

# THE VALUE RELEVANCE OF MANDATORY CORPORATE DISCLOSURES: EVIDENCE FROM KUWAIT

Mishari Alfraih, The Public Authority for Applied Education and Training - Kuwait  
Faisal Alanezi, The Public Authority for Applied Education and Training - Kuwait

## ABSTRACT

*This study is the first to explore the association between the level of compliance with International Financial Reporting Standards (IFRS) mandatory disclosures and the value relevance of accounting information to market participants. This association is examined in the context of listed companies in the emerging economy of Kuwait – a jurisdiction with a history of applying international accounting standards but with lax enforcement. The research design of the study consists of two parts. First, the level of compliance with mandatory IFRS disclosures of Kuwait Stock Exchange (KSE) listed firms in 2010 is examined using a disclosure index. Second, the value relevance of financial statement information, specifically, earnings and book values, is examined empirically using Ohlson's (1995) valuation model that captures the level of compliance with IFRS among KSE listed firms. The results show a significant association between the level of compliance with IFRS and the value relevance of earnings and book values to KSE investors, highlighting the importance of establishing and maintaining adequate monitoring and enforcement mechanisms to ensure compliance with accounting standards. The outcomes of this study serve to inform regulators and companies on whether moving toward stricter compliance with IFRS will necessarily improve the value relevance of financial statement information.*

**JEL:** M44, M48

**KEYWORDS:** Value Relevance, International Financial Reporting Standards, Compliance, Disclosure Index, Kuwait

## INTRODUCTION

The growing acceptance and use of International Financial Reporting Standards (IFRS) and its predecessor, International Accounting Standards (IAS), in major capital markets throughout the world over the past several years is remarkable. Currently, there are nearly 130 countries that have adopted or that make a commitment to adopt IFRS (IASB, 2014). The International Accounting Standards Board (IASB) claims that its principle objective is to develop a single set of high-quality financial reporting standards (IASB, 2014). However, as IFRS adoption expands globally, concerns and questions remain about the usefulness of these standards in producing high-quality information. In addressing these concerns and as part of its continuous efforts to improve the quality of existing IFRS, the IASB hosted in January 2013 a public forum to foster dialogue about how to improve the quality and usefulness of its standards (IFRS, 2013). It can be argued that usefulness is likely impacted by differences in IFRS adoption, interpretation, and compliance across jurisdictions. In jurisdictions with lax enforcement regimes, compliance is likely to be the major impediment to the usefulness and the value relevance for the IFRS-based accounting information to investors. However, a review of value relevance literature shows that a prominent characteristic in most of the previous studies on value relevance of accounting information is a failure to distinguish between accounting standards that are *used* and those that are *actually* implemented.

Interestingly, despite the obvious link between compliance and value relevance, most value relevance research ignores compliance in assessing the value relevance of accounting information (Hellstrom, 2006).

While extant research generally supports the value relevance of IFRS adoption (e.g., Larsson and Bogstrand, 2012; Kargin, 2013), no known research has examined how the extent of compliance with IFRS affects financial statements' value relevance to users. A possible explanation for ignoring the compliance issue in value relevance research could be that most value relevance research has been mainly conducted in developed countries where there are high levels of compliance with accounting standards and strong enforcement regimes. However, prior research on developing countries has documented lax enforcement and limited compliance with IFRS, which undermines the effectiveness of IFRS in producing high-quality information.

In this study, we consider the extent of IFRS compliance in the emerging economy of Kuwait, which has required the application of international standards since 1991, but lacks a reputation for strong enforcement of compliance with IFRS, as evident in a recent study by Alfraih and Alanezi (2012). Consequently, the Kuwaiti stock market provides an ideal setting for investigating the association between the level of compliance with IFRS and the value relevance of accounting information to market participants, as the variation observed in compliance level among Kuwait Stock Exchange (KSE)–listed firms provides an ideal opportunity to explore this issue.

To examine the extent of IFRS compliance by Kuwaiti firms, we developed a self-constructed compliance index that comprehensively captures the level of compliance with the all applicable and relevant IFRS among all KSE-listed nonfinancial firms in 2010. To test the value relevance of the accounting information produced by KSE-listed companies in 2010, the *price* model developed by Ohlson (1995) is applied. The value relevance of accounting information is expected to vary cross-sectionally according to variation in the quality of the underlying accounting information, as proxied by the extent of IFRS compliance. Hence, prior to estimating the model, the IFRS compliance score that is derived from the compliance index is incorporated into the price model as a separate explanatory variable.

Consistent with our expectations, a significant association is observed between the level of compliance with IFRS and the value relevance of earnings and book values to KSE investors. The finding highlights the importance of establishing and maintaining adequate monitoring and enforcement mechanisms to ensure compliance with accounting standards. In addition, the finding that stricter compliance with IFRS improves the value relevance of accounting information highlights the importance of full compliance with IFRS and not just mere adoption.

As regulations and enforcement are costly for regulators and companies, a potential benefit of this study is that corporate regulators and company managers may be able to better recognize the effect of compliance with IFRS on the value relevance of financial statement information. Thus, the outcome of this study will inform regulators and companies on whether moving toward stricter compliance with IFRS will necessarily improve the value relevance of financial statement information.

The remainder of this paper is organized as follows. Section 2 provides a brief overview of the Kuwaiti accounting regulatory framework and its impact on firms listed on the KSE. Section 3 provides an overview of prior research on compliance with IFRS and the value relevance of accounting information. Section 4 outlines this study's theory development and research hypotheses, while Section 5 discusses the research design used to test these hypotheses. Section 6 presents an analysis of the data and the results of the hypotheses tests. The paper concludes in Section 7 with a summary of findings and an outline of this study's major contributions and implications.

## REGULATORY FRAMEWORK OF ACCOUNTING IN KUWAIT

### Background on the KSE

Share trading in Kuwait started with the establishment of the National Bank of Kuwait in 1952 as the first Kuwaiti shareholding company. In the following decades, the Kuwait government issued a number of laws and rules to regulate share-trading activities, culminating in August 1983 with the issuance of an Amiri Decree establishing the KSE. Since that time, the KSE has witnessed significant expansion, which has brought it to the attention of both domestic and international investors, particularly in recent years. The exchange was mandated to organize trading activities and to regulate them, which it continued to do until its regulatory responsibilities were transferred to the Capital Markets Authority (CMA), which was established by a new law, which, after being signed by the Amir, came into force on February 28, 2010 (KSE, 2014).

In 2010, the KSE administration divided listed companies into seven sectors: banking, insurance, investment, real estate, industry, services, and food. Table 1 shows that KSE-listed companies are broadly distributed across these sectors in 2010, with investment and services being the dominant sectors.

Table 1: KSE Investment Sectors and Number of Listed Companies, 2010

| Sector                         | Number of Firms | Percentage |
|--------------------------------|-----------------|------------|
| Banks                          | 9               | 4.4        |
| Investment                     | 52              | 25.5       |
| Insurance                      | 7               | 3.4        |
| Real Estate                    | 40              | 19.6       |
| Industrial (Industry and Food) | 35              | 17.2       |
| Services                       | 61              | 29.9       |
| <b>Total</b>                   | <b>204</b>      | <b>100</b> |

*This table shows KSE investment sectors and number of listed companies in 2010.*

### Accounting Regulations in Kuwait

In Kuwait, the evolution of corporate financial reporting began in the early 1960s with growth of the business sector and the establishment of public corporations. The Kuwaiti government takes sole responsibility for formulating business regulations as well as for managing and running enforcement agencies to ensure adherence to these regulations (Alfraih and Alanezi, 2012). One of the most significant laws governing accounting in Kuwait is the Law of Commercial Companies No. 15/1960, which was issued by the Ministry of Commerce and Industry (MCI) on October 19, 1960, to organize the formation of new companies and to regulate the administration of existing companies. The MCI Law requires companies to provide an audited annual balance sheet and a profit and loss statement to the MCI and all shareholders. However, the law has not provided guidelines for preparing these statements other than that they be prepared in accordance with “generally accepted accounting standards” to reflect a “true and fair view” of the company position and to maintain a proper book of accounts. Furthermore, the law does not define “generally accepted accounting standards” or “true and fair view” (Shuaib, 1987).

Because of the ambiguity caused by not specifying a set of accounting standards, as well as the lack of definition of a “true and fair view,” significant differences have emerged among the disclosures provided in the financial statements of Kuwaiti companies (Shuaib, 1987). In response to these discrepancies and in an attempt to standardize accounting practices in Kuwait, the Ministry of Commerce and Industry (MCI) issued Resolution No. 18 on April 17, 1990, which effectively mandated adoption of International Accounting Standards (IAS) for all companies operating in Kuwait including listed KSE firms for financial periods beginning January 1, 1991 (MCI, 2000).

## LITERATURE REVIEW

Since the 1960s, and the seminal work of Ball and Brown (1968), the value relevance of accounting information has been an important topic in accounting research. The research aims to provide evidence as to whether accounting numbers relate to corporate value in a predictable manner (Beaver, 2002). The broad literature that has developed in this area comprehensively documents the value relevance of accounting information in numerous contexts (e.g., Alfraih and Alanezi, 2011; Larsson and Bogstrand, 2012; Kargin, 2013). Such research is not only important for investors but also provides useful insights into accounting reporting effectiveness for standard setters and other users. Prior studies show that a fundamental prerequisite for the value relevance of accounting information is the quality of prescribed accounting regulations. Accounting standards of high quality are also necessary to ensure well-functioning capital markets and the economy as a whole; thus such standards are important for investors, firms, standard setters, and regulators (e.g., Hellstrom, 2006; Aljifri *et al.*, 2014). For example, Arthur Levitt, the former chairman of the U.S. Securities and Exchange Commission (SEC), proclaimed,

I firmly believe that the success of capital markets is directly dependent on the quality of the accounting and disclosure system. Disclosure systems that are founded on high quality standards give investors confidence in the credibility of financial reporting – and without investor confidence, markets cannot thrive. (Levitt, 1998, p. 80)

Kothari (2000) observes that market participants seek high-quality accounting information because it mitigates information asymmetry between firms' managers and outside investors. Accounting quality is further articulated in Francis *et al.* (2004) who identify seven attributes of accounting quality that are posited to be desirable: accrual quality, persistence, value relevance, timeliness, predictability, smoothness, and conservatism. They find that value relevance is one of the most important attributes of accounting quality. The findings of Francis *et al.* are supported by Barth *et al.* (2008), who claim that higher-quality accounting information exhibits less earnings management, more timely loss recognition, and a higher value relevance of the earnings and equity book values.

Although the objective of the International Accounting Standards Board (IASB), is to develop an internationally acceptable set of high-quality financial reporting standards (IASB, 2014), reported accounting information based on these high quality standards might be of low quality in the absence of full compliance with accounting regulations, or if the discretion provided in accounting standards is exploited opportunistically. Aljifri *et al.* (2014) argue that deficiencies in the application of accounting standards cause inconsistency, incomparability, reduced transparency, and a lack of trust in the information provided, which lead to higher costs of capital and increased risks for different user-groups. In other words, mere adoption of high-quality domestic or international accounting standards may be insufficient to improve the usefulness of accounting information to investors, unless effective domestic regulatory and enforcement mechanisms exist to ensure that companies adhere to the prescribed standards (Hellstrom, 2006).

Similar claims have been made by other researchers. For example, Barth *et al.* (2008) argue that adoption of higher-quality accounting standards, such as International Financial Reporting Standards (IFRS), is associated with predictable improvement in the quality of financial reporting and value relevance. They also note that lax enforcement of these high-quality standards may result in limited compliance, thus undermining the effectiveness of these standards in producing high-quality information. Similarly, Kothari (2000) argues that the quality of accounting information is not only influenced by the quality of accounting standards but also by the nature of corporate governance, the legal system, and the existence and enforcement of effective laws that govern accounting standards. Kothari defines the quality of financial information as a function of both the quality of accounting standards and the enforcement of those

standards. Thus, if enforcement of accounting standards is weak, then the quality of accounting information is likely to be poor, regardless of the quality of the accounting standards.

Over recent years, IFRS have increasingly become the global accounting standards. According to the International Accounting Standard Board (IASB), there are nearly 130 countries that have adopted or that have made a commitment to adopt IFRS (IASB, 2014). However, questions have been raised about whether companies that claim to be compliant with IFRS are, in fact, complying with all IFRS requirements (Glaum and Street, 2003). The U.S. Securities and Exchange Commission (SEC) conducted a study in 2011 regarding the application of IFRS in practice, based on an analysis of the annual financial statements of 183 companies across 22 countries. The study observes that

(...) many companies did not appear to provide sufficient detail or clarity in their accounting policy disclosures to support an investor's understanding of the financial statements, including in areas they determined as having the most significant impact on the amounts recognized in the financial statements. (...) In some cases, the disclosures (or lack thereof) also raised questions as to whether the company's accounting complied with IFRS. (SEC, 2011, p. 2)

Similarly, a study by Al-Shammari *et al.* (2008) examines the extent of compliance with IAS by companies in the Gulf Co-Operation Council (GCC) countries – namely, Bahrain, Oman, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates – over the period 1996 to 2002. Importantly, their study reveals there is significant variation in compliance levels among GCC countries and between companies. The average level of compliance for all GCC companies during the study period was 75%. A recent study by Alfraih and Alanezi (2012) that examines the effectiveness of requiring two external auditors in Kuwait and the associated cost-benefit of this requirement on the level of corporate disclosure shows that the average level of IFRS mandatory disclosure was 75% in 1994 and 78% in 2006, an increase of 4% over a 12 year period.

In summary, a prominent characteristic in most of the previous literature on the value relevance of accounting information is a lack of distinction between accounting standards that are *used* and the *actual* implementation of those standards. Accounting regulations might be of high quality; however, the value relevance of reported accounting information might be of low quality if accounting regulations are not fully complied with, or the discretion provided in the accounting standards is opportunistically exploited. The review of the literature on compliance with IFRS provides substantial evidence of noncompliance by companies that claim to comply with the standards. Whether noncompliance improves or impairs information quality remains an empirical question that we seek to address in this study.

### Theory Development and Research Hypotheses

Using a large sample of firms from 21 countries, Barth *et al.* (2008) compared accounting information characteristics for firms that adopt IAS to a matched sample of firms that do not adopt IAS in order to investigate whether reporting under IAS is associated with predictable differences in accounting quality. Their overall results suggest that IAS improves accounting quality, consistent with the objective of the IASB. In addition, the study finds that the financial statement information produced by IAS-adopting firms provides more value relevant earnings and book values, based on both price and returns models, than firms that do not adopt IAS. Similarly, Vann (2012) investigates whether the use of IFRS is associated with the value relevance of accounting information across 16 countries using both price and returns valuation models. The study results show that there are incremental changes in the value relevance of accounting information when firms transition to IFRS.

Although it might seem that IFRS adoption is associated with a predictable improvement in accounting quality and value relevance, Barth *et al.* (2008) argue that a lax enforcement of these high-quality standards

may result in limited compliance, thereby undermining the effectiveness of these standards in producing high-quality information. Similarly, Armstrong *et al.* (2012) believe that variation in the implementation and enforcement of IFRS could lead to an increase in opportunistic managerial discretion, thus undermining the effectiveness of IFRS in producing high-quality information. Consequently, it cannot be assumed that the adoption of IFRS will necessarily lead to greater value relevance of financial statement information in all jurisdictions. Kothari (2000) similarly argues that the quality of accounting information is influenced not only by the quality of accounting standards but also by the existence and enforcement of effective laws governing accounting standards. Thus, if enforcement of accounting standards is weak, the quality of accounting information is likely to be poor, regardless of the quality of accounting standards (Kothari, 2000). Interestingly, the literature on compliance with the IFRS provides substantial evidence of noncompliance among firms that claim to fully comply with IFRS (e.g., Glaum and Street, 2003; Al-Shammari *et al.*, 2008; Alfraih and Alanezi, 2012).

Despite the extensive literature on value relevance, the research fails to distinguish between accounting regulations and the actual implementation of accounting standards. Although the literature on value relevance theoretically links the quality of accounting information to the enforcement of effective implementation of accounting standards (e.g., Kothari, 2000; Barth *et al.*, 2008; Armstrong *et al.* 2012), no known empirical research explores the association between the extent of compliance with accounting standards and the value relevance of accounting information.

Based on the potential improvement in value relevance associated from *complying* with IFRS standards and based on the assumption that lax enforcement of IFRS standards may result in limited compliance, which would undermine the effectiveness of IFRS in giving market participants high-quality information, this study predicts that the greater the level of IFRS compliance, the greater the value relevance of earnings and book values to investors. Therefore, it is hypothesized that

H1: *The higher the level of compliance with IFRS requirements, the greater the value relevance of reported earnings.*

H2: *The higher the level of compliance with IFRS requirements, the greater the value relevance of reported book values.*

## DATA AND METHODOLOGY

### Sample Selection and Data Sources

The 2010 Annual Report for the Kuwait Stock Exchange (KSE) shows that, by the end of 2010, there were 204 Kuwaiti companies listed on the KSE. The most recent annual consolidated financial statements available at the time of the analysis were the fiscal 2010 financial statements. In light of the time needed to assess the compliance level and the number of firms to be analyzed and since mandatory disclosure policies are relatively constant and rarely change overtime (Botosan, 1997), the study sample was limited to the year 2010. Due to their financial characteristics, 68 financial firms were excluded from the sample. Additionally, 17 firms were also excluded due to data unavailability. The final sample for measuring the value relevance of IFRS mandatory disclosures is comprised of the remaining 119 nonfinancial firms. The primary data sources for investigating the extent to which KSE-listed firms comply with mandatory IFRS disclosures and assessing the value relevance of accounting information are the companies' consolidated financial statements and share prices. All the required consolidated financial statements for the KSE companies and share price data were obtained from the KSE Auto Documentation and Archival Department at the KSE.

### Measurement of the Extent of Compliance with IFRS

To explore the association between the level of compliance with IFRS and the value relevance of accounting information, a measure of the extent of compliance with IFRS must first be established. Consistent with prior compliance research (e.g., Glaum and Street, 2003; Al-Shammari *et al.*, 2008; Alfraih and Alanezi, 2012), the extent of compliance with IFRS among KSE-listed firms is measured using a comprehensive self-constructed compliance checklist (*CINDEX*). The self-constructed compliance index was developed based on the applicable and relevant IAS and IFRS for the Kuwaiti financial reporting environment in the year 2010. This index is recognized to be a reliable and valid instrument for measuring the IFRS-mandatory disclosure (Cooke and Wallace, 1989).

There were 37 IAS/IFRS applicable and effective at the end of 2010. However, not all of these standards were applicable or relevant to this study and the Kuwait financial reporting environment. The assessment of the applicability of IFRS reveals that there are 13 IAS/IFRS considered not to be relevant to the study period or not to be applicable to the reporting environments of the KSE-listed firms sample used in the study. Consequently, of the 37 effective standards by the end of 2010, only 24 standards are deemed applicable to the investigation of the extent of compliance by the sample KSE-listed firms. The justifications for considering these standards as not relevant to this study and not applicable to the Kuwaiti financial reporting environments are as follows:

IFRS 1 (*First-time Adoption of International Financial Reporting Standards*) technically does not apply to KSE-listed firms, because any firm requesting listing on the KSE must provide audited financial statements in full compliance with IFRS related to the three years prior to the listing request. IFRS 6 (*Exploration for and Evaluation of Mineral Resources*), IAS 20 (*Accounting for Government Grants and Disclosure of Government Assistance*), and IAS 41 (*Agriculture*) are deemed not applicable because none of the 119 firms examined performed any activities related to these standards. Although IAS 39 (*Financial Instruments: Recognition and Measurement*) and IAS 32 (*Financial Instruments: presentations*) are qualifying standards and all KSE-listed firms are obligated to comply with them, there are no substantive disclosure requirements associated with these standards. IAS 12 (*Income Tax*) is not applicable to the Kuwaiti financial environment because income taxes are not levied on the income of KSE-listed companies. IAS 19 (*Employee Benefits*) and IAS 26 (*Accounting and Reporting by Retirement Benefit Plans*) are not applicable to the Kuwaiti financial environment because KSE-listed firms are obligated to follow the local labor and social security laws. IAS 29 (*Financial Reporting in Hyperinflationary Economies*) is not applicable to the Kuwaiti economy because the inflation rate ranged from 2% to 11% during the 2007 to 2010 period (CBK, 2014). Since the focus of this study is on annual reports of nonfinancial firms, IAS 34 (*Interim Financial Reporting*), IFRS 4 (*Insurance Contracts*), and IFRS 7 (*Financial Instruments: Disclosures*) are deemed not relevant to this study and thus are excluded. Although IAS 39 (*Financial Instruments: Recognition and Measurement*) and IAS 32 (*Financial Instruments: presentations*) are qualifying standards, there are no substantive disclosure requirements associated with these standards.

In constructing and developing the compliance checklist (*CINDEX*), the official International Accounting Standard Board (IASB) volume for 2010 is used to obtain details about each IAS/IFRS disclosure requirement. Based on the requirements of each standard, a comprehensive checklist is developed to address each disclosure requirement of the 24 standards applicable to the study period and Kuwaiti financial environment. The checklist focuses on mandatory disclosures that are required in financial statements and footnotes. Disclosures that are explicitly voluntary or merely encouraged and suggested by IFRS are not considered relevant to this study, and, thus, they are not included in the checklist. For the 24 applicable IAS/IFRS, 397 mandatory disclosure requirements are obtained. To ensure completeness and comprehensiveness, the checklist is validated by having it reviewed by academic experts and practicing professionals. Table 2 shows the number of disclosure requirements for each of the 24 IFRS included in the compliance checklist (*CINDEX*).

Table 2: Number of Disclosure Requirements for Each IFRS Included in CINDEK

| Standard | Title   | Number of Disclosure Requirements |
|----------|---|-----------------------------------|
| IFRS 2   | Share-Based Payment   | 17                                |
| IFRS 3   | Business Combinations   | 22                                |
| IFRS 5   | Non-Current Assets Held for Sale and Discontinued Operations    | 15                                |
| IFRS 8   | Operating Segments  | 30                                |
| IAS 1    | Presentation of Financial Statements                            | 69                                |
| IAS 2    | Inventories   | 9                                 |
| IAS 7    | Cash-Flow Statements  | 10                                |
| IAS 8    | Accounting Policies, Changes in Accounting Estimates and Errors | 20                                |
| IAS 10   | Events after the Reporting Period                               | 4                                 |
| IAS 11   | Construction Contracts  | 8                                 |
| IAS 16   | Property, Plant, and Equipment                                  | 15                                |
| IAS 17   | Leases  | 21                                |
| IAS 18   | Revenue   | 3                                 |
| IAS 21   | Effects of Changes in Foreign Exchange Rates                    | 8                                 |
| IAS 23   | Borrowing Costs   | 2                                 |
| IAS 24   | Related Party Disclosures                                       | 21                                |
| IAS 27   | Consolidated and Separate Financial Statements                  | 12                                |
| IAS 28   | Investments in Associates                                       | 14                                |
| IAS 31   | Interests in Joint Ventures                                     | 10                                |
| IAS 33   | Earnings Per Share  | 7                                 |
| IAS 36   | Impairment of Assets  | 31                                |
| IAS 37   | Provisions, Contingent Liabilities, and Contingent Assets       | 15                                |
| IAS 38   | Intangible Assets   | 13                                |
| IAS 40   | Investment Property   | 21                                |
| Total    | 24 Standards  | 397                               |

This table shows the number of disclosure requirements for each of the 24 IFRS included in the compliance checklist (CINDEK).

Consistent with Cooke (1989), Street and Bryant (2000), Street and Gray (2001), Glaum and Street (2003), and Al-Shammari *et al.* (2008), an equal weighting is assigned to each of the items on the CINDEK. Accordingly, each of the disclosure requirements mentioned in the CINDEK is coded one (1) if the required disclosure has been made and zero (0) if it has not. When the required disclosure is not applicable to the firm, the item is dropped from the scoring system for that firm. This scoring procedure is based on a careful review of the complete company annual report. Following Cooke (1989), the total disclosure (TD) score for a company is additive, as follows:

$$TD = \sum_{i=1}^m d_i$$

where  $d = 1$  if item  $d_i$  is disclosed,  $d = 0$  if item  $d_i$  is not disclosed, and  $m \leq n$

After the total disclosure score (TD) is obtained for a company, an index can be constructed to measure the relative level of corporate disclosure. The index is the ratio of a company's actual disclosure score (TD) to the maximum score (M) that the company is expected to achieve if the company fully complies with the mandatory disclosure requirements of IFRS. As a result, a company is not penalized for omitting a disclosure item that is not relevant or applicable to its business. Consequently, the maximum score (M) a company can earn may vary from company to company and is computed as follows:

$$M = \sum_{i=1}^n d_i$$

where  $d$  is the expected item of disclosure, and  $n$  is the number of items that the company is required to disclose.



Accordingly, the disclosure compliance checklist (*CINDEX*) for each firm is calculated by dividing the total number of mandatory disclosures (TD) that are provided by a company by the total number of applicable mandatory disclosures (M):

$$CINDEX = \frac{TD}{M}$$

This results in a *CINDEX* score with a range between zero to one.

### Empirical Valuation Model Assessing Value Relevance

Ohlson (1995) develops a model that links a firm's market value to earnings and book values. In this model, current earnings are considered as a proxy for abnormal earnings, while book value is considered as a proxy for the present value of expected future normal earnings. The Ohlson's model (1995) expresses a firm's market value (proxied by the firm's stock price) as a linear function of earnings, book values, and other value relevant information. The model has many appealing properties, and it provides a useful benchmark for conceptualizing how market value relates to accounting data and other price-relevant information (Ohlson, 1995). The model is based on three analytically straightforward assumptions. First, the present value of expected dividends determines the market value. Second, accounting data and dividends satisfy the clean surplus relation, and the dividends reduce book value without affecting current earnings. The clean surplus is considered satisfied when the ending book value equals the beginning book value plus income minus dividends (Lundholm, 1995). Third, a linear model frames the stochastic time-series behavior of abnormal earnings. The variable of abnormal earnings is defined as current earnings minus the risk-free rate times the beginning of the period book value – that is, earnings minus a charge for the use of capital.

The three assumptions lead to a linear, closed-form, valuation model in which value equals book value plus a linear function of current abnormal earnings and the scalar variable representing other information (Ohlson, 1995). Ohlson's theoretical model (1995) has been extensively used by researchers to empirically examine the value relevance of accounting earnings and book values (e.g., Hellstrom, 2006; Barth *et al.*, 2008; Alfraih and Alanezi, 2011; Vann, 2012). The model is specified as follows:

$$P_{it} = \beta_0 + \beta_1 EPS_{it} + \beta_2 BVS_{it} + \varepsilon_{it} \quad (1)$$

where

- $P_{it}$  = stock price per share for firm  $i$  at time  $t$ , three months after the fiscal year end of time  $t$
- $EPS_{it}$  = the earnings per share of firm  $i$  at time  $t$
- $BVS_{it}$  = the book value per share of firm  $i$  at time  $t$
- $t$  = 2010, corresponding to the fiscal year 2010
- $\varepsilon_{it}$  = other value relevant information

The statistical association between stock price and both earnings and book values is used as the primary metric to measure the value relevance of accounting numbers. If accounting variables – earnings and book values – are value relevant to investors, then there will be an association between stock price, earnings and book values, and the coefficients of earnings and book values will be statistically significant. This association is measured by the explanatory power ( $R^2$ ) of the regression model.

Several studies have documented that the value relevance of earnings and book values can be influenced by several factors. These factors include the earnings sign (positive or negative) (Barth *et al.*, 2008), industry categories (Hellstrom, 2006), and firm size (Alfraih and Alanezi, 2011). Consequently, the price

model developed by Ohlson (1995) incorporates proxies for profitability, industry categories, and firm size as control variables.

### Assessing the Association between Value Relevance and the Level of Compliance with IFRS

The goal of this study is to explore whether the extent of compliance with IFRS is associated with the value relevance of accounting numbers. Assuming greater compliance with IFRS is valued by investors, then compliance represents additional information that investors incorporate into their valuation models. To test the study hypotheses (H1 and H2), a level-of-compliance dummy variable (*DCINDEX*) that is equal to one (1) if the firm achieves a level of compliance higher than the sample median and zero (0) otherwise is included in the price model to capture the influence of the level of compliance on the value relevance of accounting earnings and book values. In addition to the level of compliance with IFRS, profitability, industry categories, and firm size are included in the price model as control variables to capture their influence.

To further examine the impact of level of compliance on the value relevance of accounting earnings and book values, the compliance level is collapsed from the high/low category to high/medium/low category. The percentile rank approach is used to classify the compliance level into high/medium/low. A level of compliance variable (*TCINDEX*), which is equal to (2) if the firm achieves a level of compliance above 75 percentile, (1) if the firm achieves a level of compliance between 75 and 25 percentile, and (0) otherwise is included in the price model to capture the influence of the level of compliance on the value relevance of accounting earnings and book values.

Based on the potential improvement in value relevance of accounting information to market participants from complying with the IFRS standards it is predicted that the higher the level of compliance, the greater is the value relevance of earnings (H1) and book values (H2). Accordingly, a significant positive *DCINDEX* or *TCINDEX* coefficient in the valuation models (as depicted in equation 2) will indicate that greater compliance is considered value relevant to investors.

### Extended Price Model

The extended price model that incorporates the level of compliance with IFRS, profitability, industry categories, and firm size is as follows:

$$P_{it} = \beta_0 + \beta_1 |EPS_{it}| + \beta_2 BVS_{it} + \beta_3 DCINDEX \text{ or } TCINDEX_{it} + \beta_4 LOSS_{it} + \beta_5 IND\_INDUS_{it} + \beta_6 IND\_SERV_{it} + \beta_7 LSIZE_{it} + \varepsilon_{it} \quad (2)$$

where

- $P_{it}$  = stock price per share for firm  $i$  at time  $t$ , three months after the fiscal year end of time  $t$
- $|EPS_{it}|$  = the absolute value of earnings per share of firm  $i$  at time  $t$
- $BVS_{it}$  = the book value per share of firm  $i$  at time  $t$
- $DCINDEX$  = dummy variable that equals 1 if the firm achieves a level of compliance higher than the median level of compliance for all sample firms and zero otherwise
- $TCINDEX$  = dummy variable coded 1 if the firm achieves a level of compliance higher than the median level of compliance for all sample firms and zero otherwise
- $LOSS$  = dummy variable that equals 1 if the firm achieves negative earnings and 0 otherwise
- $IND\_INDUS$  = dummy variable that equals 1 for firms in the industrial category, and 0 otherwise
- $IND\_SERV$  = dummy variable that equals 1 for firms in the services category, and 0 otherwise (the omitted industry category when all categories are zero is the real estate category)

$LSIZE$  = the natural logarithm of total assets of firm  $i$  at time  $t$   
 $t$  = 2010 fiscal year

As mentioned, if greater IFRS compliance is valued by investors, then compliance represents additional information that investors can incorporate into their valuation models. A significant, positive  $DCINDEX$  (or  $TCINDEX$ ) coefficient indicates that investors consider greater compliance to be value relevant, which provides support for H1 and H2. However, firm size and industry category are expected to have influence on the extent of compliance with IFRS and the value relevance of earnings and book values.

In this situation, it could be argued that the extended price model that incorporates the  $DCINDEX$  (or  $TCINDEX$ ) might capture only the influence of firm size and industry category that correlate with compliance level. Consequently, observing a significant  $DCINDEX$  (or  $TCINDEX$ ) coefficient in the extended price model might not be considered as having independent explanatory power in the valuation models. To resolve this situation (See, for instance, Gordon *et al.*, 2006), a two-stage, least-squares regression method is used in which the compliance level ( $DCINDEX$  or  $TCINDEX$ ) is first regressed on the common explanatory variables (firm size and industry category) to estimate the portion of  $DCINDEX$  (or  $TCINDEX$ ) that is associated with the common explanatory variables.

The specification of the model is as follows:

$$DCINDEX \text{ or } TCINDEX = \beta_0 + \beta_1 SIZE + \beta_2 IND\_INDUS + \beta_3 IND\_SERV + RESIDUAL \quad (3)$$

Alternatively, the  $RESIDUAL$  variable obtained from the above model (model 3) is used as a proxy for the independent effect of  $DCINDEX$  (or  $TCINDEX$ ) in the sensitivity analysis. Consequently, the  $RESIDUAL$  variable replaces the  $DCINDEX$  (or  $TCINDEX$ ) in the extended price model in the sensitivity analysis. A significant, positive  $RESIDUAL$  coefficient in the valuation model indicates that greater compliance is considered value relevant to investors, and indicates support for H1 and H2.

## RESULTS

### Descriptive Statistics for the Extent of Compliance with IFRS-Required Disclosures

Table 3 presents descriptive statistics for  $CINDEX$ . Panel A indicates that the mean (median)  $CINDEX$  score for all KSE-listed nonfinancial firms in 2010 was 71.2% (72%), with a minimum score of 41% and a maximum of 94%. The results show that no KSE-listed nonfinancial firm complied fully with all the IFRS-required disclosures. Table 3, Panel B presents the frequency distribution of  $CINDEX$  scores for the firms in 2010. The statistics show that 14% of the firms achieved an IFRS-compliance score between 41 and 59%. Thirty-two% achieved scores between 60 and 69%, and 34% achieved scores between 70 and 79%. Only 20% achieved scores above 79%. Thus the frequency distribution of  $CINDEX$  scores among the 119 listed nonfinancial firms in 2010 reveals a noticeable variation in IFRS-compliance levels across KSE-listed firms.

Table 4 extends the descriptive statistics to compliance with each of the 24 IFRS/IAS-relevant standards. The results further show a noticeable variation in the level of compliance among standards. The mean compliance ranged from 49% for the IFRS 2 (Share-Based Payment) to 90% for IAS 18 (Revenue). Taken together, the Tables 3 and 4 results suggest that compliance may be a material factor impacting the value relevance of accounting information for these firms.

Table 3: Descriptive Statistics for the IFRS Compliance Index (CINDEX) in Financial Statements for 2010

| <b>Panel A: Descriptive Statistics for CINDEX</b>       |                 |       |            |                    |                       |         |
|---|-----------------|-------|------------|--------------------|-----------------------|---------|
| Dependent Variable                                      | N               | Mean  | Median     | Standard Deviation | Minimum               | Maximum |
| CINDEX  | 119             | 0.712 | 0.720      | 0.103              | 0.41                  | 0.94    |
| <b>Panel B: Frequency Distribution of CINDEX Scores</b> |                 |       |            |                    |                       |         |
| CINDEX Range  | Number of Firms |       | Percentage |                    | Cumulative Percentage |         |
| 0.41–0.49   | 2               |       | 2          |                    | 2                     |         |
| 0.50–0.59   | 14              |       | 12         |                    | 14                    |         |
| 0.60–0.69   | 38              |       | 32         |                    | 46                    |         |
| 0.70–0.79   | 41              |       | 34         |                    | 80                    |         |
| 0.80–0.89   | 17              |       | 14         |                    | 94                    |         |
| 0.90–0.94   | 7               |       | 6          |                    | 100                   |         |
| <b>Total</b>  | <b>119</b>      |       | <b>100</b> |                    |                       |         |

This table shows descriptive statistics for the IFRS compliance index (CINDEX) in financial statements for 2010. Panel A shows the descriptive statistics for CINDEX. Panel B shows frequency distribution of CINDEX scores.

Table 4: Descriptive Statistics for Compliance Index Scores (CINDEX) by Standards

| Standard                             | Title  | Mean | Min. | Max. | Number of Disclosures Requirements |
|--------------------------------------|--|------|------|------|------------------------------------|
| <b>High-Level Compliance Group</b>   |  |      |      |      |                                    |
| IAS 1                                | Presentation of Financial Statements                             | 0.84 | 0.69 | 1.00 | 69                                 |
| IAS 7                                | Cash-Flow Statements   | 0.80 | 0.00 | 1.00 | 16                                 |
| IAS 16                               | Property, Plant, and Equipment                                   | 0.86 | 0.20 | 1.00 | 15                                 |
| IAS 18                               | Revenue  | 0.90 | 0.33 | 1.00 | 3                                  |
| IAS 27                               | Consolidated and Separate Financial Statements                   | 0.89 | 0.17 | 1.00 | 12                                 |
| IAS 33                               | Earnings Per Share   | 0.85 | 0.28 | 1.00 | 7                                  |
| <b>Medium-Level Compliance Group</b> |  |      |      |      |                                    |
| IAS 2                                | Inventories  | 0.75 | 0.11 | 1.00 | 9                                  |
| IAS 8                                | Accounting Policies, Changes in Accounting Estimates, and Errors | 0.68 | 0.00 | 1.00 | 20                                 |
| IAS 10                               | Events after the Reporting Period                                | 0.72 | 0.00 | 1.00 | 4                                  |
| IAS 23                               | Borrowing Costs  | 0.65 | 0.00 | 1.00 | 2                                  |
| IAS 24                               | Related Party Disclosures  | 0.68 | 0.00 | 1.00 | 21                                 |
| IAS 28                               | Investments in Associates  | 0.67 | 0.00 | 1.00 | 12                                 |
| IAS 31                               | Interests in Joint Ventures                                      | 0.69 | 0.00 | 1.00 | 10                                 |
| IAS 38                               | Intangible Assets  | 0.71 | 0.00 | 1.00 | 13                                 |
| IAS 40                               | Investment Property  | 0.65 | 0.10 | 1.00 | 21                                 |
| IFRS 3                               | Business Combinations  | 0.65 | 0.00 | 1.00 | 22                                 |
| <b>Low-Level Compliance Group</b>    |  |      |      |      |                                    |
| IAS 11                               | Construction Contracts   | 0.52 | 0.00 | 1.00 | 8                                  |
| IAS 17                               | Leases   | 0.40 | 0.00 | 1.00 | 21                                 |
| IAS 21                               | Effects of Changes in Foreign Exchange Rates                     | 0.47 | 0.00 | 1.00 | 8                                  |
| IAS 36                               | Impairment of Assets   | 0.55 | 0.00 | 1.00 | 31                                 |
| IAS 37                               | Provisions, Contingent Liabilities, and Contingent Assets        | 0.50 | 0.00 | 1.00 | 15                                 |
| IFRS 2                               | Share-Based Payment  | 0.49 | 0.00 | 1.00 | 17                                 |
| IFRS 5                               | Noncurrent Assets Held for Sale and Discontinued Operations      | 0.53 | 0.25 | 1.00 | 15                                 |
| IFRS 8                               | Operating Segments   | 0.51 | 0.00 | 1.00 | 30                                 |

This table shows descriptive statistics for compliance index scores (CINDEX) with each of the 24 IFRS/IAS-relevant standards.

### Descriptive Statistics for Dependent and Independent Variables Used in the Valuation Model

Table 5 presents the descriptive statistics for dependent and independent variables used in the price model. The results show that all variables used in the valuation model have a reasonable degree of variations with the greatest variation evident for the firms' stock price (P) and firm size (SIZE). Firm size (total assets)

varied significantly, ranging from KD 3.48 million to KD 3490.93 million, with a mean of KD 135.08 million. Due to the variation from normality, the stock price and size variables were transformed using natural log transformations. Further analysis of profitability of nonfinancial firms in 2010 (not shown in tables) revealed that approximately 81% of KSE-listed firms were profit firms while only 19% were loss firms.

Table 5: Descriptive Statistics Based on Price Model Variables

| Variable     | N   | Mean   | Std. Dev. | Min.  | Max.    |
|--------------|-----|--------|-----------|-------|---------|
| $P_{it}$     | 119 | 0.31   | 0.51      | 0.02  | 2.00    |
| $BVS_{it}$   | 119 | 0.23   | 0.21      | 0.03  | 1.13    |
| $EPS_{it}$   | 119 | 0.01   | 0.05      | -0.14 | 0.28    |
| $SIZE_{it}$  | 119 | 135.08 | 376.46    | 3.48  | 3490.93 |
| $LSIZE_{it}$ | 119 | 11.26  | 1.48      | 8.16  | 15.31   |

This table shows descriptive statistics based on price model variables. All numbers are in Kuwaiti dinar (KD). Variables are defined as follows:  $N$  is the number of observations;  $P_{it}$  is the stock price per share for firm  $i$  at time  $t$ , three months after the fiscal year's end of time  $t$ ;  $EPS_{it}$  is the earnings per share of firm  $i$  at time  $t$ ;  $BVS_{it}$  is the book value per share of firm  $i$  at time  $t$ ;  $SIZE$  is the total assets of firm  $i$  at time  $t$  (KD million);  $LSIZE$  is the natural log of the total assets of firm  $i$  at time  $t$  (KD million); and  $t = 2010$ , corresponding to the year 2010.

### Bivariate Correlation Results

Pearson's correlation and Spearman's rank correlation among the variables are presented in Table 6. An examination of the correlation matrix reveals significant pair-wise correlation coefficients for nearly all of the independent variables with the dependent variable ( $P$ ). In particular, the compliance variable  $CINDEX$  has positive and significant correlations with the dependent variable. Among the independent variables none exhibit excessively high pair-wise correlation coefficients. Thus, multicollinearity is unlikely to be a serious threat to the interpretation of results from estimating the value relevance regression model. Variance inflation factors (VIF) were also examined and were found to be well within acceptable limits.

Table 6: Bivariate Correlations among Dependent and Independent Variables

| Variable   | $P_{it}$    | $BVS_{it}$  | $EPS_{it}$  | $LSIZE$     | $CINDEX$    |
|------------|-------------|-------------|-------------|-------------|-------------|
| $P_{it}$   | <b>1.00</b> | 0.75***     | 0.71***     | 0.12**      | 0.25**      |
| $BVS_{it}$ | 0.78***     | <b>1.00</b> | 0.63***     | 0.27***     | 0.26***     |
| $EPS_{it}$ | 0.73***     | 0.70***     | <b>1.00</b> | 0.15***     | 0.18***     |
| $LSIZE$    | 0.38***     | 0.46***     | 0.50***     | <b>1.00</b> | 0.49***     |
| $CINDEX$   | 0.25***     | 0.36***     | 0.19***     | 0.37***     | <b>1.00</b> |

This table shows bivariate correlations among dependent and Independent Variables. Notes: \*\*, \*\*\* Correlation is significant at the 0.05 and 0.01 levels, respectively (two-tailed). Upper-right diagonal presents Spearman's correlation and lower-left diagonal presents Pearson's correlation of variables. Variables are defined as follows:  $P_{it}$  is the stock price per share for firm  $i$  at time  $t$ , three months after the fiscal year's end of time  $t$ ;  $EPS_{it}$  is the earnings per share of firm  $i$  at time  $t$ ;  $BVS_{it}$  is the book value per share of firm  $i$  at time  $t$ ;  $LSIZE$  is the natural log of the total assets of firm  $i$  at time  $t$  (KD million);  $CINDEX$  is the IFRS-mandated disclosures index score and  $t = 2010$ , corresponding to the year 2010.

### Regression Analysis

Table 7 presents the results of the extended price models after incorporating the level of compliance with IFRS (DCINDEX, TCINDEX, or RESIDUAL), profitability, industry categories, and firm size. The regression results show that all the regression models are highly significant ( $p < 0.01$ ) and each model explains about 76% to 79% of the association between the dependent variable and the independent variables. Furthermore, the estimated coefficients of accounting earnings and book values in all models are strongly positively related with firm value ( $p < 0.01$ ), suggesting that earnings and book values reported by

KSE-listed nonfinancial firms played an important role in the equity valuation of KSE-listed nonfinancial firms in the year 2010.

Table 7: Results of Regression of Price on Earnings, Book Values, and IFRS Compliance

| Dependent Variable: Stock Price |                       |                      |                            |                      |                                 |                      |                                 |                      |
|---------------------------------|-----------------------|----------------------|----------------------------|----------------------|---------------------------------|----------------------|---------------------------------|----------------------|
| Variable                        | DCINDEX<br>(High/Low) |                      | TCINDEX<br>(High/Med./Low) |                      | RESIDUAL<br>(Proxy for DCINDEX) |                      | RESIDUAL<br>(Proxy for TCINDEX) |                      |
|                                 | Coeff.                | t-stat               | Coeff.                     | t-stat               | Coeff.                          | t-stat               | Coeff.                          | t-stat               |
| Intercept                       | -0.15                 | -1.81*               | -0.17                      | -1.68*               | -0.19                           | -1.92*               | -0.21                           | -1.81*               |
| EPS                             | 3.13                  | 5.80***              | 3.23                       | 5.92***              | 3.46                            | 6.26***              | 3.61                            | 6.35***              |
| BVS                             | 1.19                  | 9.15***              | 1.17                       | 8.85***              | 1.15                            | 9.05***              | 1.15                            | 8.86***              |
| D/TCINDEX                       | 0.08                  | 1.92 <sup>+</sup>    | 0.20                       | 1.88 <sup>+</sup>    |                                 |                      |                                 |                      |
| RESIDUAL                        |                       |                      |                            |                      | 0.10                            | 1.89 <sup>+</sup>    | 0.16                            | 1.67 <sup>+</sup>    |
| LOSS*EPS                        | -2.25                 | -2.57 <sup>+++</sup> | -2.12                      | -2.53 <sup>+++</sup> | -2.04                           | -2.37 <sup>+++</sup> | -1.94                           | -2.31 <sup>+++</sup> |
| IND_INDUS                       | 0.23                  | 1.75*                | 0.25                       | 1.68*                | 0.25                            | 2.32**               | 0.27                            | 2.34**               |
| IND_SERV                        | 0.19                  | 2.87***              | 0.21                       | 2.57***              | 0.22                            | 2.52***              | 0.22                            | 2.55***              |
| LSIZE                           | 0.10                  | 3.52                 | 0.09                       | 3.22***              | 0.10                            | 3.74***              | 0.10                            | 3.48***              |
| Adj. R <sup>2</sup>             |                       | 0.79                 |                            | 0.78                 |                                 | 0.78                 |                                 | 0.76                 |
| F-stat                          |                       | 64.04***             |                            | 62.54***             |                                 | 61.81***             |                                 | 61.69***             |
| n                               |                       | 119                  |                            | 119                  |                                 | 119                  |                                 | 119                  |

This table shows the results of regression of price on earnings, book values, and IFRS compliance. <sup>+</sup>, <sup>++</sup>, <sup>+++</sup> Significant at the 0.05 and 0.01 levels respectively (one-tailed); \*, \*\*, \*\*\* significant at the 0.1, 0.05, and 0.01 levels respectively (two-tailed).  $P_{it}$  is the stock price per share for firm  $i$  at time  $t$ , three months after the fiscal year's end of time  $t$ ;  $EPS_{it}$  is the earnings per share of firm  $i$  at time  $t$ ;  $BVS_{it}$  is the book value per share of firm  $i$  at time  $t$ ; DCINDEX is a dummy variable that equals 1 if the firm achieves a level of compliance higher than the median level of compliance for all sample firms and 0 otherwise; TCINDEX is a variable that equal 2 if the firm achieves a level of compliance above 75% for all sample firms, 1 if the firm achieves a level of compliance between 75 and 25% and 0 otherwise; RESIDUAL is obtained from a two-stage, least-squares regression method, where the level of compliance (DCINDEX or TCINDEX) is first regressed on the common explanatory variables (firm size and industry category) to estimate the portion of DCINDEX (or TCINDEX) associated with the common explanatory variables; LOSS is a dummy variable that equals 1 if the firm achieves negative earnings and 0 otherwise; IND\_INDUS is a dummy variable that equals 1 for firms in the industrial category and 0 otherwise; IND\_SERV is a dummy variable that equals 1 for firms in the service category and 0 otherwise (the omitted industry category when all categories are 0 is the real estate category); LSIZE is the natural log of the total assets of firm  $i$  at the end of time  $t$ ; and  $t = 2010$ .

Consistent with expectations (H1 and H2) the results show that the coefficient estimates for the compliance variable (DCINDEX, TCINDEX, and RESIDUAL) are positive and significant in all models ( $p < 0.05$ ). These finding indicate that greater compliance with IFRS in the financial reports is significantly associated with firm value, and thus suggesting that greater compliance with IFRS is significantly valued by market participants in valuing accounting earnings and book values. As predicted, the results also show that all the control variables related to industry categories and firm size have coefficient estimates that are strongly positively related to firm value. These results are consistent with the value relevance literature findings and confirm the influence of industry categories, and firm size on the value relevance of earnings and book values. In addition, the results reveal that the coefficient estimates of the profitability variable (LOSS\*EPS) are negative and significant ( $p < 0.01$ ) in all models.

## CONCLUDING COMMENTS

This study examines the association between the levels of compliance with International Financial Reporting Standards (IFRS) and the value relevance of accounting information to market participants. In particular, this study investigates whether the extent of compliance with IFRS influences the value relevance of accounting information. A review of value relevance literature shows that a prominent characteristic in most of the previous studies on value relevance of accounting information is a failure to distinguish between accounting standards that are *used* and those that are *actually* implemented. Interestingly, the review of the literature on compliance with IFRS shows substantial evidence of noncompliance with IFRS by companies that claim to comply with the standards. Thus, there is a clear need for research that examines the association between compliance with IFRS and the value relevance of accounting information.

Based on this motivation, we examine the value relevance of compliance with IFRS by KSE-listed nonfinancial companies in 2010. Kuwait offers an ideal setting to explore the value relevance of IFRS compliance because of its long IAS/ IFRS history and evidence that accounting standard compliance is not strongly enforced. In this setting, it is predicted that KSE-listed firms with greater IFRS compliance are more likely to have greater earnings (H1) and book values (H2) value relevance than firms that are associated with lower compliance. These hypotheses are based on the assumption that lax enforcement of IFRS standards may result in limited compliance and thus, undermine the effectiveness of these standards in producing high-quality information for market participants.

The hypotheses are tested by first developing a compliance index to capture the level of compliance with the 24 applicable IFRSs among all KSE-listed nonfinancial firms in 2010. The value relevance of compliance with IFRS is then tested by applying the Ohlson (1995) valuation model inclusive of the compliance index variable. The results of the price model reveal a significant association between the level of compliance with IFRS and the value relevance of earnings and book values to KSE investors. Thus, in support of the hypotheses, compliance represents additional information that investors incorporate into their valuation models.

Although prior studies have theorized a positive association between the quality of accounting information and the existence and enforcement of effective laws that ensure compliance with those standards (see Kothari, 2000; Barth *et al.*, 2008), there is no known research that empirically explores the association between the extent of compliance with accounting standards and the value relevance of accounting information. Hence, this study is the first to offer empirical evidence to support the theoretical expectation of the association between the level of compliance with IFRS and the value relevance of accounting information to market participants.

These findings have important policy implications for standard setters and enforcement bodies. In particular, they highlight the importance of establishing and maintaining adequate monitoring and enforcement mechanisms to ensure compliance with accounting standards. In addition, the finding that stricter compliance with IFRS improves the value relevance of accounting information highlights the importance of full compliance with IFRS and not just mere adoption.

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## **ACKNOWLEDGMENTS**

This work was supported and funded by the Public Authority for Applied Education & Training – Kuwait/Research Grant no. BS-13-08.

## **BIOGRAPHY**

Mishari M. Alfraih, Ph.D., CPA, CIA, CFE, is an Associate Professor of Accounting at the College of Business Studies, The Public Authority for Applied Education and Training, Kuwait. He holds a Ph.D. in Accounting from Queensland University of Technology, Australia. He is a Certified Public Accountant (CPA), Certified Internal Auditor (CIA), and a Certified Fraud Examiner (CFE). Dr. Alfraih's research interest focuses on the role of information in capital markets and IFRS reporting practices. His research areas in IFRS include financial information flows, information quality, decision usefulness of financial reporting and audit quality in emerging capital markets. E-mail address: [m@dralfraih.com](mailto:m@dralfraih.com). Tel: +965-99755666. PO Box 3438 Mishref, 40185, Kuwait.

Faisal S. Alanezi, Ph.D., is an Associate Professors of Accounting at the College of Business Studies, The Public Authority for Applied Education and Training, Kuwait. He holds a Ph.D. in Accounting from University of Newcastle, Australia. His research interests include financial reporting disclosure, corporate

governance, accounting education, international financial reporting standards and voluntary disclosure. E-mail address: [alanezifs@hotmail.com](mailto:alanezifs@hotmail.com) .Tel: +965-99133230.