

# IFRS adoption and accounting-based performance measures: evidence from an emerging capital market

Ibrahim El-Sayed Ebaid

*Department of Accounting, Faculty of Commerce, Tanta University, Tanta, Egypt and  
Department of Accounting, Umm Al-Qura University, Makkah, Saudi Arabia*

## Abstract

**Purpose** – This study aims to examine the economic consequences of the adoption of International Financial Reporting Standards (IFRS) in Saudi Arabia. More specifically, the study examines the impact of the mandatory adoption of IFRS on the accounting-based performance measures.

**Design/methodology/approach** – Data on study variables were obtained manually from the published financial statements of 67 of listed companies in the Saudi stock market during the period 2014–2019. The study addressed the research hypotheses by comparing the accounting-based performance measures computed under the Saudi accounting standards for three years (2014–2016) before the mandatory adoption of IFRS and the corresponding three years (2017–2019) after the mandatory adoption of IFRS. The Mann–Whitney *U* Test was used to investigate the significance of differences between the values of performance measures in the pre- and post-mandatory adoption periods.

**Findings** – The findings of the study revealed that there were no significant differences between the values of accounting-based performance measures related to the three performance categories (i.e. profitability, liquidity and leverage) in the post-mandatory adoption period (IFRS) compared to the values of these measures in the pre-mandatory adoption period (Saudi accounting standards).

**Research limitations/implications** – The results of the study indicated that there is a good convergence between the Saudi accounting standards that were implemented before 2017 and the IFRS that began to be applied starting from 2017. This convergence resulted in a low significant impact of IFRS on the financial statements of companies and then on the accounting-based performance measures calculated from them. However, this study suffers from some limitations, the most important of which is the small sample size as a result of the small number of listed companies in the Saudi market during the study period.

**Originality/value** – Although the impact of the adoption of IFRS have always been a subject of intense research in developed countries, the study of the impact of the adoption of IFRS in developing countries still limited. This study contributes to the literature by examining the economic consequences of adopting IFRS in Saudi Arabia as one of developing countries.

**Keywords** IFRS, Performance measures, Accounting, Saudi Arabia

**Paper type** Research paper

## Introduction

Financial statements are an important part of the information set provided by companies to investors, which help bridge the information gap between the principal (investors) and the agent (manager). The higher the quality of the accounting information, the lower the informational asymmetry between the agent (manager) and the principal (investors) and then, enabling investors to make a better evaluation of the companies' performance.



Consequently, accounting standards in all countries aimed at enhancing the quality of accounting information. Under the current global economy, globalization has brought about fundamental changes in business and investment. Distances became less important and the practice of business on an international scale became the dominant feature. In light of this globalization of business, it is no longer acceptable for companies to prepare their financial statements according to local accounting standards, which may differ from one country to another according to their economic, legal, cultural and other institutional factors. It has become imperative to develop global standards across different countries and standardize within a policy framework that can define and regulate the practice of accounting well (Nurunnabi, 2021). Therefore, International Financial Reporting Standards (IFRS) has been considered as a global business language that allows stakeholders to understand and compare global business affairs. IFRS now serves as a benchmark for measuring the performance of companies regardless of which country they belong to, and helps investors know the actual financial position of companies operating around the world. Over the last years, several streams of accounting research, using a variety of research metrics to measure economic consequences of the IFRS adoption (or convergence), provide evidence regarding the positive impacts of IFRS adoption such as enhanced accounting quality (e.g. Barth *et al.*, 2008; Daske *et al.*, 2008; Barth *et al.*, 2012; Liu and Sun, 2015; Hussein and Nounou, 2021; Bandara and Falta, 2021), enhanced market liquidity (e.g. Daske *et al.*, 2013; Dhaliwal *et al.*, 2013), improved analysts forecasts (e.g. Byard *et al.*, 2011; Tan *et al.*, 2011), increased foreign institutional ownership (e.g. Covrig *et al.*, 2007; DeFond *et al.*, 2011), greater institutional holding (e.g. Florou and Pope, 2012), reduced cost of capital (e.g. Lee *et al.*, 2010; Li, 2010) and improved comparability of financial statements internationally (e.g. Yip and Young, 2012; Horton *et al.*, 2012; Brochet *et al.*, 2013; Ozu *et al.*, 2018; Hassan, 2019; Nwaogwugwu, 2020).

The adoption of IFRS has resulted in many differences in various aspects and levels of corporate reporting and in the data included in the financial statements. The measurement and reporting of most items of the financial statements according to the IFRS may differ, to varying degrees and in different direction, from that of local standards. Thus, financial statements in accordance with IAS/IFRS may give a vastly different set of data that creates a different picture of the financial position and financial efficiency of the company (Albu and Albu, 2010). The impact of mandatory adoption of IFRS on financial statements and financial ratios has received considerable research interest in recent years. Unfortunately, these studies reached mixed results. For example, while Goodwin *et al.* (2007) argue that IFRS has led to an increase in liabilities and leverage ratios, and a decrease in equity and profits, Hung and Subramanyam (2007) conclude that the value of total assets, equity and net income is much higher under IFRS. In contrast, Dalci and Özyapıcı (2017) show that the adoption of IFRS did not influence the liquidity, solvency and profitability ratios. In light of these mixed results, this study aims to examine the impact of the adoption of IFRS on the financial performance measures of listed companies in the Saudi Stock Exchange. More specifically, the study aims to examine the impact of the adoption of IFRS on the profitability, liquidity and financial leverage of listed Saudi companies. In fact, this study contributes to the literature for several reasons. First, the adoption of IFRS by developing economies has been a subject of controversy in the accounting literature. On the one hand, some believe that IFRS are developed standards that require a high level of economic development in order to successfully implement them, while developing countries are characterized by low human development indicators, dominance of the public sector and relatively backward profession of accounting. This can reduce the benefits of implementing these standards in developing countries (Carmona and Trombetta, 2008). On the other hand, some believe in the effectiveness of adopting IFRS by developing countries because IFRS are flexible enough to respond to the needs of developing countries (e.g. Joshi and Ramadhan, 2002). Consequently, studying the economic consequences of the adoption of IFRS on financial reporting is an important issue in emerging economies, including Saudi Arabia.

Second, the adoption of IFRS will affect the measurement of much of the accounting information that is widely used in evaluating the performance of companies. Because measurement methods may change if IFRS are implemented, numerical values, such as sales revenue, expenses, assets, equity and liabilities, may also change. As a result, it becomes important to examine the impact of the adoption of IFRS on key performance measures such as Return On Equity (ROE), Return On Assets (ROA), etc. (Hoshino, 2017). Third, most of the previous studies that examined the impact of the adoption of IFRS on accounting information, which were carried out in either developed or developing countries, focused on earnings management, value relevance of accounting information and accounting conservatism (e.g. El Shamy and Kaled, 2005; Barth *et al.*, 2008; Daske *et al.*, 2013; Müller, 2014; Pelucio-Grecco *et al.*, 2014; Liu and Sun, 2015; Edeigba and Amenkhienan, 2017; Abdullah *et al.*, 2018; Lopez *et al.*, 2020; Nurunnabi *et al.*, 2020; Almaqtari *et al.*, 2021). Few studies have focused on the impact of adopting IFRS on accounting-based measures of performance. This study investigates whether there is a significant difference between the accounting-based performance measures calculated from the financial statements prepared in accordance with IFRS and those calculated from the financial statements prepared in accordance with the Saudi accounting standards in order to ascertain whether the adoption of IFRS appears higher in performance than Saudi accounting standards. To achieve the purpose of this study, the remainder of the study will be organized as follows: the second section presents the literature related to the impact of the adoption of IFRS on accounting performance measures. The third section shows the research method used in this study. The fourth section presents the results of the study, while the fifth section presents the conclusion and the limitations.

### Literature review and hypotheses development

The financial statements, which are prepared in accordance with accounting standards, are the basis for evaluating the financial position and performance of the companies. This indicates that there is a relationship between performance evaluation and the accounting standards applied by the companies. Because IFRS may differ from local standards in measuring financial statement items, it is expected that the adoption of IFRS will have an impact on company's performance measures. Accordingly, a research stream has emerged that aims to examine the impact of the adoption of IFRS on key performance measures for companies. In fact, there is a long history of using financial ratios calculated from financial statements in evaluating companies' performance. For example, Altman (1968) introduced a model based on a set of financial ratios to predict corporate bankruptcy. Beaver (1966) also relied on financial ratios in predicting the financial health of companies. With the growing trend of the adoption of IFRS, several studies have focused on examining the effect of implementing IFRS on these ratios and then the effect of implementing IFRS on evaluating companies' performance. Callao *et al.* (2007) compared the accounting figures and financial ratios prepared under the IFRS and those prepared under the Spanish accounting standards and found a significant difference between the two sets of ratios and that the comparability of ratios worsens when IFRS and GAAP are used together in a country at the same time. In a similar study, Fitó *et al.* (2013) studied the impact of IFRS adoption on the main accounting numbers and ratios in Spain and demonstrated that the noncurrent assets, equity, reserves and long-term liabilities changed significantly after the adoption of IFRS. Lantto and Sahlstrom (2009) calculated the financial ratios for a sample of companies in Finland to examine the impact of implementing IFRS. Their results indicated an increase in profitability ratios, decreased liquidity and market-based financial ratios after the implementation of IFRS. Punda (2011) examined the impact of adopting IFRS on the financial performance of companies in the UK. Their study focused on ratios related to profitability, liquidity and one market-based ratio. They reached mixed results, as all profitability ratios showed a huge and

significant increase, liquidity ratios indicated insignificant increase, while the market-based ratio showed insignificant decrease. [Cordazzo \(2013\)](#) provided empirical evidence on the nature and extent of the differences between Italian accounting standards and IFRS. Their results indicated a more effect of this transition on net income than equity, as a result of the discrepancies between the Italian accounting standards and IFRS, especially in the accounting treatment of intangible assets, income taxes and business combinations. [Hou et al. \(2014\)](#) examined the relationship between the mandatory adoption of IFRS in China and executive compensation. They found a strong evidence supporting the positive impact of mandatory adoption of IFRS on accounting-based performance measures, and thus a significant improvement in executive compensation. [Istrate \(2014\)](#) tested the effect of the transition to IFRS on accounting performance measures in Romania. They reached mixed results as the results revealed an increase in the equity ratios and leverage ratios, while there was a decrease in the profitability ratios. [Lueg et al. \(2014\)](#) examined the impact of the adoption of IFRS on the financial ratios of listed companies in the United Kingdom and concluded that the operating income margin, return on invested capital and the current ratio are the most affected financial ratios. [Banker et al. \(2014\)](#) investigated the impact of mandatory IFRS adoption on productivity in 16 European countries. By using revenue as the output measure and cost of inventory, general and administrative expenses, fixed assets, past R & D expenditures and intangible assets as input measures of production efficiency, they documented that company productivity has improved after the mandatory adoption of IFRS. [Kalra and Vardia \(2016\)](#) examined the impact of IFRS adoption in India on financial statements figures and key financial ratios. They revealed that the adoption of IFRS has no significant impact on assets turnover ratio, fixed assets turnover ratio, ROA, net profit margin, receivable turnover and ROE. [Dalci and Özyapıcı \(2017\)](#) aimed to explore the impact of first-time IFRS adoption on some financial ratios in Turkey. They selected liquidity, solvency and profitability ratios and found that the transition to IFRS did not influence the financial ratios of listed firms in Turkey. [Amaefule et al. \(2018\)](#) examined the impact of IFRS adoption on the financial performance of the companies in Nigeria as measured by Earning Per Share (EPS) and ROA. They concluded that the IFRS adoption has insignificant negative effect on the EPS while exerting significant negative effect on the ROA. [Qadri \(2019\)](#) focused on the differences between the financial ratios of Indian companies before and after the application of IFRS and showed that there are some ratios that were not significantly affected, such as the ratios of liquidity and profitability, while other ratios were positively affected, such as EPS and ROA. [Nwaogwugwu \(2020\)](#) examined the impact of IFRS adoption on the financial performance of companies in Nigeria as measured by ROA, ROE and EPS. They concluded that the adoption of IFRSs did not lead to higher performance. [Turki et al. \(2020\)](#) tested the impact of IFRS on the performance of companies in France based on three financial ratios, namely, Marris ratio, Tobin Q and PER ratio, and found that there was no direct impact of the application of IFRS on the performance of companies and that the impact of the application was indirect through the cost of capital. In Egypt, [Hussein and Nounou \(2021\)](#) suggested that there are no significant differences between IFRS companies and non-IFRS companies for both stock price and stock return ratios. Conversely, there is a significant difference between IFRS companies and non-IFRS companies in the company value ratio.

In light of the mixed results of previous studies regarding the impact of mandatory adoption of IFRS on the accounting-based performance measures, the current study aims to examine the impact of mandatory adoption of IFRS on accounting-based performance measures for listed companies in the Saudi market. More specifically, the current study aims to test the following hypotheses:

- H01.* Transition to IFRS from Saudi accounting standards has no impact on profitability ratios;

H02. Transition to IFRS from Saudi accounting standards has no impact on liquidity ratios; and

H03. Transition to IFRS from Saudi accounting standards has no impact on leverage ratios.

## Research method

### *Study period*

To test the influence of the adoption of IFRS on accounting-based performance measures in Saudi Arabia, the study compares the accounting-based performance measures calculated from the financial statements in the post-adoption period (i.e. according to IFRS) with the same measures calculated from the financial statements in the pre-adoption period (i.e. according to Saudi accounting standards). The mandatory adoption of the IFRS in Saudi Arabia began with the fiscal year beginning on January 1, 2017. When determining the post-mandatory adoption period, the financial statements for the fiscal year 2020 were excluded due to the fact that this year witnessed exceptional circumstances as a result of the complete closure of the Saudi economy as part of the precautionary procedures of Covid-19 pandemic, which had a significant impact on all performance measures of Saudi companies. Consequently, the study defined the post-mandatory adoption period to include three years, namely 2017, 2018 and 2019. To achieve consistency in comparing periods, the study defined the pre-mandatory adoption period to also include three years, namely 2014, 2015 and 2016. Accordingly, the study period includes six years: three years before the mandatory adoption of IFRS (2014–2016) and three years after the mandatory adoption of IFRS (2017–2019).

### *Variables and measurements*

The adoption of IFRS could affect many items in the financial statements. This study focuses on examining the impact of mandatory adoption of IFRS on three performance categories of the Saudi companies, which are profitability, liquidity and financial leverage. These three categories cover most of basic items of the financial statements such as total assets, total liabilities, equity, revenues, profit/loss and net operating cash flow. Profitability is the most common measure of a company's performance. It examines how well a company is using its operating resources efficiently to earn income. To examine the impact of adopting IFRS on profitability, three financial ratios were used: ROA, ROE and net profit margin. Liquidity is a good indicator of financial health. The following ratios would be used to measure liquidity: current ratio, quick ratio and operating cash flow coverage. These ratios were chosen because they are mostly used to evaluate company's financial strengths, weaknesses and ability to meet its obligation as they fall due. Lenders typically use leverage to assess the company's ability to meet its long-term financial obligations. Firms with high leverage are those that are more likely to fail in business than companies with low leverage due to the large amount of debt they have relative to their assets or equity. Three financial ratios were used to examine the impact of adopting IFRS on leverage: debt ratio, equity ratio and debt to equity ratio. [Table 1](#) displays the financial ratios used in the study and how to measure them.

### *Sample selection*

This study examines the effect of IFRS adoption on the financial performance of the listed Saudi companies for the period of 6 years (2014–2019) segregated into pre-IFRS adoption period (2014–2016) and post-IFRS adoption period (2017–2019). The study population includes all companies listed in the Saudi Stock Exchange (Tadawul). By the end of 2019, the number of companies listed in the Saudi market reached 173 companies distributed over 20 sectors. In the first step for selecting the sample, the 45 financial companies (i.e. banks and insurance companies) were excluded, as the nature and methods of measuring some items of

**Table 1.**  
Variables  
measurement

Performance category	Ratios	Measurement	Source
Profitability	Return on assets (ROA)	Net profit after tax (Zakat)/Total assets	Published financial statements
	Return on equity (ROE)	Net profit after tax (Zakat)/Shareholders' equity	Published financial statements
	Net profit margin (NPM)	Net profit after tax (Zakat)/Revenue	Published financial statements
Liquidity	Current ratio (CR)	Current assets/Current liabilities	Published financial statements
	Quick ratio (QR)	(Current assets – Inventory)/Current liabilities	Published financial statements
	Operating cash flow coverage (OC)	Operating cash flow/Current liabilities	Published financial statements
Leverage	Debt ratio (DR)	Total liabilities/Total asset	Published financial statements
	Equity ratio (ER)	Shareholder equity/Total assets	Published financial statements
	Debt to equity (DTE)	Total liabilities/Shareholders equity	Published financial statements

the financial statements of these companies differed to some extent from the financial statements of non-financial companies due to their subjection to special legislation in addition to IFRS. In the second step, 61 other companies were excluded from the study population for various reasons, such as some companies were listed in the stock market after the year 2015, and then their published financial statements on the Saudi Stock Exchange website do not cover the entire study period. Also, some companies were merged into other companies during the study period, and then no longer had their own published financial statements. In addition, some companies whose registration in the financial market was canceled during the study period. After these two steps, the remaining 67 non-financial companies represent the sample for this study. [Table 2](#) shows the distribution of the study sample among sectors.

## Analysis and results

### *Descriptive statistics of performance measures in pre- and post- adoption periods*

Descriptive statistics (particularly the mean) is used to determine the impact of the adoption of IFRS on accounting-based performance measures. The purpose of this descriptive analysis is to determine whether the mandatory adoption of IFRS has led to an increase or decrease in the values of the performance measures than they were during the implementation of Saudi accounting standards. [Table 3](#) provides descriptive statistics for the performance measures used in this study. As shown in [Table 3](#), the mean for all performance measures related to profitability is somewhat higher after the implementation of IFRS. Conversely, it is noticeable that liquidity-related performance measures have decreased after the implementation of IFRS. Regarding the performance measures related to leverage, [Table 3](#) shows mixed results. While both debt ratio and equity ratio have increased after the implementation of IFRS, debt to equity ratio showed a decrease after the implementation of IFRS.

### *Testing the normality assumption*

As shown in [Table 3](#), there are differences in the values of the accounting performance measures in the post-mandatory adoption period than in the pre-mandatory adoption period. The next step is to test the significance of these differences. Before testing the significance of

**Table 2.**  
Distribution of the  
sample across sectors

Sector	Number of companies	Percentage
Basic industries	25	37.3%
Telecommunications	4	5.9%
Food production	12	17.9%
Transportation	5	7.5%
Real estate development	6	8.9%
Capital goods	7	10.5%
Retail trade	3	4.5%
Healthcare	2	3%
Pharmaceutical	1	1.5%
Applications and technology services	1	1.5%
Media and entertainment	1	1.5%
Total	67	100%

**Table 3.**  
Descriptive statistics of  
performance measures  
in pre- and post-  
adoption periods

Ratio	Pre- adoption period (2014– 2016)		Post- adoption period (2017–2019)	
	Mean	Std. Dev.	Mean	Std. Dev.
<i>Profitability</i>				
Return on assets	0.0829	0.0142	0.0879	0.4211
Return on equity	0.1526	0.0139	0.1605	0.3298
Net profit margin	0.1629	0.0961	0.1904	0.0169
<i>Overall mean</i>	0.1328		0.1463	
<i>Liquidity</i>				
Current ratio	1.3112	0.0756	1.1104	0.8211
Quick ratio	1.2071	0.2967	1.1206	0.3651
Operating cash flow coverage	0.6592	0.8342	0.4828	0.0684
<i>Overall mean</i>	1.0592		0.9046	
<i>Leverage</i>				
Debt ratio	0.4295	0.06981	0.4409	0.0981
Equity ratio	0.5441	0.1796	0.5480	0.1368
Debt to equity	0.8046	0.5137	0.7892	0.0887
<i>Overall mean</i>	0.5876		0.5978	

these differences, it is necessary to determine whether the data of the performance measures examined in the study are normally distributed. This step is important to determine the appropriate test to examine the significance of the differences between performance measures in the pre-mandatory and post-mandatory adoption periods (i.e. parametric or non-parametric test). To verify whether the data examined in the study were normally distributed, the study used the One-Sample Kolmogorov Smirnov test considering that the null hypothesis is that the examined data are normally distributed, and the alternative hypothesis is that the examined data are not normally distributed. Table 4 presents the results of the One-Sample Kolmogorov Smirnov test.

**Table 4.**  
One-sample  
Kolmogorov–  
Smirnov test

Number of observations (company/year)	Mean	Standard deviation	K-S Z value	Significant.
402	3.692	9.426	1.764	0.002
<b>Note(s):</b> $p \leq 0.05$				

According to the results showed in Table 4, it is acceptable to reject the null hypothesis that the data of financial ratios under study are normally distributed, and to accept the alternative hypothesis that the data of financial ratios under study are not normally distributed using a statistical significance level 0.05. Accordingly, the Mann–Whitney  $U$  test, an equivalent non-parametric test for the  $t$  test is used to test whether the mean differences between performance measures in pre- and post- adoption periods are significant at the 5% significant level.

#### *Significance of the differences between performance measures in pre- and post- adoption periods*

As mentioned above, to examine whether the differences between performance measures in pre- and post-adoption are significant, the study uses the Mann–Whitney  $U$  test for each category of performance measures (i.e. profitability, liquidity and leverage). Table 5 presents the results of Mann–Whitney  $U$  test for each category of performance measures for both pre- and post-adoption periods. As shown in Table 5, it is noted that the post-adoption period has a higher mean score for profitability and leverage categories than pre-adoption period: profitability ratios ( $3.02 > 2.68$ ) and leverage ratios ( $4.56 > 4.11$ ). The pre-adoption period has a higher mean score for liquidity ratios ( $4.23 > 3.89$ ) than post-adoption period. For profitability ratios, it is noted that  $p$  value = 0.07 which suggests accepting the first null hypothesis that the transition to IFRS from Saudi accounting standards has no significant impact on profitability ratios at a significance level  $p \leq 0.05$ . With respect to liquidity ratios, it is noted that  $p$  value = 0.09 which suggests accepting the second null hypothesis that the transition to IFRS from Saudi accounting standards has no significant impact on liquidity ratios at a significant level  $p \leq 0.05$ . With respect to leverage ratios, it is noted that  $p$  value = 0.11 which suggests accepting the second null hypothesis that the transition to IFRS from Saudi accounting standards has no significant impact on leverage ratios at a significance level  $p \leq 0.05$ .

In general, previous results indicate that the implementation of IFRS has led to increases in the values of the accounting performance measures of Saudi listed companies in the post-mandatory adoption period compared to the pre-mandatory adoption period for profitability and leverage. In contrast, the mandatory adoption of IFRS has led to decreases in the values of the liquidity ratios. However, these increases and decreases were not significant. These results can be interpreted by reference to the notes attached to the published financial statements of the sample companies during the entire study period. These notes refer to the financial statements of the Saudi listed companies which were not greatly affected by the new treatments brought by IFRS. For example, most of the listed Saudi companies used the weighted average method to calculate the cost of inventory before the mandatory adoption, and none of them applied the last-in-first-out method, and then the financial statements were not affected by the prohibition of application of this method by the IFRS. Also, through examining these notes, it can be said that most listed companies in Saudi Arabia used fair

Performance category	Standards	$N$	Mean rank	Sum of ranks	$Z$ -statistics	Sig.
Profitability	Saudi accounting standards	201	2.68	10.00	-1.235	0.07
	IFRS	201	3.02	13.00		
Liquidity	Saudi accounting standards	201	4.23	19.00	-0.956	0.09
	IFRS	201	3.89	17.00		
Leverage	Saudi accounting standards	201	4.11	11	-0.697	0.11
	IFRS	201	4.56	12		

**Note(s):**  $p \leq 0.05$

**Table 5.**  
Mann–Whitney Test  
for each category of  
performance measures



value on a large scale in evaluating current assets (especially financial instruments) and liabilities in the pre-mandatory period. This means that the financial statements of these companies were not significantly affected by the trend toward fair value as a basis for measurement in IFRS. Finally, although IFRS allow the use of fair value in the subsequent measurement of property, plants and equipment as an alternative to the historical cost, an examination of the notes attached to the financial statements of Saudi companies showed that all sample companies continue to use the historical cost in the post-mandatory period. This reduces the impact of implementing IFRS on noncurrent assets values and their depreciations.

### **Conclusion and limitations**

In a world that includes countries that differ to varying degrees in institutional frameworks, general levels of financial literacy and socio-cultural factors, it is important to study the impact of adopting the IFRS in individual countries. Despite the intensity of studies that examined the economic consequences of the adoption of IFRS in developed countries, especially European countries, the number of studies examining this issue in developing countries is still limited. This study aims to examine the economic consequences of adoption of IFRS in Saudi Arabia as one of the developing countries. More specifically, the study examines the impact of implementing IFRS on accounting-based performance measures. The study examined nine of performance measures related to profitability, liquidity and leverage calculated from the financial statements of a sample of 67 listed companies in the Saudi Stock Exchange over six years: three years before the mandatory adoption (2014–2016) and three years after the mandatory adoption (2017–2019). By using the Mann–Whitney *U* test to examine the significance of the differences between these measures in the pre-mandatory and post-mandatory adoption periods, the study found that there were no significant differences between the performance measures related to profitability, liquidity and financial leverage of Saudi companies in the post-mandatory adoption period compared to the pre-mandatory adoption period. These results indicate that the local Saudi standards that were applied before 2017 were not much different from IFRS, and therefore the transition to IFRS did not have a significant impact on the financial statements of Saudi listed companies and the accounting-based performance measures calculated from these financial statements. This study contributes to the literature by examining the economic consequences of adopting IFRS in developing country. However, this study suffers from some limitations. One of these limitations is the small sample size as a result of the small number of listed companies in the Saudi market during the study period. However, the Saudi market is one of the promising markets that is witnessing a continuous increase in the number of listed companies as a result of the Saudi government encouraging the private sector and considering it the cornerstone of economic growth in the Saudi Vision 2030, in addition to the Saudi government's tendency toward privatization by offering the shares of public companies in the market. In light of the continuous increase in the number of listed companies in the Saudi market, future studies can examine larger samples. Another limitation of the study is that this study only examined nine accounting-based performance measures. Future studies can examine a larger number of accounting-based performance measures. Finally, the study focused on the IFSR as a whole. Future studies can examine the effect of applying some individual IFRSs that deal with individual accounting issues such as financial instruments, capital lease, revenue, etc.

### **References**

- Abdullah, W., Maruhun, E., Tarmizi, M. and Rahman, L. (2018), "Mitigating earnings management: adoption of IFRS and corporate governance practices in Malaysia", *International Journal of Academic Research in Business and Social Sciences*, Vol. 8 No. 2, pp. 760-772.

- 
- Albu, N. and Albu, N. (2010), "The context of the possible IFRS for SMEs implementation in Romania—an exploratory study", *Accounting and Management Information Systems*, Vol. 9 No. 1, pp. 45-71.
- Almaqtari, F., Hashed, A. and Shamim, M. (2021), "Impact of corporate governance mechanism on IFRS adoption: a comparative study of Saudi Arabia, Oman, and the United Arab Emirates", *Heliyon*, Vol. 7 No. 1, e05848.
- Altman, E. (1968), "Financial Ratios, discriminant analysis and the prediction of corporate bankruptcy", *The Journal of Finance*, Vol. 23 No. 4, pp. 589-609.
- Amaefule, L., Onyekpere, U. and Kalu, E. (2018), "International financial reporting standards and manufacturing firms' financial performance in Nigeria: a study of selected quoted firms", *International Journal of Accounting and Taxation*, Vol. 6 No. 1, pp. 102-114.
- Bandara, S. and Falta, M. (2021), "The usefulness of IFRS-compliant reports: perceptions of Sri Lankan investors and lenders", *Asian Review of Accounting*, Vol. ahead-of-print No. ahead-of-print.
- Banker, R., Huang, R. and Li, Y. (2014), "Do accounting standards matter for firm productivity? Evidence from mandatory IFRS adoption", Working Paper, available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2429121](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2429121).
- Barth, M., Landsman, W. and Lang, M. (2008), "International accounting standards and accounting quality", *Journal of Accounting Research*, Vol. 46 No. 3, pp. 467-498.
- Barth, M., Landsman, W., Lang, M. and Williams, C. (2012), "Are IFRS-based and US GAAP-based accounting amounts comparable?", *Journal of Accounting and Economics*, Vol. 54 No. 1, pp. 68-93.
- Beaver, W. (1966), "Financial ratios as predictors of failure", *Journal of Accounting Research*, Vol. 4 No. 1, pp. 71-111.
- Brochet, F., Jagolinzer, A. and Riedl, E. (2013), "Mandatory IFRS adoption and financial statement comparability", *Contemporary Accounting Research*, Vol. 30 No. 4, pp. 1373-1400.
- Byard, D., Li, Y. and Yu, Y. (2011), "The effect of mandatory IFRS adoption on financial analysts' information environment", *Journal of Accounting Research*, Vol. 49 No. 1, pp. 69-96.
- Callao, S., Jarne, J. and Lanez, J. (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. 148-178.
- Carmona, S. and Trombetta, M. (2008), "On the global acceptance of IAS/IFRS", *Journal of Accounting and Public Policy*, Vol. 27 No. 4, pp. 455-461.
- Cordazzo, M. (2013), "The impact of IFRS on net income and equity: evidence from Italian listed companies", *Journal of Applied Accounting Research*, Vol. 14 No. 1, pp. 54-73.
- Covrig, V., Defond, M. and Hung, M. (2007), "Home bias, foreign mutual fund holdings, and the voluntary adoption of International Accounting Standards", *Journal of Accounting Research*, Vol. 45 No. 1, pp. 41-70.
- Dalci, I. and Özyapıcı, H. (2017), "Analysis of the impact of first-time mandatory IFRS adoption on financial statements: the case study of the listed hotels in Turkey", *Accounting and Management Information Systems*, Vol. 16 No. 1, pp. 5-29.
- Daske, H., Hail, L., Leuz, C. and Verdi, R. (2008), "Mandatory IFRS reporting around the world: early evidence on the economic consequences", *Journal of Accounting Research*, Vol. 46 No. 5, pp. 1085-1142.
- Daske, H., Hail, L., Leuz, C. and Verdi, R. (2013), "Adopting a label: heterogeneity in the economic consequences around IAS/IFRS adoptions", *Journal of Accounting Research*, Vol. 51 No. 3, pp. 495-547.
- DeFond, M., Hu, X., Hung, M. and Li, S. (2011), "The impact of mandatory IFRS adoption on foreign mutual fund ownership: the role of comparability", *Journal of Accounting and Economics*, Vol. 51 No. 2, pp. 240-258.

- Dhaliwal, D., Wen, H., Li, Y. and Pereira, R. (2013), "Does mandatory IFRS adoption facilitate financial market integration?", *Paper presented at the American Accounting Association (AAA) Annual meeting and Conference, Consequences of IFRS Adoption*, California.
- Edeigba, J. and Amenkhienan, F. (2017), "The influence of IFRS adoption on corporate transparency and accountability: evidence from New Zealand", *Australasian Accounting, Business and Finance Journal*, Vol. 11 No. 3, pp. 3-19.
- El Shamy, M. and Kaled, M. (2005), "The value relevance of earning and book values in equity valuation: an international perspective – the case of Kuwait", *International Journal of Commerce and Management*, Vol. 14 No. 1, pp. 68-79.
- Fitóá, A., Moyab, S. and Orgazc, S. (2013), "Considering the effects of operating lease capitalization on key financial ratios", *Spanish Journal of Finance and Accounting*, Vol. 42 No. 159, pp. 341-369.
- Florou, A. and Pope, P. (2012), "Mandatory IFRS adoption and institutional investment decisions", *The Accounting Review*, Vol. 87 No. 4, pp. 1993-2025.
- Goodwin, J., Ahmed, K. and Heaney, R. (2007), "The effects of international financial reporting standards on the accounts and accounting quality of Australian firms: a retrospective study", Working Paper. The Hongkong Polytechnic University.
- Hassan, M. (2019), "Analysis of effects of IFRS adoption on the comparability of financial reporting: evidence from Saudi listed companies", *Journal of Emerging Issues in Economics, Finance and Banking*, Vol. 8 No. 1, pp. 2698-2714.
- Horton, J., Serafeim, G. and Serafeim, I. (2012), "Does mandatory IFRS adoption improve the information environment?", *Contemporary Accounting Research*, Vol. 20 No. 1, pp. 1-37.
- Hoshino, Y. (2017), "Effect of IFRS adoption on corporate performance measurement: analysis of Japanese manufacturing companies", *Universal Journal of Accounting and Finance*, Vol. 5 No. 4, pp. 78-90.
- Hou, Q., Jin, Q. and Wang, L. (2014), "Mandatory IFRS adoption and executive compensation: evidence from China", *China Journal of Accounting Research*, Vol. 7 No. 1, pp. 9-29.
- Hung, M. and Subramanyam, K. (2007), "Financial statement effects of adopting international accounting standards: the case of Germany", *Review of Accounting Studies*, Vol. 12 No. 4, pp. 623-657.
- Hussein, A. and Nounou, G. (2021), "The impact of internet financial reporting on Egyptian company's performance", *Journal of Financial Reporting and Accounting*, Vol. ahead-of-print No. ahead-of-print.
- Istrate, C. (2014), "Impact of IFRS on the accounting numbers of Romanian listed companies", *Proceedings of the 9th International Conference AMIS 2014, București, Editura ASE*, pp. 535-555.
- Joshi, P. and Ramadhan, S. (2002), "The adoption of international accounting standards by small and closely held companies: evidence from Bahrain", *The International Journal of Accounting*, Vol. 37 No. 4, pp. 429-440.
- Kalra, N. and Vardia, S. (2016), "The impact of IFRS on financial statements: a study of Indian listed companies", *Pacific Business Review International*, Vol. 9 No. 5, pp. 31-40.
- Lantto, A. and Sahlstrom, P. (2009), "Impact of international financial reporting standard adoption on key financial ratio", *Accounting and Finance*, Vol. 48 No. 2, pp. 341-361.
- Lee, E., Walker, M., Christensen, H. and Zhao, R. (2010), "Mandating IFRS: its impact on the cost of equity capital in Europe", *Journal of International Accounting Research*, Vol. 9 No. 1, pp. 58-59.
- Li, S. (2010), "Does mandatory adoption of International Financial Reporting Standards in the European Union reduce the cost of equity capital?", *The Accounting Review*, Vol. 85 No. 3, pp. 607-636.
- Liu, G. and Sun, J. (2015), "Did the mandatory adoption of IFRS affect the earnings quality of Canadian firms?", *Accounting Perspectives*, Vol. 14 No. 3, pp. 250-275.

- Lopez, H., Jara, M. and Cabello, A. (2020), "IFRS adoption and accounting conservatism in Latin America", *Academia Revista Latinoamericana de Administracion*, Vol. 33 Nos 3/4, pp. 301-320.
- Lueg, R., Punda, P. and Burkert, M. (2014), "Does transition to IFRS substantially affect key financial ratios in shareholder-oriented common law regimes? Evidence from the UK", *Advances in Accounting, Incorporating Advances in International Accounting*, Vol. 30 No. 1, pp. 241-250.
- Müller, V. (2014), "The impact of IFRS adoption on the quality of consolidated financial reporting", *Procedia - Social and Behavioral Sciences*, Vol. 109, pp. 976-982.
- Nurunnabi, M. (2021), "Implementation of international financial reporting standards (IFRS) in developing countries", *International Financial Reporting Standards Implementation: A Global Experience (Contributions to International Accounting)*, Emerald Publishing, Bingley, pp. 11-76.
- Nurunnabi, M., Jermakowicz, E. and Donker, H. (2020), "Implementing IFRS in Saudi Arabia: evidence from publicly traded companies", *International Journal of Accounting & Information Management*, Vol. 28 No. 2, pp. 243-273.
- Nwaogwugwu, C. (2020), "Effects of IFRS adoption on the financial performance and value of listed banks in Nigeria", *Journal of Finance and Accounting*, Vol. 8 No. 4, pp. 172-181.
- Ozu, C., Nakamura, M., Nagata, K. and Gray, S. (2018), "Transitioning to IFRS in Japan: corporate perceptions of costs and benefits", *Australian Accounting Review*, Vol. 28 No. 1, pp. 4-13.
- Pelucio-Grecco, M., Geron, C., Grecco, G. and Lima, J. (2014), "The effect of IFRS on earnings management in Brazilian non-financial public companies", *Emerging Markets Review*, Vol. 21 No. 1, pp. 42-66.
- Punda, P. (2011), *The Impact of International Financial Reporting Standards (IFRS) Adoption on Key Financial Ratios-Evidence from the UK*, Master's Thesis, Aarhus School of Business.
- Qadri, F. (2019), "The post-effect of IFRS adoption on financial position: an empirical study of Indian SMSEs", *Research Journal of Finance and Accounting*, Vol. 10 No. 24, pp. 71-77.
- Tan, H., Wang, S. and Welker, M. (2011), "Analyst following and forecast accuracy after mandated IFRS adoptions", *Journal of Accounting Research*, Vol. 49 No. 4, pp. 1307-1357.
- Turki, H., Wali, S., Ali, Z. and Mohammed, M. (2020), "IFRS and financial performance: study in the French context", *International Journal of Financial Research*, Vol. 11 No. 2, pp. 424-435.
- Yip, R. and Young, D. (2012), "Does mandatory IFRS adoption improve information comparability?", *The Accounting Review*, Vol. 87 No. 4, pp. 1767-1789.

### Further reading

- Ahmed, A., Neel, M. and Wang, D. (2013), "Does mandatory adoption of IFRS improve accounting quality? Preliminary evidence", *Contemporary Accounting Research*, Vol. 30 No. 4, pp. 1344-1372.
- Akinmulegun, S. and Oluwole, F. (2013), "An assessment of the Nigerian manufacturing sector in the era of globalization", *American Journal of Social and Management Sciences*, Vol. 5 No. 1, pp. 27-31.
- André, P., Filip, A. and Marmousez, S. (2014), "The impact of IFRS on the relationship between conservatism and investment efficiency", *Comptabilité Contrôle Audit*, Vol. 20, pp. 101-124.
- Armstrong, C., Barth, M., Jagolinzer, A. and Riedl, E. (2010), "Market reaction to the adoption of IFRS in Europe", *The Accounting Review*, Vol. 85 No. 1, pp. 31-61.
- Bartov, E., Goldberg, S. and Kim, M. (2005), "Comparative value relevance among German, US, and international accounting standards: a German stock market perspective", *Journal of Accounting, Auditing & Finance*, Vol. 20 No. 2, pp. 95-119.
- Blanchette, M., Racicot, F. and Girard, J. (2011), *The Effects of IFRS on Financial Ratios: Early Evidence in Canada*, Certified General Accountants Association of Canada, Ottawa.

- Goodwin, J. and Ahmed, K. (2006), "The impact of international financial reporting standards: does size matter?", *Managerial Auditing Journal*, Vol. 21 No. 5, pp. 460-475.
- Gordon, L., Loeb, M. and Zhu, W. (2012), "The impact of IFRS adoption on foreign direct investment", *Journal of Accounting and Public Policy*, Vol. 31, pp. 374-398.
- Herath, S. and Alsulmi, F. (2017), "International financial reporting standards (IFRS): the benefits, obstacles, and opportunities for implementation in Saudi Arabia", *International Journal of Social Science and Business*, Vol. 2 No. 1, pp. 1-18.
- Huian, M. (2015), "Impact of the IFRS adoption on financial assets and liabilities: empirical evidence from Bucharest stock Exchange", *Review of Economic and Business Studies*, Vol. 8 No. 2, pp. 69-90.
- Mantzari, E., Sigalas, C. and Hines, T. (2017), "Adoption of the International Financial Reporting Standards by Greek non-listed companies: the role of coercive and hegemonic pressures", *Accounting Forum*, Vol. 41 No. 3, pp. 185-205.
- 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. 166-175.
- Ojeka, S., Adegboye, A., Adetula, D., Adegboye, K. and Udoh, I. (2019), "IFRS adoption and CEO compensation: evidence from listed banks in Nigeria", *Banks and Bank Systems*, Vol. 14 No. 3, pp. 1-9.
- Razak, R. and Alqurashi, R. (2019), "Assessing the impact of the mandatory conversion to IFRS on net income in Saudi Arabia", *Asia Pacific Journal of Advanced Business and Social Studies*, Vol. 5 No. 1, pp. 65-75.
- Umobong, A. and Akani, D. (2015), "IFRS adoption and accounting quality of quoted manufacturing firms in Nigeria: a cross sectional study of brewery and cement manufacturing firms", *International Journal of Business and Management Review*, Vol. 3 No. 6, pp. 61-77.
- Wang, Y. and Campbell, M. (2012), "Corporate governance, earnings management, and IFRS: empirical evidence from Chinese domestically listed companies", *Advances in Accounting*, Vol. 28 No. 2, pp. 189-192.
- Xiamen, C. and Alsuhaibani, A. (2012), "The expected impact of IFRS adoption on Saudi Arabia based on lessons from other countries: a focus on the telecommunication business", *Procedia-Social and Behavioral Sciences*, Vol. 62, pp. 1190-1198.

**Corresponding author**

Ibrahim El-Sayed Ebaid can be contacted at: [ebaid1969@yahoo.com](mailto:ebaid1969@yahoo.com)