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Said Elfakhani, Abdeljalil Ghanem

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Said Elfakhani* and Abdeljalil Ghanem

Suliman S. Olayan School of Business,
American University of Beirut (AUB),
Bliss Street, Beirut, 1107-2020, Lebanon

Email: se01@aub.edu.lb

Email: ag10@aub.edu.lb

*Corresponding author

Abstract: This study examines the accounting transparency and financial performance under International Financial Reporting Standards ('IFRS') in seven Middle East and North African ('MENA') countries during the 2000–2015 period, which marked the early implementation of the standards in the region. Based on a sample of up to 148 firms, we regress return premiums on IFRS adoption, along with eleven performance variables. Under IFRS, well-established firms are larger, have lower excess returns, pay lower dividends, are more profitable, and less overvalued. These findings probably reflect better disclosure of quality information and transparency, i.e., less risk of asymmetry and uncertainty. When comparing the period before to after IFRS inception year within the country, we document an increase in firm size, sales and profitability, greater cash flows, and more reliance on leverage. Yet, these changes are coupled with greater variability in firm performance. These are important outcomes for regulators to consider when designing policies to enhance transparency, resource allocation, and the protection of stakeholders' interests.

Keywords: International Financial Reporting Standards; Middle East and North Africa; financial performance; information asymmetry; transparency.

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Biographical notes: Said Elfakhani is an Associate Dean for Programs in the Olayan School of Business (OSB) at the American University of Beirut (AUB) and a Professor of Finance. Prior to joining AUB, he was a Dean, the Harvey R. Wickes Endowed Chair, and visiting scholar at other international universities. He earned MBA from UT-Arlington (1984), an MSc (1987) and a PhD in finance from UT-Dallas (1989). He has published numerous papers in major international refereed journals, presented academic papers in many countries, written for business magazines, participated in discussion panels and made several media appearances.

Abdeljalil Ghanem is a Senior Lecturer of Accounting at the Olayan School of Business, American University of Beirut (AUB). Prior to joining AUB, he was a Financial Controller and company representative of the Saudi Oger/Belbadi

group, a Senior Auditor at Deloitte & Touche, and Auditor at Saba & Co international accounting firm. He received his PhD in Accounting from the University of Bordeaux in France. He also participated and delivered various executive trainings in Lebanon and the Middle East. He has published research papers related to company valuation, banking regulations, corporate governance and tax evasion.

This paper is a revised and expanded version of a paper entitled ‘Will the adoption of IFRS improve the comparability of information provided by financial statements of listed companies in the MENA region?’ presented at *Canada the Mediterranean & African Finance and Accounting Association (MEAF) 2nd Summer Meeting*, Concorde Les Berges Du Lac, Tunis, Tunisia, 17–19 July, 2019; ‘IFRS adoption, accounting transparency, and financial performance of common stocks in the MENA region’ Abstract was published in the proceedings of the *18th Academy for Global Business Advancements (AGBA) Conference*, Istanbul, Turkey, 2–3 July, p.232.

1 Introduction

Demand for internationally comparable accounting information has increased significantly in recent years due to rapid growth in cross country investment and increased interest from financial statement analysts. Comparability focuses on the similarity of accounting disclosure practices, increases in the ability to read and consistently compare standardised financial statements, and proficiency in assessing a firm’s performance relative to other firms. In this context, the transition from national Generally Accepted Accounting Principles (“GAAP”) to the more transparent International Financial Reporting Standards (“IFRS”) is perceived as a major development in accounting regulation, and a step toward harmonised global accounting standards throughout the world. It is expected to foster friendlier, comparable reporting format, and minimise asymmetric information.

Europeans have led the way in adopting IFRS (IAS Plus 2006), recognising the need for a universal set of financial accounting standards (EC-1606/2002). Developing countries followed suit, with approximately 120 countries either requiring or inviting their companies to prepare their financial statements using IFRS. Other countries that are considering the adoption of IFRS include Japan, India, Russia, Malaysia, and Columbia.¹ China, following the mandatory use of IFRS in 2007, is expected to join as well. The US Securities and Exchange Commission (“SEC”) endorsed the acceptance of IFRS for financial reporting by non-US firms in US markets in 2007. IFRS was initially expected to be implemented for all US publicly traded companies, but that has yet to happen at full scale.

The effect of the transition to IFRS on the level of information transparency has been tested in many developed countries, yet findings are inconclusive.² However, IFRS implementation effect is even less clear in countries with emerging markets, such as those in the Middle East and North African (“MENA”) region. The MENA stock markets, like other emerging capital markets, are less researched, and are thus an ideal setting to investigate the association between firm performance under IFRS and the communication of clearer comparable accounting information. There are at least three major reasons for this. First, regional and international investors have always believed MENA financial

markets lack information transparency and financial statement comparability due to inconsistent and less stringent enforcement of regulations in the region, and due to local GAAP failure in providing adequate quality information prior to the adoption of IFRS. Second, IFRS implementation is new in this region and its application remains less stringent and uncertain. This makes the study of this region interesting for the purpose of generating lessons for similar emerging markets. Third, this study could provide benefits to policy makers, regulators, and other parties in MENA countries.

This study closes the described gap for IFRS adopters in some MENA countries by attempting to settle current debates on whether IFRS can increase the quality of accounting information and with it, enhance financial performance in the region. Thus, we evaluate an extensive dataset covering 148 companies in seven different countries in MENA spanning the period of 2000–2015. These seven MENA countries are Kuwait, Kingdom of Bahrain, Sultanate of Oman, United Arab Emirates (“UAE”), Lebanon, Egypt, and Jordan.³ We limit our study to these seven MENA countries because they had already legislated the use of IFRS and had enough data points to sample. Also, we contend that by focusing on early adopters in the MENA region, late adopters could benefit from early adopters’ experience. The seven chosen countries share some similarities with regard to their economic, social, and political conditions. All of them were using the local set of accounting standards based on GAAP before fully adopting IFRS.

We find that IFRS provides information that is more transparent and less asymmetric and brings about an improvement in the financial performance of the 148 listed companies we evaluate. We observe that well-established firms (old, international, and often leveraged) are larger and more profitable, while their stock return premiums are lower. We also find that firms operating in more than one country tend to be less overvalued and pay lower dividends, while generating more reported cash flows. Yet, IFRS inception is accompanied by greater variability in firm performance measures. We recommend that regulators consider these findings when designing policies to enhance transparency and resource allocation, and to protect stakeholders’ interests.

In the following sections of this paper, we elucidate the choice of sampled MENA countries, describe the hypothesis and testing methodology used, present the findings, and conclude with key policy implications.

2 Literature review and the background of selected countries

The adoption of IFRS started as early as 1973 when the International Accounting Standards Committee (“IASC”) was established, but the transition towards its adoption was slow at first. With time, the European Commission acknowledged the inadequacy of financial statements directives as early as 1995. The mandatory adoption of IFRS in Europe represents one of the most influential accounting rules changes of recent times. European policy makers reasoned that mandating a common set of accounting standards would increase the comparability of financial statements prepared by publicly traded companies. In 2002, the Commission announced that all EU listed firms should use standards set by the International Accounting Standards Board (“IASB”), the standard-setting body of the IFRS, by or before 2005. To facilitate a gradual, uniform enforcement of IFRS, the Committee of European Securities Regulators (“CESR”) issued a common standard (CESR 2003a and 2003b) to allow adequate assessment of the impact of the

transition on consolidated financial statements, including 21 high-level principles member states should adopt in enforcing it. The International Audit and Assurance Standards Board (“IAASB”) issued additional guidance on the audit of IFRS financial statements (IAASB 2003). Yet, according to Pownall and Wieczynska (2018), 17% of the companies had not fully implemented IFRS by 2012. The companies that did were larger international firms, which are usually less neglected by the public, that have increased their debt and equity. Other firms skipped exemptions and deferrals, hence failing to comply in full.

Grossman et al. (2013) tests the market performance of 64 European stocks listed on the New York Stock Exchange (“NYSE”) during 2005 and 2006. They find insignificant differences between the two financial reporting systems (GAAP vs. IFRS) and recommend that complete implementation of IFRS in the US should not be problematic.

De Franco et al. (2011) introduces a new measure for financial statement comparability. They present evidence of a lower cost of information, increasing the quality of financial statements reporting and enhancing comparability. Using a modified version of that measure, Lin et al. (2019) reports a slight improvement in comparability in Germany following IFRS adoption in 2005. They also suggest that gradual convergence between local GAAP and IFRS in US, Japan and China may suffice, as the added benefits from full adoption of IFRS may be minimal. Further, Abdullah and Tursoy (2021) find a positive relationship between firm performance and capital structure under IFRS for highly leveraged firms in Germany. Using a conservatism/comparability index on a sample of 170 industrial and service-based Italian companies in 2006, one year after mandatory IFRS implementation, Cordazzo (2013) documents higher net income, shareholders’ equity, ROE, and fixed assets (property, plants, and equipment), as well as a negative effect on intangible assets and income taxes. For large Greek firms, over a short period (2004–2005) using a binary regression model, Iatridis and Dalla (2011) document evidence of a negative impact on liquidity and an increase in profitability, financing needs, and leverage (gearing) for most industrial firms as well as the sampled indices. For UK, France, and Australia, Ertugrul and Demir (2021) report no significant statistical impact from the adoption of IFRS on information asymmetry surrounding takeover announcements, which was proxied by measuring cumulative abnormal returns (“CAR”).

While, many other countries that permit or require IFRS for domestic listed companies have fully conformed to IFRS and improved comparability, others did not. We contend that there is a link between the adoption of IFRS in MENA, the firm’s performance, and the comparability of financial statements. Previous studies did find such a link as well (e.g., De Franco et al., 2011, Lin et al., 2019, Abdullah and Tursoy, 2021).

With regard to the association between IFRS and firm performance, Umobong (2015) finds no statistical evidence of increased performance (proxied by earnings per share, dividend yield, and price-earnings) for IFRS adoption during the years 2009–2013 of sixteen food and beverage manufacturing firms in Nigeria. Similarly, evidence from South America, namely in Brazil, Rodrigues Júnior et al. (2015) shows that migration from GAAP to IFRS had no significant impact on the financial performance (proxied by 23 indicators) of 55 construction and transportation companies in the year 2009.

In US, the Securities and Exchange Commission (“SEC”) requires foreign-listed companies to either prepare financial reports in accordance with US GAAP, or provide a detailed reconciliation of earnings and book values from foreign GAAP to US GAAP

(using the 20-F form). The SEC's reason for requiring US GAAP compliance is to protect US investors by ensuring that all foreign companies listed in US provide comparable, high-quality, financial reporting. Yet, IFRS is still not enforced for US companies.

In this study, we focus on the only seven MENA countries that have formally adopted IFRS, namely, four of the Gulf Cooperation Council ("GCC") countries (Kingdom of Bahrain, Kuwait, United Arab Emirates UAE, and Sultanate of Oman) and four non-GCC countries (Lebanon, Egypt, and Jordan). These countries were the first to implement IFRS gradually in the MENA region starting in the year 2000. We closely examine the profile of these countries to identify any differences in their structural and fundamental characteristics. All seven countries had a local version of GAAP for companies to maintain proper books of accounts before transitioning to IFRS in the past two decades. They all have active stock markets, although not all are equally efficient. They all have taken many steps towards well-liberalised, more privatised government institutions, and transparent economic environments. They have legislated laws aiming to regulate corporate governance for the purpose of transparency and legibility for both national and international investors, reformed their legal systems, and created adequate climates to attract foreign direct investment, fostering sustainable growth and increased employment opportunities.

Beginning with the GCC countries, Kuwait was ahead of other countries in the GCC in enforcing adequate financial statements reflective of a 'true and fair view' of the company position to shareholders being submitted in a timely manner to the Ministry of Commerce and Industry ("MCI"). Nevertheless, because these rules were not specific enough, there were significant differences in disclosed financial statements of Kuwaiti companies. In response to these discrepancies and in an attempt to standardise accounting practices, the MCI issued Resolution No. 18 (April 17, 1990) to rectify these differences. This action was later followed by the introduction of IFRS.

Bahrain was also among the first in the group in leading these efforts. All their laws were generally directed towards improving implementation, relationships with shareholders, and disclosure requirements. This explains why Bahrain ranked first in the region and 12th in the world on the 2013 Index of Economic Freedom (The Heritage Foundation 2013).

The UAE is transitioning from being fully dependent on significant oil and gas revenues to being one of the strongest countries in attracting capital, with a trade surplus of over 100 billion dirhams in 2007, and an increase in its official reserves account by over 50 billion dirhams.⁴ The variety of products and services introduced to the country through globalisation, coupled with the benefit of strong construction and real estate activities and the increase in an imported skilled workforce have all been major assets for UAE's economic development. With IFRS, corporate transparency is expected to increase these patterns.

Similarly, Oman, another GCC country on the southeast coast of the Arabian Peninsula, succeeded in its ascent to World Trade Organization ("WTO") membership in 2000. The corporate governance, and later the Oman Centre for Corporate Governance supported by IFRS adoption was formed in 2010 to enhance transparency and compliance systems, improving the efficiency of listed companies and boosting their competitiveness.

Lebanon, a non-GCC country, introduced IAS (Decree Nos. 1/6258; August 21, 1996) and later applied IFRS to companies listed on the Beirut Stock Exchange for specific industries, making it optional to unlisted companies. A major industry in

Lebanon, banks, covered under the Code of Money and Credit in the Banking Law (1963) submit their interim and annual financial statements and other statistical reports to the Bank of Lebanon (“BDL”) and Banking Control Commission (“BCC”), in addition to reporting their compliance to the Ministry of Finance. All ministerial mandates are designed to improve transparency.

Egypt has its own corporate governance mechanisms and a financial reporting environment that might negatively affect initial compliance with IFRS’s recognition and disclosure requirements. Egypt’s strong central government control, its mix of both public and private companies listed on the Egyptian stock exchange, its conservative accounting disclosures, less transparent regulations, and deep secrecy provide a distinctive opportunity to study issues of performance with IFRS recognition and disclosure requirements.

Since 1997 (Securities Law No. 23), Jordan has required entities in the Jordanian Securities Commission (“JSC”) to publish annual, audited financial statements in accordance with IAS rather than the eliminated GAAP choices. Thus, Jordanian auditors have been familiar with IAS and IFRS for a long time. Jordan has an open economy where companies engage in different local and international business areas. In 2002, the country’s privatisation law was updated by the IASB, followed by the implementation of IFRS in 2006 with the new standard effective starting in 2009.

Researching IFRS implementation in individual MENA countries, as limited as it is, yields contradictory and incomparable results for some GCC countries. In particular, Alali and Foote (2012) finds a positive relation between stock price and both earnings per share and book value per share in Abu Dhabi markets. They also find that market value has increased since the market inception in 2000. Alsaqqa (2012) documents a lack of readiness to apply IFRS in UAE from the pre-IFRS era (2002–2004) to post-IFRS (2005–2007). He finds evidence of higher ROE (but lower variability) and stronger return on invested capital (“ROIC”), but no difference in leverage (D/E ratio), liquidity (current ratio), and gross margin. Using a sample of 40 companies (2005–2011), Mousa and Desoky (2013) find little evidence of changes in stock returns for Bahrain, and some improvement in firm value. Nevertheless, these studies are limited to GCC countries, and their use of simple OLS regression may have plagued their results.

At the MENA level, Klibi and Kossentini (2014) find IFRS adoption had a positive effect in 14 MENA stock markets after controlling for macro-economic factors. However, not all their sampled countries formally enforced IFRS. Boolaky et al. (2018) testify that despite some reported inhibitions to the advancement in accounting practices under IFRS, Egypt, Jordan, and the United Arab Emirates could be considered on par with their trading partners (Germany, Italy, UK and US). El-Diftar and Elkalla (2019) show that although accounting information, including book value and earnings per share, normally reflect positively on the market value per share, IFRS had a negative impact on the market value relevance. On the other hand, Klish et al. (2021) note that firms in oil-dependent states that adopted IFRS recorded a reduction in earnings management and higher financial reporting quality in comparison to firms that adopted local standards in non-oil-dependent states in the MENA region. Ozkan et al. (2021) further report a reduction in cash holdings in ten Arab countries in the MENA region, especially for larger firms. However, this relationship is stronger for high-income countries in the Gulf region, suggesting a higher quality of financial reporting and lower asymmetric information in these countries. However, our study is focused on early MENA countries that have enforced IFRS, covering a larger sample and testing a more comprehensive set

of variables in our attempt to measure IFRS's effect on transparency and stock performance.

In conclusion, extant research supports the comparability of IFRS adoption in more developed countries; yet we observe more voluntary compliance with IFRS in developing countries. Thus, it is interesting to examine the effect of IFRS adoption in a more relaxed, compliant environment with loose enforcement, such as in the emerging MENA markets, to evaluate the extent of reporting quality information.

3 Research design and hypotheses development

Our sample consists of companies traded in seven MENA markets, but excludes financial institutions, holding companies, and insurance firms, as they have specialised financial statements. The sample consists of at least 135 companies (Kingdom of Bahrain 10, Egypt 8, Jordan 8, Kuwait 72, Lebanon 1, Sultanate of Oman 12, and United Arab Emirates 24) with 1225 monthly observations that had annual excess return premiums observations during the 2000–2015 period.⁵ We have allowed at least two years to measure the company stock performance prior to and post IFRS adoption. We avoided extending the post period beyond 2015 in order to control for the effect of any contaminating events. These firms publish their financial information under local MENA standards and IFRS, making them individually comparable. This set of data was not readily available, as no formal databases exist to provide both sets of accounts (IFRS and Local GAAP). Thus, we relied on hand-selected annual reports from audited reports published on those companies' websites.⁶

We test the presence of differences in key sets of financial ratios in light of the switch from GAAP to IFRS accounting standards. The comparison is performed on the periods before and after the implementation of IFRS, while marking the first year of IFRS inception using information from balance sheets and income statements. We must note, though, that the level of IFRS compliance is unclear, as it may differ across MENA companies and countries. Thus, our tests on the extent of compliance are indirect on whether the results in the emerging MENA markets are consistent with their counterparts in developed countries or not. Nevertheless, these outcomes may have important implications for policy makers in the MENA countries that already enforce IFRS, or the remaining countries that have yet to adopt it.

We will now introduce the testable hypothesis, identify testable variables relevant to comparability and information, and explain the methodology applied in this study. We run a regression model, using a measure of the company performance, return premiums (as a proxy of financial performance used by Grossman et al., 2013) on IFRS implementation years, and a set of eleven independent variables. Our choice of testable variables is driven by the literature as shown below, citing theoretical and technical justifications for differences in financial reporting methods between GAAP and IFRS causing changes to financial performance under IFRS. Some of these variables were individually used in earlier research, but they were not tested collectively as we do herewith, and were not tested thoroughly for the MENA region.

Our primary independent variable for transparency is a dummy variable for the years during which IFRS was implemented. The dummy variable is equal to 1 for the years IFRS was implemented by the company, or 0 for prior years. (Other users of this variable,

include De Franco et al., 2011; Lin et al., 2019; Abdullah and Tursoy, 2021). We postulate that the adoption of IFRS is expected to lead to less asymmetry (i.e., more transparency as implied by Lolito et al., 2020) and earnings management, and hence lower financial performance. The IFRS adoption year is also considered as one of four corporate governance proxies. The three other corporate governance-related proxies are the dummy variables for the year IFRS was incepted (equal to 1 for the year IFRS was first adopted, or 0 for all other sampled years), the dummy variable for the large size of audit firms (“AUDLARGE”); (equal to 1 if the auditing firm is among the Big 4 auditing companies, or 0 if otherwise e.g., see Wieczynska, 2016), and the dummy variable for the geographical business scope (“INTL”) (equal to 1 for the company that has an international geographical business scope, or 0 for the company operating domestically only). Similarly, with regard to the effect of IFRS implementation, the year of IFRS inception is expected to point to less asymmetry, better comparability, and less earnings management, and hence, lower financial performance. This may present conflicting testable contentions. On the one hand, there is less need for larger auditing firms despite the fact that firms with strong financial performance can afford to hire them. Conversely, better comparability and less asymmetry under IFRS makes it easier for firms to access international capital markets and regional expansion.

Under IFRS, two leverage-related variables are affected: equity multiplier (“EM”), and debt/equity ratio (“D/E”). The increase in reported current liabilities (i.e., fair value accounting, lease accounting, income tax accounting, and the accounting of financial instruments) would increase D/E ratio (as in Iatridis and Dalla, 2011).

Next, we introduce the two investment-related measures: dividend yield (“DY”) and price-earnings ratio (“P/E”). Revaluation gains would steer an increase in dividend payout ratios and a decrease in P/E ratios due to an increase in reported earnings (as in Iatridis and Dalla, 2011).

Two profitability variables, cash flow per share (“CFPS”) and net profit margin (“PM”), are tested. Iatridis and Dalla (2011) suggest that the increase in net income stems from the recognition of good will under IFRS 3 and the increased total net equity under IAS 12. For the second profitability ratio, CFPS, IFRS reduces the cost of capital rate. Consequently, the discounted value of CFPS decreases as well (e.g., Armstrong et al., 2010).

Finally, regarding the effect of firm size (e.g., see Coffie and Bedi, 2019), our two proxies are company age (“OLDAGE”) with the dummy variable equal to 1 for the company that has been operating for at least twenty years, or 0 if otherwise, and total sales (“TS”), both of which are expected to surge under IFRS. The literature reports a positive association between age and IFRS (Tatiana et al., 2013). Older firms tend to provide extensive information disclosure already required by IFRS to maintain their leading position in the market. In addition, both GAAP and IFRS recognise contract revenues on a stage of completion basis. However, the completed contract method acknowledged exclusively by GAAP recognises lower (almost zero) revenue in early years, and full revenue after project completion. By comparison, IFRS will report higher sales in early years.

Hence, the testable regression model is:

$$\begin{aligned} \text{Return Premium RP} = & a + b_1 \text{ IFRS Implementation Years} \\ & + b_2 \text{ Equity Multiplier EM} + b_3 \text{ Debt-Equity Ratio D/E} \\ & + b_4 \text{ Dividend Yield DY} + b_5 \text{ Price-Earnings Ratio P/E} \\ & + b_6 \text{ Cash Flow per Share CFPS} \\ & + b_7 \text{ Net Profit Margin PM} \\ & + b_8 \text{ Company Age OLDAGE} \\ & + b_9 \text{ Total Sales TS} + b_{10} \text{ IFRS Inception Year} \\ & + b_{11} \text{ Size of Audit Firm AUDLARGE} \\ & + b_{12} \text{ Company Geographical Business Scope INTL.} \end{aligned} \quad (1)$$

Return premium (“RP”) is equal to stock returns minus risk-free rate is a proxy for firm performance. RP is regressed on the dummy for IFRS implementation years, as well as eleven other variables that fall under five categories: proxies for leverage, investment, profitability, corporate governance, and firm size. Towards this end, we have developed the following testable hypothesis:

H0-1: Return premiums (proxying for financial performance) are not associated with leverage levels (proxied by equity multiplier and debt-equity ratio), investment (dividend yield and price-earnings ratio), profitability (proxied by cash flow per share and net profit margin), corporate governance (proxied by IFRS adoption years, IFRS inception year, size of audit firms, and geographical business scope) under the firm’s implementation of IFRS, and firm size (proxied by company age and total sales).

Firms that have adopted IFRS have more room for professional judgement, which leaves more (or less) room for earnings management (i.e., earnings asymmetric timeliness),⁷ more timely loss recognition, and more value relevant accounting numbers than firms that have not adopted IFRS. Therefore, IFRS adoption can positively influence the consistency of accounting measurement and the quality of financial reporting by limiting allowable alternative accounting practices under home country GAAP.

Rejection of the above hypothesis implies that there is an association between the tested dependent variable and IFRS adoption in the presence of all independent variables in the regression model. On the other hand, failure to reject the null hypothesis implies that IFRS has no impact on the firm performance selected proxies.

In addition to the above regression analysis, we also test for any possible econometric problems including:

- 1 multicollinearity using VIF and Tolerance tests
- 2 normality using Kolmogorov-Smirnov F statistics and skewness and kurtosis T-test statistics
- 3 heteroscedasticity using Bruesch-Pagan and Koenker Chi-square Statistics
- 4 serial autocorrelation using Breusch-Godfrey, Durbin-Watson statistics, and the Breusch-Godfrey Test
- 5 model specification error using Ramsey Regression Equation Specification Error Test (“RESET”) F-statistics.⁸

Controlling for various econometric problems proves to be crucial to our analysis.

4 Testing results and analysis

We calculate some descriptive statistics for our sampled data. Table 1 shows the number of sampled observations (1393 observations except for the return premium and market capitalisation variables, which are 1225 and 1116, respectively), mean, median, standard deviation, skewness, kurtosis, maximum, and minimum values for our variables.

Table 1 Descriptive statistics

<i>Variable</i>	<i>No. of obs. (dummy = 1.0)</i>	<i>Mean</i>	<i>Median</i>	<i>Standard deviation</i>	<i>Skewness</i>	<i>Kurtosis</i>	<i>Max</i>	<i>Min</i>
Stock return premium	1225	-0.1799%	-4.820%	36.276%	1.559	4.962	195.50%	-87.38%
Market capitalisation	1116	455878.14	96214.07	1932.522	12.137	182.800	37661.62*	179.76*
Modified Tobin's Q	1335	11.375	11.445	1.832	-0.404	1.357	17.44	3.80
Equity multiplier	1393	2.340	0.940	47.684	37.306	1392.167	1780.53	0.01
Debt/equity ratio	1393	21.898%	11.0%	27.213%	2.097	4.950	150%	0.10%
Dividend yield	1393	3.844%	0.00%	12.112%	4.777	25.069	99.41%	0.00%
P/E Ratio	1393	42.891	11.550	836.904	37.247	1389.216	31235.0	0.21
Cash flow per share	1393	11.757%	5.0%	27.684%	1.605	5.736	141%	-95.00%
Net profit margin	1393	19.574%	15.0%	24.495%	0.702	1.243	98.90%	-49.00%
Total gross revenues	1393	227000.83	54990.0	872911.33	10.321	126.475	14091.14*	10*

Descriptive statistics for the stock return premium $RP (=R_{\text{Stock}} - R_F)$, market capitalisation MKTCAP, modified Tobin's Q, leverage ratios (proxied by equity multiplier EM, and debt/equity ratio), investment measures (proxied by dividend yield DY, and price-earnings ratio P/E), profitability ratios (proxied by cash flow per share CFPS, and net profit margin PM), and firm size (proxied by total gross revenues TS). The reported numbers are the number of observations (and for dummy values); mean, median, standard deviation, skewness, kurtosis, maximum and minimum values for all listed variables. The total number of sampled companies and observations are up to 148 and 1393, respectively. The sampling period extends from 2000 to 2015.

*In thousands of dollars.

Our sampled firms operate mostly under IFRS for over 71% of the sampling period. Almost two-thirds (65.54%) of these firms employ one of the big four auditing firms. All reported means (and medians to a lesser extent) are positive except for the return premiums, suggesting that our sample is dominated by negative return premiums (i.e., stock return is less than the risk-free rate).⁹ The mean market capitalisation is a bit below half a million dollars, while the maximum capitalisation is \$37,661,616. Obviously, small cap firms dominate our sample, as confirmed by maximum gross revenues of

\$14,091,137. These firms are well established (2/3 are older than 20 years), and successful, with an average of 11.38 modified Tobin's Q, a convincing net profit margin of 19.58%, good CFPS (11.76%), and they pay little dividend yields (average 3.84%). These firms are financed largely with equity (median D/E is 11%) and minimum leverage risk. In addition, they are reasonably priced (median P/E is 11.55). Finally, 62% of them operate in more than one country.

To test our hypothesis while controlling for possible econometric problems, we run a weighted least square ("WLS") regression analysis of stock return premium on the dummy variable of IFRS implementation in the presence of eleven independent variables categorised under the five listed categories.¹⁰ Table 2 presents the results of this regression analysis. There is a significant (less than 1%) relationship between return premiums for MENA companies and the set of independent variables. The explanatory power of the model ("R²") is unsurprisingly about 10%, however, given a sample of panel data.

The introduction of IFRS is associated with higher stock return premiums (statistically significant at 6%) for older well-established firms. This finding is consistent with those of European countries in Lin et al. (2019) for Germany, less so in Abdullah and Tursoy (2021) for Greece, but contradicts Ertugrul and Demir (2021) for UK, France, and Australia. By implication, younger firms in our sample earn fewer return premiums, which is probably justified by the effect of changes to financial reporting information under IFRS (e.g., fair value adoption and goodwill recognition). These observations prompt improved presentation quality, lowered information asymmetry/risk (i.e., more transparency), reduced costs of capital, and increased efficiency of allocated savings across countries. All the above induce a drop in the costs of comparing multiple reporting methods, leaving little room for earnings management. The reported true, but lower, and probably less inflated net income compared to pre-IFRS adoption further confirms this conclusion. These changes are especially relevant in an emerging MENA market, and to users of financial reports, such as investors and analysts, because of the increased relevance of accounting information after IFRS adoption.

Table 2 Multiple regression analysis using stock return premiums on MENA data

$ER = -0.499 - 8.301 \text{ IFRS Adoption} - 0.005 \text{ EM} + 0.031 \text{ DE} + 0.067 \text{ DY} - 5.12 \times 10^{-5} \text{ PE} - 0.079 \text{ CFPS} + 0.085 \text{ PM} - 1.917 \text{ IFRS Inception} + 0.715 \text{ AUDLARGE} + 1.530 \text{ Intl} + 5.312 \text{ OLDAGE} + 8.76 \times 10^{-7} \text{ TS}$						
Tested variable	Coefficients	Std. error	Coefficient significance		Collinearity significance	
			T-statistics	p-value	Tolerance	VIF
Constant	-0.499	3.655	-0.136	0.891		
IFRS adoption	-8.301	2.999	-2.768**	0.006	0.790	1.265
EM	-0.005	0.002	-2.527**	0.012	0.081	12.286
D/E	0.031	0.036	0.859	0.390	0.547	1.829
DY	0.076	0.081	0.939	0.348	0.864	1.157
P/E	-5.119E-05	0.000	-0.521	0.603	0.337	2.968
CFPS	-0.079	0.037	-2.135**	0.033	0.666	1.501

Table 2 Multiple regression analysis using stock return premiums on MENA data (continued)

ER = -0.499 - 8.301 IFRS Adoption - 0.005 EM + 0.031 DE + 0.067 DY - 5.12*10 ⁻⁵ PE - 0.079 CFPS + 0.085 PM - 1.917 IFRS Inception + 0.715 AUDLARGE + 1.530 Intl + 5.312 OLDAGE + 8.76*10 ⁻⁷ TS						
Tested variable	Coefficients	Std. error	Coefficient significance		Collinearity significance	
			T-statistics	p-value	Tolerance	VIF
PM	0.085	0.037	2.291**	0.022	0.635	1.574
IFRS inception	-1.917	2.970	-0.645	0.519	0.108	9.284
AUDLARGE	0.715	1.966	0.363	0.716	0.507	1.972
INTL	1.530	2.023	0.756	0.450	0.446	2.243
OLDAGE	5.312	2.033	2.613**	0.009	0.680	1.470
TS	8.759E-07	0.000	0.662	0.508	0.939	1.065
Model significance	F-Statistics (p-value)				10.918** (0.000)	
	R ² (Adj. R ²)				0.097 (0.008)	
Model specification	Durbin-Watson Test of Auto-correlation				1.993	
	Breusch-Godfrey Test of Auto-correlation χ^2 (p-value)				22.237** (0.03494)	
	Breusch-Pagan Test of Heteroscedasticity χ^2 (p-value)				26.294** (0.009751)	
	Koenker Test of Heteroscedasticity χ^2 (p-value)				9.3868 (0.6696)	
	Skewness (z-value)				1.663 (2.227**)	
	Kurtosis (z-value)				6.195 (35.44**)	
	Kolmogorov-Smirnov Test of Normality F value (p-value)				0.117** (0.000)	
	Ramsey Specification Error Test (RESET) F-value (F critical)				3.003** (0.00)	

Regressing stock return premium RP on the dummy variable for the years IFRS were implemented after controlling for the following variables: leverage level (proxied by equity multiplier EM, and debt/equity ratio D/E), investment (proxied by dividend yield DY, and price-earnings ratio P/E), profitability (proxied by cash flow per share CFPS, and net profit margin PM), corporate governance (proxied by the dummy variable for the year IFRS was incepted, dummy variable for the large size of the audit firm AUDLARGE, and dummy variable for geographical business scope INTL), and firm size (proxied by company age OLDAGE, and total gross revenues TS). For each variable, the table reports beta coefficient and standard error, t-statistics, p-value, and collinearity statistics (tolerance and variance inflation factor VIF), the results of the total regression F-statistics and p-value, coefficient of determination R² and adjusted R², as well as the results of the following econometric tests: serial auto-correlation test (i.e., Durbin-Watson and Breusch-Godfrey χ^2 statistics and p-value), heteroscedasticity tests (i.e., Breusch-Pagan and Koenker F and p-values), normality tests (i.e., Skewness and Kurtosis and their t-values, Kolmogorov-Smirnov F and p-value), and the test of model specification error (i.e., Ramsey RESET F-value and its critical value). Asterisks refer to statistical significance level. The total number of sampled companies is 135 and 1225, respectively. The sampling period extends from 2000 to 2015.

* and ** denote rejection significance at the 10% level and 5% level, respectively.

Table 2 also shows that the leverage ratio equity multiplier is negatively correlated with stock performance (significant at the 1% level). D/E ratio, on the other hand, has a positive coefficient. This is contrary to our postulation and to results reported by Cordazzo (2013) and Alsaqqa (2012). We note, however, that MENA firms are characterised by low leverage. IFRS bases the measurement of deferred taxes on tax rates and tax laws that are either enacted or substantively enacted on the date of reporting. Alternatively, GAAP bases the measurement of deferred taxes on tax rates and tax laws that are enacted. We argue that this may explain the negative relation between leverage and the use of IFRS.

The cash flow per share (CFPS) coefficient is also negative (and statistically significant at the 3% level). This is consistent with Greek evidence by Iatridis and Dalla (2011) and with our postulation, since OCF is measured with different classification alternatives available under IFRS only. Accordingly, we argue that firms with a higher likelihood of financial distress have higher leverage. The economic consequences of increased disclosure, restriction on the creation of hidden reserves, and the fewer accounting choices under properly enforced IFRS can all be expected to enhance financial reporting quality, making earnings-management a more arduous task. This, in turn, is likely to cause the association of CFPS with stock performance to be negative.

On the contrary, the net profit margin is higher (statistically significant at a 2% level), but consistent with Iatridis and Dalla (2011) for Greece. We argue that managers of prosperous firms with positive news tend to disclose more detailed information than firms with bad news. This is to boost their compensations at times of high profitability. Finally, the two investment measures (DY and P/E) and the three corporate governance measures (i.e., IFRS inception year, size of auditing firm, and going international) all behave as we presumed earlier. Going international proved to be associated with positive stock performance but the excess is not statistically significant. The size effect evidence confirms the same evidence reported for Greece (Iatridis and Dalla, 2011).

The above results seem to be robust against possible econometric problems. Using a robust heteroscedasticity-controlled regression model such as WLS would reduce the effect of the reported heteroscedasticity and auto-correlation problems as presented in Table 2. Table 3 displays that the error terms were positively auto-correlated. Both Breusch-Godfrey and DW corroborate this conclusion. The presence of auto-correlation implies a possible underestimation of the level of statistical significance in our model. Positive first-order autocorrelation may render statistical tests under the traditional OLS incorrect and render confidence intervals biased. The standard errors tend to be underestimated while the t-scores tend to be overestimated. However, this problem is not unusual in time-series analyses, so it does not present a serious threat to our model findings. The Breusch-Pagan and Koenker tests confirmed that heteroscedasticity for return premiums such as the estimator, were not the Best Linear Unbiased Estimate ("BLUE"). The assumption that our specification was correct for return premiums was rejected by the RESET. This rejection suggests a possible omission of relevant variables. This finding may weaken our results. On the other hand, our normality tests (Kolmogorov, skewness and Kurtosis) showed positively skewed data, implying a violation of the normality condition (significant at less than 5%). Nevertheless, the return premiums variable is a percentage, which can reduce the effect of specification error. It is argued that straight lines do not exist, that normal and linear assumptions are not true, and therefore, we can still generate results that approximate the real world. Finally, our VIF and Tolerance test results show no serious possible endogeneity problem, as many of

our variables are simply either dummy variables or ratios making them less susceptible to this problem.

Table 3 Multiple logistic regression analysis Using IFRS adoption on MENA data

<i>Tested variable</i>	<i>Beta value</i>	<i>Wald test</i>	<i>P-Value</i>	<i>Exp (B)</i>
Constant	-0.149	0.430	0.512	0.862
Return premium	-0.001	0.231	0.630	0.999
LNMKTCAP	0.304	21.917**	0.000	1.356
Tobin's Q	-0.028	10.534**	0.001	0.973
EM	0.782	7.114**	0.008	2.186
D/E	-0.002	0.064	0.801	0.998
DY	-0.019	7.277**	0.007	0.981
P/E	0.007	1.927	0.165	1.007
CFPS	-0.002	0.259	0.611	0.998
PM	0.000	0.000	0.988	1.000
IFRS inception	19.338	0.000	0.995	250237958.179
AUDLARGE	0.111	0.242	0.623	1.118
INTL	1.143	25.712**	0.000	3.135
OLDAGE	-0.463	3.674*	0.055	0.629
TS	0.000	0.542	0.462	1.000
Model significance	Omnibus Tests of Model Coefficient χ^2 (p-value)			128.001** (0.000)
	Cox & Snell R Square (Nagelkerke R Square)			0.111 (0.228)
	Percentage Correct Predictions			90.9%

Multiple logistic regression to determine the associations between IFRS adoption years with return premiums, transformed market capitalisation, modified Tobin's Q, leverage level (proxied by equity multiplier EM, and debt/equity ratio D/E), investment (proxied by dividend yield DY, and price-earnings ratio P/E), profitability (proxied by cash flow per share CFPS, and net profit margin PM), corporate governance (proxied by dummy variable for the year IFRS was incepted, dummy variable for the large size of the audit firm AUDLARGE, and dummy variable for the geographical business scope INTL), firm size (proxied by company age OLDAGE, and total gross revenues TS). For each variable, the table reports its beta value, Wald test value, p-value, and expected beta value. Asterisks refer to statistical significance level). The table also reports the results the Omnibus Tests of Model Coefficients (chi square statistic and p-value), Cox & Snell R Square and Nagelkerke R Square, and percentage correct predictions. The total number of sampled companies and observations are 148 and 1393, respectively. The sampling period extends from 2000 to 2015.

* and *** denote rejection significance at the 10% level and 5% level, respectively.

Next, we test a modified version of our hypothesis, using the effect of dummy IFRS implementation variable as our dependent variable on return premium (our ex-dependent variable) and twelve independent variables (tested in Table 2) using multiple logistic (binary) regression. By reporting the results of the Omnibus Tests of Model Coefficients (chi square statistic and p-value), we also test whether the explained variance in our sample is greater than the unexplained variances of Cox & Snell R Square, Nagelkerke R

Square, and the percentage of correct predictions. Table 3 shows the coefficient beta value, Wald test value, p-value, and expected beta value for binary regression model. Our results support that IFRS implementation is significantly associated with variables reflecting MENA market performance, as confirmed by the Omnibus Chi-square test and has acceptable explanatory power (Cox & Snell R Square and Nagelkerke R Square are 11% and 23%, respectively). The percentage of correct predictions is also quite high at about 91%. The table shows that firms tend to be larger (i.e., have higher market capitalisation and Tobin's Q), have a higher equity multiplier, operate in more than one country, are younger, and pay lower dividends, while generating less wealth. All are statistically significant around the 5% level. On the other hand, the remaining variables have positive and negative coefficients, but are statistically insignificant.¹¹

5 Conclusions and policy implications

There is little known about the effect of IFRS implementation on information quality (i.e., transparency and comparability) of financial statements in the MENA region, which is the main focus of this paper. Under rigorous econometric control, our regression analysis demonstrates that the relative reduction in return premiums is likely associated with the improved quality of reported financial information, reduced information asymmetry, less uncertainty, and as a result, reduced risk. P/E and CFPS ratios are consistently lower, the size of auditing firms are smaller, firms are younger, but grow larger (i.e., have higher market capitalisation and Tobin's Q), growing regionally, while possessing the confidence to pay lower dividends.

Our findings reflect the need for implementing IFRS to help MENA companies disclose relevant information. Under IFRS, companies disclose their material accounting policy information rather than their significant accounting policies. This distinction is important because changes in accounting estimates are applied prospectively only to future transactions and future events, but changes in accounting policies are generally applied retrospectively to past transactions and other past events. In the absence of an IFRS, the management of MENA companies would use its judgement in developing and applying an accounting policy that results in information that may or may not be relevant or reliable. Under IFRS, the management refers first to the requirements and guidance dealing with similar and related issues; and second to the recognition criteria and measurement concepts for assets, liabilities, income, and expenses in the conceptual framework and applied locally. Although stock performance is more moderate (i.e., less return premiums), transparency and certainty are more assured. These are important outcomes for regulators to consider when designing policies to enhance transparency, resource allocation, and the protection of stakeholders' interests.

Our findings, however, should be interpreted with caution because of some limitations. We were not able to verify explicitly whether our sampled companies are in full or partial compliance with IFRS. Large listed companies dominate our sample with a minority of smaller companies, which are normally exempted, or simply defiant to mandatory compliance. The research design does not capture direct measures of comparability, interim changes in IFRS/GAAP; nor does it seize differences in practice between MENA countries or cross-country differential settings. Regulators have the responsibility of strictly enforcing IFRS comprehensively to confirm universal transparency and to remove or minimise the use of these differentiating options.

Furthermore, we do not account for the effect of corruption, which may negatively affect the level of IFRS compliance, and the speed by which it is implemented (El-Helaly et al., 2020). Therefore, future research is warranted to account for these limitations, and in particular, to examine the effect of information quality on the credit market, and the ability of analysts to make accurate predictions.

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Notes

¹<https://www.iasplus.com/en/resources/ifrs-topics/adoption-of-ifrs>

²We adopt Lolito et al. (2020) notion that transparency is “meant as disclosure of information... A way to ensure that relevant information reaches all the market agents... which shows that information transparency enhances efficiency”. In that sense, we consider enhancing transparency as synonymous to reducing corporate asymmetric information.

³There are other countries that adopted IFRS as well, but we focus only on early adopters. Saudi Arabia made it required starting 2016, one year after our sampling period. Iraq, Syria and Palestine did adopt them earlier but were excluded because we could not find enough sample for them, especially after filtering out banks and other financial institutions.

⁴United Arab Emirates Interact (2010) “*The Economy – Stock market*”, <http://www.uaeinteract.com/news/default.asp?ID=142>, and Global Investment House (2010) “*The economy of the UAE*”, <http://www.globalinv.net/default.asp>.

⁵Almost half of the sample represents Kuwaiti firms. The final sample is up to 148 companies and 1393 observations for the IFRS adoption dataset. Kuwait was ahead of other countries in the GCC in enforcing adequate financial statements reflective of a “true and fair view” of the company position to shareholders. Kuwait could have been a case study on its own, but we opted to assess other MENA countries as well.

⁶For the same reasons, we could not collect a sample as a control variable. In the MENA region, only larger firms that are listed have publicly available data. The same problem of small firms-data availability exists about sampling non-IFRS countries. Data on small firms is not easily available.

⁷Thanks to Dr. Mariem Khalifa Sanaa for pointing this possibility out during the presentation of this paper at the second MEAFA Summer Meeting, Tunisia (2019).

⁸Skewness, Kurtosis and RAMSEY statistics were calculated manually. We use R software to generate Breusch-Godfrey Test of Auto-correlation, Breusch-Pagan and Koenker F Statistics of heteroscedasticity. The remaining econometric tests results (i.e., Tolerance, VIF, DW, and Kolmogorov-Smirnov statistics) are generated from WLS regression using SPSS.

⁹This problem persists although we truncated the top 1% of the most positive premiums and the 1% of most negative premiums.

¹⁰WLS regression model controls for variability in the standard errors by using weights that are inversely proportional to the variance at each level of the explanatory variables yielding the most precise parameter estimates possible. WLS are less contaminated by the presence of outliers when compared to OLS.

¹¹Finally, we repeat the regression of Table 3 but this time we divide our sampling period to two sub-periods – before and after IFRS adoption using the differences in mean (using Wilcoxon Z), median (using Mood’s Chi-square and Kruskal-Wallis Chi-Square), and variance (using ANOVA and Levene’s tests) on data available for 148 companies. Our tabled results are available upon request. Our mean and median differentials tests have results almost in the same direction. The period during IFRS implementation is accompanied by more equity financing, more sales and more profitability, but with greater variance/risks. The higher sales growth could induce preference to choose the more expensive GAAP over IAS/IFRS. On the other hand, return premiums and the Modified Tobin’s Q are of statistically lower values under IFRS, reflecting reduction in stock price overvaluation. Similarly, the leverage ratio is slightly lower. We note that IFRS 9 gives firms the option to assign fair, rather than historical, value to liabilities. Overall, there is improvement in transparency and comparability as asymmetry is declining and so is risk.