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Value Relevance of Accounting Measures: Do Board Gender-Diversity and Ownership Structure Matter in Kuwaiti Context?

Abstract

Purpose: This study aimed to investigate whether the characteristics of the boards of directors of companies listed on Kuwait Boursa influenced the value relevance of accounting information.

Study design/methodology/approach: Family members, women members, members of the royal family, and government ownership of the boards of directors were used as proxies of effective corporate governance on the value relevance of accounting information. Value relevance was derived from regressing stock price on earnings and equity book values using Ohlson's (1995) valuation model.

Sample and data: The dataset consisted of 121 non-financial firms listed on Kuwait Boursa in 2016.

Results: Regression analysis showed that certain board characteristics of firms listed on the Kuwait Boursa displayed greater value relevance to accounting information. After controlling for firm size and industry category, the results suggested that family ownership resulted in greater value relevance of earnings, but not book value. Kuwaiti firms with more women on boards had significantly lower value relevance for book value. The presence of royal family members on a board and government ownership were negatively correlated with market value.

Originality/value: This paper extends the previous literature by providing empirical evidence that certain board characteristics increase the value relevance of accounting information.

Research limitations/implications: This research provides evidence only for a limited set of characteristics; other board aspects and valuation models should be investigated. This study is useful for academics, regulators, managers and other stakeholders. The findings will benefit decision makers by highlighting the importance of female members on Kuwaiti boards in maintaining an effective governance mechanism. Family-owned businesses with family members on the board had greater value relevance for earnings.

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Introduction

Corporate governance entails a set of internal and external control mechanisms specifically designed to allow monitoring of corporate management's decisions, confirm their accuracy and timeliness, and ensure an efficient operation of a company on behalf of its owners and other stakeholders (Donnelly and Mulcahy, 2008). However, in countries where external corporate governance mechanisms are less-well developed or ineffectively enforced, the internal monitoring role played by the board of directors (BoD) in regulating procedural decision making becomes an essential corporate governance control mechanism as it substitutes for the weakness of the external control system (Campbell and Mõnguez-Vera, 2008). Shamil *et al.* (2014) also highlighted the importance of member diversity on the board for enhancing its problem-solving ability. Adams and Ferreira (2009) found that diversity among the directors enhanced the board's ability to make effective decisions, and they empirically documented that having a nearly equal gender balance resulted in better allocation of monitoring efforts.

Arguments based on agency theory support the view that a well-structured and diverse BoD should result in more thorough and timely financial reporting and consequently higher value relevance of earnings and book-value information for market participants (Habib and Azim, 2008). Over time, internal and external corporate governance mechanisms have proved their effectiveness as tools to mitigate agency conflict with management (Fama and Jensen, 1983). According to the tenets of agency theory, one of the fundamental objectives of the BoD is to prevent opportunistic managerial earnings behavior. An effective BoD is expected to restrain such behavior, and consequently make accounting information more credible and value-relevant for market participants (Alfraih *et al.*, 2015). It has been well documented in the literature that the higher the value relevance of earnings and book values, the more the financial statement information can be relied upon in making investment decisions (Omran and Tahat, 2020; El-Diftar *et al.,* 2019; Alfraih, 2016b).

Habib and Azim (2008) examined the empirical relationship between corporate governance mechanisms that involved the BoD, audit committees and external audits, and the value relevance of accounting information produced by Australian firms. Their findings demonstrated that firms with strong governance procedures tended to provide accounting information that exhibited greater value relevance. Similarly, Ogeh Fiador (2013) documented the positive influence of internal corporate governance structures on the value relevance of accounting information within the Ghanaian market. In the Kuwaiti context, Alfraih *et al*. (2015) emphasized that size, role duality and cross directorship were the key characteristics necessary for creating an effective board and improving the value relevance of accounting information. Almujamed and Alfraih (2020) emphasized that board size was significantly associated with firm value and that Kuwaiti companies with large boards exhibited greater value relevance of earnings and book value.

Empirical evidence suggested that firms with a strong corporate governance structure exhibited greater value-relevance. This result supported the hypothesis that a positive relationship exists between a company's governance mechanisms and the value relevance of its accounting information (Alfraih *et al*., 2015; Fiador, 2013; Habib and Azim, 2008). With regard to Kuwait, Alfraih *et al*. (2015) evaluated the influence of board size, role duality and cross directorships on the value of accounting data for 2010, while Almujamed and Alfraih (2020) examined the impact of board size, presence of non-executive members, and role duality as proxies of effective corporate governance on the value of accounting information from 2013. Empirical evidence from both papers suggested that the positive characteristics of the BoD improved the value relevance of accounting information. The current study is different from that of Almujamed and Alfriah (2020) and Alfraih *et al*. (2015) as it investigated the family members, female members, members of the royal family, and government ownership of the boards of directors, which had not been explored in recent publications. In addition, this paper took into consideration recent developments at Kuwait Boursa, such as the formation of the Capital Markets Authority (CMA).

Kuwait was selected for this investigation for a number of reasons. The country witnessed significant growth over the past two decades, and Kuwait Boursa was among the best performing bourses, ranking fifth among Arab countries based on market capitalization (Arab Monetary Fund, 2017). Kuwait was recently listed on the Morgan Stanley index for emerging stock markets, which is watched with interest by international fund managers (Kuwait Boursa, 2021). Restrictions on ownership by foreign investors were removed, which made it easier for institutional investors to invest in the country (Omran and Tahat, 2020). All listed companies had to provide financial statements on a quarterly basis and disclose all relevant information about their firms' operations within 45 days of the end of each quarter (Almujamed *et al.*, 2017). Lastly, the country requires all listed firms to follow International Financial Reporting Standards (IFRS) and International Accounting Standards (IAS) to increase the quantity, quality and reliability of corporate disclosures of listed companies in Kuwait (Kuwaiti Company Law No. 1, 2016). This allowed us to obtain empirical data for a better understanding and insight into how some characteristics of the BoD promoted value relevance of accounting information.

This paper significantly contributes to the literature by identifying the specific aspects of the boards of directors from Kuwait Boursa that influence the value relevance of accounting information. The results may be useful as a guide to stockholders who depend on the validity of accounting information in decision making. In an endeavor to develop the capital market, the CMA in Kuwait issued a resolution requiring companies subject to CMA supervision to apply the Corporate Governance Code effective 30/6/2016. Based on this gap in the research and mandatory enforcement of the corporate governance code, we chose to investigate the influence of gender and the presence of royalty and family members on the BoD, among other corporate governance mechanisms in the newly emerging markets of Kuwait. These specific aspects of the internal corporate governance mechanism were used as proxies. Value relevance was estimated from a regression of stock price on earnings and equity book values using Ohlson's (1995) valuation model as adopted in recent investigations (Almujamed and Alfraih, 2020; Omran and Tahat, 2020; El-Diftar *et al.*, 2019; Alfraih *et al.*, 2015). Specifically identified corporate governance mechanisms were included in the valuation model as other "information" to capture their influence on the value relevance of earnings and book values from companies listed on the Kuwaiti exchange.

The paper is organized as follows: section 2 summarizes the theoretical background, prior studies, and the related literature and posits the hypotheses to be tested; section 3 describes the research model and data collection; section 4 presents the empirical results and research findings; and lastly, the conclusions are drawn and the contributions to the literature, implications, limitations and future research are discussed.

Theoretical Background, Prior Studies, and Hypotheses

According to Almujamed *et al.* (2017), there was no corporate governance code in Kuwait until 2012. The first attempt at drafting a code was made by the

Central Bank of Kuwait (CBK) in 2004 when it required banks to follow some principles of corporate governance. In 2012, the CBK issued a corporate governance code followed by a CMA for companies listed on Kuwait Boursa in 2016. The actions of other Gulf Cooperation Council (GCC) countries with regard to corporate governance codes were similar to Kuwait's with the majority of these countries proposing codes in the years after 2000 (Pillai and Al-Malkawi, 2016). The outcomes of these efforts promoted development of the stock exchange, offered greater transparency, attracted more foreign investors, and improved the value relevance of accounting information. One of the relevant studies was conducted by El-Diftar and Elkalla (2019) who examined the value relevance of accounting information in the Middle East and North Arica region (MENA) including both GCC firms and those in non-GCC countries. They concluded that the governance measures adopted ensured greater value relevance to the reported accounting information. Our study goal was to define and establish a framework based on theory and evidence related to the composition and characteristics of BoDs and their effects on the value relevance of earnings and the equity book value. After a thorough review of the literature, a series of hypotheses was proposed with regard to the interaction of four key elements - the presence of women, royal family members and family members on BoDs, and government ownership of the firm - on earnings and book value.

Gender balance:

The monitoring role of the BoD is an essential corporate governance control mechanism, particularly in countries where external mechanisms are less well developed and enforced (Campbell and Mínguez-Vera, 2008). The literature on the effectiveness of the BoD highlights the importance of including more women on the board and suggests that boards with approximately equal numbers of male and female members with diverse characteristics, talents and experience exhibit greater creativity and innovation and more effective decision-making than conventional BoDs (Wellalage and Locke, 2013). Campbell and Mínguez-Vera (2008) supported the view that attaining gender balance on the board and diversity of members' skills and knowledge can enhance the quality of a company's accounting information. Shamil *et al*. (2014) argued that having a greater number of female members on the BoD was likely to have a positive impact on the company's operations and increase quality and accessibility of information to stakeholders. Adams and Ferreira (2009) posited that diversity on the BoD could in theory enhance board effectiveness, and documented that gender-balanced boards allocated more effort to monitoring managerial activities and governance procedures; however, when their results were considered empirically, they appeared to show that some companies with gender-balanced BoDs had a reduction in performance. These findings were attributed to the argument that too much board monitoring could decrease shareholder value.

Drawing on the existing theoretical and empirical literature related to the effectiveness of BoDs and the expected influence of gender on that effectiveness, we hypothesized that the presence of more women on the boards of Kuwait Boursa listed companies would result in increased corporate monitoring, which would enhance the quality of information produced and its accessibility and value to market participants. Thus, we proposed that a positive relationship existed between the presence of women on BoDs and the value relevance of the accounting information produced. This led to hypothesis 1:

H1: *The presence of women on the BoD is positively associated with the value relevance of accounting information.*

Royal family:

Healy and Palepu (2001) argued that the demand for accurate and complete reporting of accounting information arose mainly from information asymmetry and agency conflicts between management and stockholders. Information asymmetry increases a company's cost of financing (Copeland and Galai, 1983), thus it is often claimed that companies find it more advantageous to provide higher quality corporate information to stockholders and financing providers to reduce the costs of borrowing money. However, Alfraih (2016a) averred that companies controlled by a royal family tended to have easier access to financing and consequently avoided the higher borrowing costs associated with poor-quality accounting information. Hudaib and Haniffa (2009) claimed that royal families in GCC countries did not hesitate to exert their power in economic spheres. Kuwait offers an interesting context for exploring the effectiveness of BoDs because of the highly idiosyncratic presence of members of the royal family on the boards of listed companies (Alanezi, 2006). In Kuwait, shareholdings in Kuwaiti-listed companies are frequently controlled by the country's ruling family, the House of Al-Sabah (Alfraih, 2016a). Alanezi (2006) provided evidence that the presence of royal family members on listed companies' BoDs added a unique, non-western dimension to the characteristics of board structure. Because of the influential political pressure that board members from the royal family can exercise over corporate governance and the relative ease of access to financing regardless of the quality of accounting information, we posited a negative relationship between the presence of royal family members on BoDs and the value relevance of a firm's accounting information. This led to hypothesis 2:

H2: *The presence of royal family members on the board is negatively associated with the value relevance of accounting information.*

Family members:

Ali *et al.* (2007) showed that board members who were part of the family that owned the company tended to be more frequently in positions of power as directors or chairpersons. As part of the family that may have started the company and now runs it, the family-appointed directors are likely to have a greater incentive to exert due diligence in monitoring and regulating company activities because, in addition to linking their wealth with that of the company, they maintain strong emotional ties with the family generation currently running the company (Maseda *et al.*, 2019). However, Jensen and Meckling (1976) claimed that family companies with more concentrated ownership tended to provide lower quality accounting information because there was less need for the information in decision-making processes. Similarly, Ali *et al.* (2007) maintained that a lack of transparency and disclosure facilitated the placement of family members in positions of power on boards with little interference from non-family shareholders. They empirically investigated this hypothesis and came to the conclusion that the degree of disclosure in family-owned companies was significantly lower than in those that were not. Alfraih and Almutawa (2017) argued that the greater the percentage of family directors on the board, the lower the motivation to release information to the public. Thus, the quality of accounting information provided by family-owned and run companies was expected to be lower than that for non-family firms in Kuwait.

Because of the reduced information stream often associated with family companies and the potential for greater access to insider and internal information by family members, we argued that the higher the proportion of family members on the boards of Kuwaiti-listed companies the lower the quality of information produced and the less relevant and useful it will be to market participants. Thus, we posited a negative relationship between the proportion of family members on BoDs and the value relevance of accounting information produced. This led to hypothesis 3:

H3: *An increased proportion of family members on the board is negatively associated with the value relevance of accounting information.*

Government ownership:

The ownership structure and the effect of corporate governance mechanisms on company behavior is one of the most hotly debated issues in the literature of corporate governance today (Maseda *et al.,* 2019). Thomsen and Pedersen (2000) hypothesized that government directors were more likely to pay special attention to political aims such as employment, low output prices, or external effects related to company valuation and profitability. Wu *et al.* (2012) reported that government ownership not only decreased the resource-based value of government-represented directors serving on the BoD, but could also result in a negative association between these directors and company value and performance. A government can participate in the financing of government-owned companies in a variety of ways. For example, it can provide subsidies directly, or can even exert pressure on banks to provide access to borrowing for corporate development or expansion (La Porta *et al.,* 2002). Alfraih and Almutawa (2017) showed that a high proportion of government-owned companies had greater opportunities to borrow money to finance their operations and expansions, as they usually obtained the required funds from their government owners. Because of this enhanced access to borrowing, government-owned companies had less need to attract investors, leading to significantly less pressure to furnish quality corporate information to outsiders.

Given the political interests and aims of government directors serving on the board and the ease of access to financing by privileged government companies, we conjectured that a negative relationship existed between the proportion of government members serving on boards of directors and the value relevance of accounting information produced. This led to hypothesis 4:

H4: *The proportion of government members serving on boards of directors is negatively associated with the value relevance of accounting information.*

Research Methods

Sampling and data

Financial firms such as banks, insurance, and investment companies were excluded from this study as the requirements of the financial sector concerning disclosure are different (Elsayed and Hoque, 2010). This study assessed the influence of women, the royal family, family directors, and governmental owners on the BoD of firms listed on the Kuwait Boursa in 2016 on the value of relevant accounting information. The 2016 investment guide, which lists 215 Kuwaiti companies, is the most recent information that we could obtain during the study period. Panel B of Table 1 lists the categories of the companies investigated. Firms that did not provide all the relevant background information were omitted from the final group of 121 firms. Financial data included stock price, book value of equity, net income, total assets versus liabilities, and common shares outstanding. The detailed information about the composition and other aspects of the BoD and the variables associated with relevant values were downloaded from the Kuwait Boursa Internet site (https://www.boursakuwait.com).

Ohlson's valuation model

In the capital market, the share prices of listed companies generally reflect the existing accounting information quite accurately and respond in a timely manner to changing corporate conditions. In 1995, Ohlson proposed a valuation model based on the two primary accounting indicators: company earnings and book value of assets (Hu *et al.*, 2016). Ohlson's theory and practical framework have been applied by a broad cross-section of scholars who utilized it to test the empirical value relevance of earnings compared to book value (Omran and Tahat, 2020; Almujamed and Alfraih, 2019; Alfraih *et al.*, 2015; Kargin, 2013; Brugni *et al.*, 2012; Larsson and Bogstrand, 2012; Lee *et al.*, 2011; Habib and Azim, 2008; Hellstrom, 2006; Collins *et al.*, 1999). Consistent with earlier studies, we employed the model as a valuation framework to test the research hypotheses. The model was defined according to the following equation:

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

Where:

$P_{it} =$ stock price per share for firm *i* at time *t*, three months after the end of the fiscal year

$EPS_{it} =$ earnings per share of firm *i* at time *t*

$BVS_{it} =$ book value per share of firm *i* at time *t*

$T =$ 2016, corresponding to the fiscal year 2016

$\epsilon_{it} =$ other value relevant information

The prices of the stock together with the earnings and book value were analyzed using statistical association as the main determinant to measure the value relevance of accounting information. If the accounting variables - earnings and book value - are relevant and of value to investors, then there will be an association between stock price, earnings, and book value, and the earnings and book value coefficients will be statistically significant. This association is measured by the explanatory power of the regression model (R^2).

Control variables

A large number of business researchers have determined that the value relevance of earnings and book value can be subject to the influence of certain company-specific factors, among which the primary ones are the size of the company (Alfraih and Alanezi, 2011) and the firm's industry category (Hellstrom, 2006). Because of their strong relationship to the studied accounting parameters, business size and industry type were inserted into the regression model as control variables.

Board characteristics and value relevance of accounting information

In conducting this study, we acquired the data necessary to determine the effects of the presence of more women on the BoD, how influential royal family members could alter a company's corporate success profile, how family ownership and family board members could influence governance decisions and information flow, and the distinct advantages of government ownership on the value relevance of earnings and book value. The BoD is of signal importance to the success of any company, and its strength, creativity and ability to marshal human capital and knowledge resources are keys to the market valuation of the firm. The composition of the board is carefully considered by those whose job it is to monitor the quality of governance decisions, and this data is factored into their valuation model. Equation (2) below includes all the important board variables: number of women on the board, royal family influence, number of family individuals participating in running the board, and government control of the company, together with the earnings and book value:

$$P_{it} = \beta_0 + \beta_1 EPS_{it} + \beta_2 BVS_{it} + \beta_3 WOMEN_{it} + \beta_4 ROYAL_{it} + \beta_5 FAMILY_{it} + \beta_6 GOVSHIP_{it} + \epsilon_{it} \quad (2)$$

However, Equation (2) does not allow the relationships among these variables to be tested. Therefore, in order to confirm or reject the study hypotheses, an accounting model based on earnings and book value was utilized to evaluate the relative influence of BoD composition-number of women, percentage of royal family on the board, proportion of the board's directorship allocated to the owner's family, and the ratio of government shareholders to the total. The size of the company and its manufacturing or service type category were entered as control variables. The extended price model is encompassed by Equation 3:

$$\begin{aligned} P_{it} = {} & \beta_0 + \beta_1 EPS_{it} + \beta_2 BVS_{it} + \beta_3 WOMEN_{it} + \beta_4 ROYAL_{it} + \beta_5 FAMILY_{it} + \\ & \beta_6 GOVSHIP_{it} + \beta_7 EPS * WOMEN_{it} + \beta_8 EPS * ROYAL_{it} + \beta_9 EPS * FAMILY_{it} + \\ & \beta_{10} EPS * GOVSHIP_{it} + \beta_{11} BVS * WOMEN_{it} + \beta_{12} BVS * ROYAL_{it} + \beta_{13} BVS * FAMILY_{it} + \\ & \beta_{14} BVS * GOVSHIP_{it} + \beta_{15} LSIZE_{it} + \beta_{16} INDUS_{it} + \beta_{17} SERV + \epsilon_{it} \quad (3) \end{aligned}$$

Where:

P_{it} = stock price per share for firm *i* at time *t*, three months after the end of the fiscal year

EPS_{it} = earnings per share of firm *i* at time *t*

BVS_{it} = book value per share of firm *i* at time *t*

$WOMEN_{it}$ = number of women on the board *i* at time *t*

$ROYAL_{it}$ = number of royal family on the board *i* at time *t*

$FAMILY_{it}$ = ratio of family members to total number of directors on the board

$GOVSHIP_{it}$ = shares of government ownership held by the state divided by total shares

$LSIZE_{it}$ = natural logarithm of total assets of firm *i* at time *t*

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 service category, and 0 otherwise; (if both of these categories are zero then the firm is in the real estate category);

t = 2016 fiscal year

ϵ_{it} = other value relevant information

The main coefficients of interest are the interaction between women and earnings (β_7), royal family (β_8), family members (β_9), and government ownership (β_{10}); women and book value (β_{11}), royal family (β_{12}), family members (β_{13}), and government ownership (β_{14}).

There is a substantial body of evidence supporting the claim that the presence of female members on the BoD tends to significantly improve the clarity and content of corporate communications (Fernandez-Feijoo *et al.*, 2014). A positive link between the relative number of female BoD members and the value relevance of earnings and book value would be confirmed by significantly negative coefficients, (β_7) and (β_{11}). Previous research found that when royal family members were major shareholders in a company, they relied on their political connections for achieving financial goals and were not forthcoming in disclosing information to market participants (Chaney *et al.*, 2011). Therefore, we proposed a negative relationship between the proportion of royal family members on the BoD and the value relevance of earnings and book value, which would be confirmed by the negative coefficients, (β_8) and (β_{12}). The literature on corporate governance seemed to suggest that family-controlled firms were less likely to communicate complete accounting information to stakeholders, thus resulting in lower value relevance. Consequently, we posited a negative relationship between the higher proportion of family members on the board of directors for a family-owned company and the value relevance of earnings and book value. This would be supported by significantly negative and positive coefficients, (β_9) and (β_{13}), respectively. It was also hypothesized that due to the ease of access to borrowing, governmentally-owned companies would have less need to attract investors, leading to significantly lower pressure to furnish quality corporate information to outsiders. Therefore, we conjectured that a negative relationship existed between the proportion of government members serving on boards of directors and the value relevance of accounting information produced, which would be confirmed by negative coefficients, (β_{10}) and (β_{11}).

Results

Descriptive Statistics

Panel A of Table 1 shows the descriptive statistics for the dependent variable, stock price (*P*), together with the independent variables tested in the price models. The mean price per share of stock for the year 2016 was KD 0.270, and the price ranged from KD 0.020 to KD 2.520. The mean earnings per share during the study period was KD 0.020 and the mean book value per share was KD 0.220. The number of women members on the boards ranged from 0 to 2, with a mean of 0.19, suggesting that men dominated the BoDs of listed firms in Kuwait. The number of royal family members on the boards ranged from 0 to 3 with a mean of 0.230. In contrast, the percentage of family members on the boards varied from 0 to 71 per cent, with a mean of 15.5 per cent. The proportion of members indicative of government ownership ranged from 0 to 69 per cent, with a mean of 3.4 per cent. Lastly, the firms' size ranged from KD 14.34 to 21.85 million, with a mean of KD 18.00 million. This result was expected because financial firms were excluded from the analysis. Panel B of Table 1 presents the categories of the firms studied according to their listing on Kuwait Boursa as discussed earlier in Section 3.1.

Table 1
Descriptive Statistics of Variables

Panel A: Continuous Variables				
Variable	**Mean**	**Std. Dev.**	**Minimum**	**Maximum**
Stock Price (*P*)	0.27	0.36	0.02	2.52
Earnings Per Share (*EPS*)	0.02	0.03	-0.08	0.15
Book Value Per Share (*BVS*)	0.220	0.21	-0.01	1.61
Women (*WOMEN*)	0.190	0.47	0.00	2.00
Royal Family (*ROYAL*)	0.230	0.59	0.00	3.00
Family Member (*FAMILY*)	0.155	0.19	0.00	0.71
Government Ownership (*GOVSHI*P)	0.030	0.11	0.00	0.69
Firm Size (*LSIZE*)	18.000	1.33	14.34	21.85
N = 121				

Panel B: Dummy Variables				
Variable	**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
Real estate	35	28.9	28.9	28.9
Industrial	32	26.4	26.4	55.4
Service	54	44.6	44.6	100.0
Total	**121**	**100.0**	**100.0**	

Pearson correlations between independent variables are given in Table 2. No pair-wise coefficient appeared to exceed 0.8, which indicated no multicollinearity concerns (Gujarati, 2003).

Table 2
Bivariate Correlations between Independent Variables

Independent Variable	**EPS**	**BVS**	**WOMEN**	**ROYAL**	**FAMILY**	**GOV-SHIP**	**LSIZE**
Earnings Per Share (EPS)	1						
Book Value Per Share (BVS)	0.66**	1					
Women (*WOMEN*)	-0.33	0.051	1				
Royal Family (*ROYAL*)	0.16*	0.22**	0.33**	1			
Family Member (*FAMILY*)	0.12	0.32**	0.14	0.14	1		
Government Ownership (*GOVSHI*P)	0.10	0.05	0.19*	-0.06	-0.09	1	
Firm Size (*LSIZE*)	0.29**	0.41**	0.04	0.22**	0.19*	0.05	1

*, ** Correlation is significant at 0.05 and 0.01 levels, respectively (two-tailed).

Variance inflation factors (VIFs) were utilized to detect multicollinearity between independent variables. The VIFs ranged from 1.116 to 2.293 with a mean of 1.523, and this confirmed the absence of multicollinearity. Table 3 shows the VIFs for each of the explanatory variables.

Table 3
Variance Inflation Factors for Independent Variables

Independent Variable	**VIF**
Earnings Per Share (*EPS*)	1.861
Book Value Per Share (*BVS*)	2.293
Women (*WOMEN*)	1.255
Royal Family (*ROYAL*)	1.296
Family Member (*FAMILY*)	1.164
Government Ownership (*GOVSHI*P)	1.116
Firm Size (*LSIZE*)	1.306
IND_*INDUS*	1.739
IND_ *SERV*	1.677
Overall Mean VIF	1.523

Regression Results

Column 2 of Table 4 displays the results of regressing stock price on earnings and book value (Model 1)[(1)]. The results show that the model is statistically significant ($F = 48.674, p < 0.01$). The adjusted R^2 for the pooled cross-sectional regression of Model 1 demonstrates that earnings and book value jointly explained 66.5% of the variation in the stock price of Kuwait Boursa listed firms in 2016. Consistent with earlier research (Almujamed and Alfraih, 2020; Omran and Tahat, 2020; Alfraih, 2016b; Alfraih and Alanezi, 2011), Model 1 displayed considerable evidence that the corporate earnings and book value reported by Kuwait Boursa listed firms in 2016 played a significant role in equity valuation.

(1) To ensure that the regression results were not sensitive for firms with negative earnings (EPS) or Book values (EPS), a sensitivity analysis was conducted by excluding firms with negative measures. Inferences remain the same as those reported in the tables.

Table 4
Results of Regression of Price on Earnings, Book Value, and Board Characteristics

Dependent Variable: *Stock Price*			
	Model (1)	**Model (2)**	**Model (3)**
Variable	**Coefficient**	**Coefficient**	**Coefficient**
Intercept	-0.035	-0.041	0.042
EPS	2.720***	2.788***	0.419
BVS	1.048***	1.065***	1.776***
WOMEN		-0.027	0.085
ROYAL		-0.037	-0.001
FAMILY		0.042	0.158
GOVSHIP		-0.116	-0.334
*EPS*WOMEN*			0.002
*EPS*ROYAL*			1.267
*EPS*FAMILY*			13.641***
*EPS*GOVSHIP*			-0.773
*BVS*WOMEN*			-0.608*
*BVS*ROYAL*			-0.306*
*BVS*FAMILY*			-1.757**
*BVS*GOVSHIP*			1.562
LSIZE	-0.001	-0.001	-0.009
IND_*INDUS*	0.083	0.067	0.032
IND_ *SERV*	0.046	0.037	0.032
Adj. R^2	0.665	0.658	0.671
F-stat	48.674***	26.234***	19.968***
n	121	121	121

*, **, *** significant at the 0.10, 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 end of the fiscal year; $\mathbf{EPS_{it}}$ is the earnings per share of firm *i* at time *t;* $\mathbf{BVS_{it}}$ is the book value per share of firm *i* at time *t;* $\mathbf{WOMEN_{it}}$ is the number of women on the board of firm *i* at time *t*; $ROYAL_{it}$ is a number of royal member on the board of firm *i* at time *i*; $FAMILY_{it}$ is the ration of family member to total number of member on the board; $GOVSHIP_{it}$ is the shares of government ownership help by the state divided by total shares. $\mathbf{LSIZE_{it}}$ is the natural logarithm of total assets of firm *i* at time *t;* ; 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 services and $t = 2016$ fiscal year.

Column 3 of Table 4 (Model 2) shows the results of regressing stock price on earnings, book value, and board characteristics. Model 2 is highly significant (*F* =

26.234, $p < 0.01$) and explains 65.8% of the variation in the stock price of Kuwait Boursa listed firms in 2016. Although their coefficients were not significant ($p > 0.10$), the hypotheses that royal family members on the board and the fact of government ownership were associated with market value were supported, which was consistent with our predictions. This could be attributed to the nature of these members, which prevented them from becoming effective participants in board procedures. They might attempt to represent the government's policies, but the influence of royal family members and government ownership could be easily dominated by other members of the board such as the owner's family. The non-significant results observed for the presence of royal family members on the BoDs were consistent with the empirical study of Alfraih (2016a), in which the effectiveness of the board of directors' characteristics in mandatory disclosure compliance among Kuwait Boursa listed companies documented a negative, but non-significant association between the existence of ruling family members on the BoDs and the extent of corporate disclosure. The non-significant results observed for the presence of women led to rejection of our hypothesis. This finding is supported by Adams and Ferreira (2009), who showed that companies performed worse when the proportion of women on the board was higher. This conclusion could be attributed to the argument that too much board monitoring can decrease shareholder value.

In contrast to our expectations, we found that a higher proportion of family members on the board association with market value, but the coefficient was not significant. This could be grounds for rejecting our hypothesis. Although non-significant observation supported the report of Maseda *et al.* (2019) that family directors were likely to have greater incentive to enhance monitoring and accounting information quality, because in addition to linking their wealth with the company, family directors tended to maintain emotional ties with the owners of the family company.

In this study, the variables of interest were the interaction between women, royal family, family members, government ownership and earnings and book value. Column 4 of Table 4 shows the results of this investigation (Model 3). Again, the model is statistically significant ($F = 19.968$, $p < 0.01$) and explains about 67.1% of the variance. Furthermore, the predicted coefficient of book value was correlated with value ($p < 0.01$), but not with earning value where it appeared non-significant ($p > 0.10$). After controlling for firm size and industry category, the *EPS*FAMILY* coefficient was highly significant. This suggests that family firms tend to have greater motivation to provide higher firm value and earnings (Wang, 2006). However, when we tested for the *BVS*FAMILY,* the coefficient was statistically significant. This suggests that Kuwait Boursa listed firms with a higher proportion of family members offered more value-relevant earnings information and bad signals for book value. For *BVS*WOMEN and BVS*ROYAL*, the coefficients were statistically significant. This result might be attributable to the fact that women and royal family members on the board were not effectively involved in decision-making or that they were actually in such low numbers in Kuwait that their influence on the board's decisions was minimal. Column 4 of Table 4 shows that the coefficients of *BVS*GOVSHIP*, *EPS*WOMEN* and *EPS* ROYAL* were not significant. These findings could be considered to support the idea that family-controlled Kuwaiti-listed firms offered better value relevance for earnings information but not for book value. This also seemed to accord with the presence of a 'bad signal' for women board members as suggested earlier in this analysis.

Conclusions

The purpose of our study was to determine the relationship between certain compositional features of the BoDs of selected non-financial Kuwaiti firms and the value relevance of their accounting information. The parameters used in this evaluation that influenced corporate governance decisions were represented in a series of hypotheses, which included female board members, representatives of royal families, the presence of family members in directorship positions of family-owned companies, and government ownership on the board. Value relevance was determined by the regression of stock price on earnings and equity book values using Ohlson's (1995) valuation model.

Our data show that certain elements of the BoDs of firms on Kuwait Boursa resulted in greater value-relevance of their reported accounting information. The parameters associated with family-owned businesses were seen to deliver greater value relevance after controlling for size and industry. The inclusion of women on the board was found to correlate significantly with company value. In addition, the presence of members of the royal family on the BoDs significantly influence the value relevance of accounting information. In contrast, no significance was observed for the government board ownership on the value relevance of accounting information.

Contributions

The data presented here should help academics, policy makers, managers and other market participants to better understand the importance that women can play on the BoD when they are permitted to contribute in a meaningful way to the making of governance decisions. In the case of family-owned companies, the participation of family on the board can contribute to increasing the firm's value and earnings. Our results demonstrate a clear association between earnings and book value and price per share as indicators of the value of reported accounting information. Overall, our findings are useful for regulators seeking to improve corporate governance practices and accounting disclosure in the State of Kuwait and other emerging stock markets.

Practical Implications

This study contributes to the understanding of how gender-diversity and ownership structure of BoDs are linked to the value relevance of accounting information. One practical implication of this study is to make companies aware of corporate governance practices that have a significant influence on the value relevance of accounting information. This could attract more international funding.

Limitations and Future Research

The results of our investigation provide evidence for the conclusion that improving the composition of BoDs in specific ways can lead to clearer, more comprehensive, and useful corporate reporting. However, one does need to be aware of the possibility of certain limitations that could alter the applicability of the findings. The relatively small sample size of Kuwaiti firms is a drawback that was unavoidable given the limited number of firms listed on Kuwait Boursa. Also, because of lack of capacity, it was necessary to omit some potentially important aspects of BoDs such as the proportion of independent directors, the number and purpose of committees, and the number of minority stakeholders. Lastly, the study duration was only one year, and this needs to be extended to provide a more meaningful cross-section of data on the value relevance of earnings and equity book value. In spite of these potential drawbacks, our investigation has significantly contributed to the knowledge base with regard to the influence of BoD characteristics on market valuation. Our data point the way towards a number of important areas for future research such as the application of other models that can flesh out the picture in a broader and fuller way. Additional research could reveal significant new approaches for assessing other board elements including the proportion of independent directors, the types of board committees, and the inclusion of directors from outside the firm.

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مقاييس ملاءمة المعلومات المحاسبية: هل يعد عامل التنوع في الجنس والملكية في مجلس الإدارة من الأمور المهمة في حالة السوق الكويتي؟

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هدف الدراسة: تهدف الدراسة إلى معرفة إذا ما كانت خصائص مجالس إدارات الشركات المدرجة في بورصة الكويت تؤثر على قيمة ملاءمة المعلومات المحاسبية.

تصميم / منهجية / طريقة الدراسة: استخدمت بعض خصائص أعضاء مجالس الإدارات؛ مثل وجود الملكية العائلية والنساء وأفراد العائلة الحاكمة وممثلي الحكومة في مجلس الإدارة بوصف ذلك مؤشراً لفعالية حوكمة الشركات على مقاييس ملاءمة المعلومات المحاسبية. حسبت مقاييس ملاءمة المعلومات المحاسبية باستخدام قيم R^2 المعدلة المستمدة من الانحدار الخطي لسعر السهم وكل من ربحية السهم والقيمة الدفترية بناءً على نموذج التقييم Ohlson (1995).

عينة الدراسة وبياناتها: استخدمت الدراسة بيانات 121 شركة بالقطاع غير المالي مدرجة في بورصة الكويت لعام 2016.

نتائج الدراسة: تشير نتائج تحليل الانحدار الخطي إلى أن بعض خصائص مجالس إدارات الشركات المدرجة في بورصة الكويت ذات تأثير وأهمية أكبر لقيمة ملاءمة المعلومات المحاسبية، بعد التحكم في بعض المتغيرات، كحجم الشركة وقطاع الصناعة، وأشارت البيانات إلى أن الملكية العائلية أدت إلى تحسين قيمة مؤشر الربحية والتقييم العام لأسعار أسهم الشركات، ولكن ليس لمؤشرالقيمة الدفترية. الشركات الكويتية التي تضم عدداً أكبر من النساء في مجالس إداراتها كانت ذات تأثير أقل بكثير في القيمة الدفترية لأغراض تقييم أسعار أسهم الشركات. كما أن وجود أعضاء من العائلة الحاكمة وممثلين للحكومة بمجلس الإدارة له تأثير سلبي على القيمة السوقية.

أصالة الدراسة: تقدم هذه الدراسة أدلة تجريبية على أن بعض خصائص أعضاء مجلس الإدارة تزيد من قيمة ملاءمة المعلومات المحاسبية.

حدود الدراسة وتطبيقاتها: قدمت هذه الدراسة أدلة فقط لمجموعة محددة من خصائص أعضاء مجالس الإدارة؛ لذا يجب التحقق من الخصائص الأخرى ونماذج التقييم الأخرى. هذه الدراسة مفيدة للأكاديميين والمشرعين والمديرين وغيرهم من أصحاب المصالح ومتخذي القرار في السوق من خلال إظهار تأثير النساء الأعضاء في مجالس الإدارة لأجل الحوكمة الفعالة. الشركات المدرجة ذات الملكية العائلية تَزين مؤشر ربحية السهم لأغراض تقييم أسعار أسهم الشركات.

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