





“How enterprise risk management mediates the relationship between board size and corporate social responsibility: Evidence from GCC Islamic banks”

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HOW ENTERPRISE RISK MANAGEMENT MEDIATES THE RELATIONSHIP BETWEEN BOARD SIZE AND CORPORATE SOCIAL RESPONSIBILITY: EVIDENCE FROM GCC ISLAMIC BANKS

Abstract

Corporate Social Responsibility is a crucial aspect of a company's strategic plans. Stakeholders prioritize the social and environmental impacts of a company's operations in their decision-making process regarding its performance. This has encouraged companies to begin voluntarily reporting annually on the social and environmental impacts of their businesses, which has become widely known as Corporate Social Responsibility Disclosure. The purpose of this study is to investigate the relationships between board size, enterprise risk management, and corporate social responsibility disclosure in Islamic banks listed on GCC stock markets. It also explores the role of enterprise risk management as a mediating variable in the relationship between board size and corporate social responsibility disclosure. The results show that larger board sizes are positively significant to increased corporate social responsibility disclosure and enterprise risk management using the fixed-effect regression analysis. Specifically, enterprise risk management completely mediates the linkage between board size and corporate social responsibility disclosure. Indeed, this positive relationship between the size of a board and enterprise risk management reinforces the argument from practice that larger boards provide better oversight of the management of risks. The robust enterprise risk management framework equips banks in a better position to identify social and environmental risks to the business and, consequently, contribute to more transparent corporate social responsibility disclosures. Thus, the larger boards are important for effective risk management and more transparency on issues of corporate social responsibility, which can improve the organization's reputation and strengthen stakeholder confidence.

Keywords

corporate governance, social responsibility, disclosure,
board size, risk management, fixed effect, Gulf
Cooperation Council, Islamic banks

JEL Classification

G21, G32, G34

INTRODUCTION

Corporate Social Responsibility (CSR) is a key component of corporate strategy, with corporations actively incorporating social and environmental issues into their operations. Today, CSR is crucial to a company's public image, long-term viability, and stakeholder relationships. Simultaneously, Corporate Social Responsibility Disclosure (CSRD) is critical for firms to transparently communicate their CSR initiatives and impact on society and the environment. Stakeholders are increasingly demanding this transparency, seeing CSR as a critical indicator of ethical company operations and good governance.

The size of a company's board of directors is an important aspect in determining its CSR. A larger board is frequently associated with greater diversity of perspectives, knowledge, and supervision, which can improve decision-making and governance, particularly in the context of CSR. The association between board size and CSR is receiving increased attention in the subject of corporate governance. Nevertheless, the direct relationship between board size and CSR has remained complicated and multidimensional. In this scenario, Enterprise Risk Management (ERM) arises as an important mediator who may impact how board size affects CSR. ERM is a comprehensive approach to identify, evaluate, and manage risks throughout a company to ensure that board actions fit with the institution's financial interests as well as its ethical and environmental responsibilities.

This study examines the associations between board size, ERM, and CSRD in GCC Islamic banks, which have their own operational and cultural context. Islamic banks, which are distinguished by Shariah governance, ethical obligations, and risk-sharing arrangements, present a suitable setting for studying the impact of board size and ERM on CSRD. These banks are well-known for their resilience during financial crises, and they foster stability through risk-sharing methods and less reliance on debt. CSR has also seen a gradual involvement of the Islamic banking sector, which has supplemented its initial focus with more social responsibility in its strategies.

1. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

In this study, three main theories were utilized to drive the four hypotheses. The first is the agency theory, which argues that companies with robust directing structures will influence managers to release more financial and non-financial information to reduce agency costs and information asymmetry (Bandara et al., 2018). The second theory utilized in this study is the signaling theory. According to this theory, information delivered by the companies is the main determinant of investors' decisions, and the credibility of this information is crucial to both the company and the investors (Harun et al., 2020). Lastly, stakeholder theory argues the companies' operations are influenced by the management's efforts to try and meet the societal and stakeholders' expectations by providing voluntary information aimed at enhancing the company's image (Alotaibi & Hussainey, 2016; Farook et al., 2011). Together, different combinations of these three theories will form the foundations for the theoretical framework in the following sections.

The board of directors is a fundamental corporate governance mechanism in any organization (Hermuningsih et al., 2020), as the size of the board reflects the total number of these directors. Accordingly, the number of executives sitting on

the board will influence the board's monitoring performance (Raheja, 2005). Hence, according to the agency theory, as the monitoring level increases, companies will tend to reduce the information asymmetry between managers and stakeholders by disclosing more voluntary information, including CSR information (Ridwan & Mayapada, 2022). Additionally, based on signaling theory, companies with strong monitoring mechanisms will seek to disclose more information to their shareholders to allow them to make more informed decisions (Harun et al., 2020).

Previous research indicates that larger boards in Islamic banks are associated with higher corporate social responsibility disclosure (Harun et al., 2020; Hussain et al., 2021; Ali et al., 2022). On the other hand, some studies argued that large boards will lead to slow decision-making processes and increased disagreements within the board; hence, it will either have no significant impact or negatively impact the level of CSRD in Islamic banks (Bukair & Abdul Rahman, 2015; Ridwan & Mayapada, 2022).

To summarize, the board size has a substantial impact on corporate governance, affecting monitoring efficacy and transparency. As a result, efficient oversight procedures not only reduce information asymmetry but also increase transparency, allowing for better decision-making and sustaining trust in the company.

Enterprise Risk Management (ERM) refers to a mechanism used to measure and control risks that can impact the firms' value (Ali et al., 2019). In other words, ERM helps in developing strategies that protect a company's value from any risk events that could prevent it from achieving its goals (Jabbour & Abdel-Kader, 2015). Accordingly, the presence of an ERM mechanism at a company is aimed at, based on the stakeholder theory, working for the welfare of its stakeholders and indicates to shareholders that the company is well managed; therefore, based on the signaling theory, companies with ERM will try to convey to investors this message through increased voluntary disclosure, including CSR disclosure (Jonathan & Setiawan, 2022). This relationship was confirmed in previous studies where ERM was found to positively impact the CSR reporting level (Musallam, 2018; Anillah et al., 2023; Perez-Cornejo & de Quevedo-Puente, 2023). As a result, ERM acts as an important framework for businesses to reduce risks and increase total value while aligned with stakeholders' interests. Moreover, its favorable impact on CSRD displays an obligation to transparency, resulting in increased trust among investors and stakeholders alike.

In its definition, it is widely agreed that ERM is influenced by the board of directors' characteristics (Desender & Lafuente, 2009). Research found that board quality positively influences ERM adoption (Daud et al., 2011). Similar to hypothesis 1, based on the agency theory, a larger board of directors will ensure more effective management of the company; hence, it will be more likely for companies with larger board sizes to put in place an ERM system to monitor the risks that can harm its shareholders' value. Moreover, as companies have their stakeholders' interest in their core values as theorized by the stakeholder theory, minimizing the risks that these stakeholders may face will be one of their priorities. Hence, companies with stronger control will be more effective in putting mechanisms to minimize these risks into action i.e. ERM. Finally, organizations with strong governance structures and a focus on the interests of stakeholders, such as board size, are more likely to effectively implement ERM techniques, hence increasing organizational resilience and shareholder value.

The relationship between board size and the level of CSRD has not reached a consensus in prior literature, with studies showing both positive and negative associations. In this study, the channels through which board size impacts the level of CSRD will be explored. Specifically, the study will examine how the presence of an ERM system mediates the effect of board size on the level of CSRD in GCC Islamic banks. To achieve this, stakeholder theory is utilized, particularly its view that firms prioritize the best interests of all stakeholders in their core values. Consequently, as the ERM process aims to control the risks that might face all stakeholders (Naseem et al., 2020), this control will be more effective when having strong monitoring mechanisms that are normally associated with larger boards (Shatnawi et al., 2019), and companies will be keen, according to the signaling theory, to communicate this strong control to its stakeholders through CSR reporting. Using stakeholder theory, it is claimed that larger boards improve monitoring capacities, enabling effective risk management that is conveyed to stakeholders via expanded CSR reporting.

The purpose of this study is to investigate the associations between board size, enterprise risk management (ERM), and the extent of corporate social responsibility disclosure (CSR) in Islamic banks in the GCC region between 2011 and 2020. The selection of this specific period was motivated by the substantial growth of Islamic banks in the GCC, developments in governance, and robust financial stability. To do this, the following hypotheses are empirically evaluated:

H₁: There is a positive relationship between board size and the level of corporate social responsibility disclosure in the GCC Islamic banks.

H₂: There is a positive relationship between enterprise risk management and the level of corporate social responsibility disclosure in the GCC Islamic banks.

H₃: There is a positive relationship between board size and enterprise risk management in the GCC Islamic banks.

H_4 : *Enterprise risk management mediates the relationship between board size and the level of corporate social responsibility disclosure in the GCC Islamic banks.*

2. RESEARCH METHODOLOGY

A sampling pool included all listed Islamic banks in the six GCC countries, namely: Kingdom of Saudi Arabia (KSA), Bahrain, Qatar, Kuwait, Sultanate of Oman, and United Arab Emirates (UAE), over a 10-year period from 2011 to 2020. Accordingly, an initial sample of 230 bank-year observations was collected; however, nine of these observations had some incomplete data and were omitted from the tested sample. Consequently, the final sample utilized to examine the hypotheses of this study consisted of 221 bank-year observations from the six GCC countries over the 10-year period. The 2011–2020 period is chosen for analyzing Islamic banks in the GCC due to its ability to analyze long-term trends, regulatory changes, and evolution of governance and risk management practices, consistency with previous studies, and relevance for long-term corporate social responsibility and enterprise risk management.

Moreover, the sample included both financial and non-financial data for these banks which were gathered from DataStream and the banks' annual reports. Content analysis was then used to study the non-financial data as it is the most suitable for collecting data from corporate annual reports and has the capability of analyzing big data (Stemler, 2001; Alkayed & Omar, 2023).

The dependent variable in this study is the corporate social responsibility disclosure (CSR) level for the Islamic banks listed in the six GCC countries. As a result, the CSR index developed by Platonova et al. (2018) is employed to assess corporate social responsibility disclosure across the studied countries, as it was designed to measure the CSR performance of GCC Islamic banks. According to the explanations of Platonova et al. (2018), the CSR index has six dimensions: “mission and vision statement”, “products and services”, “commitment towards employees”, “commitment towards debtors”,

“commitment towards society”, and “zakah, charity, and benevolent funding”; in addition to 56 sub-dimensions. Moreover, the procedure adopted by Haniffa and Hudaib (2007) in calculating the CSR index was followed, which involved first using a dichotomous approach to assess the different items of the CSR index, assigning 1 if the bank disclosed the item and 0 otherwise. The total CSR index items disclosed were then divided by the maximum score to obtain the CSR index, as shown in equation (1).

$$CSR = \frac{\sum Actual\ CSR\ items\ disclosed}{\sum Maximum\ CSR\ items} \quad (1)$$

In this study, the independent variable is the size of the board of directors of Islamic Banks in the GCC region. Hence, following Jizi et al. (2014), Baraibar-Diez and Odriozola (2019), Rouf and Hossain (2021), and Ridwan and Mayapada (2022), board size is calculated as the total number of directors.

This study uses a two-step approach ERM index constructed by Florio and Leoni (2017) to test variables that signify ERM sophistication. The first step is to analyze six binary variables that indicate the ERM components independently, while the second step is to add all of the previous indications to get a total score for ERM sophistication. Three of ERM variables indicate risk management integration into corporate governance: the presence of an Internal Control and Risk Officer or a Chief Risk Officer, the presence of an Internal Control and Risk Committee (ICRC) or risk committee (RC), and the frequency with which the RC or ICRC reports to the board of directors. The other three variables indicate the risk assessment technique: the frequency of risk assessment, the level of assessment for the entire firm or a single business unit, and the risk assessment method, which can be qualitative or quantitative. The final score for ERM sophistication is the total of all six binary variables.

To prevent model misspecification, some control variables are included in the models. These control variables are bank size (Wang et al., 2013, Mallin et al., 2014; Hussain et al., 2021, So et al., 2021), profitability (Bukair & Abdul Rahman,

2015; Ali et al., 2022; Oyewo, 2021), bank age (Roberts, 1992; Wang et al., 2013; Mallin et al., 2014; El-Halaby & Hussainey, 2015), leverage (El-Halaby & Hussainey, 2015; Dyduch & Krasodomska, 2017), and sharia supervisory board size (SSBS) (Abdul Raman & Bukair, 2013; Harun et al., 2020). Table 1 displays the descriptions of these variables and their calculation methods.

Table 1. Descriptions of variables

Variable	Measurement
CSRD	The Islamic banks' CSR index developed by Platonova et al. (2018)
BoardS	Total number of directors on the bank board
ERM	The comprehensive ERM index developed by Florio and Leoni (2017)
SSBS	Total number of members on the bank Sharia supervisory board
BSize	Natural logarithm of total assets
BROE	Net income/shareholders' equity
BAge	The number of years since the bank's founding
BLev	Total debt/total assets

To examine the first three hypotheses developed in this study, linear regression models are employed. Baron and Kenny's (1986) approach is then applied to examine the role of enterprise risk management as a mediator in the relationship between board size and corporate social responsibility disclosure, i.e., hypothesis 4. Hence, the following models were developed and utilized:

$$\begin{aligned} CSR_{it} = & \beta_0 + \beta_1 BoardS_{it} + \beta_2 SSBS_{it} \\ & + \beta_3 BSize_{it} + \beta_4 BROE_{it} + \beta_5 BAge_{it} \\ & + \beta_6 ABLev_{it} + Year_{it} + \varepsilon_{it}, \end{aligned} \quad (2)$$

$$\begin{aligned} CSR_{it} = & \beta_0 + \beta_1 ERM_{it} + \beta_2 SSBS_{it} \\ & + \beta_3 BSize_{it} + \beta_4 BROE_{it} + \beta_5 BAge_{it} \\ & + \beta_6 ABLev_{it} + Year_{it} + \varepsilon_{it}, \end{aligned} \quad (3)$$

$$\begin{aligned} ERM_{it} = & \beta_0 + \beta_1 BoardS_{it} + \beta_2 BSize_{it} \\ & + \beta_3 BROE_{it} + \beta_4 BAge_{it} \\ & + \beta_5 ABLev_{it} + Year_{it} + \varepsilon_{it}, \end{aligned} \quad (4)$$

$$\begin{aligned} CSR_{it} = & \beta_0 + \beta_1 BoardS_{it} + \beta_2 ERM_{it} \\ & + \beta_3 SSBS_{it} + \beta_4 BSize_{it} + \beta_5 BROE_{it} \\ & + \beta_6 BAge_{it} + \beta_7 ABLev_{it} + Year_{it} + \varepsilon_{it}. \end{aligned} \quad (5)$$

3. RESULTS AND DISCUSSION

The descriptive statistics of all the parameters included in the models are presented in Table 2. As shown in the Table, the mean of the level of CSR by GCC Islamic banks is 0.583 which indicates a slightly above average level of disclosure; albeit there is a high range of CSR values in the sample as the minimum is 0.375 and the maximum is 0.782. This mean value is higher than the ones previously reported in the literature on CSR reporting of GCC Islamic banks (Harun et al., 2020; Khemiri & Alsulami, 2023) as this study utilizes a more recent and larger sample, which reflects the higher emphasis put on CSR reporting in recent years. Furthermore, there is consistency in the CSR reporting by the sample as the standard deviation of the CSR is very low. As for the independent variable, board size, the mean number of members in the sample is 9.516 with a standard deviation of 2.095, which is similar to the ones deduced in the literature (Harun et al., 2020). For the mediating variable, the mean and standard deviation values were 3.986 and 1.46, respectively.

As for the control variables, the average size of the sharia supervisory board (SSBS) in the sample was 3.932, with a minimum of three members and a maximum of six members, which is in line with sharia board sizes in past research in the literature (Harun et al., 2020; Ridwan & Mayapada, 2022). Moreover, the average size of the banks (BSize) in the sample was 10.08 and they had a low profitability (BROE) of 8.1%, on average, with some banks reported losses during the study years; while, the average leverage (BLev) level is higher than those previously reported in the literature of Islamic Banks around the world (El-Halaby & Hussainey, 2015). Lastly, the average number of years since the banks were founded (BAge) is 27.05 years, with some established for only two years and others for 63 years, which shows the comprehensiveness of the sample.

Table 3 presents the correlation matrix between the variables utilized in the models, over the 10-year period, together with their significance levels. As seen from Table 3, all the variables have significant and positive correlations with the CSR by GCC Islamic banks. Moreover, there is a significantly positive correlation between the size of the

board of directors (BoardS) and the level of CSRD by GCC Islamic banks at 1% significance level. At the same time, it can be inferred that there is a strong association between the level of ERM and BoardS, and between ERM and the level of CSRD at 1% significance level.

Table 2. Descriptive statistics

Variable	N	Mean	S.D	Min	Max
CSRD	221	0.583	0.090	0.375	0.782
BoardS	221	9.516	2.095	5.000	16.000
ERM	221	3.986	1.460	1.000	6.000
SSBS	221	3.932	0.968	3.000	6.000
BSize	221	10.080	0.474	8.820	11.100
BROE	221	0.081	0.078	-0.204	0.181
BAge	221	27.050	15.665	2.000	63.000
BLev	221	7.414	2.773	1.732	17.743

As for the control variables, the findings for the SSBS, BSize, and BAge are in line with previous literature on Islamic banks (Abdul Rahman & Bukair, 2013; Mallin et al., 2014; Hussain et al., 2021; Agarwala et al., 2022). On the other hand, there was a strong and positive correlation between the banks' profitability (BROE) and the banks' leverage (BLev) with the level of CSRD which does not conform with what was previously reported in

the literature (Bukair & Abdul Rahman, 2015; El-Halaby & Hussainey, 2015; Ali et al., 2022), which can be attributed to the difference in the sampling year, size, and country.

Although there is no threat to multicollinearity evident from the correlation matrix as the correlation between any independent variables is 0.578 which is less than the maximum level of 0.8 or 0.9 (Field, 2009), a Variance Inflation Factor (VIF) test was carried out to confirm the reliability of the regression models. Table 4 shows the obtained results and the highest VIF in all of the four models is 1.35, which shows no threat of multicollinearity as multicollinearity can be considered a serious problem when the VIF value is close to 10 (Kennedy, 1992).

In this study, the main statistical test used to examine the four developed hypotheses is fixed-effect analysis. This regression analysis method is a powerful method of assessing causal relationships between two variables (Gangl, 2010) and provides unbiased estimates of the significance of the inferred relationship (Bruderl & Ludwig, 2015). Moreover, when compared to pooled OLS and random-effect analyses, fixed-effect analy-

Table 3. Correlation matrix

	CSRD	BoardS	ERM	SSBS	BSize	BROE	BAge	BLev
CSRD	1	–	–	–	–	–	–	–
BoardS	0.321***	1	–	–	–	–	–	–
ERM	0.591***	0.300***	1	–	–	–	–	–
SSBS	0.310***	0.414***	0.102	1	–	–	–	–
BSize	0.281***	0.245***	0.305***	0.226***	1	–	–	–
BROE	0.221***	0.150**	0.196***	0.106	0.578***	1	–	–
BAge	0.266***	0.225***	0.166***	0.136**	0.501***	0.181***	1	–
BLev	0.134**	0.176***	0.221***	0.186***	0.171***	-0.011	0.228***	1

Note: ** and *** denote significance at 5% and 1%, respectively.

Table 4. Variance inflation factors

Variable	Model 1 CSRD		Model 2 CSRD		Model 3 ERM		Model 4 CSRD	
	VIF	1/VIF	VIF	1/VIF	VIF	1/VIF	VIF	1/VIF
BoardS	1.27	0.79	–	–	1.10	0.91	1.35	0.74
ERM	–	–	1.14	0.88	–	–	1.21	0.83
SSBS	1.25	0.80	1.08	0.93	–	–	1.26	0.74
BSize	2.06	0.49	2.13	0.47	2.03	0.49	2.13	0.47
BROE	1.56	0.64	1.56	0.64	1.56	0.64	1.56	0.64
BAge	1.42	0.71	1.40	0.72	1.41	0.71	0.42	0.71
BLev	1.10	0.91	1.14	0.88	1.09	0.92	1.14	0.88
Mean VIF	1.44	–	1.41	–	1.44	–	1.44	–

sis yields the most robust Husman test results. Furthermore, fixed-effect analysis was extensively used in the previous literature concerning the determinants of CSR, such as Hussain et al. (2021) and Ali et al. (2022).

Accordingly, based on Table 5, in Model 1, the CSR was regressed onto the board size (BSize) and the results demonstrate that this independent variable positively and significantly impacts the level of CSR at a 95% confidence level, which supports the first hypothesis. This result conforms with the agency and signaling theories and their views that larger boards will have better monitoring mechanisms in place to ensure no information asymmetry between managers and stakeholders and will be keen to communicate this strong monitoring to its stakeholders through CSR reporting, respectively. Moreover, this result conforms with the results obtained from the literature, such as Harun et al. (2020), Hussain et al. (2021), and Ali et al. (2022). Nevertheless, the R-squared value of this model is 0.269, which shows the board size alone does not fully explain the change in the CSR level and that there might exist other potential determinants of the level of CSR; hence, it supports the need to explore the impact of the level of ERM and its mediating effect on the relationship between the board size and the level of CSR.

Concerning the second hypothesis and the association between ERM and the level of CSR, it can be seen from Table 5 that a significantly positive relationship exists between these two variables at a 99% confidence interval, with a slightly higher R-squared value. This supports the second hypothesis and conforms with both the signaling and stakeholder theories, as well as, previous studies in the literature (Musallam, 2018; Anillah et al., 2023; Perez-Cornejo & de Quevedo-Puente, 2023). Similarly, the third hypothesis is supported by the outcomes obtained from the test as the board size (BoardS) has a positive and significant impact on the ERM at 95% confidence level. This relationship was not explored before in the literature, yet the results are supported by the agency and stakeholder theories.

Lastly, a mediating test was performed with the ERM introduced as a mediator between the board size (BoardS) and the CSR level by GCC Islamic banks. As shown in Table 5, when introducing the

ERM as a mediator, the relationship between the board size of GCC Islamic banks and their levels of CSR becomes insignificant. In other words, it can be deduced that the ERM fully explains the relationship between the size of the board of directors (Boards) and the levels of CSR which means that the ERM fully mediates this relationship i.e. the fourth hypothesis is supported by the results of this test. This result infers that the board size positively affects the level of CSR by GCC Islamic banks through the ERM; as the number of board members increases, the level of ERM by GCC Islamic banks increases, which, in turn, increases the level of CSR by these banks. Similar to hypothesis 3, this study is the first to explore this relationship in the literature of CSR in Islamic banking. The results of this study deduce that the larger the number of board executives at GCC Islamic banks, the better control they have, which helps to prioritize stakeholders' interests, especially with the ERM mechanism. The findings of this study will help enrich the literature on CSR reporting, especially in GCC Islamic banks. These findings comply with the agency, stakeholder, and signaling theories. The study's use of a combination of three theories to analyze the various relationships between the variables adds important theoretical value to the literature on CSR reporting.

Table 5. Regression results (Fixed-effect)

Dependent Variables	Model 1	Model 2	Model 3	Model 4
	CSR	CSR	ERM	CSR
BoardS	0.008**	–	0.084**	0.005
	2.03	–	2.04	1.43
ERM	–	0.032***	–	0.031***
	–	4.96	–	4.72
SSBS	0.004	0.001	–	0.002
	0.33	0.12	–	0.16
BSize	–0.142**	–0.079	–1.472**	–0.096
	–2.31	–1.35	–2.28	–1.62
BROE	0.208**	0.152*	1.874**	0.151*
	2.52	1.91	2.15	1.90
BAge	0.016***	0.004	0.365***	0.005
	5.72	1.23	12.20	1.42
BLev	–0.0002	0.0008	–0.027	0.0006
	–0.06	0.27	–0.81	0.21
Constant	1.466***	1.105**	8.212	1.215**
	2.69	2.14	1.43	2.33
Years Effect	Yes	Yes	Yes	Yes
No. of Obs	221	221	221	221
R ²	0.269	0.338	0.664	0.345

Note: *, **, and *** denote significance at 10%, 5%, and 1%, respectively.

Table 6. Regression results (Random-effect and Pooled OLS)

Dependent Variables	Random-effect				Pooled OLS			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
	CSRD	CSRD	ERM	CSRD	CSRD	CSRD	ERM	CSRD
BoardS	0.006*	–	0.078*	0.004	0.008**	–	0.154***	0.002
	1.78	–	1.95	1.09	2.28	–	3.34	0.48
ERM	–	0.032***	–	0.031***	–	0.034***	–	0.034***
	–	6.02	–	5.83	–	10.86	–	9.32
SSBS	0.013	0.014*	–	0.013	0.018***	0.023***	–	0.022***
	1.40	1.76	–	1.61	2.81	4.43	–	3.82
BSize	–0.020	–0.017	–0.374	–0.022	0.009	–0.015	0.665**	–0.015
	–0.69	–0.72	–0.84	–0.91	0.53	–1.11	2.34	–1.10
BROE	0.201**	0.146*	1.855**	0.143*	0.140	0.114	0.862	0.112
	2.50	1.93	2.15	1.89	1.43	1.46	0.59	1.43
BAge	0.001	0.001	0.010	0.001	0.001**	0.001***	–0.003	0.001***
	1.43	1.61	0.65	1.60	2.08	3.07	–0.51	2.98
BLev	–0.003	–0.001	–0.044	–0.001	0.001	–0.002	0.081***	–0.002
	–0.95	–0.54	–1.39	–0.55	0.48	–1.24	2.88	–1.24
Constant	–21.430***	–2.507	–624.108***	–2.659	0.311**	0.484***	–4.764*	0.477***
	–5.58	–0.53	–12.84	–0.56	1.99	3.93	–1.74	3.75
Years Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs	221	221	221	221	221	221	221	221
R ²	0.251	0.329	0.658	0.335	0.198	0.442	0.169	0.443

Note: *, **, and *** denote significance at 10%, 5%, and 1%, respectively.

To confirm the results reached from the fixed-effect test, a robustness test was performed using an additional two regression techniques; namely: a pooled OLS test and a random effect analysis. The first regression technique, pooled OLS, this test was previously used in the literature concerning the determinants of the level of CSR reporting (El-Halaby & Hussainey, 2015; Harun et al., 2020). Similarly, the random effect test is another powerful regression technique that can capture the relationship between different variables and was also previously used in the literature of CSR determinants by Abduh and AlAgeely (2015) and Ebaid (2022).

Accordingly, and as evident from Table 6, both of these additional tests confirmed the conclusions reached from the main test from all four models. In other words, according to both the pooled OLS and random effect analysis, the board size (BoardS) and the ERM of GCC Islamic banks have positive and significant impacts on the level of CSRD, the board size has a positive and significant impact on the ERM, and the ERM fully mediates the relationship between the board size (BoardS) and the level of CSRD. In addition, the random effect analysis has R-squared values for all four models that are close to those obtained from the main test; while the pooled OLS has much lower R-squared values.

CONCLUSION

This study investigates the effects of the board size on the ERM and the level of CSRD, as well as the effect of the ERM on the level of CSRD and the mediating effect of the ERM on the relationship between the board's size and the level of CSRD of GCC Islamic Banks. The results indicated a significant positive correlation between board size and both ERM and CSRD levels, suggesting that larger boards contribute to more effective monitoring and control. Additionally, ERM demonstrated a substantial positive influence on CSRD and fully mediated the relationship between board size and CSRD levels, emphasizing the importance of robust governance frameworks for improving transparency and accountability in these banks.

This study enhances CSR reporting literature by addressing key gaps, particularly the impact of board size on ERM and its role in mediating the relationship between board size to CSR disclosure levels in

GCC Islamic banks. The study also makes a theoretical contribution by integrating agency, stakeholder, and signaling theories to develop its hypotheses and elucidate the relationships among the variables. Additionally, the findings offer several important implications for regulators, policymakers, management, and investors. By leveraging board size and the ERM system, banks can enhance CSRD, which is crucial for regulators and policymakers in developing corporate governance regulations. Furthermore, the research underscores the importance of ERM in helping management sustain high levels of CSRD to meet stakeholder expectations. Lastly, the findings serve as a practical guide for investors, highlighting that contemporary investment decisions are influenced not only by financial performance but also by social performance.

AUTHOR CONTRIBUTIONS

Conceptualization: Awatif Hodaed Alsheikh, Warda Hodaed Alsheikh, Tamader Alsalam.

Data curation: Tamader Alsalam.

Formal analysis: Awatif Hodaed Alsheikh, Warda Hodaed Alsheikh, Tamader Alsalam.

Funding acquisition: Awatif Hodaed Alsheikh, Warda Hodaed Alsheikh, Tamader Alsalam.

Investigation: Awatif Hodaed Alsheikh, Warda Hodaed Alsheikh, Tamader Alsalam.

Methodology: Awatif Hodaed Alsheikh, Warda Hodaed Alsheikh, Tamader Alsalam.

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Supervision: Awatif Hodaed Alsheikh, Warda Hodaed Alsheikh.

Validation: Awatif Hodaed Alsheikh, Warda Hodaed Alsheikh, Tamader Alsalam.

Visualization: Awatif Hodaed Alsheikh, Warda Hodaed Alsheikh, Tamader Alsalam.

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