the countries' decisions on the quality of firms' financial reporting.

Keywords: IFRS; Financial Reporting Quality; MENA region; Rentier States; Governance Quality.

Introduction

Since the announcement of the European Union (EU) in 2002, several studies have been conducted on the adoption of the International Financial Reporting Standards (IFRS) (Singleton-Green, 2015; George *et al*., 2016). Despite the significance of the findings reached by multi-country studies, very few of these studies have included any Middle East and North Africa (MENA) countries. There is currently a lack of research in literature regarding IFRS adoption in the Middle East (Nurunnabi, 2018). This region is often neglected, and has not received the full attention of previous researchers. Most of the studies in current literature are unable to explain why countries with shared common characteristics, such as MENA countries, have different reactions towards IFRS adoption (Boolaky *et al*., 2018).

This study aims to provide a deep understanding of the consequences of IFRS adoption/rejection decisions taken by MENA countries. Aside from analysing the impact on MENA firms, there is a need to examine the unique features of the MENA region. Through utilising the unique characteristics of the MENA region, this study uses one of the MENA regions specific themes, namely, the rentier status (oil dependency status)[1]. Additionally, this research has taken the further step of examining financial reporting quality across the same accounting regime, using governance quality ranking levels as a distinguished factor for improving or deteriorating MENA region firms' financial reporting quality.

This research uses proxies to assess the accounting quality of the followed accounting regime (IFRS vs. Local Standards), using five metrics models (Barth *et al*., 2008; Chen *et al*., 2010; Christensen *et al*., 2015; Capkun *et al*., 2016). Three metrics are used to measure earnings smoothing; the variability of change in net income, the variability of change in net income scaled by the variability of change in cash flow, and thirdly, the negative correlation between cash flows and accruals. A high volatility of earnings is consistent with less smoothing of earnings (Lang *et al*., 2003, 2006; Leuz *et al*., 2003; Barth *et al*., 2008). The fourth metric measures managers' involvement in managing earnings towards a target, through measuring the frequency of reporting small positive net income. The last non-smoothing measure of accounting quality is through measuring the likelihood of reporting large negative earnings to

[1] This research uses the Organization of the Petroleum Exporting Countries' (OPEC) membership (OPEC, 2016) as a benchmark to categorise the MENA states into Rentier States and Non-Rentier States. According to the US Energy Information Administration, OPEC as an organisation is an important factor that affects oil prices, members' oil production targets, and its actions do impact global economy (EIA, 2016). Therefore, OPEC membership classification is a distinctive sign of the rentier status of a country to seek membership in OPEC in comparison to those who did not join OPEC.

measure timely loss recognition. The period of study is set after the global diffusion, that is, 2005, for a period of ten years from 2006 to 2015. 3,040 firm-year observations were collectively studied for the main tests, and 2,580 firm-year observations studied in the additional analysis tests.

The study's findings reveal that the overall sample of IFRS adopters in the MENA region have benefited from the adoption, as the results show that there is a reduction in earnings management for IFRS adopters in comparison to local standards adopters. The sub-sample analysis shows that IFRS adopters in both rentier and non-rentiers countries have higher financial reporting quality than non-IFRS adopters. However, the findings reveal that the magnitude of the financial reporting quality is higher for IFRS adopters in rentier states than that of IFRS adopters in non-rentier states. Lastly, the countries with medium governance quality levels have benefited the most from IFRS adoption, while the findings show that a stronger governance quality of IFRS adopters may lower financial reporting quality. The findings of this study are relevant for standard setters, IFRS adopters and non-IFRS adopters, rentier states, researchers, investors, and the IASB.

Several studies have used a sample of one country to examine the impact of IFRS adoption in MENA or outside the MENA region, such as Jordan (Al-Htaybat, 2018) as an example of such a study in the MENA region or outside the MENA region, such as in New Zealand (Kabir et al., 2010), Romania (Albu and Albu, 2012), or Brazil (Nakao and Gray, 2018), among others. Single country studies might reduce the variation between the sample, as the firms are exposed to the same culture, legal, institutional, and economic structures (George *et al*., 2016). However, single-country studies have their own disadvantages as they can be problematic when generalising their research findings to other countries (ibid). This study, however, can overcome such limitations of both previous cross-country and single-country studies, and has extended the literature of international accounting and IFRS adoption by using relatively new samples that share common characteristics (that is, the MENA region). In addition, this research also extends the literature by examining a new angle that has not been investigated before, that is, the rentier-ism affect. This research provides a valuable input to investors by evaluating the current status of firms' financial reporting quality in this part of the world (the MENA region) using recent and longer periods of time.

The remainder of this paper covers the following sections in the same sequence as is presented throughout the document. Literature Review and Research Hypotheses, Research Design and Sample Selection, Data Analysis and Research Findings, and the last section, Reflection and Conclusion, followed by References.

Literature Review and Research Hypotheses

Previous researchers have studied financial reporting quality from different perspectives in order to evaluate accounting quality. There are different indicators that reflect the quality of accounting, such as earnings management or income smoothing (Healy and Wahlen, 1999; Holland and Ramsay, 2003; Ding *et al*., 2007; Aussenegg *et al*., 2008; Cai *et al*., 2008; Jeanjean and Stolowy, 2008; Chen *et al*., 2010; Garcia and Pope, 2011; Ahmed *et al*., 2013; Shubita, 2015), financial analysts' forecasts (Byard *et al*., 2011; Jansson *et al*., 2012), loss provisions (Leventis *et al*., 2011), discretionary accruals (Callao and Jarne, 2010; Shubita, 2010; Houqe *et al*., 2012; Salewski *et al*., 2014) and timely loss recognition (Gebhardt and Novotny-Farkas, 2011; Ahmed *et al*., 2013). Studies refer explicitly to financial reporting quality by concentrating on a selective group of financial reporting issues that have impacted on the measurement of net income and assets that are subject to impairment (Singleton-Green, 2015). They mostly investigate phenomena and judge the firms' accounting quality through income smoothing, accruals and/or timely loss recognition, which in turn, most researchers refer to some or all of these practices as earnings management (ibid).

The judgment of accounting quality is whether implementing IFRS would decrease or increase earnings management. The above studies have varied between the impacts of IFRS on income smoothing practices. Several studies have emphasised the positive consequences of IFRS adoption, stating that IFRS adoption leads to lower earnings management, and therefore results in higher financial reporting quality (Barth *et al*., 2008; Cai *et al*., 2008, 2014; Daske *et al*., 2008; Leventis *et al*., 2011; Houqe *et al*., 2012; Salewski *et al*., 2014). Others find that IFRS adoption has increased earnings management, which results in poorer accounting quality (Callao *et al*., 2007; Ahmed *et al*., 2013; Christensen *et al*., 2015; Capkun *et al*., 2016). On the other hand, there are studies that have found mixed results (Chen *et al*., 2010; Aubert and Grudnitski, 2011; Zeghal *et al*., 2012). Such studies have used different samples, methods, and periods in order to evaluate possible improvement that IFRS adoption may bring to the accounting quality.

Early studies of IFRS adoption were driven by investigating the benefits of the adoption, and measuring the changes along the way after adoption. However, measuring the quality of the financial reporting by adopting new standards, per se, is misleading and does not provide the full picture in terms of what the determinants are of the accounting quality (Duarte *et al*., 2015). Several researchers have been urged to take a step further towards examining other factors, rather than the impact of the adoption only (Soderstrom and Sun, 2007; Duarte *et al*.,

2015; George *et al*., 2016). Most of the studies in the literature were unable to adequately explain why countries with common characteristics (such as the MENA countries) have various differing reactions towards IFRS adoption (Boolaky *et al*., 2018).

The MENA region is unique from other regions regarding the phenomena of IFRS diffusion. This region is often neglected and not given the full attention of previous researchers. Researchers believe that accounting practices can be affected by inherited behaviour, religious background, and cultural values (Joshi *et al*., 2008; Upton, 2010; Amiram, 2012; Glaum *et al*., 2013). The MENA region has unique features in terms of language unity, religion, and culture (Boolaky *et al*., 2018), and such features are directly linked to IFRS adoption, as identified by pioneers in the IFRS literature (Camfferman and Zeff, 2007; Nobes and Parker, 2008; Pacter, 2016). However, the IFRS phenomena impact on financial reporting quality is understudied. The benefit of IFRS adoption in higher developed Western countries might be less beneficial elsewhere (George *et al*., 2016), and MENA countries motivation for adoption may differ from Western countries. Even in Western countries, there are still doubts of contribution brought about by IFRS adoption. A recent study on French companies illustrates a decrease in earnings quality after a decade of IFRS adoption (Benkraiem *et al*., 2021). Before examining specific themes on the MENA region, the study will firstly address the overall impact of IFRS adoption on the financial reporting quality in the MENA region. The first hypothesis is as follows:

1. *IFRS adoption decision and financial reporting quality (regardless of country's rentier status):*

   H1a: Firms that adopted IFRS have higher financial reporting quality.

   H1b: Firms that rejected IFRS have lower financial reporting quality.

The MENA region's mixed reaction towards the IFRS diffusion requires a closer look into the region, addressing its anatomy in order to gain a clearer understanding of the countries' behaviour towards IFRS adoption. The wealth of the countries and the state of the economy play a vital role in confirming international norms, that is, adopting or rejecting the international accounting regime. Oil has played a vital role regarding the political, economic, power, and control interests at both local and international levels, with around 60 per cent of worldwide oil reserves being located in the Middle East (Smith, 2016), which has made the MENA region the focus of the world. "We depend on oil, so we depend on the Middle East" (Smith, 2016: 42). While less than half of the MENA region states are oil exporters, the remaining countries rely on other forms of revenue to support their economy (IMF, 2016). The

rentier economy has distinctive features as it heavily relies on accidental resources without a controlled productive source of income (Beblawi, 1987). Moreover, the rentier state has a fragile economy that is vulnerable to external fluctuations of oil prices (Levins, 2013). Furthermore, sectors other than the oil industry sector are not well developed (Benli, 2014). The rentier state often has a weak institutional structure, and a lack of state capacity, due to a government monopoly over oil wealth (Benli, 2014). Therefore, the remaining hypotheses, according to the established themes in this paper, are as follows:

2. *IFRS adoption decision and financial reporting quality (oil dependency status):*

   H2a: Firms in rentier status countries that adopted IFRS have higher financial reporting quality.

   H2b: Firms in rentier status countries that rejected IFRS have lower financial reporting quality.

3. *IFRS adoption decision and financial reporting quality (non-rentier countries):*

   H3a: Firms in non-rentier status countries that adopted IFRS have higher financial reporting quality.

   H3b: Firms in non-rentier status countries that rejected IFRS have lower financial reporting quality.

This paper takes the extra step through examining the governance quality impact on financial reporting quality in the MENA region. Previous studies have suggested that financial reporting quality would increase in countries with stronger enforcement mechanisms more than countries with weak enforcement (Burgstahler *et al*., 2006; Byard *et al*., 2011; Hope, 2003; Houqe, 2018; Leuz *et al*., 2003). Barth and Israeli (2013) state that both the level of enforcement and the quality of accounting standards are dependent on each other - "The benefits of enforcement depend on the quality of the standards being enforced, and the benefits of accounting standards rely on the strength of the enforcement of the standards" (Barth & Israeli, 2013:p.187). Cai *et al*. (2008) investigated the enforcement and its impact on earnings management regarding IFRS adoption. Their study shows that those countries that adopted IFRS exhibit less earnings management than non-adopters, while generally the earnings management practices were less in countries with stronger enforcement. Verriest *et al*. (2013) found that IFRS adopters have exhibited greater quality disclosures than local GAAP, and the level of disclosures were at a higher quality for firms that have strong corporate governance. Moreover, Barth *et al*. (2014), through studying the value relevance to investors in terms of

reconciliations of local GAAP numbers to IFRS numbers, conclude that IFRS adopters have increased the financial reporting quality more than local GAAP. They interpret their findings as IFRS enforcement has led to an increase in financial reporting quality, due to the use of its rules that are more relevant to investors than other accounting regimes, such as the use of fair value measurement (Barth *et al*., 2014).

Others, however, have found mixed results. Ahmed *et al*. (2013) argue that financial reporting quality decreased after the adoption, especially for firms in countries with a strong enforcement system. Ahmed *et al*. (2013) relate the deterioration of accounting quality after IFRS adoption in stronger enforcement countries to the difference between local GAAP quality in comparison to IFRS quality. In other words, if IFRS were looser than the local GAAP as its principle-based standards in the sense that managers would have incentives to exercise their discretion in their own interests (Ahmed *et al*., 2013). Cai *et al*. (2014) found that countries with high levels of divergence of their local GAAP from IFRS have shown a greater decline in earnings management, especially in countries with a high level of enforcement, as they benefited the most from IFRS adoption, followed by high divergence status countries with lower levels of enforcement. On the other hand, Cai *et al*. (2014) conclude that countries with lower divergence and higher levels of enforcement do not significantly benefit from IFRS adoption. This research aims to test such notions in the MENA region IFRS adoption environment. The additional analysis is set to test whether the higher governance quality would ensure higher financial reporting quality within the same accounting regime. Therefore, the hypotheses are as follows:

4. *IFRS adoption decision and financial reporting quality (governance quality impact):*

   H4a: The higher the governance quality in a country that adopted IFRS, the higher the quality of firms' financial reporting.

   H4b: The higher the governance quality in a country that rejected IFRS, the higher the quality of firms' financial reporting.

Research Design and Sample Selection

The quality of the accounting regime that firms choose to adopt is measured through the engagement of earnings management, as practised by the managers of these firms. The lower the earnings being managed, the higher the quality of the financial reporting of the firm. The higher managers engage in earnings smoothing, the poorer the financial reporting quality of the firms. This study follows prior research (Lang *et al*., 2003, 2006; Barth *et al*., 2008; Chen *et al*., 2010; Christensen *et al*., 2015) by utilising Barth, Landsman, and Lang's (2008) accounting quality measurement methods. Barth *et al*.'s (2008) methodology has been used by several researchers in order to determine accounting quality in relation to the adoption of new accounting standards (Chen *et al*., 2010; Lin *et al*., 2012; Christensen *et al*., 2015; Capkun *et al*., 2016). The study uses a cross-sectional research design (cross-sectional estimation pooling observations across firms) which has been used in prior literature (Barth *et al*., 2008; Chen *et al*., 2010; Christensen *et al*., 2015; Capkun *et al*., 2016). This design allows the measurement of the effect of both IFRS and the local standard adoption on results (Capkun *et al*., 2016). The research uses pooled estimation models in order to ensure the results are comparable to prior research. However, the sample selection and construction are modified to serve the purpose of this study (Figure 2). The two dimensions of accounting quality were measured by means of the five common models used in the previously mentioned studies. Three metrics have been used to measure earnings smoothing; the variability of change in net income, the variability of change in net income scaled by the variability of change in cash flow, and the negative correlation between the cash flows and accruals. A high volatility of earnings is consistent with less smoothing of earnings (Lang *et al*., 2003, 2006; Leuz *et al*., 2003; Barth *et al*., 2008). The fourth metric measures manager involvement in managing earnings towards a target through measuring the frequency of reporting small positive net income. The last non-smoothing measure of accounting quality is through measuring the likelihood of reporting large negative earnings to measure the timely loss recognition. Figure 1 illustrates the metrics that are used to measure financial reporting quality.

[Insert Figure 1]

Data Collection and Research Period

The period is set after global interest started to diffuse around the world, that is, after the EU mandatory adoption in 2005. Thus, the firm-year observations are set from the period of 2006 to 2015. Firms that have less than 10 years of observations are excluded. The study is

also interested in firms that either fully adopt IFRS or fully adopt local standards, throughout the period of the study. Firms that switched during the study period are excluded, as they are very low in number, and the empirical analysis was therefore not feasible[2]. In addition, prior to 2005, the data availability was very low for firms in the MENA region in the Thomson Reuters *Datastream/WorldScope* financial database. The ten-year study period is a well representative period of IFRS and the Local Standards effect on firms in the MENA region after the global spread of the IFRS.

Sample Selection and Construction

Prior research has used many criteria for sample selection to suit their research needs and their data availability. The multi-country studies have used different methods in sample selection, such as size, country, industry, or legal origin, which could be feasible for developed market-oriented countries. However, data availability for the MENA region includes too many characteristics for matching, and samples will end up with no data on which to conduct the research, or at best, this will lead to the loss of much valuable information. This has contributed to the scarcity of IFRS studies in the MENA region. In order to maximise the representative sample in the study, and to avoid the loss of valuable firm-year observations, this study develops well organised methods to achieve the research objectives.

The purpose of selecting the same country is to control the effects of the regulatory environment, enforcement mechanisms, and the legal institutions that the firms are exposed to (Capkun *et al*., 2016). With regard to the MENA region, however, there is no available sample on which to conduct the research in comparison to other studies, due to the following reasons. Firstly, the matching method on the country's criteria is not feasible due to the limited MENA firms' data availability in the *Datastream/WorldScope* database. Secondly, the MENA countries either apply IFRS, or do not apply IFRS, and therefore, the sample selection is highly limited to just one type of group, especially during the selected years[3]. Matching the same country's criteria for both groups is almost impossible.

[2] The initial firm-level analysis was to include a section discussing the pre-post adoption in the MENA region, but the samples were small after the matching process, and the analysis was not feasible. Also, the adoption times of these firms were scattered throughout the years and could not be matched and unified for the year effect on firms' performances, unlike EU firms where researchers have clear cut IFRS adoption switching year on 2005. With regard to the adoption year, MENA region firms' adoption years are scattered, as some adopted IFRS in 2015 while others adopted it in 2003.

[3] Except very few limited numbers of firms in some countries 1 to 3 firms at most that are different to the country's adoption trend, and they were included in the matched sample.

The study uses three Worldwide Governance Indicators, which are rule of law, government effectiveness, and regulatory quality (The World Bank Group, 2017) in order to form a criteria known as the Governance Quality (GQ) indicator. The researchers use this indicator to group countries based on their average scores during the same period of study (2006 to 2015). This method reflects the real substance of the countries in terms of their rule of law, government effectiveness, and regulatory quality. The measurement of governance quality scores controls the effects of regulatory environment, enforcement mechanisms, and legal institutions that affect firms through grouping countries based on their governance quality scores. Each group is treated as one unit (that is, one country), and as such, the firms are exposed to similar institutional environments. The group classifications were set into five categories of governance quality, ranking Negligible, Very low, Low, Medium, and High. The matching firms will be selected from the same group, as if they were from the same country. Table I illustrates the governance quality scores (average) of the countries in the MENA region. Prior research has used the size of the company on the year after the adoption in order to match firms. Due to the different purpose of this study, this research sets 2006 as the basis on which to match the sizes of the firms for the two accounting regimes. Therefore, the sample selection of IFRS adopters and non-IFRS (Local Standard) adopters were matched on the size and the governance quality group ranking.

[Insert Table I]

In order to investigate the firms' financial reporting quality in the MENA region, the researchers use two approaches. Firstly (main analysis), the study compares the metrics between firms that apply IFRS, to those that are still applying their local standards. The sample is constructed by using the oil dependency status theme (rentier status). However, the study firstly examines the overall accounting quality of the firms in the MENA region that were matched between the two accounting regimes based on firm-size and governance quality (Table II, Panel A). Secondly, the researchers use the country's rentier status to distinguish between the differences in the firms' accounting quality in both rentier and non-rentier states (Table II, Panels B and C). The second part (additional analysis) is conducted in order to test the financial reporting quality of each group of the adopted accounting regimes (IFRS/Local Standards), based on the governance quality ranking levels. The sample is constructed into two separate

groups - non-IFRS adopters and IFRS adopters (Table III, Panels E and F)[4]. The comparing metrics are set to test the financial reporting quality of each accounting regime across the governance quality ranking of the countries within the MENA region. Figure 1 illustrates an overview of the samples' construction for financial reporting quality.

[Insert Figure 2]

[Insert Table II]

[Insert Table III]

Financial Reporting Quality Metrics

The financial reporting quality of the two accounting regimes is measured using five models. The first metric is based on the variability of the change in net income, scaled by total assets, Equation (1) (ΔNI). However, Lang *et al*. (2006) and Barth *et al*. (2008) argue that earnings volatility may not be linked to discretionary actions, but rather to the differences in cash flow. Therefore, the second metric is based on the variability of the change in operating cash flow scaled by total assets, Equation (2) (ΔCF). This study then controls the above concerns by examining the variability of (ΔNI) over (ΔCF). In order to mitigate confounding effects, and to address other factors that are un-attributable to the financial reporting system, this study follows prior research by controlling these factors and estimating the following regression models:

$$\Delta NI_{it} = \alpha_0 + \alpha_1 SIZE_{it} + \alpha_2 GROWTH_{it} + \alpha_3 EISSUE_{it} + \alpha_4 DEBT_{it} + \alpha_5 DISSUE_{it} + \alpha_6 TURN_{it} + \alpha_7 CF_{it} + \alpha_8 AUDIT_{it} + \alpha_9 NUMEX_{it} + \alpha_{10} CLOSE_{it} + \sum_{k=1}^{9} \alpha_{k+10} Country_i + \sum_{j=1}^{18} \alpha_{j+19} Industry_i + \varepsilon_{it} \quad (1)$$

$$\Delta CF_{it} = \alpha_0 + \alpha_1 SIZE_{it} + \alpha_2 GROWTH_{it} + \alpha_3 EISSUE_{it} + \alpha_4 DEBT_{it} + \alpha_5 DISSUE_{it} + \alpha_6 TURN_{it} + \alpha_7 CF_{it} + \alpha_8 AUDIT_{it} + \alpha_9 NUMEX_{it} + \alpha_{10} CLOSE_{it} + \sum_{k=1}^{9} \alpha_{k+10} Country_i + \sum_{j=1}^{18} \alpha_{j+19} Industry_i + \varepsilon_{it}$$

[4] Table III Panel E and F and Figure 1 illustrate that for IFRS adopters, there were no firms located in low GQ levels that have adopted IFRS. As a result, only firms in the medium and high GQ levels adopted IFRS. On the other hand, there were no firms located in high GQ levels that adopted Local Standards. Only firms in low and medium GQ levels still adopted their Local Standards. This is a clear indication of the GQ influence in terms of IFRS adoption given the data availability for each accounting regime within different segments of the governance quality ranking. As for the remaining ranking GQ groups as stated in Table I, that is, Very low and Negligible levels, there were no data available for these regimes within the targeted sample research period.

(2)

Where:
ΔNI[5] is the change in net income scaled by total assets
ΔCF is the change in cash flow from operating activities scaled by total assets
SIZE is the natural logarithm of market value of equity
GROWTH is the annual percentage change in sales
EISSUE is the annual percentage change in common stock
DEBT is the end of year total liabilities divided by end of year equity book value
DISSUE is the annual percentage change in total liabilities
TURN is the sales divided by end of year total assets
CF is the annual net cash flow from operating activities divided by total assets
AUDIT is a dummy variable equal to one for observations where the firm's auditor is one of the Big 4 accounting firms, and zero otherwise
NUMEX is the number of exchanges on which a firm's stock is listed
CLOSE[6] is the percentage of closely held shares of the firm as reported by Datastream/WorldScope Database
Country is a dummy variable that takes the value of (1) given the country's firm-year observation is from and (0) Otherwise;
Industry is a dummy variable that takes the value of (1) given the industry's firm-year observation is belonging to and (0) Otherwise.

From Equations (1) and (2), the variance of the residuals estimated from these equations are the measures of variability of net income (Eq. 1) and cash flows (Eq. 2), and donated as ΔNI*, ΔCF* respectively. The interpretation of high variability is consistent with less earnings smoothing (Lang *et al*., 2003, 2006; Leuz *et al*., 2003; Barth *et al*., 2008; Christensen *et al*., 2015).

The third earnings smoothing metric is set to examine the use of accruals to smooth earnings. This metric is based on the Spearman correlations between operating cash flows (CF) and total accruals (ACC). In line with the previous models, the correlation of the residuals from the following equation is measured by regressing them on the same variables, excluding CF from the following models, denoted as CF* and ACC* (Equations 3 & 4):

[5] There are different definitions provided by Datastream for 'Net Income' for various income line items. In line with previous literature, this study uses Net Income before extraordinary and other non-operating items. Therefore, the referral for this item in all analyses will be short as net income.
[6] Closely held shares are not available for all firms within the MENA region. Therefore, and to avoid the loss of valuable observations, the researchers applied the method as used in the Christensen *et al*. (2015) study, and set this variable equal to the median during the period of study or zero if there is no data available during the period of the study. In addition, this study also includes the results estimation of the raw data of the tested variables, not just the residuals from the regression which in return facilitates and supports the empirical results, similar to Barth *et al*. (2008) and Christensen *et al*. (2015).

$$CF_{it} = \alpha_0 + \alpha_1 SIZE_{it} + \alpha_2 GROWTH_{it} + \alpha_3 EISSUE_{it} + \alpha_4 DEBT_{it} + \alpha_5 DISSUE_{it} + \alpha_6 TURN_{it} + \alpha_7 AUDIT_{it} + \alpha_8 NUMEX_{it} + \alpha_9 CLOSE_{it} + \sum_{k=1}^{9} \alpha_{k+9} Country_i + \sum_{j=1}^{18} \alpha_{j+18} Industry_i + \varepsilon_{it} \quad (3)$$

$$ACC_{it} = \alpha_0 + \alpha_1 SIZE_{it} + \alpha_2 GROWTH_{it} + \alpha_3 EISSUE_{it} + \alpha_4 DEBT_{it} + \alpha_5 DISSUE_{it} + \alpha_6 TURN_{it} + \alpha_7 AUDIT_{it} + \alpha_8 NUMEX_{it} + \alpha_9 CLOSE_{it} + \sum_{k=1}^{9} \alpha_{k+9} Country_i + \sum_{j=1}^{18} \alpha_{j+18} Industry_i + \varepsilon_{it} \quad (4)$$

Where:
ACC is total accruals net income minus cash flow scaled by total assets.
The rest is explained underneath in Equation 2.

The interpretation of the correlation results are based on managers' great usage of accruals to make up for cash flows decreasing in order to smooth earnings (Lin *et al*., 2012; Capkun *et al*., 2016). Therefore, the more negative the correlation between ACC and CF, the more consistent it is with greater smoothing and vice versa.

The fourth non-smoothing metric measures earning management by examining the frequency of reporting positive income. The rationale is that the common purpose of earnings management is to report positive income and therefore avoid reporting losses (Burgstahler and Dichev, 1997). The regression model (Eq. 5) is used to measure earnings management towards a target using logistic regression, where SPOS is an indicator variable that equals one, if the net income scaled by total assets is between 0 and 0.01, and zero otherwise. Thus, higher frequency of small positive net income is associated with earnings management.

$$IFRS(0,1)_{it} = \alpha_0 + \alpha_1 SPOS_{it} + \alpha_2 SIZE_{it} + \alpha_3 GROWTH_{it} + \alpha_4 EISSUE_{it} + \alpha_5 DEBT_{it} + \alpha_6 DISSUE_{it} + \alpha_7 TURN_{it} + \alpha_8 CF_{it} + \alpha_9 AUDIT_{it} + \alpha_{10} NUMEX_{it} + \alpha_{11} CLOSE_{it} + \sum_{k=1}^{9} \alpha_{k+11} Country_i + \sum_{j=1}^{18} \alpha_{j+20} Industry_i + \varepsilon_{it} \quad (5)$$

Where:
IFRS (0, 1) is a binary variable that takes the value of (1) if IFRS was reported under the 'Accounting Standards Followed' indicator in the *Datastream/WorldScope* database for a given MENA country in a given year, and (0) if Local Standards was reported under this indicator.

SPOS is an indicator variable that equals one if the net income scaled by total assets is between 0 and 0.01, and zero otherwise.

The justifications are of using the coefficient rather than direct comparison of both types of firms' percentages of reporting SPOS because the coefficient takes account of the factors that are not attributable to financial reporting system (Barth *et al*., 2008). Therefore, the positive coefficient on SPOS indicates that IFRS adopters have managed earnings towards small positive income more frequently than non-IFRS adopters. The negative coefficient of SPOS indicates that non-IFRS adopters have managed earning towards small positive income more frequently than IFRS adopters.

Lastly, this study examines the likelihood of reporting large negative earnings by the firms in the MENA region to measure the frequency of timely loss recognition. Following Barth et al. (2008), this study uses LNEG as an indicator variable that equals one for observations for which annual net income scaled by total assets is less than −0.20, and zero otherwise. The following logistic regression, running in Equation (6), measures the financial reporting quality of the IFRS and non-IFRS adopters:

$$IFRS(0,1)_{it} = \alpha_0 + \alpha_1 LENG_{it} + \alpha_2 SIZE_{it} + \alpha_3 GROWTH_{it} + \alpha_4 EISSUE_{it} + \alpha_5 DEBT_{it} + \alpha_6 DISSUE_{it} + \alpha_7 TURN_{it} + \alpha_8 CF_{it} + \alpha_9 AUDIT_{it} + \alpha_{10} NUMEX_{it} + \alpha_{11} CLOSE_{it} + \sum_{k=1}^{9} \alpha_{k+11} Country_i + \sum_{j=1}^{18} \alpha_{j+20} Industry_i + \varepsilon_{it} \quad (6)$$

LNEG is an indicator variable that equals one for observations for which annual net income scaled by total assets is less than −0.20, and zero otherwise.

The result of the above equation is interpreted for the LENG coefficient, where a negative coefficient suggests that IFRS adopters recognise large losses less frequently than non-IFRS adopters. Therefore, this would indicate more earnings management, and as a result poorer quality of financial reporting. On the other hand, a positive coefficient suggests that IFRS adopters recognise large losses more frequently than non-IFRS adopters, and therefore higher financial reporting quality.

Additional Information About Metrics Testing

Dealing with outliers. Following Barth *et al*. (2008), and in order to mitigate the effects of outliers, all variables (except indictor variables) listed in Appendix 1 were winsorised at levels of 5 per cent and 95 per cent. The samples range from various countries across the MENA region, and therefore the level of winsorisation reflects this fact. In other words, this level of winsorising will ease the outliers effect on variability analysis using the above metrics (Christensen *et al*., 2015).

Bootstrapping approach for significance testing. Obtaining the estimations of the above metrics for the tested variables may tell us the variability differences between each accounting regime within the targeted samples. However, they do not compare the significance in difference of the financial reporting quality metrics between the study groups. Therefore, the bootstrapping approach is used for this purpose (Barth *et al*., 2008). This approach requires no assumption about the distribution of the used metrics and allows the testing of these metrics with unknown distributions (Bickel and Freedman, 1981). In addition, it mitigates the concern that research findings are a result of sample bias (Lin *et al*., 2012). The researchers have used *Stata* software to run the bootstrapping test. In order to fully capture how the bootstrapping procedure was used in this research, the steps that the researchers followed to test significant differences in each of the financial reporting quality metrics across the tested subsamples is set out below.

Firstly, the researchers randomly selected, with replacement, firm-year observations from each tested original group sample, the same number of firm-year observations as in the original sample to create representative samples that were equal in size to the actual original sample. Secondly, the researchers ran and computed each of the financial reporting quality metrics, as explained above, by getting the variance of the residuals for the metrics that is the change unexplained by either the firm characteristics or the surrounding environments. It is worth mentioning that the differences testing can be a comparison between the two accounting regimes of the firms within the MENA region across the targeted countries' samples (IFRS Adopters vs. Non-IFRS adopters), or for the same accounting regime across the Governance Quality levels. Thirdly, this approach is repeated 1000 times in order to obtain the referent empirical distribution of differences between samples. This bootstrapping approach is performed separately for each group, as displayed in Figure 2. Finally, after obtaining 1000 variances of residuals, for example, for the ΔNI metric, the researchers then apply the t-test for statistical significance of the differences of the metric, say between IFRS adopters and Non-IFRS adopters in the targeted sample. Note that for metrics that estimate the SPOS and LENG, the bootstrapping approach is not used, as these variables are measured as regression coefficients.

Data Analysis and Research Findings

Descriptive Statistics

Tables IV to VIII present the summary of statistics for all of the variables used in the analysis of the financial reporting quality of firms within the MENA region. The tables illustrate the results of each sample accordingly, as displayed in Figure 1. Although, the following summary statistics display the descriptive statistics for raw tested variables, without controlling other factors, they do reveal the results regarding the firm-characteristics of the both types of accounting regimes.

[Insert Table IV]

[Insert Table V]

[Insert Table VI]

[Insert Table VII]

[Insert Table VIII]

Data Analysis and Research Findings - Main Tests (Empirical Models)

The main tests examine the financial reporting quality between firms that adopt IFRS in comparison to Local Standards adopters in the MENA region. Three main tests were conducted to match samples based on time, size, and governance quality ranking, namely - Overall (no criteria attached), Rentier States and non-Rentier States.

IFRS and Non-IFRS (Local Standards) Firms' Financial Reporting Quality within the MENA Region (Overall)

Table IX shows the results of measuring the financial reporting quality of firms within the MENA region for all available matched observations over the period from 2006 to 2015. The findings of this study are statistically significant less smoothing, as evidently revealed by the results below in support of IFRS adoption over the Local Standards accounting regime. The first finding relating to financial reporting quality reveals that IFRS adopters have a significantly higher variability of change in net income than non-IFRS adopters; $\sigma^2(\Delta NI^*)$ (0.0022 vs. 0.0014). This might imply that the change is due to cash flow variability, as a result, the second metric tests this notion. The second finding shows that this is not the case as the ratio of the variance of change in net income, ΔNI*, to the variance of the change in cash flow, ΔCF*, is significantly higher for IFRS adopters than for non-IFRS adopters; $\sigma^2(\Delta NI^*)/\sigma^2(\Delta CF^*)$ (0.8670 vs. 0.4595). The higher variability of these results indicates less earnings

smoothing and so higher financial reporting quality. Therefore, the first two tests statistically show that IFRS adopters have higher financial reporting quality than non-IFRS adopters in the MENA region. Thirdly, the correlation between accruals, ACC*, and cash flows CF*, for IFRS adopters is significantly less negative for IFRS adopters than for non-IFRS adopters: $\rho(\mathrm{ACC}^*, \mathrm{CF}^*)$ (-0.5764 vs. -0.6231). This is also consistent with the above findings suggesting that IFRS adopters are less earnings smoothing than Local Standards adopters of firms in the MENA region. These results reveal that financial reporting quality is higher under IFRS adopters than Local Standards adopters in the MENA region.

This study has coded zero for firm-year observations of the non-IFRS adopters and coded one for firm-year observations of the IFRS adopters, thus, negative coefficient in testing the likelihood of reporting Small Positive Earnings (SPOS) is consistent with less earnings management by IFRS adopters and so higher quality of financial reporting. The opposite holds in relation to testing the frequency of large negative earnings as positive coefficient of LENG indicating that IFRS adopters are reporting large losses more often than non-IFRS adopters, and so less earnings management and higher financial reporting quality. The researchers found no significant differences between both accounting regimes in terms of managing earnings towards the target of both IFRS and non-IFRS adopters. However, the SPOS coefficient (-0.1457) suggests that this result also supports the above findings in terms of IFRS adopters having higher financial reporting quality, despite the insignificant differences between the two accounting regimes. The final findings, however, reveal that IFRS adopters are significantly larger in recognising losses more frequently than non-IFRS adopters, as the LENG coefficient is (1.2442 at 1 percent level of significance. Therefore, this finding is also consistent with less earnings management under IFRS standards than local standards.

[Insert Table IX]

Consequently, four out of five tests of the financial reporting quality assessment under both regimes of firms in the MENA region found that IFRS adopters are significantly different and have higher financial reporting quality than non-IFRS (Local Standards) adopters. These results are consistent with previous literature which leads to accepting the hypothesis (H1a) for firms in the MENA region in terms of adopting IFRS that will provide higher accounting quality than Local Standards (H1b).

1. IFRS adoption decision and financial reporting quality (regardless of country's rentier status):

   H1a: Firms adopted IFRS have higher financial reporting quality (Accepted)

   H1b: Firms rejected IFRS have lower financial reporting quality (Accepted)

IFRS and Non-IFRS (Local Standards) Firms' Financial Reporting Quality in Rentier Countries

The second analysis consists of comparison examination of financial reporting quality between IFRS adopters and Local Standards adopters in rentier states within the MENA region (Table X). The first finding shows that IFRS adopters in rentier countries have a significantly higher variance of the change in net income, ΔNI*, than non-IFRS adopters (0.0026 vs. 0.0018). The second result of the ratio of the variance of ΔNI* to the variance of ΔCF* also shows significant difference between the two-accounting regimes, and is higher for IFRS adopters than for non-IFRS adopters as $\sigma^2(\Delta \mathrm{NI}^*)/\sigma^2(\Delta \mathrm{CF}^*)$ (1.2680 vs. 0.6008). This indicates that the change in net income is not because of cash flow variability. As the study presents earlier, higher variability of net income is indicative of less earning smoothing, and therefore, IFRS adopters in rentier states show that they produce higher quality financial reporting in comparison to the non-IFRS adopters, based on the first two metrics results. The third finding is also consistent with these results as the correlation between accruals and cash flows for IFRS adopters is significantly different and less negative than non-IFRS adopters; $\rho(\mathrm{ACC}^*, \mathrm{CF}^*)$ (-0.6072 vs. -0.6629). These results reveal less earnings smoothing for IFRS adopters in rentier states in comparison to non-IFRS adopters, which in turn empirically prove that firms under IFRS in rentier states within the MENA region have higher accounting quality. Similarly, there is a significant difference between the two-accounting regimes in terms of regularly recognising large losses as the positive SPOS coefficient indicates (1.1863 at 5 percent level). This means that IFRS adopters frequently report large negative income than non-IFRS adopters, which also implies higher accounting quality than non-IFRS adopters. Despite that, there are no significant differences between IFRS and non-IFRS adopters regarding managing earrings towards target, the negative coefficient of LENG insignificantly indicates that IFRS adopters are less earning smoothing than their counterparts, suggesting IFRS adopters produce higher financial reporting quality.

[Insert Table X]

The analysis of the second sample of this study empirically reveals that four out of five earning management metrics shows that firms in rentier states who adopt IFRS produce higher financial reporting quality than non-IFRS adopters. The magnitude of this result, however, is slightly larger than the first sample, where there were no criteria attached. Therefore, this research accepts both hypotheses (H2a & H2b):

2. IFRS adoption decision and financial reporting quality (oil dependency status):

   H2a: Firms in rentier status countries that adopted IFRS have higher financial reporting quality (Accepted)

   H2b: Firms in rentier status countries that rejected IFRS have lower financial reporting quality (Accepted)

IFRS and Non-IFRS (Local Standards) Firms' Financial Reporting Quality in Non-Rentier Countries

Table XI shows the results of the third empirical analysis of the earnings management metrics examining IFRS and non-IFRS adopters in non-rentier states within the MENA region. The variability of earnings income, ΔNI*, is higher for IFRS adopters than for non-IFRS adopters, and there is a significant difference between the two accounting regimes. However, the magnitude is very low and close between the two accounting systems in non-rentier states, as $\sigma^2(\Delta NI^*)$ (0.0009 vs. 0.0007), for IFRS adopters and non-IFRS adopters respectively. This is consistent with the decrease in earnings management. The second finding that would eliminate the change in earnings might be driven by cash flow shows that it might be the case. The ratio of the variance of change in net income, ΔNI*, to the variance of the change in cash flow, ΔCF*, is less for IFRS adopters than for non-IFRS adopters; $\sigma^2(\Delta NI^*)/\sigma^2(\Delta CF^*)$ (0.2225 vs.0.2552). This result suggests that IFRS adopters evidenced more earnings smoothing than non-IFRS adopters in non-rentier states in the MENA region. This finding contrasts with the findings for the rentier states comparison, in which non-IFRS adopters have a significantly lower ratio of the two variances. It is worth mentioning that the ratio of the variability of ΔNI divided by the variability of ΔCF, before applying the control variables, shows that IFRS adopters have higher variably than non-IFRS adopters $\sigma^2(\Delta NI)/\sigma^2(\Delta CF)$ (0.2241 vs. 0.1659).

The less significant negative correlation between accruals, ACC*, and cash flows, CF*, is however, lower for IFRS adopters than for non-IFRS adopters; $\rho(ACC^*, CF^*)$ (-0.6825 vs. -0.8261). This implies less earnings smoothing management for IFRS adopter firms than their counterparts in non-Rentier states. The fourth metric shows no significant difference between

the two accounting regimes in terms of managing earnings towards positive targets, yet, the negative SPOS coefficient (-0.4301) reveals that it is consistent with less earnings management towards a target in firms that adopt IFRS. The last finding is statistically significant at a level of 5 per cent, where IFRS adopters in non-rentier states within the MENA region frequently report larger losses than non-IFRS adopters. The positive coefficient of LENG (2.4065) statistically indicates that IFRS adopters are more likely to recognize large losses, which also implies less earrings management and higher financial reporting quality. Overall, the non-rentier status analyses of countries in the MENA region reveal mixed results, despite the fact that three out of five metrics statistically and significantly illustrate that firms that choose to adopt IFRS produce higher financial reporting quality than the firms that reject the adoption. Therefore, the study accepts both hypothesis (H3a & H3b):

3. IFRS adoption decision and financial reporting quality (non-rentier status countries):

   H3a: Firms in non-rentier status countries that adopt IFRS have a higher financial reporting quality. (Accepted)

   H3b: Firms in non-rentier status countries that reject IFRS have lower financial reporting quality. (Accepted)

[Insert Table XI]

The results show that four out of five metrics are statistically significant and have less earnings management for firms that adopt IFRS in rentier states. The magnitude of the benefits of such adoption is higher for firms in rentier states than for firms in non-rentier states. In addition, the results are mixed and lower in magnitude for non-rentier states in comparison to both rentier-states analysis and overall (no-criteria) analysis. Moreover, the ratio of the variance of ΔNI* to the variance of ΔCF* findings show that non-IFRS adopters have a higher ratio, and so less managing earnings than IFRS adopters. The findings show that IFRS adoption is economically meaningful, less managing earnings and so higher financial reporting quality for firms in rentier states than for firms in non-rentier states. It can also be interpreted that local standards could provide higher accounting quality in non-rentier states due to a business-oriented environment and the institutional characteristics that the non-oil driven economy has in comparison to the oil dependent economy. Therefore, adopting high accounting standards, such as IFRS, firms in rentier states will produce a greater accounting quality than the local accounting regime, as empirically shown in the above findings.

Data Analysis and Research Findings - Additional Analyses (Empirical Models)

This sub-section separately examines each accounting regime's financial reporting quality across firms within the MENA region, based on their countries' Governance Quality levels.

Financial Reporting Quality of Non-IFRS Adopters - Governance Quality Comparison (Medium vs. Low)

Table XII presents the results of the financial reporting quality comparison of non-IFRS adopters between firms in low GQ countries and medium GQ countries. The first finding that relates to earnings management indicates that firms in medium level countries exhibit a significantly higher variability of change in net income, ΔNI*, than low level countries (0.0015 vs. 0.0011). This is consistent with less earnings management for medium ranking groups in comparison with low GQ groups. This supports the hypothesis (H4b) that the higher the level of governance quality, the higher the quality of accounting, for non-IFRS adopters. The second metric result is consistent with the first in that it indicates that the ratio of the variance of change in net income, ΔNI*, to the variance of change in cash flow, ΔCF*, is statistically and significantly different and higher for medium level countries than for low level countries; $\sigma^2(\Delta NI^*)/\sigma^2(\Delta CF^*)$ (0.3167 vs. 0.2352). In addition, the negative correlation between accruals, ACC*, and cash flows, CF*, is significantly less for medium level countries than for low level countries, which implies less earnings management by firms in countries with a higher GQ; $\rho(ACC^*, CF^*)$ (-0.6356 vs. -0.7259). Thirdly, the coefficient of SPOS (-0.2732) is insignificantly negative, which is also consistent with less earnings management by medium ranking GQ countries, given the fact that they were coded as 'one' while the low group is coded as 'zero', when running the logit regression. Moreover, the positive coefficient of LENG (0.6410) is statistically significant, indicating that non-IFRS adopter firms in medium level countries are more likely to recognise large losses than firms in lower governance quality countries.

Overall, this analysis statistically proves that higher GQ levels of non-IFRS adopters ensure higher financial reporting quality. Four out of five empirical models support the research hypothesis (H4b) that the higher the governance quality of a country, the higher the quality of their accounting regime, given the fact that the studied firms are non-IFRS adopters.

[Insert Table XII]

Financial Reporting Quality of IFRS Adopters - Governance Quality Comparison (High vs. Medium)

Table XIII presents the results of comparing financial reporting quality metrics for IFRS adopters in both high and medium GQ level countries. Interestingly, the first finding shows that the variability of net income, ΔNI*, of IFRS adopters in high level countries is less than IFRS adopters in medium level countries; $\sigma^2(\Delta NI^*)$ (0.0016 vs. 0.0020). This finding is not consistent with less earnings management for IFRS adopters in high level countries. In addition, the variability of earnings relative to the variability of cash flows (ΔNI* over ΔCF*) indicates that IFRS adopters in high level countries engage more in earnings management than those firms in medium level countries, and therefore have poorer financial reporting quality; $\sigma^2(\Delta NI^*)/\sigma^2(\Delta CF^*)$ (0.6911 vs. 0.8287). In addition, the correlation between accruals and cash flows also supports the above findings as IFRS adopters in high level countries is significantly different and negatively higher than medium level countries; $\rho(ACC^*, CF^*)$ (-0.5788 vs. -0.5629). This also implies more earnings management practices by IFRS adopters in high level countries than those in medium level countries. The last metrics show no statistical significance between IFRS adopters in high and medium GQ level countries, yet the coefficient signs also indicate that managers of firms that adopt IFRS in high level countries manage earnings more towards targets, and are less likely to report large losses; as coefficients of (SPOS, LENG) are (0.0771, -0.1366). Therefore, firms that adopt IFRS in high level countries are more likely to engage in earnings management behaviour, and thereby poorer financial reporting quality.

The research findings of analysing the IFRS adopters under high GQ levels show that they statistically and significantly contribute to producing poorer accounting quality, despite the fact that the accounting regime is empirically proven that it significantly supersedes the local accounting regime. Therefore, the research hypothesis (H4a) is rejected since the findings indicate that the higher governance quality in a country that has adopted IFRS, the lower the quality of firms' financial reporting.[7]

[Insert Table XIII]

Reflection and Conclusion

The promoters of IFRS often emphasise the notion that they have a set of high-quality standards (George *et al.*, 2016). They are also assured that by adopting these international

[7] In rolling out the industry matched sample selection of IFRS adopters' comparison between High and Medium GQ levels of countries within the MENA region, a robustness check has been carried out using matched sample by size, year, governance quality ranking and industry was constructed. The findings show no change to these findings.

accounting standards, the consequences would lead to enhancing the financial reporting quality. This study does not look at pre-adoption verses post adoption, nor voluntary verses mandatory, but rather examines the decision taken by MENA countries to adopt IFRS in comparison to those that reject the adoption during the high peak of the global interest in international accounting standards, which took place over the period of 2006 to 2015. The importance of this study in comparison to the discussed studies in the literature section, and the similarity of their conclusion with the findings of this study, is the agreement of incentives for producing higher financial reporting quality through the firm decision to adopt IFRS. The overall tests' results of the financial reporting quality metrics show that IFRS adopters in the MENA region exhibit lower income smoothing and more timely loss recognition in comparison to non-IFRS adopters; which indicates lower earnings management, and as a result, higher financial reporting quality. This study's findings are consistent with the conclusions in Barth *et al*. (2008), Cai *et al*. (2014), Daske *et al*. (2008), and Leventis *et al*. (2011), as the adoption of IFRS has reduced earnings management which in turn exhibits an increase in the quality of financial reporting. Although, on a country's level, it might be seen as mandatory adoption, yet within the context of the MENA region, the proportion between adopters and rejecters was split, until 2015 when half of the countries within the MENA region chose to adopt IFRS, while the other half still reject its adoption. Those who join the global family of IFRS adopters within the MENA region have incentives to produce transparent financial reports, and therefore they have produced a higher financial reporting quality by adopting the international accounting standards in comparison to those countries who choose not to join the club.

Van Tendeloo and Vanstraelen (2005) and Gassen and Sellhorn (2006), on the other hand, found that not all voluntary adopters showed a higher accounting quality. Paananen and Lin's (2009) study draws this conclusion because IFRS, in comparison to the German GAAP, involves a greater use of fair value. Van Tendeloo and Vanstraelen (2005) conclude that in a code law country such as Germany, the adoption of IFRS may not produce high quality financial reporting. However, as explained above, Christensen *et al*. (2015) reached a different conclusion as they provided evidence that accounting quality has improved following the voluntary IFRS adoption in Germany, and they refer to the incentives behind the adoption of these firms. These contradicting results are explained with regards to German GAAP and IFRS differences, as well as voluntary verses mandatory adoption by Salewski's et al. (2014) study. They compare earnings management under German GAAP in comparison to IFRS across two periods under IFRS adoption, with each period covering four years. They found that the mature

phase exhibits a significant decrease in earnings management in comparison to the early phase of IFRS adoption. Salewski *et al*. (2014) assert that the change between the two phases is not the voluntary nor mandatory element of adoption, but rather the gradual building of experience of different implemented parties such as auditors, preparers, and users, as they develop their learning and construct common guidelines and interpretations of these new standards over time. Despite the fact that the discussion of these studies focused on Germany, the notion behind stating the above is that the purpose of this study in choosing the time period as well as matching parallel samples of two accounting regimes over the same period, looks at the transition from local to IFRS adoption, with the purpose of eliminating the development and learning factors after the adoption. In other words, both IFRS adopters and non-adopters have the same exposure level as far as learning and experience exposure are concerned. Cai *et al*. (2014) found that there was evidence of earnings management in the first year of adoption relative to the last year before IFRS, but a decrease in the first two, three, four, and five years of IFRS adoption relative respectively to the last two, three, four and five years before adoption. This research agrees with the findings of Salewski *et al*. (2014) and Cai *et al*. (2014) in terms of the longer period of time effect by selecting and studying the two accounting regimes (adopters and Non-IFRS adopters) of firms in the MENA region after the global interest in IFRS adoption in 2005 for the period 2006-2015. The studied samples not only reflect their longer and mature understanding of the followed accounting regime, but also reflects the credibility of this study's findings regarding the consequence of their adoption/rejection decision.

The gap between the local standards and IFRS is another aspect that explains this study's findings regarding the improvement in the financial reporting quality of IFRS adopters in the MENA region. Zeghal *et al*. (2012) found that firms in countries where the distance between pre-existing national GAAP and IFRS exhibit an improvement in accounting quality between pre-adoption and post-adoption periods. With regard to the MENA region, apart from Saudi Arabia, Tunisia and Egypt (Hassan, 2008; Pacter, 2016; Slama and Klibi, 2017; Nurunnabi, 2018), most MENA countries did not have local accounting standards of their own (Kossentini and Othman, 2012; PwC, 2015; IASplus, 2016; IFRS Foundation, 2016; Pacter, 2016). Interestingly, those three countries are also non-IFRS adopters up to the time period of this

study[8] (2006-2015). Capkun *et al*. (2016) found that firms from countries with high local GAAP flexibility illustrate less evidence of increases in earning smoothing following the mandatory adoption of IFRS. However, the sample of 29 to 30 countries in the Capkun *et al*. (2016) study, based on the Ding *et al*. (2007) index sample, did not include any MENA countries in their investigations. Yet, the findings of this study support the findings of Zeghal *et al*. (2012) and Capkun *et al*. (2016). This research sheds new light by examining IFRS adoption in this important part of the world. The adoption of ready-made accounting standards, along with what is considered to be loose local GAAP, and the lack of existing local standards, have played a role in the effectiveness of IFRS adoption in the MENA region.

Regarding the role played by governance quality on financial reporting quality, the findings of this study are relatively consistent with Ahmed *et al*. (2013)in regard to impact on increase of earnings management for IFRS adopters in countries with stronger enforcement. However, there are differences between the targeted sample and the research design between Ahmed *et al*. (2013) and this research' design. They compare domestic GAAP verses IFRS across weak and strong enforcement regimes, while this study compares the same accounting regimes across governance quality levels. In addition, their studied period was limited to 2006-2007 as representative sample period for post-IFRS adoption and the sample of both IFRS adopters and non-IFRS adopters did not include a single MENA country in their sample and so the study conducted by Cai *et al*., (2014). While this research proves the conclusion reached by Ahmed *et al*. (2013) in terms of the effect of stronger enforcement regime on accounting quality of IFRS adopters, the findings of this research contradict their findings of the improvement of IFRS adoption in general, especially for countries in the MENA region with medium levels of governance quality in comparison to Local accounting Standards adopters.

These were the interpretations given by the above studies, however, this study does not claim that Cai *et al*. (2014) nor Ahmed *et al*. (2013) interpretations applied to MENA's countries IFRS adopters and the higher level of governance quality's case. This is because it is hard to claim that this was the case for this study's findings, as the level of divergence and/or looseness of the local GAAP in comparison to the adopted IFRS in countries with high level

[8] Banks and insurance institutions in Saudi Arabia are required to report under IFRS in line with The Saudi Arabian Monetary Agency (SAMA) regulations, while all other listed and unlisted firms are required to follow their Local Standards (SOCPA accounting standards) until 2016 (Nurunnabi, 2018). The SOCPA board approved an IFRS convergence plan and stated that all listed firms were required to follow IFRS from 1 January 2017. All other entities (i.e. SME) are required to report under IFRS from 1 January 2018 (ibid).

of governance quality was not yet measured or studied, nor was the enforcement itself despite the governance quality revealing a sense of the country's enforcement degree. In addition, this research period of study (10 years: 2006-2015) was longer than the above two studies[9] and therefore the learning curve should be effective enough to distance itself from any influences or differences of prior local GAAP effect. This research lays out the foundation for future research to explore the negative effects of stronger governance quality of IFRS adopters on the financial reporting quality in the MENA region.

The increase in the governance quality of local standards adopters exhibited greater financial reporting quality. On the other hand, the increase of governance quality for IFRS adopters showed a reduction in the quality of the financial reporting in the MENA region. This research has contributed to the international accounting literature by providing evidence that higher levels of governance quality for countries that have adopted IFRS did not insure greater accounting quality. On the other hand, countries with medium level governance quality illustrate greater accounting quality for both local standards adopters and IFRS adopters.

This study concludes that IFRS adopters in the MENA region have benefited from the adoption. The results show that there is a reduction in earnings management for IFRS adopters in comparison to local standards adopters. The sub-sample analysis shows that IFRS adopters, in both rentier and non-rentier countries, have higher financial reporting quality than local standards adopters. Although, the magnitude of positive outcome was higher for rentier states, while the non-rentier states exhibit mixed results. Lastly, those countries with medium governance quality levels have benefited the most from IFRS adoption, while the findings show that countries with a stronger governance quality that adopted IFRS have lower financial reporting quality. This study lays out the first step in understanding the impact of IFRS on firms' financial reporting quality in the MENA region. Future studies are encouraged to assess the extent to which firms in the MENA region follow those standards, as published by the IASB as they claim. Researchers are recommended to investigate if there are any deviations from the published IFRS version, as well as the reasons behind such deviations. As many studies in this field, this study encounters a number of limitations, such as strict sample selection, limited data availability within the *Datastream/WorldScope* database, and heavy reliance on the Kaufmann *et al*. (2007) governance index. Examining the financial reporting quality of firms in the MENA

[9] The period covered by Ahmed *et al*. (2013) study was 2002-2004, 2006-2007, while the period covering the study conducted by Cai *et al*. (2014) was 2000-2009.

region was the first step in understanding the impact of IFRS in comparison to the Local GAAP. We believe our paper opens the door for future studies to assess to what extent firms in the MENA region follow these standards, as published by the IASB, as they claim, and to investigate whether there are any deviations from the standards, and if so, the reasons behind such deviations, along with recommendations to address this topic with the MENA region at a macro level in a separate study in the future, in order to align with the current study and offer an overall description of this contemporary topic at various levels.

References

Ahmed, A.S., M. Neel and D. Wang (2013),"Does Mandatory Adoption of IFRS Improve Accounting Quality? Preliminary Evidence", *Contemporary Accounting Research*, Vol. 30 No. 4, pp. 1344–1372.

Al-Htaybat, K. (2018),"IFRS Adoption in Emerging Markets: The Case of Jordan.", *Australian Accounting Review*, Vol. 28 No. 1, pp. 28–47.

Albu, N and C Albu. (2012),"International Financial Reporting Standards in an Emerging Economy: Lessons from Romania", *Australian Accounting Review*, Vol. 22 No. 4, pp. 341–352.

Amiram, D. (2012),"Financial Information Globalization and Foreign Investment Decisions", *Journal of International Accounting Research*, Vol. 11, pp. 57–81.

Aubert, F. and G. Grudnitski. (2011),"The Impact and Importance of Mandatory Adoption of International Financial Reporting Standards in Europe", *Journal of International Financial Management and Accounting*, Vol. 22 No. 1, pp. 1–26.

Aussenegg, W., P. Inwinkl and G. Schneider. (2008),"Earnings Management and Local vs. International Accounting Standards of European Public Firms.", *SSRN*, No. (September 1, 2008), [online]. Available at: http://ssrn.com/abstract=1310346.

Barth, M.E. and D. Israeli. (2013),"Disentangling Mandatory IFRS Reporting and Changes in Enforcement", *Journal of Accounting and Economics*, Vol. 56 No. 2–3, pp. 178–88.

Barth, M.E., W.R. Landsman, D. Young and Z. Zhuang. (2014),"Relevance of Differences between Net Income Based on IFRS and Domestic Standards for European Firms", *Journal of Business Finance & Accounting*, Vol. 41 No. 3–4, pp. 297–327.

Barth, M.E., Wayne R. Landsman and M. Lang. (2008),"International Accounting Standards and Accounting Quality", *Journal of Accounting Research*, Vol. 46 No. 3, pp. 467–98.

Beblawi, Hazem. (1987),"The Rentier State in the Arab World",In Hazem BEBLAWI and Giacomo LUCIANI (eds.). *The Rentier State: Nation, State and the Integration of the Arab World*. London: Croom Helm.

Benkraiem, R., I. Ben Saad and F. Lakhal. (2021),"New Insights into IFRS and Earnings Quality: What Conclusions to Draw from the French Experience?", *Journal of Applied Accounting Research*.

Benli, Altunışık Meliha. (2014),"Rentier State Theory and the Arab Uprisings: An

Appraisal", *Uluslararası İlişkiler*, Vol. 11 No. 42, pp. 75–91.

Bickel, P. and D. Freedman. (1981),"Some Asymptotic Theory for the Bootstrap.", *Annals of Statistics*, Vol. 9 No. 6, pp. 1196–1217.

Boolaky, P.K., K. Omoteso, M.U. Ibrahim and I. Adelopo. (2018),"The Development of Accounting Practices and the Adoption of IFRS in Selected MENA Countries", *Journal of Accounting in Emerging Economies*, Vol. 8 No. 3, pp. 327–51.

Bureau van Dijk. (2018),"Osiris",[online]. Available at: Subscription Service [accessed 20 Jan 2018].

Burgstahler, D.C., L. Hail and C. Leuz. (2006),"The Importance of Reporting Incentives: Earnings Management in European Private and Public Firms", *The accounting review*, Vol. 81 No. 5, pp. 983–1016.

Burgstahler, David and Ilia Dichev. (1997),"Earnings Management to Avoid Earnings Decreases and Losses", *Journal of Accounting and Economics*, Vol. 24 No. 1, pp. 99–126.

Byard, D., L. Ying and L. Yu. (2011),"The Effect of Mandatory IFRS Adoption on Financial Analysts' Information Environment", *Journal of Accounting Research*, Vol. 49 No. 1, pp. 69–96.

Cai, L., A. Rahman and S. Courtenay. (2014),"The Effect of IFRS Adoption Conditional upon the Level of Pre-Adoption Divergence", *The International Journal of Accounting*, Vol. 49 No. 2, pp. 147–78.

Cai, L., A.R.R. Rahman and S.M. Courtenay. (2008),"The Effect of IFRS and Its Enforcement on Earnings Management: An International Comparison".

Callao, S. and J.I. Jarne. (2010),"Have IFRS Affected Earnings Management in the European Union?", *Accounting in Europe*, Vol. 7 No. 2, pp. 159–189.

Callao, Susana, José I. Jarne and José A. Laínez. (2007),"Adoption of IFRS in Spain: Effect on the Comparability and Relevance of Financial Reporting", *Journal of International Accounting, Auditing and Taxation*, Vol. 16 No. 2, pp. 148–78.

Camfferman, K and S Zeff. (2007),*Financial Reporting and Global Capital Markets: A History of the International Accounting Standards Committee 1973-2000.* Oxford, U.K.: Oxford University Press.

Capkun, Vedran, Dan Collins and Thomas Jeanjean. (2016),"The Effect of IAS/IFRS

Adoption on Earnings Management (Smoothing): A Closer Look at Competing Explanations", *Journal of Accounting and Public Policy*, Vol. 35 No. 4, pp. 352–94.

Chen, Huifa, Qingliang Tang, Yihong Jiang and Zhijun Lin. (2010),"The Role of International Financial Reporting Standards in Accounting Quality : Evidence from the European Union", *Journal of International Financial Management and Accounting*, Vol. 21 No. 3, pp. 220–77.

Christensen, Hans B, Edward Lee, Martin Walker and Cheng Zeng. (2015),"Incentives or Standards: What Determines Accounting Quality Changes around IFRS Doption?", *European Accounting Review*, Vol. 24 No. (1), pp. 31–61.

Daske, Holger, Luzi Hail, Christian Leuz and R Verdi. (2008),"Mandatory IFRS Reporting around TheWorld: Early Evidence on the Economic Consequences", *Journal of Accounting Research*, Vol. 46 No. 5, [online] pp. 1085–142. Available at: http://doi.wiley.com/10.1111/j.1475-679X.2008.00306.x.

Ding, Y., O.K. Hope, T. Jeanjean and H. Stolowy. (2007),"Differences between Domestic Accounting Standards and IAS: Measurement, Determinants and Implications", *Journal of accounting and public policy*, Vol. 26 No. 1, pp. 1–38.

Duarte, Ana Maria da Paixão, Irina Saur-Amara and Graça Maria do Carmo Azevedo. (2015),"IFRS Adoption and Accounting Quality : A Review", *Journal of Business & Economic Policy*, Vol. 2 No. 2, [online] pp. 104–23. Available at: http://www.jbepnet.com.

EIA. (2016),"Energy & Financial Markets. WHAT DRIVES CRUDE OIL PRICES? An Analysis of 7 Factors That Influence Oil Markets, with Chart Data Updated Monthly and Quarterly.",*US Energy Information Administration (EIA)* [online]. Available at: https://www.eia.gov/finance/markets/supply-opec.cfm [accessed 24 Nov 2016].

Garcia, B.O. and P. F. Pope. (2011),"Strategic Balance Sheet Adjustments Under First-Time IFRS Adoption and the Consequences for Earnings Quality.", *SSRN*, No. 1735009 (January 4, 2011)

Gassen, J. and T. Sellhorn. (2006),"Applying IFRS in Germany – Determinants and Consequences", *Betriebswirtschaftliche Forschung und Praxis*, Vol. 58 No. 4,.

Gebhardt, G. and Z. Novotny-Farkas. (2011),"Mandatory IFRS Adoption and Accounting Quality of European Banks.", *Journal of Business Finance and Accounting*, Vol. 38 No.

May, pp. 289–333.

George, Emmanuel T. D., Xi Li and Lakshmanan Shivakumar. (2016),"A Review of the IFRS Adoption Literature", *Review of Accounting Studies*, Vol. 21 No. 3, pp. 898–1004.

Glaum, M., Peter S., Street D. L. and S. Vogel. (2013),"Compliance with IFRS 3- and IAS 36-Required Disclosures across 17 European Countries: Company- and Country-Level Determinants", *Accounting and Business Research*, Vol. 43, pp. 163–204.

Hassan. (2008),"The Development of Accounting Regulations in Egypt", *Managerial Auditing Journal*, Vol. 23 No. 5, [online] pp. 467–84. Available at: http://www.scopus.com/inward/record.url?eid=2-s2.0-44049099611&partnerID=tZOtx3y1.

Healy, P.M. and J.M. Wahlen. (1999),"A Review of the Earnings Management Literature and Its Implications for Standard Setting", *Accounting horizons*, Vol. 13 No. 4, pp. 365–83.

Holland, D. and A. Ramsay. (2003),"Do Australian Companies Manage Earnings to Meet Simple Earnings Benchmarks?", *Accounting and Finance*, Vol. 43, pp. 41–62.

Hope, O.K. (2003),"Disclosure Practices, Enforcement of Accounting Standards, and Analysts' Forecast Accuracy: An International Study", *Journal of accounting research*, Vol. 41 No. 2, pp. 235–72.

Houqe, N. (2018),"A Review of the Current Debate on the Determinants and Consequences of Mandatory IFRS Adoption", *International Journal of Accounting & Information Management*, Vol. 26 No. 3, pp. 413–42.

Houqe, T. Van Zijl, K. Dunstan and A.W. Karim. (2012),"The Effect of IFRS Adoption and Investor Protection on Earnings Quality around the World", *The International journal of accounting*, Vol. 47 No. 3, pp. 333–55.

IASplus. (2016),"Use of IFRS by Jurisdiction",[online]. Available at: http://www.iasplus.com/en/resources/ifrs-topics/use-of-ifrs [accessed 12 Sep 2016].

IFRS Foundation. (2016),*The Global Financial Reporting Language*. London, United Kingdom.

IMF. (2016),*REGIONAL ECONOMIC OUTLOOK: MIDDLE EAST AND CENTRAL ASIA*. Available at: http://siteresources.worldbank.org/INTMENA/Resources/WP25.pdf.

Jansson, A., M Jönsson and C. V. Koch. (2012),*Has the Introduction of IFRS Improved Accounting Quality? A Comparative Study of Five Countries.*

Jeanjean, T and H. Stolowy. (2008),"Do Accounting Standards Matter? An Exploratory Analysis of Earnings Management before and after IFRS Adoption.", *Journal of Accounting and Public Policy*, Vol. 27, pp. 480–494.

Joshi, P. L., Wayne G. Bremser and Jasim Al-Ajmi. (2008),"Perceptions of Accounting Professionals in the Adoption and Implementation of a Single Set of Global Accounting Standards: Evidence from Bahrain", *Advances in Accounting*, Vol. 24 No. 1, pp. 41–8.

Kabir, M., F. Laswad and M. Islam. (2010),"Impact of IFRS in New Zealand on Accounts and Earnings Quality", *Australian Accounting Review*, Vol. 20 No. 4, pp. 343–57.

Kaufmann, Daniel, Aart. Kraay and M Mastruzzi. (2007),*Governance Matters VI: Governance Indicators for 1996– 2006*,Policy Research Working Paper. Washington, D. C. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1424591.

Kossentini, Anas and Hakim Ben Othman. (2012),"A Study of the Institutional and Economic Determinants of IFRS Adoption in Emerging Economies" Vol. 333 No. 216, pp. 1–63.

Lang, M., Jana Smith Raedy and Michelle Higgins Yetman. (2003),"How Representative Are Firms That Are Cross-Listed in the United States? An Analysis of Accounting Quality", *Journal of Accounting Research*, Vol. 41 No. 2, pp. 363–86.

Lang, M., Jana Smith Raedy and Wendy Wilson. (2006),"Earnings Management and Cross Listing: Are Reconciled Earnings Comparable to US Earnings?", *Journal of Accounting and Economics*, Vol. 42 No. 1–2, pp. 255–83.

Leuz, Christian, Dhananjay Nanda and Peter D. Wysocki. (2003),"Earnings Management and Investor Protection: An International Comparison", *Journal of Financial Economics*, Vol. 69 No. 3, pp. 505–27.

Leventis, S., P. Dimitropoulos and A. Anandarajan. (2011),"Loan Loss Provisions, Earnings Management and Capital Management under IFRS: The Case of EU Commercial Banks", *Journal of Financial Services Research*, Vol. 40 No. 1–2, pp. 103–22.

Levins, Charlotte M. (2013),"The Rentier State and the Survival of Arab Absolute Monarchies", *Rutgers Journal of Law and Religion*, No. May, pp. 388–423.

Lin, Steve, William Riccardi and C. Wang. (2012),"Does Accounting Quality Change Following a Switch from U.S. GAAP to IFRS? Evidence from Germany", *Journal of Accounting and Public Policy*, Vol. 31 No. 6, [online] pp. 641–57. Available at: http://dx.doi.org/10.1016/j.jaccpubpol.2012.10.006.

Nakao, S.H. and S.J. Gray. (2018),"The Impact of IFRS in Brazil: The Legacy of Mandatory Book-tax Conformity.", *Australian Accounting Review*, Vol. 28 No. 4, pp. pp.482-495.

Nobes, C and R H Parker. (2008),*Comparative International Accounting*. 10th edn. Harlow, UK: Pearson Education Limited.

Nurunnabi, M. (2018),"Perceived Costs and Benefits of IFRS Adoption in Saudi Arabia: An Exploratory Study", *Research in Accounting Regulation*, Vol. 30 No. 2, pp. 166–75.

OPEC. (2016),"Member Countries",*Organization of the Petroleum Exporting Countries* [online]. Available at: http://www.opec.org/opec_web/en/data_graphs/40.htm [accessed 5 Sep 2016].

Paananen, M. and Lin. (2009),"The Development of Accounting Quality of IAS and IFRS over Time: The Case of Germany", *Journal of International Accounting Research*, Vol. 8 No. 1, pp. 31–55.

Pacter, Paul. (2016),*Pocket Guide to IFRS Standards: The Global Financial Reporting Language*. London, United Kingdom: IFRS Foundation.

PwC. (2015),*IFRS Adoption by Country*. Available at: https://www.pwc.com/us/en/issues/ifrs-reporting/publications/assets/pwc-ifrs-by-country-2015.pdf.

Salewski, M., T. Teuteberg and H. Zülch. (2014),"Short-Term and Long-Term Effects of IFRS Adoption on Disclosure Quality and Earnings Management" [online]. Available at: SSRN 2398305.

Shubita, M. (2015) The impact of income smoothing on earnings quality in emerging markets: Evidence from GCC markets. *Journal of Accounting in Emerging Economies*, 5 (3). pp. 299-324.

Shubita, M. (2010). The incremental information content of earnings management. *International Research Journal of Finance and Economics*, (48), pp. 61-72.

Singleton-Green, B. (2015),"The Effects of Mandatory IFRS Adoption in the EU : A Review of Empirical Research", *Information for Better Markets, Forthcoming.*, No. April, pp. 1–164.

Slama, F.B. and M.F. Klibi. (2017),"Accounting Development in a Changing Environment: The Case of Tunisia", *International Journal of Law and Management*, Vol. 59 No. 5, pp. 756–75.

Smith, D. (2016),*The Penguin State of the Middle East Atlas: Completely Revised and Udpated.* 3rd edn. New York: Myraid Edition Limited.

Soderstrom, N. S. and K. J. Sun. (2007),"IFRS Adoption and Accounting Quality : A Review", *European Accounting Review*, Vol. 16 No. 4, pp. 675–702.

Van Tendeloo, B. and A. Vanstraelen. (2005),"Earnings Management under German GAAP versus IFRS", *European Accounting Review*, Vol. 14 No. 1, pp. 155–80.

The World Bank Group. (2017),"The Worldwide Governance Indicators",[online]. Available at: http://info.worldbank.org/governance/wgi/index.aspx#home [accessed 23 Sep 2017].

Thomson Reuters. (2017a),"Datastream Database",[online]. Available at: Subscription Service [accessed 1 Nov 2017].

Thomson Reuters. (2017b),"Worldscope Database",[online]. Available at: Subscription Service [accessed 2 Nov 2017].

Upton, W. (2010),"Adopt, Adapt, Converge?. A Contribution by Wayne Upton, Director of International Activities", 16 Apr [online]. Available at: http://www.ifrs.org/news/features/Pages/adopt-adapt-converge.aspx.

Verriest, A., A. Gaeremynck and D.B. Thornton. (2013),"The Impact of Corporate Governance on IFRS Adoption Choices", *European accounting review*, Vol. 22 No. 1, pp. 39–77.

Zeghal, D., S.M. Chtourou and Y.M. Fourati. (2012),"The Effect of Mandatory Adoption of IFRS on Earnings Quality: Evidence from the European Union", *Journal of International Accounting Research*, Vol. 11 No. 2, pp. 1–25.

Table I Governance Quality Scores (Average) during 2006-2015 for the MENA Region

Country	Governance Quality (GQ) Score	(Scale)	GQ Ranking Level
Qatar	0.78		
United Arab Emirates	0.77	(0.50 - 1.00)	High
Bahrain	0.56		
Oman	0.47		
Jordan	0.25		
Kuwait	0.19	(0.00 - 0.49)	Medium
Saudi Arabia	0.09		
Tunisia	0.02		
Morocco	-0.14		
Lebanon	-0.40	(-0.01 - -0.50)	Low
Egypt	-0.44		
Palestine	-0.50		
Algeria	-0.77	(-0.51 - -0.99)	Very low
Mauritania	-0.82		
Yemen	-1.01		
Syria	-1.06		
Libya	-1.32	(-1.00 - -1.50)	Negligible
Sudan	-1.33		
Iraq	-1.37		

Sources:(The World Bank Group 2017; Researchers' calculation)

Table II Firms and Observations Breakdown by Country and Industry of IFRS and Non-IFRS (Local Standards) Adopters Based on Country Status

Country	IFRS and Non-IFRS† (Local Standards) adopters											
	Overall-No Criteria (Panel A)				Rentier States‡ (Panel B)				Non-Rentier States‡ (Panel C)			
	Firm-Year Obs.	Firm-Year %	No. of Firms	% of Firms	Firm-Year Obs.	Firm-Year %	No. of Firms	% of Firms	Firm-Year Obs.	Firm-Year %	No. of Firms	% of Firms
Egypt	20	1.28	2	1.28					20	4.00	2	4.00
Jordan	90	5.77	9	5.77					230	46.00	23	46.00
Kuwait	620	39.74	62	39.74	460	46.94	46	46.94				
Oman	20	1.28	2	1.28								
Saudi Arabia	550	35.26	55	35.26	520	53.06	52	53.06				
Tunisia	260	16.67	26	16.67					250	50.00	25	50.00
Total	1560	100	156	100	980	100	98	100	500	100	50	100
Industry												
Automobiles & Parts	10	0.64	1	0.64					10	2.00	1	2.00
Banks	200	12.82	20	12.82	90	9.18	9	9.18	120	24.00	12	24.00
Basic Resources	30	1.92	3	1.92	30	3.06	3	3.06				
Chemicals	100	6.41	10	6.41	20	2.04	2	2.04	70	14.00	7	14.00
Construct. & Material	220	14.1	22	14.1	190	19.39	19	19.39	20	4.00	2	4.00
Financial Services	280	17.95	28	17.95	170	17.35	17	17.35	130	26.00	13	26.00
Food & Beverage	160	10.26	16	10.26	110	11.22	11	11.22	30	6.00	3	6.00
Healthcare	20	1.28	2	1.28	10	1.02	1	1.02	10	2.00	1	2.00
Ind. Goods & Services	100	6.41	10	6.41	60	6.12	6	6.12	10	2.00	1	2.00
Insurance	60	3.85	6	3.85	10	1.02	1	1.02	20	4.00	2	4.00
Media	20	1.28	2	1.28	20	2.04	2	2.04				
Oil & Gas	70	4.49	7	4.49	40	4.08	4	4.08	10	2.00	1	2.00
Real Estate	120	7.69	12	7.69	120	12.24	12	12.24				
Retail	80	5.13	8	5.13	50	5.1	5	5.1	30	6.00	3	6.00
Telecommunications	20	1.28	2	1.28	10	1.02	1	1.02	10	2.00	1	2.00
Travel & Leisure	40	2.56	4	2.56	30	3.06	3	3.06	10	2.00	1	2.00
Utilities	30	1.92	3	1.92	20	2.04	2	2.04	20	4.00	2	4.00
Total	**1560**	**100**	**156**	**100**	**980**	**100**	**98**	**100**	**500**	**100**	**50**	**100**

† **IFRS and Non-IFRS classification** is based on Datastream/WorldScope classification which is a binary variable that takes the value of (1) if IFRS was reported under 'Accounting Standards Followed' indicator in Datastream/WorldScope database for a given MENA country in a given year and (0) if Local Standards was reported under the same item.
Status is a binary variable that takes the value of (1) if a given MENA country in a given year obtained OPEC membership and (0) otherwise.

Table III Country and Industry Breakdown of IFRS Adopters and Non-IFRS adopters – Governance Quality Ranking Tests

Country	Governance Quality Raking†							
	IFRS Adopters‡ (High vs. Medium) (Panel E)				Non-IFRS Adopters‡ (Medium vs. Low) (Panel F)			
	Firm-Year Obs.	Firm-Year %	No. of Firms	% of Firms	Firm-Year Obs.	Firm-Year %	No. of Firms	% of Firms
Bahrain	180	11.25	18	11.25				
Egypt					490	50	49	50
Jordan	330	20.63	33	20.63				
Kuwait	460	28.75	46	28.75				
Oman	10	0.63	1	0.63				
Qatar	120	7.5	12	7.5				
Saudi Arabia					320	32.65	32	32.65
Tunisia					170	17.35	17	17.35
UAE§	500	31.25	50	31.25				
Total	**1600**	**100**	**160**	**100**	**980**	**100**	**98**	**100**
Industry	**Firm-Year Obs.**	**Firm-Year %**	**No. of Firms**	**% of Firms**	**Firm-Year Obs.**	**Firm-Year %**	**No. of Firms**	**% of Firms**
Automobiles & Parts					10	1.02	1	1.02
Banks	370	23.13	37	23.13	60	6.12	6	6.12
Basic Resources	10	0.63	1	0.63	20	2.04	2	2.04
Chemicals	50	3.13	5	3.13	130	13.27	13	13.27
Construct. & Material	170	10.63	17	10.63	220	22.45	22	22.45
Financial Services	340	21.25	34	21.25	70	7.14	7	7.14
Food & Beverage	110	6.88	11	6.88	160	16.33	16	16.33
Healthcare	30	1.88	3	1.88	20	2.04	2	2.04
Ind. Goods & Services	100	6.25	10	6.25	90	9.18	9	9.18
Insurance	70	4.38	7	4.38	20	2.04	2	2.04
Media					10	1.02	1	1.02
Oil & Gas	30	1.88	3	1.88	20	2.04	2	2.04
Personal and Household Goods					40	4.08	4	4.08
Real Estate	120	7.5	12	7.5	20	2.04	2	2.04
Retail	90	5.63	9	5.63	50	5.1	5	5.1
Telecommunications	40	2.5	4	2.5	10	1.02	1	1.02
Travel & Leisure	30	1.88	3	1.88	20	2.04	2	2.04
Utilities	40	2.5	4	2.5	10	1.02	1	1.02
Total	**1600**	**100**	**160**	**100**	**980**	**100**	**98**	**100**

† **Governance Quality Ranking Levels**: Based on Governance Quality variable that consists of three Worldwide Governance Indicators (The World Bank Group, 2017) which are rule of law, government effectiveness, and regulatory quality to group countries based on their average scores during the same period of the study (2006-2015). The group classifications were set into five categories of governance quality, ranking: Negligible, Very low, Low, Medium and High (Table I).

‡ **IFRS and Non-IFRS classification**: Based on Datastream/WorldScope classification which is a binary variable that takes the value of (1) if IFRS was reported under the 'Accounting Standards Followed' indicator in Datastream/WorldScope database for a given MENA country in a given year and (0 if Local Standards was reported under the same item.

§ **UAE**: United Arab Emirates.

Table IV Summary Statistics of IFRS and Non-IFRS Firms in the MENA Region (Overall)

	Full Sample						Non-IFRS (Local Standards) Adopters				IFRS Adopters					
	N	Mean	Median	Std. Dev.	Min	Max	N	Mean	Median	Std. Dev.	N	Mean	•	Median	•	Std. Dev.
Test Variables																
ΔNI	1560	-0.0006	0.0016	0.0456	-0.1137	0.0972	780	0.0014	0.0024	0.0402	780	-0.0026	*	0.001	*	0.0503
ΔCF	1560	0.0035	0.0019	0.0642	-0.1306	0.1412	780	0.0053	0.0033	0.0666	780	0.0016		0.0007		0.0617
ACC	1560	-0.02	-0.0156	0.0604	-0.1442	0.1032	780	-0.0206	-0.0201	0.059	780	-0.0193		-0.0122		0.0618
CF	1560	0.0628	0.0437	0.0806	-0.0703	0.2443	780	0.0779	0.0634	0.0868	780	0.0478	***	0.0303	***	0.0708
SPOS	1560	0.2436	0	0.4294	0	1	780	0.2423	0	0.4288	780	0.2449		0		0.4303
LENG	1560	0.0237	0	0.1522	0	1	780	0.009	0	0.0944	780	0.0385	***	0	***	0.1924
Control Variables																
SIZE	1560	5.8672	5.7379	1.3826	3.3590	8.7886	780	5.9412	5.8627	1.387	780	5.7931	**	5.6815	**	1.3751
GROWTH	1560	7.4065	6.1409	27.3524	-46.0223	73.6426	780	8.4103	7.0293	23.3392	780	6.4027		5.1329		30.8307
EISSUE	1560	5.1464	0.0048	13.5704	-11.2788	46.5850	780	4.2024	0.0033	13.3543	780	6.0905	***	0.8984	***	13.7269
DEBT	1560	1.9456	0.8419	2.5204	0.0657	8.8435	780	1.7479	0.6046	2.5909	780	2.1433	***	1.0552	***	2.4334
DISSUE	1560	11.0115	5.4083	29.5866	-32.2238	90.2793	780	10.2123	5.1491	28.7599	780	11.8108		5.5516		30.3881
TURN	1560	0.3897	0.263	0.3723	0.0339	1.3484	780	0.4662	0.3709	0.3822	780	0.3131	***	0.1546	***	0.3458
AUDIT	1560	0.3545	0	0.4785	0	1	780	0.4141	0	0.4929	780	0.2949	***	0	***	0.4563
NUMEX	1560	0.9936	1	0.0798	0	1	780	0.9872	1	0.1126	780	1	***	1	***	0
CLOSE	1560	44.0198	41.13	27.3982	1.63	87.32	780	34.552	24.695	27.5185	780	53.4876	***	52.7575	***	23.7805

Notes: Variables definitions (Appendix 1).

• t-test is used to test mean difference and Wilcoxon rank sum test is used to test median difference between the two accounting regimes.

*, **, *** Significant at 10%, 5%, and 1% level.

Table V Summary Statistics of IFRS and Non-IFRS Firms in Rentier Countries

	Full Sample						Non-IFRS (Local Standards) Adopters				IFRS Adopters					
	N	Mean	Median	Std. Dev.	Min	Max	N	Mean	Median	Std. Dev.	N	Mean	•	Median	•	Std. Dev.
Test Variables																
ΔNI	980	0.0004	0.0025	0.0501	-0.1239	0.1094	490	0.0028	0.005	0.0455	490	-0.002		0.0011	**	0.0543
ΔCF	980	0.0045	0.0023	0.0628	-0.1244	0.1424	490	0.0077	0.0046	0.0675	490	0.0013		0.0008		0.0577
ACC	980	-0.0216	-0.0153	0.0583	-0.1484	0.0845	490	-0.0269	-0.0264	0.0571	490	-0.0164	***	-0.0096	***	0.059
CF	980	0.0712	0.0516	0.0815	-0.0487	0.2635	490	0.0973	0.0845	0.0888	490	0.045	***	0.0299	***	0.0634
SPOS	980	0.2439	0	0.4296	0	1	490	0.2163	0	0.4122	490	0.2714	**	0	**	0.4452
LENG	980	0.0255	0	0.1577	0	1	490	0.0122	0	0.1101	490	0.0388	***	0	***	0.1933
Control Variables																
SIZE	980	6.4383	6.1339	1.2751	4.6170	9.2087	490	6.5397	6.3612	1.2543	490	6.3368	**	5.9743	***	1.289
GROWTH	980	7.8338	5.6956	30.2766	-48.5663	82.7127	490	10.0642	7.401	25.9723	490	5.6034	**	3.6071	***	33.9219
EISSUE	980	6.1676	0.0047	13.9007	-6.6676	49.9813	490	5.2391	0.0037	13.4428	490	7.0961	**	0.9067	**	14.2976
DEBT	980	1.2945	0.6215	1.7278	0.0741	6.3948	490	0.6096	0.36	0.6828	490	1.9794	***	1.0264	***	2.1378
DISSUE	980	11.5415	4.5709	32.0377	-33.0374	96.8779	490	11.6192	5.2203	32.474	490	11.4638		4.0063		31.6283
TURN	980	0.351	0.2295	0.3509	0.0299	1.2803	490	0.4629	0.3862	0.3495	490	0.239	***	0.0923	***	0.3152
AUDIT	980	0.3959	0	0.4893	0	1	490	0.5184	1	0.5002	490	0.2735	***	0	***	0.4462
NUMEX	980	1	1	0	1	1	490	1	1	0	490	1		1		0
CLOSE	980	36.0996	30.935	23.6218	4.64	83.01	490	24.6939	20	18.7175	490	47.5054	***	44.18	***	22.4957

Notes: Variables definitions (Appendix 1)

• t-test is used to test mean difference and Wilcoxon rank sum test is used to test median difference between the two accounting regimes

*, **, *** Significant at 10%, 5%, and 1% level

Table VI Summary Statistics of IFRS and Non-IFRS Firms in Non-Rentier Countries

	Full Sample						Non-IFRS (Local Standards) Adopters				IFRS Adopters					
	N	Mean	Median	Std. Dev.	Min	Max	N	Mean	Median	Std. Dev.	N	Mean	•	Median	•	Std. Dev.
Test Variables																
ΔNI	500	-0.0017	0.0008	0.0325	-0.0784	0.0684	250	-0.0013	0.0005	0.029	250	-0.0022		0.0012		0.0356
ΔCF	500	-0.001	0.0003	0.0732	-0.1620	0.1412	250	-0.0007	0.0019	0.0712	250	-0.0013		-0.0018		0.0752
ACC	500	-0.014	-0.0151	0.0676	-0.1332	0.1410	250	-0.0088	-0.0123	0.0649	250	-0.0192	*	-0.0194	*	0.07
CF	500	0.0493	0.0361	0.0845	-0.1239	0.2154	250	0.0406	0.0304	0.0815	250	0.0579	**	0.0472	**	0.0866
SPOS	500	0.26	0	0.4391	0	1	250	0.312	0	0.4642	250	0.208	***	0	***	0.4067
LENG	500	0.016	0	0.1256	0	1	250	0.004	0	0.0632	250	0.028	**	0	**	0.1653
Control Variables																
SIZE	500	4.6279	4.7008	1.2258	2.6079	6.6727	250	4.7587	4.9407	1.1877	250	4.4971	**	4.4291	**	1.2516
GROWTH	500	5.8774	5.0281	20.8677	-33.5230	55.1320	250	5.2598	5.0769	17.3158	250	6.4949		4.7897		23.9179
EISSUE	500	3.717	0.0187	14.6011	-15.1947	48.1248	250	2.3687	-0.5614	15.6491	250	5.0654	**	0.0473	***	13.3677
DEBT	500	3.5536	1.4645	4.0151	0.0478	12.9672	250	4.7351	2.8469	4.3882	250	2.3721	***	0.6403	***	3.2011
DISSUE	500	7.2825	5.6355	21.1136	-28.9194	56.4698	250	7.179	5.4208	19.7596	250	7.386		6.34		22.4253
TURN	500	0.4509	0.3784	0.368	0.0592	1.2443	250	0.4659	0.3248	0.4167	250	0.4359		0.426		0.312
AUDIT	500	0.328	0	0.47	0	1	250	0.18	0	0.385	250	0.476	***	0	***	0.5004
NUMEX	500	0.98	1	0.1401	0	1	250	0.96	1	0.1964	250	1	***	1	***	0
CLOSE	500	65.7164	72.9925	25.6301	0	92.88	250	55.3362	66.77	29.4555	250	76.0966	***	76.345	***	15.2465

Notes: Variables definitions (Appendix 1)

• t-test is used to test mean difference and Wilcoxon rank sum test is used to test median difference between the two accounting regimes

*, **, *** Significant at 10%, 5%, and 1% level

Table VII Summary Statistics of IFRS Adopters - Governance Quality Levels (High vs. Medium)

	Full Sample						Governance Quality (Medium Level)				Governance Quality (High Level)					
	N	Mean	Median	Std. Dev.	Min	Max	N	Mean	Median	Std. Dev.	N	Mean	•	Median	•	Std. Dev.
Test Variables																
ΔNI	1600	-0.0003	0.0022	0.0465	-0.1192	0.1043	800	-0.0011	0.0015	0.0489	800	0.0006		0.003		0.044
ΔCF	1600	0.0037	0.0024	0.0607	-0.1213	0.1427	800	0.0027	0.0015	0.0597	800	0.0048		0.0038		0.0617
ACC	1600	-0.0129	-0.0097	0.059	-0.1343	0.1102	800	-0.0179	-0.0119	0.06	800	-0.008	***	-0.007	***	0.0577
CF	1600	0.0535	0.0367	0.0699	-0.0714	0.2110	800	0.0532	0.0342	0.0718	800	0.0538		0.0397		0.068
SPOS	1600	0.2944	0	0.4559	0	1	800	0.275	0	0.4468	800	0.3138	*	0	*	0.4643
LENG	1600	0.0288	0	0.1672	0	1	800	0.0338	0	0.1807	800	0.0238		0		0.1524
Control Variables																
SIZE	1600	6.1108	5.9635	1.5998	3.2056	8.9871	800	5.9055	5.8244	1.6732	800	6.3162	***	6.2804	***	1.496
GROWTH	1600	8.4391	6.7151	30.3613	-51.4292	78.8692	800	7.0024	5.2016	31.8709	800	9.8757	*	8.1157	**	28.7208
EISSUE	1600	7.1393	0.0316	13.1068	-2.5552	48.5041	800	6.2946	0.1205	12.7033	800	7.984	***	0.0081	***	13.4532
DEBT	1600	2.4338	0.8753	2.8931	0.0740	9.0409	800	2.3302	0.8434	2.8218	800	2.5374		0.9194		2.9609
DISSUE	1600	12.7957	6.8576	31.0989	-32.7197	92.6817	800	10.6061	5.441	30.1444	800	14.9853	***	8.4444	***	31.8937
TURN	1600	0.2947	0.1731	0.2903	0.0360	1.0277	800	0.3044	0.13	0.3221	800	0.2851		0.2041	**	0.2544
AUDIT	1600	0.4613	0	0.4987	0	1	800	0.375	0	0.4844	800	0.5475	***	1	***	0.4981
NUMEX	1600	1	1	0	1	1	800	1	1	0	800	1		1		0
CLOSE	1600	52.1596	55.88	25.0431	8.6	91.31	800	59.0873	66.1525	24.6377	800	45.2319	***	50.9	***	23.4942

Notes: Variables definitions (Appendix 1)

• t-test is used to test mean difference and Wilcoxon rank sum test is used to test median difference between the two Governance Quality levels

*, **, *** Significant at 10%, 5%, and 1% level

Table VIII Summary Statistics of Non-IFRS Adopters - Governance Quality Levels (Medium vs. Low)

	Full Sample						Governance Quality (Low Level)				Governance Quality (Medium Level)					
	N	Mean	Median	Std. Dev.	Min	Max	N	Mean	Median	Std. Dev.	N	Mean	•	Median	•	Std. Dev.
Test Variables																
ΔNI	980	0.0004	0.0019	0.0405	-0.0923	0.0853	490	0.0004	0.0024	0.0399	490	0.0004		0.0015		0.0411
ΔCF	980	0.0018	0.0024	0.0843	-0.1761	0.1731	490	0.0014	0.0031	0.0847	490	0.0023		0.0016		0.084
ACC	980	-0.0185	-0.0222	0.0681	-0.1442	0.1354	490	-0.019	-0.0212	0.069	490	-0.0179		-0.0231		0.0672
CF	980	0.0917	0.0752	0.109	-0.1011	0.3116	490	0.1043	0.0828	0.113	490	0.079	***	0.0656	***	0.1033
SPOS	980	0.2082	0	0.4062	0	1	490	0.2163	0	0.4122	490	0.2		0		0.4004
LENG	980	0.0112	0	0.1054	0	1	490	0.0082	0	0.0901	490	0.0143		0		0.1188
Control Variables																
SIZE	980	5.4041	5.4625	1.322	3.0243	7.6722	490	5.3249	5.4436	1.3638	490	5.4833	*	5.4795	*	1.2753
GROWTH	980	8.2277	5.2693	22.5377	-27.7544	64.7622	490	8.7529	5.3089	23.1466	490	7.7025		5.1735		21.9229
EISSUE	980	3.494	-0.0012	14.9404	-13.6492	50.0026	490	3.8074	-1.5156	16.3875	490	3.1806		0.003	***	13.347
DEBT	980	1.6414	0.6064	2.4155	0.0843	9.0678	490	1.8696	0.733	2.561	490	1.4131	***	0.4387	***	2.2402
DISSUE	980	9.1565	3.7294	29.3212	-31.7048	90.1851	490	8.6425	4.814	27.9107	490	9.6704		3.1571		30.6869
TURN	980	0.6	0.5024	0.4553	0.0701	1.7194	490	0.6631	0.6015	0.4758	490	0.5369	***	0.4157	***	0.425
AUDIT	980	0.3102	0	0.4628	0	1	490	0.2959	0	0.4569	490	0.3245		0		0.4687
NUMEX	980	1	1	0	1	1	490	1	1	0	490	1		1		0
CLOSE	980	46.5164	50.615	28.5904	0.02	91.7	490	62.2441	64.995	18.2963	490	30.7888	***	22.315	***	28.3903

Notes: Variables definitions (Appendix 1)

• t-test is used to test mean difference and Wilcoxon rank sum test is used to test median difference between the two Governance Quality levels

*, **, *** Significant at 10%, 5%, and 1% level

Table IX Comparison of IFRS and Non-IFRS (Local Standards) Firms' Financial Reporting Quality in the MENA Region

	Financial Reporting Quality Metrics	Prediction	Non-IFRS (Local Standards) Adopters	IFRS Adopters	Level of Significance
Number of Observations			(N = 780)	(N = 780)	
1	**Earnings Management**				
1.1	*Earnings Smoothing*				
	Variability of ΔNI	Non-IFRS < IFRS	0.0016	0.0025	
a	Variability of ΔNI*	Non-IFRS < IFRS	0.0014	0.0022	***
	Variability of ΔNI over ΔCF	Non-IFRS < IFRS	0.3638	0.6656	
b	Variability of ΔNI* over ΔCF*	Non-IFRS < IFRS	0.4595	0.8670	***
	Correlation of ACC and CF	Non-IFRS < IFRS	-0.6014	-0.5828	
c	Correlation of ACC* and CF*	Non-IFRS < IFRS	-0.6231	-0.5764	***
1.2	*Managing Earnings Towards Target*				
a	Small positive NI (SPOS) (N= 1560)	-		-0.1457	No
2	***Timely loss recognition***				
a	Large negative NI (LNEG) (N= 1560)	+		1.2442	***

Notes: Variables definitions (Appendix 1)
*, **, *** Significant at 10%, 5%, and 1% level

Table X Comparison of IFRS and Non-IFRS (Local Standards) Firms' Financial Reporting Quality in Rentier Countries

	Financial Reporting Quality Metrics	Prediction	Non-IFRS (Local Standards) Adopters	IFRS Adopters	Level of Significance
Number of Observations			(N = 490)	(N = 490)	
1	**Earnings Management**				
1.1	*Earnings Smoothing*				
a	Variability of ΔNI	Non-IFRS < IFRS	0.0021	0.0029	
	Variability of ΔNI*	Non-IFRS < IFRS	0.0018	0.0026	***
b	Variability of ΔNI over ΔCF	Non-IFRS < IFRS	0.4552	0.8857	
	Variability of ΔNI* over ΔCF*	Non-IFRS < IFRS	0.6008	1.2680	***
c	Correlation of ACC and CF	Non-IFRS < IFRS	-0.5230	-0.5594	
	Correlation of ACC* and CF*	Non-IFRS < IFRS	-0.6629	-0.6072	***
1.2	*Managing Earnings Towards Target*				
a	Small Positive NI (SPOS) (N= 980)	-		-0.2886	No
2	***Timely Loss Recognition***				
a	Large Negative NI (LNEG) (N= 980)	+		1.1863	**

Notes: Variables definitions (Appendix 1)
*, **, *** Significant at 10%, 5%, and 1% level

Table XI1 Comparison of IFRS and Non-IFRS (Local Standards) Firms' Financial Reporting Quality in Non-Rentier Countries

	Financial Reporting Quality Metrics	Prediction	Non-IFRS (Local Standards) Adopters	IFRS Adopters	Level of Significance
Number of Observations			(N = 250)	(N = 250)	
1	**Earnings Management**				
1.1	*Earnings Smoothing*				
a	Variability of ΔNI	Non-IFRS < IFRS	0.0008	0.0013	
	Variability of ΔNI*	Non-IFRS < IFRS	0.0007	0.0009	***
b	Variability of ΔNI over ΔCF	Non-IFRS < IFRS	0.1659	0.2241	
	Variability of ΔNI* over ΔCF*	Non-IFRS < IFRS	0.2552	0.2225	***
c	Correlation of ACC and CF	Non-IFRS < IFRS	-0.8108	-0.6817	
	Correlation of ACC* and CF*	Non-IFRS < IFRS	-0.8261	-0.6825	***
1.2	*Managing Earnings Towards Target*				
a	Small Positive NI (SPOS) (N=500)	-		-0.4301	No
2	***Timely Loss Recognition***				
a	Large Negative NI (LNEG) (N=500)	+		2.4065	**

Notes: Variables definitions (Appendix 1)
*, **, *** Significant at 10%, 5%, and 1% level

Table XII Comparison of IFRS Firms' Financial Reporting Quality between High and Medium Governance Quality Countries

	Financial Reporting Quality Metrics	Prediction	Low	Medium	Level of Significance
Number of Observations			(N = 490)	(N = 490)	
1	**Earnings management**				
1.1	*Earnings Smoothing*				
	Variability of ΔNI	Low < Medium	0.0016	0.0017	
a	Variability of ΔNI*	Low < Medium	0.0011	0.0015	***
	Variability of ΔNI over ΔCF	Low < Medium	0.2217	0.2398	
b	Variability of ΔNI* over ΔCF*	Low < Medium	0.2352	0.3167	***
	Correlation of ACC and CF	Low < Medium	-0.6076	-0.5958	
c	Correlation of ACC* and CF*	Low < Medium	-0.7259	-0.6356	***
1.2	*Managing Earnings Towards Target*				
a	Small Positive NI (SPOS) (N= 980)	-	-0.2732		No
2	***Timely Loss Recognition***				
a	Large Negative NI (LNEG) (N= 980)	+	0.6410		No

Notes: Variables definitions (Appendix 1)
*, **, *** Significant at 10%, 5%, and 1% level

Table XIII Comparison of IFRS Firms' Financial Reporting Quality between High and Medium Governance Quality Countries

	Financial Reporting Quality Metrics	Prediction	Medium	High	Level of Significance
Number of Observations			(N = 800)	(N = 800)	
1	**Earnings Management**				
1.1	*Earnings Smoothing*				
	Variability of ΔNI	Medium < High	0.0024	0.0019	
a	Variability of ΔNI*	Medium < High	0.0020	0.0016	***
	Variability of ΔNI over ΔCF	Medium < High	0.6699	0.5098	
b	Variability of ΔNI* over ΔCF*	Medium < High	0.8287	0.6911	***
	Correlation of ACC and CF	Medium < High	-0.5996	-0.5298	
c	Correlation of ACC* and CF*	Medium < High	-0.5629	-0.5788	***
1.2	*Managing Earnings Towards Target*				
a	Small Positive NI (SPOS) (N= 1600)	-	0.0771		No
2	***Timely Loss Recognition***				
a	Large Negative NI (LNEG) (N= 1600)	+	-0.1366		No

Notes: Variables definitions (Appendix 1)
*, **, *** Significant at 10%, 5%, and 1% level

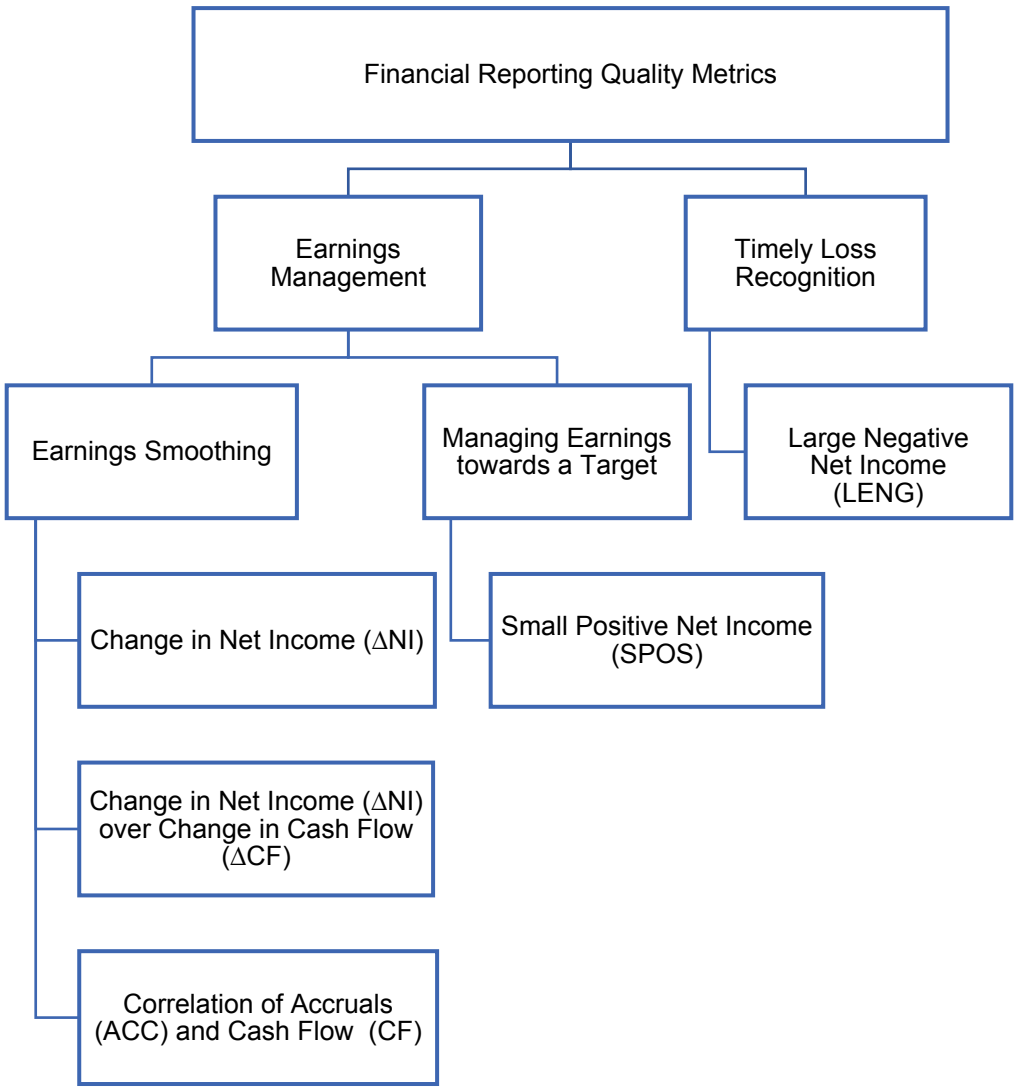

Figure 1 Financial Reporting Quality Metrics
(Barth et al., 2008; Christensen et al., 2015; Capkun et al., 2016)

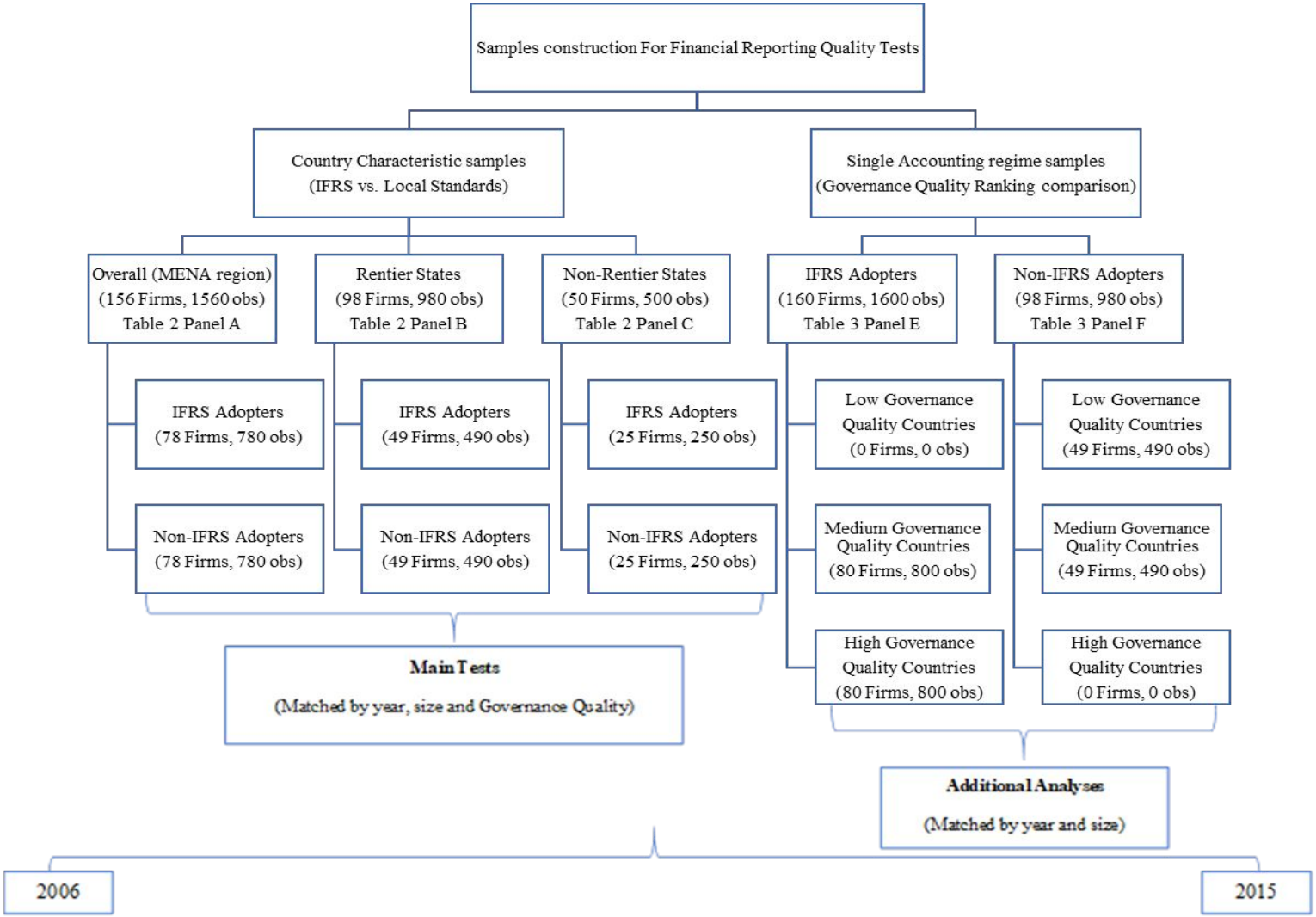

Figure 2 Overview of samples construction

Appendices

Appendix 1 Variables Definitions

Test Variables	Definition
1. Earnings Management	
1.1 Earnings Smoothing	
Change in Net Income (ΔNI)	The change in net income scaled by total assets.
Variability of ΔNI*	The variance of residuals from a regression of the ΔNI on control variables.
Change in Operating Cash flow (ΔCF)	The change in cash flow from operating activities scaled by total assets.
Variability of ΔCF*	The variance of residuals from a regression of the ΔCF on control variables.
Variability of ΔNI* over ΔCF*	The ratio of the variability of ΔNI* divided by the variability of ΔCF*.
Total Accruals (ACC)	Total accruals is net income minus cash flow scaled by total assets.
Correlation of Accruals (ACC) and Operating Cash Flow (CF)	The Spearman correlation between ACC and CF.
Correlation of ACC* and CF*	The Spearman correlation between residuals from ACC and CF regressions.
1.2 Managing Earnings Towards Target	
Small Positive Net Income (SPOS)	SPOS is an indicator variable that equals one if net income scaled by total assets is between 0 and 0.01, and zero otherwise.
2.Timely Loss Recognition	
Large Negative Net Income (LENG)	LNEG is an indicator variable that equals one for observations for which annual net income scaled by total assets is less than −0.20, and zero otherwise.
Control Variables	
SIZE	The natural logarithm of market value of equity.
GROWTH	The annual percentage change in sales.
EISSUE	The annual percentage change in common stock.
DEBT	The end of year total liabilities divided by end of year equity book value.
DISSUE	The annual percentage change in total liabilities.
TURN	The sales divided by end of year total assets.
CF	The annual net cash flow from operating activities divided by end of year total assets.
AUDIT	An indicator equal to one for observations where the firm's auditor is one of the Big 4 accounting firms: Price Waterhouse Coopers, Deloitte & Touche, Ernst & Young, or KPMG, and zero otherwise.

NUMEX	The number of exchanges on which a firm's stock is listed.
CLOSE	The percentage of closely held shares of the firm as reported by Datastream/WorldScope Database.
Indicators	
IFRS (Accounting Standards classification)	A binary variable that takes the value of (1) if IFRS was reported under 'Accounting Standards Followed' indicator in Datastream/WorldScope database for a given MENA country, in a given year, and (0) if Local Standards was reported under the same item.
Governance Quality	Governance Quality variable consists of three Worldwide Governance Indicators which are rule of law, government effectiveness, and regulatory quality to group countries based on their average scores during the same period of the study (2006-2015). The group classifications were set into five categories of governance quality ranking: Negligible, Very Low, Low, Medium and High (Table I).
Country	Dummy variable that takes the value of (1) given the country's firm-year observation is from and (0) Otherwise.
Industry	Dummy variable that takes the value of (1) given the industry's firm-year observation is belonging to and (0) Otherwise.

Sources: Datastream/WorldScope & Osiris Databases (Thomson Reuters, 2017a, 2017b; Bureau van Dijk, 2018), The World Bank Group (2017), and researchers' calculations.