

Full Length Research Paper

Impact of internal audit function (IAF) on financial reporting quality (FRQ): Evidence from Saudi Arabia

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Accepted 1 September, 2011

This study examined the impact of the quality of the internal audit function (IAF), an integral part of corporate governance structure, on the financial reporting quality (FRQ) of all Saudi companies listed in the Saudi stock exchange (TADAWL) in 2009, excluding banks. Both secondary and primary information was collected through a matched survey and interview of internal and external auditors. The findings show weak association between IAF quality and FRQ. The findings imply that the listed firms merely use IAF to provide a symbolic conformity to capital market authority (CMA) regulations. For better internal control and global recognition, CMA needs to put in place more initiatives to increase the role of IAF on firms in Saudi Arabia. Considering the environmental factors of emerging institutions, this study added different insights on the issue of IAF and its role in FRQ in the oil-based economy of Saudi Arabia.

Key words: Internal audit, financial reporting quality, corporate governance, capital market authority, audit committee, the board of directors, Saudi Arabia.

INTRODUCTION

Recent financial scandals in the U.S. and other countries emphasize the importance of investors' confidence in financial reporting quality (FRQ) and the need for a

quality financial report to meet expectations of current and potential investors. Regulations have an important role, in that weak regulations could reduce the governance quality and FRQ, resulting in poor market efficiency. Studies on corporate governance (CG) in recent years have focused their attention to the role of maintaining the transparency and accountability of financial reporting. For example, introducing new acts of CG to improve FRQ (Cohen et al., 2008) and the improvement of quality of internal audit function (IAF) (Abdolmohammadi et al., 2006; Algerini et al., 2006; Cooper et al., 2006). In addition, researchers have documented an association between weak governance (such as the lack independence of the board, the lower quality of audit committee (AC), and the absence of an IAF) and the link to financial crises (Beasley et al., 2000; Dechow et al., 1996).

In general, CG provides a complete foundation to assist stakeholders to exercise their rights, protect their interests and mitigate potential conflicts between them and managers. In recent years, both developed and

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Abbreviations: IAF, Internal audit function; FRQ, financial reporting quality; TADAWL, the Saudi stock exchange; CMA, capital market authority; AC, audit committee; CG, corporate governance; SOX, Sarbanes Oxley Act; PCAOB, public company accounting oversight board; MCCG, Malaysian code of corporate governance; IA, internal audit; NYSE, New York stock exchange; DAC, discretionary accrual; SAS, statistical analysis system; GICS, global industry classification standard; NDAC, non-discretionary accruals; ACEXP, audit committee financial background; ACIND, audit committee independence; ACMEET, audit committee meeting; ROA, return on asset; EXTP, extreme performance; IIA, Institute of internal auditors; AUQLTY, audit quality; B-SIZE, board size; LEV, leverage.

developing countries have taken initiatives to continuously improve their system of CG to improve the quality of financial reporting and to recover investors' confidence in financial reports. For example, the USA introduced the Sarbanes Oxley Act (SOX) in 2002 and created the public company accounting oversight board (PCAOB) in 2004 to help improve CG practice. Malaysia developed the Malaysian code of corporate governance (MCCG) in 1999 and enforced it in 2001. In 2006, Saudi Arabia introduced reforms to enhance the CG of its companies. The objectives of the CG resolution were to enhance the efficiency of market mechanisms, build investor confidence, and to provide a mechanism to help in evaluating the performance of firms.

The CG system comprises of four cornerstones, including management, an external auditor, an AC, and internal audit (IA) (Gramling et al., 2004; Prawitt et al., 2009). The IAF is considered an effective function in new developments in governance structure, providing an important role in assessing internal control effectiveness. The CG reforms in many countries now give increasing importance to IAF to improve transparency and quality of financial reports. For examples, the SOX (2002) in the US required that management should report on the effectiveness of the internal control structure (SOX, section 404, 2002); In 2004, the New York stock exchange (NYSE) started requiring all listed companies to maintain an IAF; the PCAOB was created to assess whether companies were complying with recent regulations regarding CG; and the role of IAF to help external auditors to determine the extent, time, and the nature of audit tests (AICPA, 2008); and to detect and prevent fraud (AICPA, 2002). There is also evidence that IAF improves the control environment which would be reflected in an improved FRQ in terms of reducing reporting errors (Gordon and Smith, 1992) deter financial reporting irregularity (Schneider and Wilner, 1990) and enhancing investors' confidence in company oversight effectiveness and financial reporting reliability (Holt and DeZoort, 2009).

The role of IAF in improving FRQ is premised on the assumption that developments in legal and accounting systems are important factors that help enhance the quality of governance process and FRQ. In the case of Saudi Arabia, CG regulation is among a set of regulations adopted in recent years to enhance the efficiency of the capital market. IAF is a cornerstone in the CG system. It has become an important function that provides a pioneer role in governance quality and FRQ.

This study focuses on IAF as one component of the CG regulation adopted in Saudi Arabia. Specifically, this study examines the impact of the quality of the IAF on FRQ of listed Saudi non-financial companies. The key issue is to ascertain, first, whether the quality of IAF has improved in response to the introduction of a new regulations of CG and secondly, whether such

improvement (if any) is reflected in terms of higher FRQ. To date, there is no documented evidence on this issue on companies listed on the Saudi stock exchange (TADAWL), and this is the first study in Saudi Arabia that seeks to investigate the impact of IAF quality on the financial statements audit and FRQ. Specifically, it seeks to add new insights into the relationship between IAF and FRQ, and in particular whether IAF impacts FRQ in the presence of recent regulatory reforms on corporate governance in Saudi Arabia. The focus is not only on the impact of IAF on FRQ but also effectiveness of the reforms on the quality of CG of companies listed on the TADAWL.

A sample of 44 listed non-financial Saudi companies representing 43% of listed companies for fiscal year 2009 was analysed. IAF quality was measured by using a composite measure as employed in Prawitt et al. (2009) and using external audit standards to evaluate the quality of IAF. The composite measure was based on accumulating a set of individual components of IAF quality including IA proficiency, IA independence, and the quality of work performance. FRQ was measured using the absolute value of discretionary accrual (DAC) with a proposed negative relationship between the level of DAC and FRQ. Our results provide evidence that IAF quality does not significantly contribute to the FRQ. It was also found that the weak association between IAF and FRQ was due to the poor legal system in Saudi Arabia, in particular that pertaining to CG regulation. The results revealed that ownership pattern could be an important explanation for the findings as family companies, government-linked companies, and companies having few big owners constitute the majority of responding companies (75%). This ownership structure adversely affects the monitoring role of IAF and in turn affects its contribution to the audit and FRQ. Our results add to the field of knowledge as they provide evidence that CG practices, such as IAF, work differently in environments with special characteristics like Saudi Arabia, which has a less developed legal system and new CG regulations.

BACKGROUND AND EXPECTATIONS

In recent years and following the financial crises, the focus of attention has been moving towards IAF as an important factor in the structure of CG. IA, in relation to the task of organizational governance, provides a monitoring function to assess the effectiveness of control, risk management, and governance and to ensure the reliability of financial reporting (Carcello et al., 2005; Gramling et al., 2004). In this regard, research has documented that IAF is influenced by the relationship with the other CG components. For example, an effective AC has an important role in supporting the work of IAF and maintaining its quality (Beasley et al., 2000). Further,

the Institute of Internal Auditors (IIA) standards suggest that IA should report to the senior management in order to maintain IA independence (IIA, 2008).

Documented evidence indicates that IAF has a significant impact on FRQ in terms of detecting and preventing fraud (Church et al., 2001; Coram et al., 2008) and reducing the level of earnings management (Prawitt et al., 2009). Also, investors who have access to IAF reports are more confident of financial statements reliability than those who do not have access to the reports (Archambeault et al., 2008; Holt and DeZoort, 2009; James, 2003). Other evidence indicate that IAF plays an important role in completing the financial statements audit (Abdel-Khalik et al., 1983; Felix et al., 2001; Zain et al., 2006; Ward and Robertson, 1980), implying that IAF has an effective role in improving the audit quality and, in turn, FRQ.

Although, the evidence indicates the importance of IAF quality in influencing the quality of financial reporting, there has been little research on the link between IAF and FRQ. In a recent study, Coram et al. (2008) investigated whether organizations with IAF were more capable of detecting and preventing fraud than those without IAF. Their findings supported the hypothesis that organizations with an IAF were more likely to detect and prevent fraud than organizations that did not have an IAF. This suggests that IAF add value to their organizations in terms of improving internal control procedures and detecting and preventing fraud. Church et al. (2001) investigated the factors affecting internal auditors' considerations of fraudulent financial reporting. Their study found that IAs were sensitive to the factors causing fraud, implying that IAF can play a significant role in detecting and preventing fraud. It also found that as the experience of internal auditors increased, their sensitivity to fraud increased, thus suggesting that IAF has an important role not only in detecting but also in preventing fraud. Prawitt et al. (2009) looked at the effect of IAF on FRQ. They derived three attributes of the quality of IAF (that is, competence, objectivity, and reliability of IA work) based on external standards such as statistical analysis system (SAS) No. 65(AICPA, 2008) and created six individual criteria related to these three attributes of IAF quality. Unlike previous studies, their study used survey responses from the chief auditors' executives who had IIA membership and documented that IAF was associated positively with a moderation in the earnings management.

In this paper, we argued that the impact of IAF on FRQ is a function of three factors, namely: the proficiency of IA staff, IA independence, and IA work performance. In particular, competent staffs are able to identify internal control shortcomings and they are knowledgeable about the structure and system in the company, since they work in the company (Prawitt et al., 2009; Zain et al., 2006).

Furthermore, management might have less incentive to

aggressively manipulate earnings if they believe that a competent IAF is able to understand and detect earnings management (Prawitt et al., 2009). In this context, DeZoort, (1998), argued that inexperienced IA members of staff were not knowledgeable about the areas being audited; therefore, they neither identified the potential areas of fraud nor understood management's incentives for earnings manipulation. Further, an internal auditor is more familiar with the firm's structure and accounting information system than an external auditor, and this enhances an internal auditor's experience regarding the potential areas of fraud. Independence, on the other hand, is another critical factor that enables staff to report all material cases they detect without any fear even if they disclose the faults of management itself.

It is well accepted that the quality of performance including adequate resources, clear policies and procedures, and a comprehensive plan of IA help enhance the quality of work leading to higher overall audit quality. If the quality of IAF declines, the probability of internal control faults could increase, leading to a decrease in the quality of financial reporting. In contrast, if the quality of IAF increases, the probability of internal control faults would probably decrease leading to an increase in the quality of financial reporting. Therefore, we expect a significant positive relationship between IAF quality and FRQ.

METHODOLOGY

Sample and data

The sample frame included all Saudi companies listed in TADAWL in 2009, excluding banks. Secondary sources, including company's annual reports and other additional sources such as data stream and TADAWL, the official site of Saudi stock exchange, were used to provide data on the dependent variable FRQ. Completed questionnaires were received from 44 companies representing 43% of listed non-financial companies. The purpose of the questionnaires was to provide the perception of internal and external auditors on IAF quality in Saudi listed companies. In addition, this study used interviews to test the survey and to fill any gaps in the data and to enhance the quality of the variables' specification. Interviews were conducted with 27 internal auditors and 13 external auditors. For the purpose of using the cross-sectional version of the modified Jones model, samples included all TADAWAL companies in 2009 excluding banks. The TADAWAL classification system was adopted to analyse the sample by sectors; however, in some cases, the global industry classification standard (GICS) was used to increase the sample size. The final sample comprised seven industries constituting four sectors.

Measurement of variables

Financial Reporting Quality (FRQ)

Among accounting-based measures of FRQ, accrual earnings quality is very significant in reflecting the performance of a firm and,

therefore, in producing relevant financial reporting. Hence, this study used accrual-based earnings to examine the impact of IAF quality on FRQ. In terms of measures of accrual, the absolute value of the residual (also called unsigned discretionary accrual), the signed residual, and the error in predicting future cash flow are three measures of accrual-based earnings. The absolute value of the accrual has a negative association with FRQ, implying that when the absolute value increases, the magnitude of earnings management increases and the FRQ decreases. Since this study used two sets of data sources (that is, a questionnaire and annual reports) for a one-year observation (2009), the cross-sectional version of the modified-Jones was employed. Following Davidson et al. (2005), the cross-sectional version of the modified-Jones model (DeFond and Jiambalvo, 1994; Bartov et al., 2000) was used. Under this model, the level of DAC for a particular firm was calculated as the difference between the firm's total accruals and its non-discretionary accruals (NDAC).

Internal audit function (IAF) quality

A composite measure of IAF quality was used instead of the individual quality components as employed by Prawitt et al. (2009). In the first stage, we created the individual measures of IAF quality. IAF quality was measured by using three attributes as employed in prior studies (e.g. Arena and Azzone, 2009; Al-Twajry et al., 2004; Prawitt et al., 2009; Zain et al., 2006). The first attribute is proficiency and due care. Proficiency represents the knowledge, skills, and other competencies needed to perform individual responsibilities, whereas due professional care is defined as applying the care and skill expected of a reasonably prudent and competent internal auditor (IIA, 2008). Educational background, professional qualification, continuing professional development, IA experience in auditing, and knowledge of computer assisted audit programs are the five items used to measure proficiency and due professional care. The second attribute is independence. Independence is defined as the freedom from any intervention in IA activities that might confound the nature of the audit work, such as restricting the scope of the audit. Six items were adopted for this dimension including the frequency of attending meetings of the Board, ability to assess the necessary information, non-involvement in jobs other than auditing, non-involvement in installation or design of IA procedures, reporting to the AC or the Board, and possessing the authority to remove or assign the chair of IA as the authority of AC.

Performance of IA work is the third attribute of IAF quality. Performance of IA work is defined, consistent with Margheim (1986), as the nature and extent of the IA assignment performed. The quality of work performance was measured by several items, including the IA report, IA scope, working papers, IA size, and management's response to IA reports, the percentage of time employed by IA on risk assessment, control, governance and consultation activities, and finally internal periodic review to measure quality assurance. At the second stage, we created a composite measure of IAF quality. Each dimension of IAF quality was defined by using a dummy variable taking "1" if the value was above the sample mean, and "0" if the value was below the value of the mean. Then the composite measure of IAF quality was created by taking the sum of the score of individual quality components. The new measure potentially takes values ranging from 0-4. The values closer to four indicate higher IAF quality, while values closer to zero indicate lower IAF quality.

Model specification

A regression model was used to examine the impact of IAF quality

on the FRQ. The model was specified as follows:

$$DAC = \beta_0 + \beta_1 IAQ + \beta_2 ACIND + \beta_3 ACSIZE + \beta_4 ACEXP + \beta_5 ACMEET + \beta_6 LEV + \beta_7 BSIZE + \beta_8 AUQLTY + \beta_9 ROA + \beta_{10} EXTP + \beta_{11} SIZE + \beta_{12} LOSS + e$$

Where, DAC is the absolute value of discretionary accrual as it is measured by cross-sectional version of the modified-Jones model, IAQ is the sum of the score of individual quality components, individual quality components is dummy variable ("1" if value is above the sample mean; "0" if it is below the value of mean), ACIND is a dummy variable with a value of 1 if the AC is comprised of a majority of non-executive directors and 0 otherwise, ACSIZE is the number of directors assigned to the AC, ACEXP is dichotomous variable (1=AC had a member with accounting or finance expertise; 0= otherwise), ACMEET is dichotomous variable (1=AC met 4 times or more/year; 0= otherwise), LEV is the ratio of total liabilities to total asset, B-SIZE is the total numbers of board members, AUQLTY is audit firm size, measured by "1" if company belongs to Big4, "0"= otherwise, ROA is return on asset measured by net income before tax divided by total asset, EXTP is extreme performance measured by dichotomous variable; "1" if the company is within the outliers of $\pm 10\%$ of the sample for performance and "0" if otherwise, SIZE is company size measured by the natural log of total asset, LOSS is dichotomous variable (1= net income below zero; 0= net income above zero).

Control variables

Several variables were used to control the effect of confounding factors. Audit committee size, (AC SIZE), audit committee financial background, (ACEXP), audit committee independence, (ACIND), and audit committee meeting, (ACMEET), were added in the regression model. The expected direction of the relationship between these variables and the absolute value of DAC was negative (Kent et al., 2010; Prawitt et al., 2009). Leverage (LEV) was measured by the ratio of total liabilities to total assets (Beasley and Salterio, 2001; Davidson et al., 2005; Klein, 2002). The current study, in line with previous studies, expected to find a positive relationship between LEV and the absolute value of DAC, implying that it is negatively associated with FRQ. Company size (SIZE) was measured by the natural log of total assets (Beasley et al., 2000; Davidson et al., 2005). Consistent with previous studies the current study expected a positive relationship between size and FRQ. Board size (B-SIZE) refers to the total number of board members (Xie et al., 2003; Zahra and Pearce, 1989). The current study, in the light of prior studies did not propose any direction for the effect of B-SIZE on FRQ. Audit quality (AUQLTY) refers to the quality of audit firms as measured by audit firm size (1=Big 4; 0= non-Big 4). The current study, in line with prior studies (Kent et al., 2010; Prawitt et al., 2009) expected a positive relationship between FRQ and audit quality implying that as audit quality increases, the FRQ increases. Performance (ROA) was measured by return on asset (ROA), as obtained by dividing net income before interest and tax items on the total asset (Prawitt et al., 2009). The current study, in line with previous studies, expected a negative relationship between performance and DAC, implying that a company experiencing a higher performance would have lower amount of DAC and higher FRQ. Extreme performance (EXTP) was adopted to alleviate the probability that the modified Jones model might provide biased estimates of discretionary accrual when companies experience extreme performance (Davidson et al., 2005). This variable was measured by using a dummy variable that was coded "1" if the firm's performance fell within the outliers of $\pm 10\%$ of the sample for

Table 1. Descriptive statistics for estimated regression coefficients
 $TAC_{ijt} / A_{ijt} - 1 = \alpha_j [1/A_{ijt} - 1] + \beta_{1j} [\Delta REV_{ijt} / A_{ijt} - 1] + \beta_{2j} [PPE_{ijt} / A_{ijt} - 1] + \varepsilon_{ijt}$

| Cash-flow approach \square | SD | MAX | MIN | MEDIAN | MEAN |
|------------------------------|------------|----------|----------|-----------|----------|
| coefficient | 19,911.414 | 36,852.8 | -7,330.2 | 192.09650 | 7,476.69 |
| t- statistic | 0.605881 | 0.762 | -0.711 | 0.04000 | 0.03275 |
| coefficient | 0.104 | 0.206 | -0.022 | 0.010 | 0.051 |
| t- statistic | 0.548276 | 1.123 | -0.111 | 0.24550 | 0.37575 |
| coefficient | 0.0685 | 0.070 | -0.088 | -0.036 | -0.0225 |
| t- statistic | 6.341377 | 0.633 | -12.726 | -0.44650 | -3.2465 |
| R ² (%) | 37.2663 | 90.6 | 13.3 | 17.650 | 0.35 |

\square Cash-flow approach: $TAC_t = EBEXI_t - CFO_t$, Where $EBEXI_t$, earnings before extraordinary items for period t , CFO_t , cash flow from operation for period t , TAC_{ijt} , total accruals for firm i in industry j in year t , ΔREV_{ijt} , change in revenue for firm i in industry j between year $t-1$ and t , PPE_{ijt} , gross property, plant and equipment for firm i in industry j in year t ; $A_{ijt} - 1$, total asset for firm i in industry j .

performance (measured by net income divided by total asset), and "0" if the situation was otherwise. Loss (LOSS) was used to capture the incentive for management to increase the earnings when firms experience loss. The expected sign for loss was positive, implying that when loss increases, DAC also increases and FRQ decrease (Prawitt et al., 2009).

RESULTS

Table 1 presents descriptive statistics for variables in regression model. The α_1 coefficient (change in revenues) was on average, positive, as expected and the α_2 coefficient (property, plant, and equipment) was negative, as expected. The two results implied that the model is well specified. The mean R square was .35 which indicates that the two independent variables were able to explain 35% of the variance in the level of DAC. The α_1 coefficient ranged from -.02-.206, with a standard deviation of .104, while α_2 coefficients ranged from -.088-.07, with a standard deviation of .06 indicating small dispersions in the models' coefficients and precision of the estimates as specified by Bernard and Skinner (1996).

Table 2 displays the descriptive information for the variables used in the calculation of DAC. As presented in Panel A, the average of the total asset was SR 8.961b net income before extraordinary items of SR 433.747 M; and cash flow from operations was SR 1.059 b. In terms of explanatory and control variables used in the model, IA quality achieved a mean value of 1.88, indicating that the level of IA's quality was low; the median number of board members per company was 9, indicating that the size of the board was large in most responding companies. The median number of AC members per company was three. Panel C shows that 56 per cent of the companies used a Big-4 audit company as external auditor; 16% of companies registered extreme earnings performance; 12% of

companies experiencing loss during 2009. In 74% of companies, the frequency of AC meetings was about 4 times or more per year. Most (95.3%) of ACs working in Saudi listed companies were made up of a majority of non-executive directors. In 97.7% of the ACs, at least one member had financial expertise. Interestingly, the results revealed that Saudi listed companies exercised earnings management both positively and negatively, with ratios between -21 and 17% indicating poor FRQ in responding companies.

The correlations between the variables included in the model are included in Table 3, and the results indicated that the variables were not highly correlated to each other.

Table 4 presents the result of the regression model. The overall model was significant ($p < .0001$), with adjusted R square of .529. Standard regression diagnostics were performed and the result revealed that the multicollinearity, auto-correlation, and heteroskedasticity were within an acceptable limit (Coakes and Stead, 2007). The results revealed that IAF quality, defined by a composite measure, was not significant at the five per cent level of significance ($p = .239$). This finding is consistent with those of Davidson et al. (2005) who found that IAF was not related to a reduction in the level of earnings management in a situation of voluntary establishment of IAF in Australian listed companies. The finding is also consistent with that of Prawitt et al. (2009) who found that IAF was not significantly related to a reduction in positive abnormal accrual. However, the result is not consistent with the argument of agency theory that IA is an innate monitoring function that can be used to reduce agency cost and mitigate asymmetry information problems. Thus, it should be improved to enhance the quality and credibility of financial reporting. The findings showed that Saudi listed companies exercised earnings management both positive and negative earnings management ranging from -21 to 17%.

Table 2. Descriptive statistics for the model.

| Panel A: Financial variable | | | | | |
|--|-------------|-------------------|------------|---------------|-------------|
| Variable | SD | MAX | MIN | MEDIAN | MEAN |
| Total asset (000) | 2559000 | 166090974 | 70415 | 1592636 | 8961282 |
| Net income(before extraordinary items (000) | 1,666,573 | 12,130,368 | -3,099,349 | 76,517 | 433,747 |
| Cash flow from operations(000) | 3,776,844 | 25,161,768 | -11,939 | 140,574 | 1,059,166 |
| Total accrual(000) | 0.14347 | 0.19 | -1.03 | -0.0477 | -0.0685 |
| Discretionary accruals. | 0.08233 | 0.17 | -0.21 | -0.0250 | -0.0289 |
| Panel B: Continuous regression variable | | | | | |
| DAC | 0.053 | 0.21 | 0.00 | 0.0525 | 0.0683 |
| IAQ | 1.26 | 4 | 0 | 2 | 1.81 |
| ACSIZE | 0.655 | 4 | 2 | 3.00 | 3.37 |
| LEV | 0.198 | 0.72 | 0.05 | 0.2820 | 0.3328 |
| B-Size | 1.43 | 12 | 6 | 9.00 | 8.52 |
| ROA | 0.087 | 0.31 | -0.15 | 0.063 | 0.0721 |
| Size | 1.58 | 18.93 | 12.14 | 14.60 | 14.87 |
| Panel C: Dummy regression variables | | | | | |
| | Firm | Percentage | | | |
| EROA | 7 | 16 | | | |
| AQUALITY (BIG 4) | 24 | 56 | | | |
| ACMEET (frequency of meeting 4 times or more) | 32 | 74 | | | |
| LOSS (number of companies achieving losses) | 5 | 12 | | | |
| ACIND (number of companies with majority of non-executive-directors) | 41 | 95.3 | | | |
| ACEXP (number of AC with financial expertise) | 42 | 97.7 | | | |

Table 3. Correlation matrix.

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) |
|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|-------------|
| DAC(1) | 1.00 | -0.27 | -0.16 | -0.20 | -0.23 | -0.19 | 0.31 | -0.02 | -0.18 | -0.05 | 0.36 | -0.02 | -0.14 |
| IAQ(2) | | 1.00 | -0.12 | 0.23 | 0.10 | 0.14 | 0.35 | -0.02 | 0.51 | -0.04 | 0.01 | 0.36 | -0.11 |
| ACIND(3) | | | 1.00 | 0.13 | -0.03 | -0.12 | 0.32 | 0.16 | -0.20 | 0.06 | 0.10 | -0.19 | -0.08 |
| ACSIZE(4) | | | | 1.00 | 0.09 | 0.10 | 0.02 | -0.09 | 0.08 | 0.08 | 0.14 | 0.02 | 0.10 |
| ACEXP(5) | | | | | 1.000 | 0.01 | 0.06 | -0.05 | 0.17 | -0.13 | 0.07 | 0.15 | -0.06 |
| ACMEET(6) | | | | | | 1.00 | -0.10 | 0.06 | 0.09 | -0.22 | 0.01 | 0.13 | 0.05 |
| LEV(7) | | | | | | | 1.00 | -0.09 | 0.55 | -0.22 | -0.07 | 0.49 | -0.18 |
| B-SIZE(8) | | | | | | | | 1.00 | 0.11 | -0.07 | -0.03 | 0.28 | -0.02 |
| AUQLTY(9) | | | | | | | | | 1.00 | -0.10 | 0.01 | 0.39 | -0.03 |
| ROA(10) | | | | | | | | | | 1.00 | 0.17 | -0.05 | 0.48 |
| EXTP(11) | | | | | | | | | | | 1.00 | -0.11 | -0.43 |
| SIZE(12) | | | | | | | | | | | | 1.00 | 0.02 |
| LOSS(13) | | | | | | | | | | | | | 1.00 |

Note: Variables are as defined in the model specification in the text.

indicating to the lack of CG practices. Of the five added variables, two variables were significant: AC experience and loss were found to be significant at the ten per cent level ($p = .062$ and $p = .026$, respectively). This finding is

consistent with those of Alsehalhi (2006) who found that Saudi companies tend to practice earnings management when experiencing losses, and of Prawitt et al. (2009) who found that loss is significantly associated with an

Table 4. Regression Result (the absolute value of DAC is the dependent variable).

| Model | Expected sign | Coefficient | Standardized coefficient | t- ratio | Significant level | VIF |
|-------------------|---------------|-------------|--------------------------|----------|-------------------|------|
| (Constant) | | 0.155 | | 1.90 | 0.067 | |
| IAQ | - | -0.007 | -0.161 | -1.20 | 0.239 | 1.61 |
| ACIND | - | -0.024 | -0.096 | -0.808 | 0.425 | 1.25 |
| ACSIZE | - | -0.016 | -0.193 | -1.67 | 0.106 | 1.20 |
| ACEXP | - | -0.076 | -0.218 | -1.94 | 0.062 | 1.12 |
| ACMEET | - | -0.003 | -0.144 | -1.19 | 0.244 | 1.31 |
| LEV | + | 0.179 | 0.666 | 4.12 | 0.000 | 2.33 |
| BSIZE | ? | 0.004 | 0.100 | 0.818 | 0.420 | 1.33 |
| AUQUALTY | - | -0.046 | -0.432 | -2.94 | 0.006 | 1.92 |
| ROA | - | -0.177 | -0.295 | -1.91 | 0.066 | 2.13 |
| EXTP | ? | 0.098 | 0.683 | 4.75 | 0.000 | 1.84 |
| SIZE | - | -0.002 | -0.063 | -0.437 | 0.665 | 1.84 |
| LOSS | + | 0.064 | 0.389 | 2.35 | 0.026 | 2.46 |
| Adjusted R Square | | 0.529 | | | | |
| F value | | 4.932 | | | | |
| P-value | | 0.0001 | | | | |
| N | | 43 | | | | |

*P-values are one tailed when direction of coefficient is as predicted. Note: Variables are defined as shown in model specification in text. Case 37 was considered an outlier, hence it is excluded from the sample.

increase in the level of earnings management.

For the other control variables, LEV, the use of a Big 4 auditor (AUQUALTY), and EXTP were statistically significant ($p = .000$, $p = .006$, and $p = .000$, respectively). The coefficient of leverage was positive as predicted, implying that when standard deviation of LEV increases by one unit, the earnings management increases by .18 units. This result is consistent with the studies of Alsehali (2006) and Davidson et al., (2005). The relationship between audit quality and earnings management was negative, implying that the use of Big 4 audit firms by Saudi listed companies is significantly related to a reduction in the level of earnings management. This result is consistent with prior studies (Kent et al., 2010; Prawitt et al., 2009).

However, performance was found to be significant at the 10% level of significance ($p = .066$). For the remaining control variables (AC independence, AC size, meetings with AC, company size, and B-SIZE), the results were not in concurrence with those of previous studies (Davidson et al., 2005; Kent et al., 2010; Prawitt et al., 2009). The difference may reflect the poor regulatory environment in Saudi Arabia compared to that found in advanced countries such as the USA and Australia.

DISCUSSION

The result of this study revealed that IAF quality did not have a significant impact on the FRQ. The weak

association between IAF quality and FRQ might be due to the combined factors of an inadequate legal system and poor CG practices. This reasoning is attributable to institutional theory. Daily et al. (2003) argued that institutional theory and agency theory complement each other. Thus, the findings of this study might also be interpreted in the light of institutional theory. Agency theory suggests that control of ownership and various attributes of the boards, AC, and external and internal auditors are important factors in aligning management objectives with those of the owners (Kalbers, 2009) and protecting the owners from the opportunistic behaviour of managers. However, institutional theory suggests that an organization tends to be confirmed through institutionalized rule (in other words, modelled by cultural, political, and social forces) to increase its legitimacy and survival prospects (Meyer and Rowan, 1977). The current study provided evidence supporting institutional theory based on the Saudi corporate context to explain the weak relationship between IAF and FRQ found in Saudi listed companies. Among the evidence are the points that follow.

Respondents indicated that the capital market authority (CMA) plays a vital role in creating IA in most responding companies. However, beyond this role, respondents argued that CMA needs to adopt more procedures to improve the implementation of IAF, not just to create it. Respondents also noted that CMA needs to follow up its activities with respect to AC and IAF since some companies merely follow the form and not the spirit of the law; they set up an IAF and an AC simply because they

are imposed by law.

From an institutional theory perspective, the relationship between output-production is ambiguous. Since this relationship is difficult to measure, government (in this case, CMA) uses a simple measurement which is in conformity to institutionalized rule (that is, to Form 8) rather than measuring the quality of IAF itself. This leads companies to create a highly institutionalized situation in order to be legitimized and to survive. It is vital that CMA should consider aspects, creating and improving IA to prevent IA becoming merely an empty shell.

From an institutional theory perspective, organizations tend to adhere to the formal external structure, while keeping their own internal structure intact. This would create a decoupling dilemma, the detachment between what is disclosed formally and what is known informally (Meyer and Rowan, 1977). In 2009, CMA required each company to fill up "Form 8", in which companies are required to disclose whether they have implemented the provisions relating to corporate governance or not. Article 14 of the CG regulations requires that the AC should hold the responsibility to supervise and review IA activities. In turn, each company should disclose whether the AC has applied the provision relating to the review and supervision of IA activities. The findings revealed that Saudi listed companies tend to adhere to the formal external structure, while maintaining their existing internal structure. For instance, although, IA is externally connected to AC, management is the real player in this connection as IA reporting is passed to management first for approval before sending reports to the AC, thus introducing another element into the IA and reducing its independence and its role in improving FRQ.

On the other hand, the personnel interviewed, specifically external auditors, claimed that the AC's role is not sufficient to support IA, which has a negative impact on IAF quality and its influence on FRQ, and they offered some explanations for their opinion. First, low compensation for members of the AC has a negative effect on two aspects: (1) the composition of the AC; low compensation can lead to using low qualified directors within the AC team. (2) The output of the AC: Members of the AC need to work hard; unless they are recompensed with sufficient reward, the committee might not produce a good result. A second point raised was the competencies of the AC members. Interviewees claimed that the AC focuses only on financial functions; since they do not have non-financial expertise, members do not interact easily with the IA. According to this view, the AC should consist of members with experience in areas such as information technology (IT), engineering, and other non-financial aspects to be able to deal with the range of issues included in the IA report. Interviewees noted that the two directors (apart from the director with financial expertise) often play no effective role in the discussions with IA. The limited physical presence of the AC

members was another matter of concern. Interviews revealed that the AC is not directly involved in IA work. Any intervention by the company reduces the effectiveness of AC in supporting IA work. Finally, the independence of the AC was also questioned by interviewees. The inclusion of independent members in the AC is questionable since the chief of the AC is not independent, and other members are nominated by the Board. These factors are indirectly associated with reducing the effectiveness of the AC in supporting IA, leading to weak IA functions and, in turn, a limited contribution from the IAF to the FRQ.

However, as was apparent in the interview evidence, respondents believed that the boards of their companies were composed of unqualified directors who were not aware of the role of IA in an organization. In addition, interviewees revealed that the directors did not have time to concentrate on the work and understand it. This reduces their effectiveness in supporting monitoring activities including IA (Bathala and Roa, 1995) and leads to the use of unqualified staff, in some cases only one staff member in the IA, purely to meet CMA requirements. From the perspective of institutional theory, companies tend to convey symbolic conformity to values in order to avoid external inspection and evaluation (Meyer and Rowan, 1977; DiMaggio and Powell, 1983). This evidence explains why the IA in most Saudi listed companies consists of unqualified staff with respect to IA, and in many cases merely a single person, to express symbolic conformity to CMA regulation and avoid inspection.

Finally, the findings revealed that family companies, government-linked companies, and companies having a few large owners constitute the majority of responding companies (75%). From an agency perspective, these kinds of companies are controlled by a few controlling shareholders who tend to discourage professionalism and use cost as a measurement criteria of IAF quality. From an institutional theory perspective, conformity to institutionalized rules often conflicts sharply with the quality of output. This explains why companies use unqualified staff with an external audit background in the IA department, which ultimately saves costs but conflicts with the objective of achieving IAF quality. On the other hand, this finding might be due to the fact that shareholders have little interest in FRQ, especially in Saudi Arabia where CG mechanisms are weak.

In conclusion, the weak legal system and in turn poor CG practices as illustrated by the four areas of significance suggested by institutional theory are the main evidence explaining the weak impact of IAF on FRQ in listed non-financial Saudi companies.

CONCLUSION AND RECOMMENDATIONS

The current study examined the impact of IAF on FRQ in

Saudi listed companies. Overall this study did not find any significant contribution from IAF to FRQ. The weak association between IAF quality and FRQ might be due to the combined factors of an inadequate legal system and poor CG practices. This study provided evidence supporting institutional theory based on Saudi corporate sector. Although, the CMA has a role in creating IAF in Saudi Arabia, currently most of Saudi listed companies showed that IAF is used to provide a symbolic conformity to CMA regulations. CMA has to initiate more effective mechanisms to improve the IAF function for listed firms. Finally, ownership structure adversely affects the monitoring role of IAF and in turn affects its contribution to FRQ. 75% of the sampled firms in this study were family and government linked companies and companies having few big owners.

This study potentially makes several contributions to theory and to practices, and has implications useful for regulators. The study provides evidence to support the use of institutional theory in developing countries such as Saudi Arabia as a viable means of understanding the weak influence of IAF on FRQ. The results of this study suggest the role of the legal system (in this case, the CMA in contributing to the strength of governance quality and FRQ need to be revisited. Though IAF is implicitly mentioned in the CG Act, it is recommended that CMA formulates specific rules relating to IAF. In this regard, it is suggested that, for example, IA reports be presented in the company's General Assembly. Further, company boards of directors should include financial experts who are able to provide sufficient support to IAF and to understand IA reports and provide appropriate responses to recommendations made in the reports. Finally, the findings suggest that CG practices, such as IAF, work differently in Saudi Arabia that has its own peculiar characteristics compared to other emerging economies.

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