

Article

Do Board Characteristics Determine Litigation Risk? Evidence from the Jordanian Banking Industry

Hashem Alshurafat ^{1,*}, Mohammed Alzahrane ², Omar Arabiat ¹ and Randa Al-Tayan ³

¹ Department of Accounting, Business School, The Hashemite University, Zarqa 13133, Jordan; omars@hu.edu.jo

² Department of Accounting Faculty, Management Technology, Technical and Vocational Training Corporation, Riyadh 11564, Saudi Arabia; malzahrani5@tvtc.gov.sa

³ Department of Banking and Financial Sciences, Business School, The Hashemite University, Zarqa 13133, Jordan; randat@hu.edu.jo

* Correspondence: hashema@hu.edu.jo

Abstract

This paper investigates how corporate governance can impact the litigation risk of banks with reference to the board characteristics of the Jordanian banking industry. With a dataset of 14 of the banks listed on the Amman Stock Exchange between the years 2013–2023, the study examines how gender diversity on a board, board size, board independence, foreign board representation, and directors' financial education affect litigation costs. The analysis is based on agency theory and upper echelons theory and uses pooled ordinary least squares regression. The findings indicate that board characteristics have an uneven impact on litigation risk. The presence of female board members is always related to reduced legal costs, which implies that gender diversity improves the quality of monitoring and control over risks. Conversely, an increased board size and increase in foreign directors and directors of financial education are both linked to increased legal expenses, suggesting coordination issues and unfamiliarity with regulations in the cross-border governance environment. Board independence, however, does not demonstrate any statistically significant correlation with litigation risk. The paper adds to the literature by offering new evidence based on a developing economy with a unique institutional environment. The findings have significant implications for regulators, policymakers, and practitioners seeking to design effective board structures that reduce legal and compliance risks in the banking sector.

Keywords: corporate governance; board properties; litigation risk; litigation costs; board gender diversity; financial expertise; banking sector; emerging markets; Jordan

Academic Editor: Weiping Li

Received: 17 February 2026

Revised: 27 March 2026

Accepted: 1 April 2026

Published: 29 June 2026

Copyright: © 2026 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the [Creative Commons Attribution \(CC BY\)](https://creativecommons.org/licenses/by/4.0/) license.

1. Introduction

As a result of an increasingly complex business environment, businesses are constantly confronted with numerous legal issues that increase their risk of becoming involved in litigation (Al-Hazaima et al. 2023; Taha et al. 2023). Litigation risk may arise from legal disputes (i.e., lawsuits), including suits by shareholders and governmental investigations (Abdul-Baki 2019). Litigation risk can have catastrophic effects on businesses, including financial loss, loss of goodwill, and failure of management (Waheed et al. 2024).

In developing nations, litigation risk has a serious effect on businesses across sectors because of low-risk reduction strategy effectiveness, like forensic accounting, transparency,

and corporate governance (Alhusban et al. 2020). Regulatory systems and oversight systems are still emerging in most developing economies, making it difficult to ensure that banks can avoid monetary malpractices and settle their conflicts effectively. Due to this, companies that are in these environments will be more exposed to legal cases and litigation. Although litigation risk has been on the rise in such circumstances, the underlying factors that lead to litigation risk in developing countries are still being debated and have not been adequately examined in the accounting and finance literature (Al-Hazaima et al. 2023).

A number of famous corporate scandals explain how the lack of corporate governance can result in severe legal implications for companies. High-profile cases of companies like Enron, Volkswagen, and Wells Fargo have shown how governance lapses can lead to regulatory issues, fines, and huge reputational losses. Many high-profile corporate scandals have been attributed to ineffective oversight by boards of directors, limited transparency, and inadequate internal control mechanisms (Waheed et al. 2024). These examples highlight the critical role that strong corporate governance mechanisms play in preventing misconduct and reducing the likelihood of litigation against banks. The absence of efficient corporate governance mechanisms creates greater agency conflicts between management and shareholders, leading to more legal disputes and lawsuits (Bourveau et al. 2018). Moreover, different stakeholders file lawsuits against a firm when they discover fraud, corruption, or other financial malpractices. Generally, these sorts of malpractices are consequences of weak corporate governance mechanisms (Mandal and Amilan 2025; Wahyuni-TD et al. 2021).

In the accounting and finance literature, many research papers investigate the impact of sound corporate governance on financial performance (El-Chaarani et al. 2022; Matar and Eneizan 2018; Nguyen et al. 2020); corporate social responsibility (Al-Shubiri et al. 2012; Ali et al. 2017; Giannarakis 2014; Hu et al. 2018; Mardawi et al. 2023); and gender diversity on a board of directors (Alshirah et al. 2022; Moreno-Gómez et al. 2018; Yami and Alshurafat 2024). Despite the large amount of the literature that has explored the linkage between corporate governance and other financial performances, such as financial performance, corporate social responsibility, and board diversity, very little emphasis has been placed on the importance of corporate governance in reducing probabilities of litigation. Such a gap in the literature is especially apparent in developing countries, in which governance structures and legal systems might not be the same as in developed economies. Particularly, this study endeavors to answer the following question: Do board characteristics (board independence, nationality, size, gender, and education) reduce or increase litigation risk?

This study makes several key contributions to corporate governance and litigation risk literature. Theoretically, it shifts attention from traditional firm outcomes to litigation risk, which is underexplored, especially in emerging markets. By integrating agency and upper echelons theories, it explains how both structural (e.g., size, nationality, independence) and cognitive (e.g., education, gender diversity) board attributes shape banks' legal risks. Notably, the findings challenge the view that stronger governance always reduces risk, showing that some features (like financial expertise or foreign directors) may raise litigation costs. Contextually, this study adds evidence from the Jordanian banking sector, highlighting that governance–litigation dynamics depend on local institutional settings. Methodologically, it uses a unique hand-collected panel dataset (2013–2023), increasing measurement accuracy and allowing a detailed analysis of board characteristics. Robustness checks (lagged models, PCA, entropy balancing) further strengthen the results. Practically, the findings offer insights for regulators and bank stakeholders: promoting gender diversity can reduce litigation risk, while large boards or certain expertise may increase legal costs. This study suggests that governance reforms should focus on optimal board composition and local context, not just formal compliance or imported frameworks.

The remaining sections of this paper are organized as follows: Section 2 provides a background for this study by highlighting the Jordanian context, illustrating the used theory and developing the study hypotheses. In addition, the section reviews relevant prior studies on corporate governance and litigation risk. Section 3 presents the methodology of this study. Section 4 shows and discusses the study results. Section 5 concludes this study.

2. Background

2.1. Institutional Context of the Study

Jordan is considered an ideal setting for testing these relationships for several reasons. First, Jordan is a developing country, and, according to Wu et al. (2020), litigation risk needs to be explored, especially in developing countries, given the notion that civil law and legal systems are less developed there. Moreover, corporate governance mechanisms and transparency are weaker in developing countries, thereby increasing litigation risk for equity holders. Second, conducting a study on Jordan helps test whether governance–litigation relationships established in Western economies hold in different institutional environments. Third, Jordan has introduced several corporate governance codes (e.g., the Jordan Securities Commission’s code for listed firms and the Central Bank’s banking governance rules). However, enforcing governance laws and protecting shareholder rights remain challenging, making litigation risk an important outcome to study. Fourth, according to the Integrity and Anti-Corruption Commission reports, there is a considerable number of recent corporate scandals and legal cases in the Jordanian business environment. For example, in 2024, the Integrity and Anti-Corruption Commission received 1390 complaints, while in 2023, it received 2536.

2.2. Theory and Hypotheses Development

This paper applies agency theory to discuss the capacity of corporate governance in mitigating litigation risk. Agency theory is a theory that describes the conflict situation when the managers do not follow the interests of the shareholders but pursue their own interests, which causes issues such as misreporting or violation of the regulations (Jensen and Meckling 2019). Governance issues, such as poor board independence, ineffective audit committees, or dominant CEOs, will increase the likelihood of issues related to poor governance and increase the potential for litigation against Jordanian banks (Al-Hazaima et al. 2023; Alhusban et al. 2020; Taha et al. 2023; Wahyuni-TD et al. 2021). This paper looks at the governance mechanisms of banks in Jordan and uses those analyses to show that good board structure can reduce managers’ ability to make decisions on behalf of the bank, enhance management’s ability to monitor its activities, and ultimately reduce the likelihood of litigation against Jordan banks.

Besides the agency theory, this research applies the upper echelons theory to elaborate more on board characteristics. When managers possess more information than shareholders, the risk of litigation increases, and thus, misreporting is possible (Al-Hazaima et al. 2023). Governance instruments such as audit committees and open reporting are effective in mitigating these risks through disclosure enhancement. The theory of upper echelons emphasizes the influence of CEO characteristics, including education, ownership, and gender, on decision-making and risk management (Hambrick and Mason 1984; Recendes et al. 2024; Saiyed et al. 2023; Ting et al. 2015). All these theories provide a holistic picture of how governance and executive characteristics can be used in dealing with litigation risk in Jordanian banks.

In more gender-diverse boards, the effects of corporate litigation are less acute, which is manifested in less significant market reactions to litigation announcements. According

to Zheng and Wang (2024), companies that have more women on their boards have reduced and less serious corporate litigations. Furthermore, Alluwia and Sarun (2018) observe that the association between female board directors and the agency cost is significantly negative when both the asset utilization ratio (AUR) and expense ratio (ER) are used as a proxy. Aside from that, they show that the higher the number of female directors on the board, the lower the ratio of expenses, thus lowering agency costs. Similarly, Bao et al. (2014) discovered that the number of women on boards of directors is negatively correlated with the legal risk in US retail companies. Thus, the hypothesis presented below has been developed.

H1. *Board female representation is negatively associated with legal costs.*

It is repeatedly demonstrated that board attributes, especially size, composition, and directorships, are conclusive factors in the likelihood of committing environmental law violations and the size of the costs that follow (Zheng and Wang 2024). This is contrary to the popular sentiment that bigger boards are more effective in their oversight, which has been proved to be false when it comes to the evidence of higher rates of derivative lawsuits, financial statement fraud, and increased agency costs as indicated by higher operating costs and inefficient management spending (Beasley 1996; Ferris et al. 2007). Smaller boards, conversely, are associated with lower expense ratios, cost efficiency, and higher fund premiums, which strengthen their perceived efficacy (Nguyen et al. 2016). Further research indicates that the bigger the board, the more comprehensive the directors' and officers' insurance coverage, and a higher premium is needed since more people may need to have legal defense, which is a direct correlation between the board size and litigation expenses (Fakoya and Nakeng 2019; Shettima and Dzolkarnaini 2018; Zheng and Wang 2024). Thus, the hypothesis presented below has been developed.

H2. *Board size is negatively associated with legal costs.*

According to previous studies, board independence has a strong relationship with the legal costs of firms due to its impact on the effectiveness of monitoring and litigation exposure (Donelson et al. 2022). Research indicates that the greater the percentage of independent directors, the better the control of managerial activities, which minimizes opportunistic behavior and, consequently, the risk of corporate litigation and the costs associated with it (Wu et al. 2020). Simultaneously, it is proven that litigation involves high direct expenses, namely legal fees, and indirect expenses, including managerial distraction and reputational damage, which influence the performance of firms (Liu and Sun 2022). Nevertheless, this is a one-way relationship because, as mandated board independence rises, firms become susceptible to some legal cases such as product liability, labor, or financial related lawsuits, especially in firms with more leverage, which can raise legal expenses (Chen et al. 2009; Goshen and Squire 2017). Furthermore, the increased litigation risk makes independent directors more conservative in their oversight practices that may affect the legal performance and cost structure of firms (McKendall et al. 1999). Thus, the hypothesis presented below has been developed.

H3. *Board independence is negatively associated with legal costs.*

Mezias (2002) explores the relationship between employing American top officers, such as the Chairman, and a decrease in the number of labor suit verdicts that foreign subsidiaries deal with and proposes a connection between the domestic leadership and reduced legal exposure. The presence of foreigner board members also decreases the rate of employment litigation, which means that other governance mechanisms such as board

structure are significant in mitigating legal risks (Gulamhussen and Guerreiro 2009). Directors' liability under a variety of laws lead to the possibility of a substantial liability risk, which concentrates on situations where directors pay damages, financial fines, or legal costs not indemnified or insured by directors' and officers' insurance (Cheffins and Black 2005). The hypothesis presented by Tripathi (2025) is that board diversity will decrease the number of legal and regulatory breaches and promote ethical conduct, which will decrease compliance-related costs. Tripathi observed that the cost of high coordination in the case of heterogeneous boards does not necessarily translate to undesired returns, and any extra costs can be compensated by the returns of improved decision-making in compliance with the law. Thus, the hypothesis presented below has been developed.

H4. *Foreign board representation is negatively associated with legal costs.*

According to Lee and Stone (1997), agency costs are not significantly correlated with the backgrounds of audit committee members such as instrumental experience in matters that concern accounting and financial reporting. Cunningham (2008) surveyed empirical evidence, showing that accounting expertise among directors, especially on audit committees, is of high value in terms of financial reporting quality, although general economic and other expertise have less value added. Liu and Sun (2021) indicate that the legal expertise of board members might enable banks to go beyond passive compliance and evaluate future risks before they occur and devise legal strategies that enhance business value, and this may reduce legal costs. Furthermore, they establish that independent directors who possess legal skills know more about risk evaluation and tend to discourage suspicious ideas that can involve high litigation or regulatory risks. Thus, the hypothesis presented below has been developed.

H5. *Board financial education is negatively associated with legal costs.*

2.3. Literature Review

Previous research indicates that legal cost usually results in huge adverse gains in the stock market (Guo 2023; Lowry and Shu 2002). Hence, the risk of litigation has received a lot of attention among researchers and analysts because it has a strong influence on reputation and financial performance (Al-Hazaima et al. 2023). The previous literature establishes that litigation risk is linked to numerous adverse business signs, including stock volatility, stock turnover, and high costs (Kim and Skinner 2012). Furthermore, litigation risk may be influenced by numerous aspects, internal controls and various oversight, and compliance systems are also among them.

The effects of corporate governance and board characteristics on litigation risk is a question that has not been answered in the accounting and commercial law literature. Country-specific forces like legal regimes and judicial effectiveness play a very important role in defining litigation risk and settlement expenses across borders. Legal costs are complex: direct costs include attorney and court fees, while indirect costs include CEO turnover, reputational damage; all these costs can be influenced by governance decisions (Wu et al. 2020). In the accounting and finance literature, the effect of corporate governance on financial performance (El-Chaarani et al. 2022), corporate social responsibility (Mardawi et al. 2023), and gender diversity on boards of directors (Yami and Alshurafat 2024) are also studied in various research papers.

Regarding litigation risk, majority of the studies focus on the determinants and outcomes of securities class action lawsuits against companies and auditors. The correlation between corporate governance and litigation risk was the focus of very few studies. For instance, Wu et al. (2020) investigated how effective internal governance controls affect

the performance of lawsuit firms. They discovered that litigation claims of big amounts of money are negatively correlated with the performance of firms, but internal governance also modulates the adverse impact of litigation risk. He and Shi (2023) discovered that stronger internal controls have a small effect on reducing litigation risk and corporate performance. The relationship between corporate governance and litigation risk has conflicting evidence in the literature. For example, Talley (2009) examines the question of whether governance reforms that are not privatized can be used to mitigate litigation risk, concluding that most forms of governance are not predictive of liability exposure.

In contrast, Waheed et al. (2024) investigate the effect of litigation risk on the financial performance of firms and the moderating effect of corporate voluntary disclosure. They discovered that voluntary disclosure practices and ownership of financial institutions serve to close the information gap, shield firms against the risk of litigation, and provide an indication to the market of improved financial performance. Moreover, L. Zhang concludes that the traits of a CEO influence the risk of litigation. Krishnan and Lee (2009) discover that firms that have greater risk of litigation are more likely to include accounting and financial professionals on their audit committees. They further demonstrate that the relationship between litigation risk and the probability of appointment of accounting and financial experts exists only in cases of strong corporate governance.

He and Liu (2016) discover that the more companies engage in such activities such as lawsuits, dividend payments, equity transfers, or asset purchases, the higher the likelihood for these independent directors to possess legal expertise, indicating a relationship between corporate events and the need to seek legal advice. They also conclude that listed companies reduce legal and litigation risks with the assistance of independent directors who have legal qualifications and that they are often do so on a consulting basis and that those companies have higher market values. Moreover, Amoozegar et al. (2017) observe that effective risk governance has a substantial positive impact on the risk of shareholder litigation in a firm. Furthermore, they demonstrate that superior risk management enhances the performance of the bank as a whole by reducing litigation risk.

Habib et al. (2014) wrote that inappropriate accounting practices may be associated with poor corporate governance, which is why there is a need to control its influence by researching the impact of financial reporting quality on litigation. According to Liao and Ouyang (2019), the risk of shareholder litigation is an effective corporate governance tool as it greatly reduces real earnings management. Park et al. (2025) recently concluded that shareholder litigation risk is an effective governance mechanism that influences managerial priorities and determines boundary conditions, including weaker shareholder governance provisions, which moderate the relationship between governance constraints and stakeholder engagement.

3. Research Methodology

3.1. Sample and Data Source

Using a panel dataset of banks listed on the Amman Stock Exchange (ASE) between 2013 and 2023, this study investigates the impact of board characteristics on litigation risk. As shown in Table 1, the final sample includes 14 banks (two Islamic), resulting in a total of 154 bank–year observations after removing one bank (Arab Islamic International Bank) that is fully owned by a parent company (Arab Bank Group) and is not independently listed. The sample of only listed banks is reasonable since banks are highly governed entities where the structure of their boards plays a critical role in monitoring, overseeing, and controlling risk. Furthermore, focusing the analysis on a single regulated industry eliminates cross-sector differences, thereby enhancing the ability to compare governance structures and risk outcomes between banks. Furthermore, because Jordan represents an emerging market with governance systems that are institutionally unique and relatively

under-researched in the existing literature (Abedifar et al. 2013; Pathan 2009; Pathan and Faff 2013; Alhababsah 2019; Nsour and Al-Rjoub 2022), it provides a relevant context for the examination of this topic.

Table 1. Samples.

No.	Bank Name	Banks ID	Classification	Years Observed
1	Arab Bank	113023	Conventional	2013–2023
2	Jordan Ahli Bank	111033	Conventional	2013–2023
3	Bank of Jordan	111022	Conventional	2013–2023
4	Cairo Amman Bank	111021	Conventional	2013–2023
5	Capital Bank of Jordan	111017	Conventional	2013–2023
6	Invest Bank	111014	Conventional	2013–2023
7	Arab Banking Corporation	111009	Conventional	2013–2023
8	Etihad Bank	111007	Conventional	2013–2023
9	Safwa Islamic Bank	111006	Islamic	2013–2023
10	Arab Jordan Investment Bank	111005	Conventional	2013–2023
11	Housing Bank for Trade and Finance	111004	Conventional	2013–2023
12	Jordan Commercial Bank	111003	Conventional	2013–2023
13	Jordan Kuwait Bank	111002	Conventional	2013–2023
14	Jordan Islamic Bank	111001	Islamic	2013–2023

Importantly, the sample selection consists of both Islamic and conventional banks that are based in the same country and regulated by the same or a similar legal system; therefore, this enables the study to explore significant differences in board structure while still having a reasonably similar regulatory and institutional context. This makes the sample appropriate for analyzing whether board characteristics affect litigation risk. Also, the time frame of the study (2013 through 2023) is sufficient to provide time for changes in governance structures, for litigation outcomes to occur, and to include vastly different economic climates because of events such as COVID-19. This gives a more comprehensive context for analyzing the relationship under a variety of circumstances rather than within a short or very stable period (Abedifar et al. 2013; Fernandes et al. 2021).

The data used for this analysis was collected through publicly accessible annual reports, governance disclosures, and financial statements issued by the selected banks. This research’s significant contribution includes the detailed construction of a hand-collected dataset containing the variables related to governance and boards. Such an approach was critical because the variables of board size, board independence, female representation on the board, foreign directors, education, CEO duality, and auditor characteristics require a careful review of the firm’s annual disclosures to ensure that the coding for each bank-year observation is the same. Previous studies of governance in Jordan and banking studies based on hand-collected board data indicate that this method will assist with the identification of variables and provide consistency for the empirical analysis. All the variables used in this study are defined in Table 2 (Nsour and Al-Rjoub 2022; Nainggolan et al. 2023).

Table 2. Variable definitions.

Variable Name	Symbol	Measurement	Source	Reference
<i>Dependent variable</i>				
Legal Cost	Legal Cost	The natural logarithm of total legal and litigation expenses.	Annual reports	(Abedifar et al. 2013)
<i>Independent variables</i>				

Board Size	BoDnum	Total number of directors on the board.	Annual reports	(Adams and Ferreira 2009; Yermack 1996)
Board Independence	BoDind	The number of independent/non-executive directors.	Annual reports	(Adams and Ferreira 2009)
Female Directors	BoDf	The number of female directors on the board.	Annual reports	(Yousef et al. 2024; Arioglu 2020)
Foreign Board of Director	FOREIGNS	The number of non-Jordanian board of director.	Annual reports	(Bernile et al. 2018)
Board Financial Education	ECO	The number of directors with a degree related to economics, accounting or finance.	Annual reports	(Bernile et al. 2018)
<i>Control variables</i>				
CEO–Chair Duality	Duality	Dummy = 1 if CEO also serves as board chair, 0 otherwise.	Annual reports	(Adams and Ferreira 2009)
Bank Size	SIZE	Natural log of total assets.	Authors calculation based on the ASE website	(Yermack 1996)
Return on Assets	ROA	Net income is divided by total assets.	ASE website	(Abedifar et al. 2013)
Leverage	LEVE	Total liabilities are divided by total assets.	ASE website	(Abedifar et al. 2013)
Banks age	AGE	Total years since establishing the banks.	Annual reports	(Adams and Ferreira 2009)
Big-4 auditor	Big4Aud	Dummy = 1 if the bank is audited by one of the Big Four audit firms (PwC, EY, KPMG, or Deloitte), and 0 otherwise.	Annual reports	(Bernile et al. 2018)
COVID-19 Years	COVID	Dummy = 1 for observations in 2020 and 2021, 0 otherwise.		(Abedifar et al. 2013)
Islamic Bank	Islamic	Dummy = 1 if Islamic bank, 0 otherwise.		(Abedifar et al. 2013)

3.2. Econometric Technique and Model Specification

The research uses an estimation framework of pooled ordinary least squares (OLSs) to analyze the hypotheses established in this study. The natural logarithm of total legal costs, or litigation expenses, serves as the measure of legal risk in this study. The independent variables consist of various characteristics of the board; in addition, there are a number of control variables included to take into consideration the financial condition and governance of the respective banks.

To conform with the definitions of variables listed in Table 2, the number of women on boards may be assessed through either the ratio of women on boards or by counting how many women there are on a board. While previous research has traditionally assessed how many women were represented on a board based on their proportion, there is still strong theoretical and empirical justification for utilizing the counting method as well. This study utilizes a count-based variable to capture the actual numbers of women present in the boardroom and, thus, indicate the progressive increase that occurs when you go from 0 female directors to 1 or 2 or more female directors. This is important because the effect of female director(s) being able to contribute toward management may depend not solely on their presence in each percentage but also by the number of total female directors present. This conclusion is in agreement with De Masi et al. (2021) who also shifted the focus of the discussion around female director ratios to the size of the female population on the board, and with Nguyen et al. (2015) who confirm that the number of females also plays an important role in their influence as a director within the board.

To investigate the relations between board characteristics and legal cost without combining board characteristics in one model, the main regressions have been run for each hypothesis separately. The general form of the specification is

$$\text{LegalCost}_{i,t} = \alpha + \beta_1 \text{BoardChari}_{i,t} + \sum \beta_k \text{Controls}_{i,t} + \gamma_t + \varepsilon_{i,t}$$

$\text{LegalCost}_{i,t}$ refers to the legal fees incurred by bank i at time t ; $\text{BoardChari}_{i,t}$ is the board characteristics relevant to H1 through H5. Controls is simply a vector that describes all of the other variables involved in our investigation. Fixed effects, denoted as γ_t , serve to eliminate any effect of having a common time period associated with the entire exploration. Model 1 tests H1 with BoDf, Model 2 tests H2 with BoDNum, Model 3 tests H3 with BoDind, Model 4 tests H4 with FOREIGN, and Model 5 tests H5 with ECO. Moreover, Models 6 through 10 utilize the lagged dependent variable specification as another strategy to mitigate the endogeneity, while Model 11 reports the regression using the composite governance measure that is constructed through the principal component analysis (PCA) of the board characteristics.

Formal diagnostics provide evidence that unobserved panel-level effects are not present, allowing the use of pooled OLS estimation as opposed to either random or fixed effects estimation. The analysis includes a proxy for Islamic banks to account for the structural differences between Islamic and conventional banks, as the governance mechanisms and legal exposure may vary across different banking types (Abedifar et al. 2013).

4. Results and Discussion

4.1. Descriptive Statistics

Descriptive statistics for the continuous variables included in the analysis are summarized in Table 3. Legal cost demonstrated a mean of 12.63 with a standard deviation of 1.77 highlighting a significant variation in legal and litigation costs across banks in Jordan and through time. Minimum and maximum values also indicate that there were both low and high litigious banks per year. Consequently, the data was transformed to logarithmic form to address the skewness of the distribution.

Table 3. Panel A: Descriptive results for continuous variables.

Variables	Mean	SD	Min	Max	Q1	Median	Q3	N
Legal Cost	12.6335	1.7748	5.5524	17.4291	11.6379	12.6372	13.8562	150
BoDf	1.0649	0.8979	0.0000	3.0000	0.0000	1.0000	2.0000	154
BoDNum	11.5260	1.4012	7.0000	15.0000	11.0000	11.0000	12.0000	154
BoDind	4.3312	1.4866	0.0000	10.0000	4.0000	4.0000	5.0000	154
FOREIGNS	2.9737	2.6268	0.0000	10.0000	1.0000	2.0000	4.0000	152
ECO	8.6846	2.1311	3.0000	13.0000	7.0000	9.0000	10.0000	149
ROA	1.0465	0.4811	−0.1605	2.0466	0.6433	1.0987	1.4054	154
SIZE	9.4584	0.3757	8.7230	10.4592	9.1725	9.4145	9.6127	154
LEVE	86.9618	3.0355	75.4041	93.5367	84.6966	86.9016	89.2501	154
AGE	45.7013	16.6546	18.0000	91.0000	35.0000	43.0000	56.0000	154

In terms of board attributes, the mean BoDf (numbers of female directors on a board) of 1.06, with a maximum of 3, demonstrates that banks' boards do not have a significant presence of women in terms of representation at this time. These descriptive results support previous research (Bernile et al. 2018) that indicate that the trend of gender diversity in the banking sector for developing countries is an emerging trend. The average BoDnum (size of board of directors) is 11.53 (directors), which also meets the regulatory requirements that are required in the banking sector for Jordan. The average BoDind (number of

independent directors) is 4.33 (directors), which indicates that banks have a moderate level of independence among their boards.

The average per-bank foreign director (FOREIGNS) represents a moderate amount of global representation with a mean of 2.97. The average number of directors with experience in economics, accounting, and finance (i.e., ECO) shows that banks in Jordan have a strong reliance on board members who have had training and experience in financially based services, with a mean of 8.68. The banks have an ROA of 1.05, a mean leverage (LEVE) of 86.96%, and, on average, are 46 years of age (AGE), which indicates a climate of maturity and capital intensity in the industry as a whole.

Descriptive statistics for binary variables are shown in Table 4. Islamic banks are represented by 14.29% of the statistics, while conventional banks are represented by 85.71% of the statistics; therefore, there is a rationale for the use of the Islamic bank variable within the regression models. In addition, observations during the period of COVID-19 (2020–21) make up 18.18% of the observations, which shows the importance of controlling for this systemic shock. CEO duality is found in 18.82% of bank–year observations, while 82.89% of bank–year observations were provided with external monitoring by a Big 4 audit firm; thus, it is reasonable to conclude that there is a high degree of external monitoring. Overall, the descriptive statistics indicate that there is sufficient variation within the governance and financial variables to provide confidence in conducting multivariate analysis.

Table 4. Panel B: Descriptive results for binary variables.

Islamic	Frequency	(%)
Firm years observations for non-Islamic banks	132	85.71
Firm years observations for Islamic banks	22	14.29
COVID	Frequency	(%)
Firm year observations during the COVIDE-19	28	18.18
Firm year observations before and after the COVIDE-19	126	81.82
Duality	Frequency	(%)
The CEO is also served as a board chair	28	18.82
The CEO does not serve as a board chair	126	81.82
Big4Aud	Frequency	(%)
If the bank has been audited by the one of the big4	126	82.89
If the banks have not been audited by one of the big4	26	17.11

4.2. Presentation and Discussion of Hypotheses Results

Before the regression results can be presented, diagnostic tests will be carried out in order to determine if multicollinearity and correlations exist among the explanatory variables. Table 5 provides the pairwise correlations of the main variables. Overall, the correlation coefficients are moderate with no pairwise correlation values exceeding the traditional thresholds for indicating multicollinearity between two explanatory variables, which implies that any potential bias due to multicollinearity in the regression results is unlikely to occur. Therefore, this provides initial evidence as to whether the estimated coefficients from the statistical analysis may be interpreted reliably.

Table 5. Pairwise correlation findings.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Legal Cost	1.000													
(2) BoDf	0.171 **	1.000												
(3) BoDNum	0.214 ***	0.160 **	1.000											
(4) BoDind	−0.094	0.165 **	0.248 ***	1.000										
(5) FOREIGNS	0.152 *	0.057	0.227 ***	−0.040	1.000									

(6) ECO	0.238 ***	0.255 ***	0.588 ***	0.090	0.200 **	1.000							
(7) ROA	0.048	−0.132	−0.092	−0.111	0.108	−0.139 *	1.000						
(8) SIZE	0.076	−0.055	0.232 ***	0.242 ***	0.223 ***	0.255 ***	0.108	1.000					
(9) LEVE	0.025	0.102	−0.037	0.081	−0.044	0.291 ***	−0.305 ***	0.147 *	1.000				
(10) AGE	−0.031 **	−0.103	0.217 ***	0.221 ***	−0.231 ***	0.007	−0.111	0.572 ***	−0.024	1.000			
(11) Duality	0.248 ***	0.041	−0.250 *	−0.196 **	−0.079	−0.145 *	0.189 **	−0.262 ***	−0.104	−0.234 ***	1.000		
(12) Big4Aud	0.043	−0.025	0.123	0.028	0.160 *	0.039	0.011	0.226 ***	0.023	0.173 **	−0.109	1.000	
(13) COVID	−0.090	0.060	0.027	0.190 **	0.005	0.088	−0.354 ***	0.075	0.139 *	0.067	−0.135 *	0.036	1.000
(14) Islamic	−0.146 *	0.012	−0.167 **	0.072	0.011	−0.018	−0.144 *	−0.095	0.290 *	0.020	−0.192 *	0.038	0.000 1.000

Notes: Before the regression models were estimated, diagnostic collinearity was assessed. All of the variance inflation factors are well below conventional thresholds, indicating that multicollinearity does not pose a serious problem and the coefficient estimates will remain stable (Kim 2019). The values of the VIF for the variables are as follows: Big4Aud (7.11), SIZE (2.75), AGE (2.48), BoDnum (2.21), ECO (2.09), FOREIGNS (1.62), Islamic (1.57), Duality (1.54), LEVE (1.5), ROA (1.46), COVID (1.45), BoDind (1.28), BoDf (1.14). In accordance with best practice, mean-centering was used on some of the variables prior to estimating the regressions in order to further reduce possible collinearity without influencing interpretation of substantive relationships. Standard errors are in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

The relationship between board characteristics and legal costs as presented in Table 6. For the results of Model 1 assessing female representation on the board (H1), the coefficient is statistically significant and negative ($\beta = -0.4079$, $p < 0.05$), indicating that boards with a larger proportion of females have lower legal costs and, thus, support H1. This suggests that females potentially improve monitoring by providing supervision and producing more cautious and compliant decisions to limit the risk of litigation, this evidence is in line with previous studies (Alluwia and Sarun 2018; Adams and Ferreira 2009).

Table 6. Regression results for the relationship between board characteristics and legal costs.

Variables	Main Models					Lagged Dependent Variable					PCA-Model	
	Model 1-H1	Model 2-H2	Model 3-H3	Model 4-H4	Model 5-H5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	
	Legal Cost	Legal Cost	Legal Cost	Legal Cost	Legal Cost	L. Legal Cost	L. Legal Cost	L. Legal Cost	L. Legal Cost	L. Legal Cost	Legal Cost	
PCA_GOV											−0.1026 (0.2330)	
BoDf	−0.4079 ** (0.1777)					−0.3980 * (0.2011)						
BoDnum		0.4327 *** (0.1087)					0.4343 *** (0.1281)					
BoDind			−0.0827 (0.1077)					−0.0678 (0.1148)				
FOREIGNS				0.1229 * (0.0651)					0.1040 (0.0705)			
ECO					0.2732 *** (0.0749)					0.3260 *** (0.0854)		
Duality	1.5081 ** (0.5819)	1.5287 *** (0.4013)	1.2074 *** (0.4173)	1.2580 *** (0.4175)	1.3034 *** (0.4203)	0.8940 (0.6581)	1.3774 *** (0.4479)	1.0127 ** (0.4558)	1.0314 ** (0.4581)	1.1211 ** (0.4514)		
Big4Aud	−0.4833 (0.3616)	0.1950 (0.3786)	0.2487 (0.4009)	0.1769 (0.4034)	0.3393 (0.4067)	−0.5379 (0.3980)	0.1146 (0.4271)	0.3100 (0.4427)	0.2600 (0.4470)	0.2733 (0.4390)	−0.6238 (0.4904)	
ROA	−0.6325 (0.3994)	−0.2192 (0.3478)	−0.2871 (0.3674)	−0.2349 (0.3680)	−0.1703 (0.3591)	−0.3359 (0.4585)	−0.0006 (0.3893)	−0.0860 (0.4065)	−0.0200 (0.4104)	0.0550 (0.3912)	−0.2871 (0.5984)	
SIZE	0.9194 (2.7145)	0.7147 (0.5039)	0.9015 * (0.5346)	0.3229 (0.5976)	0.3454 (0.5414)	−0.2109 (3.2782)	0.6244 (0.5439)	0.7293 (0.5718)	0.2326 (0.6435)	0.0571 (0.5743)	−3.7969 (2.6536)	
LEVE	−0.1462 (0.1116)	0.0189 (0.0532)	0.0013 (0.0563)	0.0242 (0.0570)	−0.0370 (0.0557)	−0.1264 (0.1491)	0.0172 (0.0629)	0.0145 (0.0659)	0.0361 (0.0675)	−0.0506 (0.0654)	0.0347 (0.1204)	
AGE	−0.0771	−0.0128	−0.0095	0.0021	−0.0034	−0.1462	−0.0104	−0.0083	0.0017	0.0015	−0.0823	

	(0.1204)	(0.0106)	(0.0112)	(0.0129)	(0.0112)	(0.1285)	(0.0114)	(0.0119)	(0.0138)	(0.0118)	(0.0939)
COVID	0.7053	−1.0210	−0.6519	−0.7526	−0.9908	0.7790	−1.0769	−0.6468	−0.7666	−1.0155	0.8186 (0.4733)
	(1.0348)	(0.6825)	(0.7359)	(0.7157)	(0.7081)	(0.9939)	(0.6897)	(0.7296)	(0.7146)	(0.7130)	
Islamic	−0.5695	−0.2070	−0.4712	−0.6221	−0.4161	−4.9079	−0.0340	−0.4399	−0.5935	−0.2055	−5.7394 (3.6719)
	(5.9868)	(0.4345)	(0.4566)	(0.4529)	(0.4392)	(6.6553)	(0.4950)	(0.5040)	(0.5045)	(0.4835)	
Constant	0.7445	0.2992	0.0582	0.1530	0.2105	4.9280	0.4561	0.0165	0.1525	0.3257	6.0558 * (3.3254)
	(4.8622)	(0.5672)	(0.6007)	(0.5962)	(0.6101)	(5.5609)	(0.6053)	(0.6248)	(0.6264)	(0.6439)	
R ²	0.5682	0.2589	0.1715	0.1888	0.2399	0.5279	0.2138	0.1391	0.1521	0.2268	_____
Adjusted R ²	0.457	0.1554	0.055	0.073	0.130	0.397	0.099	0.014	0.026	0.111	0.5312
F	5.1323 ***	2.5031 ***	1.4839	1.6424 *	2.1915 ***	4.0484 ***	1.8711 **	1.1116	1.2136	1.9668 **	_____
Years	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Banks	Included	Not in- cluded	Not in- cluded	Not in- cluded	Not in- cluded	Included	Not in- cluded	Not in- cluded	Not in- cluded	Not in- cluded	Included
N	148	148	148	146	144	135	135	135	133	132	142

Notes: Standard errors are in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Model 2 does not support hypothesis 2 (H2). The results of this model provide direct and substantial information indicating that an increase in board size is associated with legal cost of a firm ($\beta = 0.4327$; p -value > 0.01). These findings seem to highlight that larger boards may be plagued with coordination problems and a longer time to get items approved. Boards may be less able to monitor companies and are, therefore, more vulnerable to incurring legal costs or litigation due to a lack of monitoring from the board. This analysis supports the idea that having excessively large boards causes accountability to be diluted and governance performance to be suboptimal. This evidence is not in line with the evidence from previous studies (Fakoya and Nakeng 2019; Shettima and Dzolkarnaini 2018; Zheng and Wang 2024).

When examining the independence of boards, the results from Model 3 show that the coefficient of independent directors was not statistically significant which results in rejecting H3. Therefore, in the context of Jordanian banking, having a board that is formally independent may not be enough to reduce legal costs. Instead, it may also be a result of institutional constraints, information asymmetry or because independent directors do not have sufficient decision-making authority, that there is no effective mitigation of legal ratification based on independence of a board. This evidence is not in line with the evidence from previous studies (Chen et al. 2009; Goshen and Squire 2017).

Foreign director roles were reviewed using Model 4, which resulted in an evident positive, statistically significant relationship with legal costs ($\beta = 0.1229$; $p < 0.10$), thus rejecting H4, indicating that their presence may create additional liability. One explanation for this phenomenon could be the regulatory unfamiliarity/information disadvantage for foreign directors, possibly contributing to more scrutiny or additional regulatory pressures associated with cross-border governance (Bernile et al. 2018). This evidence is not in line with evidence from previous studies (Tripathi 2025).

The financial expertise of directors is emphasized in Model 5 of this study. The coefficient associated with a board members' economics (educational) background has a positive and statistically significant impact ($\beta = 0.2732$, $p < 0.01$) and, therefore, does not support H5. This evidence is not in line with evidence from previous studies (Liu and Sun 2021).

As a result, this suggests that directors who have received a financial education are associated with higher levels of directorial liability costs; thus, boards that are financially sophisticated are more likely to identify, report, or react to legal and regulatory exposure rather than suppress these types of exposures. An alternative way to interpret this finding

is that directors with greater cognitive capacity are more likely to engage in complex compliance, monitoring, and litigation-related matters (Bernile et al. 2018); therefore, resulting in these costs being more visible in the process of organizational reporting.

In most specifications, the control variables behave as expected across all specifications. CEO duality has a positive significant relationship with legal costs, indicating that there is generally less effective monitoring when there is a concentration of executive decision-making authority. Additionally, although other control variables such as bank size, leverage, and audit quality exhibit a myriad of effects, they do not change the principal inferences of board characteristics. The baseline results generally support the hypotheses of this study while demonstrating the differing impacts of the board's characteristics on legal risk.

4.3. Endogeneity and Robustness Tests

To examine additional endogeneity concerns such as reverse causation and persistence in legal costs, the authors include other specifications that include lagged dependent variables (Table 6, Models 6–10). The inclusion of lagged independent variables in the model allows for the dynamic nature of litigation risk to be considered. An ongoing case or continuing regulatory scrutiny can cause legal risks to remain for an extended period of time (Arelano and Bond 1991).

The lagged models provide further evidence to support the primary results. The lagged dependent variable demonstrates a positive and statistically significant impact, indicating a high level of stability in the legal expense over time. Additionally, when controlling for continuity of prior legal expenses, the new key board features still show relationships that align with those indicated by the baseline analysis: Female board representation continues to have a negative relationship with legal expense, and board size indicates a positive and statistically significant relationship; these relationships are not attributable to reverse causation. Likewise, board independence has no statistically significant impact, which is consistent with previous conclusions.

Coefficients in foreign directors continue to exhibit positive associations in the majority of lagged models; however, there are instances of weaker magnitude and significance in one model, indicating that the nature of this relationship(s) may be influenced by dynamic controls to a greater extent than is currently recognized. Also, directors who possess degrees related to economics are found to consistently have positive and statistically significant relationships with legal costs, regardless of the presence of lagged effects.

The inclusion of the composite governance measure from a principal component analysis (PCA) of the board characteristics will also serve as another robustness test. Other banking studies have used PCA and other dimension-reduction methods to aggregate many governance components into fewer governance factors, thereby retaining common information from correlated board characteristics and reducing the risk of multicollinearity (Brogi and Lagasio 2022; Jmaii et al. 2024). The PCA-based governance variable in Table 6, Model 11, has a negative coefficient in the regression model, but it is not statistically significant ($\beta = -0.1026$, $p > 0.10$). Therefore, although the coefficient sign is consistent with the belief that overall greater governance is linked to lower levels of bank litigation risk, the statistical evidence does not provide support for the conclusion that board characteristics combined into a single composite factor are associated with lower levels of litigation risk for Jordanian banks. One possible explanation is that some of the individual governance variables represented different dimensions of governance and, when they were aggregated, did not reflect the same governance dimension.

To more directly address robustness and endogeneity issues, the study re-estimates key regressions using an entropy-balancing procedure followed by weighted OLS estimation. An entropy-balancing procedure is a reweighting method for observational data with a binary treatment that assigns weights to the control group so that its covariate moments

match those of the treated group to achieve better covariate balance before the outcome regression is estimated (Hainmueller 2012). Following the new empirical design, the procedure is performed for each governance variable separately, with the treated group consisting of banks in the top tercile of the governance variable, and the control group consisting of banks in the bottom tercile, with observations in the middle tercile dropped. The balancing stage then employs the control variables ROA, size, leverage, age, COVID, and Islamic bank status and re-estimates the litigation risk regression using entropy-balanced weights with year fixed effects and bank fixed effects, which is a valid robustness check to reduce bias from observable differences between groups, although it does not eliminate all possible endogeneity (Hainmueller 2012; Hainmueller and Xu 2013; McMullin and Schonberger 2022).

Table 7 presents the entropy-balanced OLS results. The findings are qualitatively similar to the main regression results, although the coefficients of governance variables are not statistically significant in the entropy-balanced specifications: BoDf is negative, BoDNum is positive, BoDind is negative, and FOREIGNS is positive. This pattern indicates that the primary inferences are not overturned following reweighting of the sample but that the statistical evidence becomes weaker when treated and control observations are made more similar in terms of observable characteristics. The only exception is ECO, which has a negative coefficient in the entropy-balanced model, indicating that the result for this variable is somewhat less robust than that of the other board characteristics and should be interpreted with more caution, although this cautious interpretation is also consistent with the accounting literature, which observes that entropy balancing can be useful in improving comparability and reducing observable imbalance while still needing to be interpreted with care in panel-data settings (McMullin and Schonberger 2020, 2022).

Table 7. Robustness and endogeneity test using entropy-balanced OLS.

Variables	Model 12: BoDf	Model 13: BoDnum	Model 14: BoDind	Model 15: FOREIGNS	Model 16: ECO
BoDf	−0.3179 (0.1797)				
BoDNum		0.2262 (0.1825)			
BoDind			−0.1001 (0.1398)		
FOREIGNS				0.1639 (0.2039)	
ECO					−0.0929 (0.1278)
Duality	1.2762 * (0.6535)	1.2938 (0.8047)	1.0928 (0.7549)	1.4778 * (0.7640)	1.3421 * (0.6349)
Big4Aud	−0.4905 (0.5355)	−0.3265 (0.5578)	−0.2650 (0.4379)	−0.0625 (0.5115)	−0.6042 (0.4942)
ROA	−0.3702 (0.5744)	−0.6667 (0.6307)	−0.0759 (0.6870)	−0.7713 (0.6570)	−0.5987 (0.7058)
SIZE	1.6798 (1.8015)	1.6581 (2.4550)	0.2290 (2.2417)	0.8570 (3.1994)	−0.9943 (3.5136)
LEVE	−0.2137 ** (0.0910)	−0.1771 (0.1207)	−0.1231 (0.0942)	−0.2594 (0.1555)	−0.0269 (0.1532)
AGE	−0.1322 (0.1224)	−0.1246 (0.0945)	−0.1073 (0.0914)	0.0665 (0.1687)	−0.0970 (0.1060)
COVID	1.1779 (0.9474)	0.2069 (0.3245)	0.7863 (0.5004)	−0.9955 (1.1829)	0.7988 (0.4907)
Islamic	−2.2998 (5.4678)	−1.9737 (4.6641)	−2.7811 (4.0795)	3.8213 (8.5030)	−3.5880 (3.7150)
Constant	1.9800 (4.4768)	2.1371 (4.4334)	2.6459 (3.7080)	−1.7354 (7.3120)	3.5514 (3.4391)
R ²	0.5986	0.5830	0.5626	0.6046	0.5633
Years	Included	Included	Included	Included	Included
Banks	Included	Included	Included	Included	Included

N

148

148

148

146

144

Note: * $p < 0.05$, ** $p < 0.01$.

5. Conclusions

The present research investigates the potential effect of board attributes on the legal exposure of banks. The sample for the data analysis consists of banking institutions listed on the Amman Stock Exchange between 2013 and 2023. In order to uncover legal risk in banking, this study considers direct (legal and litigation) costs as the observable measure of legal risk by focusing on compliance and litigation-related outcomes as an addition to existing measures of risk and performance in corporate governance research. The results of this study add to previous research investigating how different characteristics of boards can impact the amount of legal costs incurred by banks operating in a highly regulated and institutionally unique environment.

The empirical results show that legal costs are affected by various board characteristics. Female representation on boards is consistently found to correlate with lower legal fees, indicating that gender-diverse boards have better monitoring quality and make ethical and prudent decisions. This supports the proposition that female board members provide better oversight and are more risk-averse, particularly in high-cost compliance environments (Adams and Ferreira 2009). The size of the board, however, is positively related to legal costs, indicating that larger boards will experience coordination issues, less accountability, or slower responses to legal and regulatory issues (Yermack 1996).

According to this study, the independent directors of the board have no statistically significant impact on the cost of litigation for the Jordanian banking industry. As such, formal independence in the Jordanian banking industry may not reduce the risk of litigation on its own due to institutional constraints, information asymmetries, and/or limited enforcement authority. Furthermore, the presence of foreign directorship within the board was positively correlated with an increase in the cost of litigation; this implies that the presence of foreign directors on a board may increase the risk of litigation due to factors such as unfamiliar regulatory environment, cross-board governance issues and/or increased evaluation by both stakeholders and regulators.

The results of this study indicate that members of the board with degrees in the fields of economics, accounting, or finance can significantly increase legal expenditure. This finding illustrates that cognitive attributes of board members are of utmost importance. The evidence supports that directors who have greater cognitive ability tend to deal with more complex compliance, monitoring, and litigation-related issues (Bernile et al. 2018); therefore, these costs can be expected to have a greater presence within the process of corporate reporting.

In addition to its empirical findings, the study contributes in other important ways as well. First, it uses a unique, manually collected dataset relating to governance, which increases measurement accuracy and helps address a limitation of previous studies that are based on automated databases. Second, by examining the Jordanian banking sector, this study extends the governance–risk literature into an environment characterized by high levels of regulatory supervision and both Islamic and conventional banking models operating simultaneously. Third, the analysis includes the impact of significant macroeconomic shocks on the legal risk profile in order to present a more holistic view of legal risk dynamics.

There are multiple practical and policy implications derived from the results of this research. The findings suggest that promoting significant diversity at the board level, with a focus on both gender and financially experienced members, will assist with minimizing legal and compliance risks for banking regulators and policymakers. The findings also demonstrate to shareholders and bank management the potential expenses associated

with having overly large boards and the limited effectiveness of having independent directors when they are not part of a diverse and appropriately sized group. Therefore, any process to nominate directors should prioritize quality and expertise over size, with additional emphasis placed on their educational and professional qualifications.

This study presents some limitations despite its contributions. One limitation may be the fact that only publicly traded Jordanian banks are considered. Thus, the extent to which these findings can be generalized across sectors or institutional settings may be limited. Another limitation is that various other identification strategies could have been used, such as cross-county comparisons, which could have helped to further strengthen the evidence for causal relationships by using lagged specifications to address endogeneity concerns. Lastly, future studies could explore how different board characteristics interact with regulatory changes or the level of enforcement of those changes (i.e., monitoring of compliance) and affect the legal risk associated with boards.

Author Contributions: Conceptualization, H.A., M.A., O.A. and R.A.-T.; methodology, H.A., M.A., O.A. and R.A.-T.; software, H.A., M.A., O.A. and R.A.-T.; validation, H.A., M.A., O.A. and R.A.-T.; formal analysis, H.A., M.A., O.A. and R.A.-T.; investigation, H.A., M.A., O.A. and R.A.-T.; resources, H.A., M.A., O.A. and R.A.-T.; data curation, H.A., M.A., O.A. and R.A.-T.; writing—original draft preparation, H.A., M.A., O.A. and R.A.-T.; writing—review and editing, H.A., M.A., O.A. and R.A.-T.; visualization, H.A., M.A., O.A. and R.A.-T.; supervision, H.A., M.A., O.A. and R.A.-T.; project administration, H.A., M.A., O.A. and R.A.-T.; funding acquisition, H.A., M.A., O.A. and R.A.-T. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Data Availability Statement: The data used in this study are not publicly available in an online repository; however, there are no restrictions on accessing the data. The dataset can be made available by the corresponding author upon reasonable request for research purposes.

Conflicts of Interest: The authors declare no conflicts of interest.

References

- Abdul-Baki, Zayyad. 2019. The role of accounting in conflict resolution: The case of PwC's forensic audit of the Nigerian National Petroleum Corporation. *Managerial Auditing Journal* 36: 261–79. <https://doi.org/10.1108/MAJ-03-2018-1835>.
- Abedifar, Pejman, Philip Molyneux, and Amine Tarazi. 2013. Risk in Islamic banking. *Review of Finance* 17: 2035–96.
- Adams, Renée B., and Daniel Ferreira. 2009. Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics* 94: 291–309.
- Alhababsah, Salem. 2019. Ownership structure and audit quality: An empirical analysis considering ownership types in Jordan. *Journal of International Accounting, Auditing and Taxation* 35: 71–84.
- Al-Hazaima, Huthaifa, Omar Arabiat, and Ghassan Maayah. 2023. The double-edged sword of forensic accounting services: Litigation risks in Jordan's industrial sector. *Journal of Financial Reporting and Accounting* 23: 170–85.
- Alhusban, Abed Alla Alhusban, Haitham A. Haloush, Hashem Alshurafat, Jebreel Mohammad Al-Msiedeen, Ali Abdel Mahdi Masadeh, and Rawan J. Alhmoud. 2020. The regulatory structure and governance of forensic accountancy in the emerging market: Challenges and opportunities. *Journal of Governance and Regulation* 9: 149–61. <https://doi.org/10.22495/jgrv9i4art13>.
- Ali, Waris, Jędrzej George Frynas, and Zeeshan Mahmood. 2017. Determinants of corporate social responsibility (CSR) disclosure in developed and developing countries: A literature review. *Corporate Social Responsibility and Environmental Management* 24: 273–94.
- Alluwia, Farissha, and Anuar Sarun. 2018. Female directors, mechanisms for corporate governance and agency cost. *International Business Education Journal* 11: 1–15.
- Alshirah, Malek Hamed, Faraj Salman Alfawareh, Ahmad Farhan Alshira'h, Ghaith Al-Eitan, Tareq Bani-Khalid, and Moh'd Alsqour. 2022. Do corporate governance and gender diversity matter in firm performance (ROE)? Empirical evidence from Jordan. *Economics* 10: 84.

- Al-Shubiri, Faris Nasif, Abedalfattah Zuhair Al-Abedallat, and Marwan Mohammad Abu Orabi. 2012. Financial and non financial determinants of corporate social responsibility. *Asian Economic and Financial Review* 2: 1001–12.
- Amoozegar, Arash, Kuntara Pukthuanthong, and Thomas J. Walker. 2017. On the role of the chief risk officer and the risk committee in insuring financial institutions against litigation. *Managerial Finance* 43: 19–43.
- Arellano, Manuel, and Stephen Bond. 1991. Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The Review of Economic Studies* 58(2), 277–97.
- Arioglu, Emrah. 2020. The affiliations and characteristics of female directors and earnings management: Evidence from Turkey. *Managerial Auditing Journal* 35: 927–53.
- Bao, Shuji, Stav Fainshmidt, Anil Nair, and Veselina Vracheva. 2014. Women in upper echelons of management, tenure and legal risk. *British Journal of Management* 25: 388–405.
- Beasley, Mark S. 1996. An empirical analysis of the relation between the board of director composition and financial statement fraud. *Accounting Review* 71: 443–65.
- Bernile, Gennaro, Vineet Bhagwat, and Scott Yonker. 2018. Board diversity, firm risk, and corporate policies. *Journal of Financial Economics* 127: 588–612.
- Bourveau, Thomas, Yun Lou, and Rencheng Wang. 2018. Shareholder litigation and corporate disclosure: Evidence from derivative lawsuits. *Journal of Accounting Research* 56: 797–842.
- Brogi, Marina, and Valentina Lagasio. 2022. Better safe than sorry. Bank corporate governance, risk-taking, and performance. *Finance Research Letters* 44: 102039.
- Cheffins, Brian R., and Bernard S. Black. 2005. Outside director liability across countries. *Texas Law Review* 84: 1385.
- Chen, Kevin C. W., Zhihong Chen, and K. C. John Wei. 2009. Legal protection of investors, corporate governance, and the cost of equity capital. *Journal of Corporate Finance* 15: 273–89.
- Cunningham, Lawrence A. 2008. Rediscovering board expertise: Legal implications of the empirical literature. *University of Cincinnati Law Review* 77: 465.
- De Masi, Sara, Agnieszka Słomka-Golebiowska, and Andrea Paci. 2021. Women on boards and monitoring tasks: An empirical application of Kanter's theory. *Management Decision* 59: 56–72.
- Donelson, Dain C., Elizabeth Tori, and Christopher G. Yust. 2022. The effects of independent director litigation risk. *Contemporary Accounting Research* 39: 982–1022.
- El-Chaarani, Hani, Rebecca Abraham, and Yahya Skaf. 2022. The impact of corporate governance on the financial performance of the banking sector in the MENA (Middle Eastern and North African) region: An immunity test of banks for COVID-19. *Journal of Risk and Financial Management* 15: 82.
- Fakoya, Michael Bamidele, and Mancheleng Vanessa Nakeng. 2019. Board characteristics and sustainable energy performance of selected companies in South Africa. *Sustainable Production and Consumption* 18: 190–99.
- Fernandes, Catarina, Jorge Farinha, Francisco Vitorino Martins, and Cesario Mateus. 2021. The impact of board characteristics and CEO power on banks' risk-taking: Stable versus crisis periods. *Journal of Banking Regulation* 22: 319.
- Ferris, Stephen P., Tomas Jandik, Robert M. Lawless, and Anil Makhija. 2007. Derivative lawsuits as a corporate governance mechanism: Empirical evidence on board changes surrounding filings. *Journal of Financial and Quantitative Analysis* 42: 143–65.
- Giannarakis, Grigoris. 2014. The determinants influencing the extent of CSR disclosure. *International Journal of Law and Management* 56: 393–416. <https://doi.org/10.1108/IJLMA-05-2013-0021>.
- Goshen, Zohar, and Richard Squire. 2017. Principal costs: A new theory for corporate law and governance. *Columbia Law Review* 117: 767.
- Gulamhussen, Mohamed Azzim, and Luís Guerreiro. 2009. The influence of foreign equity and board membership on corporate strategy and internal cost management in Portuguese banks. *Management Accounting Research* 20: 6–17.
- Guo, Heng. 2023. Enterprise litigation risk and risk taking. *Finance Research Letters* 58: 104025.
- Habib, Ahsan, Haiyan Jiang, Md. Borhan Uddin Bhuiyan, and Ainul Islam. 2014. Litigation risk, financial reporting and auditing: A survey of the literature. *Research in Accounting Regulation* 26: 145–63.
- Hainmueller, Jens. 2012. Entropy balancing for causal effects: A multivariate reweighting method to produce balanced samples in observational studies. *Political Analysis* 20: 25–46.
- Hainmueller, Jens, and Yiqing Xu. 2013. Ebalance: A Stata package for entropy balancing. *Journal of Statistical Software* 54: 1–18.
- Hambrick, Donald C., and Phyllis A. Mason. 1984. Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review* 9: 193–206.

- He, Hui, and Wei Shi. 2023. Enterprise litigation risk and enterprise performance. *Finance Research Letters* 55: 103783.
- He, Weifeng, and Wei Liu. 2016. Why do companies appoint independent directors having professional legal expertise? *China Journal of Accounting Studies* 4: 379–405.
- Hu, Yuan Yuan, Yanhui Zhu, Jon Tucker, and Yuxiao Hu. 2018. Ownership influence and CSR disclosure in China. *Accounting Research Journal* 31: 8–21. <https://doi.org/10.1108/ARJ-01-2017-0011>.
- Jensen, Michael C., and William H. Meckling. 2019. Theory of the firm: Managerial behavior, agency costs and ownership structure. In *Corporate Governance*. Farnham: Gower, pp. 77–132.
- Jmaii, Amal, Noomene Zaafouri, and Hella Guerchi Mehri. 2024. On the measurement of corporate governance and its impact on bank profitability and credit risk: The case of Tunisian listed banks. *African Development Review* 36: 239–51.
- Kim, Irene, and Douglas J. Skinner. 2012. Measuring securities litigation risk. *Journal of Accounting and Economics* 53: 290–310.
- Kim, Jong Hae. 2019. Multicollinearity and misleading statistical results. *Korean Journal of Anesthesiology* 72: 558–69.
- Krishnan, Jagan, and Jong Eun Lee. 2009. Audit committee financial expertise, litigation risk, and corporate governance. *Auditing: A Journal of Practice & Theory* 28: 241–61.
- Lee, Tom, and Mary Stone. 1997. Economic agency and audit committees: Responsibilities and membership composition. *International Journal of Auditing* 1: 97–116.
- Liao, Qunfeng, and Bo Ouyang. 2019. Shareholder litigation risk and real earnings management: A causal inference. *Review of Accounting and Finance* 18: 557–88.
- Liu, Guoping, and Jerry Sun. 2021. Independent directors' legal expertise, bank risk-taking and performance. *Journal of Contemporary Accounting & Economics* 17: 100240.
- Liu, Guoping, and Jerry Sun. 2022. The effect of firm-specific litigation risk on independent director conservatism. *Managerial Finance* 48: 96–112.
- Lowry, Michelle, and Susan Shu. 2002. Litigation risk and IPO underpricing. *Journal of Financial Economics* 65: 309–35.
- Mandal, Abinash, and Amilan S. 2025. Preventing financial statement fraud in the corporate sector: Insights from auditors. *Journal of Financial Reporting and Accounting* 23: 56–80.
- Mardawi, Zeena, Aladdin Dwekat, Rasmi Meqbel, and Pedro Carmona Ibáñez. 2023. Configurational analysis of corporate governance and corporate social responsibility reporting assurance: Understanding the role of board and CSR committee. *Meditari Accountancy Research* 32: 512–42. <https://doi.org/10.1108/MEDAR-04-2022-1654>.
- Matar, Ali, and Bilal Mohammad Eneizan. 2018. Determinants of financial performance in the industrial firms: Evidence from Jordan. *Asian Journal of Agricultural Extension, Economics & Sociology* 22, 1–10.
- McKendall, Marie, Carol Sánchez, and Paul Sicilian. 1999. Corporate governance and corporate illegality: The effects of board structure on environmental violations. *The International Journal of Organizational Analysis* 7: 201–23.
- McMullin, Jeff L. and Bryce Schonberger. 2020. Entropy-balanced accruals. *Review of Accounting Studies* 25: 84–119.
- McMullin, Jeff, and Bryce Schonberger. 2022. When good balance goes bad: A discussion of common pitfalls when using entropy balancing. *Journal of Financial Reporting* 7: 167–96.
- Mezias, John M. 2002. Identifying liabilities of foreignness and strategies to minimize their effects: The case of labor lawsuit judgments in the United States. *Strategic Management Journal* 23: 229–44.
- Moreno-Gómez, Jorge, Esteban Lafuente, and Yancy Vaillant. 2018. Gender diversity in the board, women's leadership and business performance. *Gender in Management: An International Journal* 33: 104–22.
- Nainggolan, Yunieta Anny, Dianita Indah Prahmila, and Annisa Rizkia Syaputri. 2023. Do board characteristics affect bank risk-taking and performance? Evidence from Indonesian and Malaysian Islamic banks. *Journal of Management and Governance* 27: 1115–45.
- Nguyen, Pascal, Nahid Rahman, Alex Tong, and Ruoyun Zhao. 2016. Board size and firm value: Evidence from Australia. *Journal of Management & Governance* 20: 851–73.
- Nguyen, Thi Hong Hanh, Collins G. Ntim, and John K. Malagila. 2020. Women on corporate boards and corporate financial and non-financial performance: A systematic literature review and future research agenda. *International Review of Financial Analysis* 71: 101554.
- Nguyen, Tuan, Stuart Locke, and Krishna Reddy. 2015. Does boardroom gender diversity matter? Evidence from a transitional economy. *International Review of Economics & Finance* 37: 184–202.
- Nsour, Maen F., and Samer A. M. Al-Rjoub. 2022. Building a corporate governance index (JCGI) for an emerging market: Case of Jordan. *International Journal of Disclosure and Governance* 19: 232–48.

- Park, Eunyoung, Donald Lange, and Chunhu Jeon. 2025. How shareholder litigation risk influences firm orientation toward stakeholders. *Strategic Management Journal* 46: 1149–82.
- Pathan, Shams 2009. Strong boards, CEO power and bank risk-taking. *Journal of Banking & Finance* 33: 1340–50.
- Pathan, Shams, and Robert Faff. 2013. Does board structure in banks really affect their performance? *Journal of Banking & Finance* 37: 1573–89.
- Recendes, Tessa, Jeffrey A. Chandler, Zhefan Huang, and Aaron D. Hill. 2024. Toward a Stakeholder View of Upper Echelons: A Framework Synthesis Review and Future Research Agenda. *Journal of Management* 50: 2073–118.
- Saiyed, Abrar Ali., Ekrem Tatoglu, Salman Ali, and Dev K. Dutta. 2023. Entrepreneurial orientation, CEO power and firm performance: An upper echelons theory perspective. *Management Decision* 61: 1773–97.
- Shettima, Usman, and Nazam Dzolkarnaini. 2018. Board characteristics and microfinance institutions' performance: Panel data evidence from Nigeria. *Journal of Accounting in Emerging Economies* 8: 369–86.
- Taha, Rana, Noor Taha, and Husam Ananzeh. 2023. Determinants of litigation risk in the Jordanian financial sector: The role of firm-specific indicators. *Journal of Financial Reporting and Accounting* 23: 154–69.
- Talley, Eric L. 2009. Public ownership, firm governance, and litigation risk. *The University of Chicago Law Review* 76: 335–66.
- Ting, Irene Wei Kiong, Noor Azlinna Binti Azizan, and Qian Long Kweh. 2015. Upper echelon theory revisited: The relationship between CEO personal characteristics and financial leverage decision. *Procedia-Social and Behavioral Sciences* 195: 686–94.
- Tripathi, Shailja 2025. Corporate Governance and Legal Compliance: Evaluating the Role of Board Diversity in Enhancing Ethical Business Practices. *International Journal of Business Management & Legal Affairs* 1: 1–12.
- Waheed, Abdul, Hamid Mahmood, and Jun Wen. 2024. Corporate governance, litigation risk and firm performance: A mediation moderating model. *International Journal of Emerging Markets* 19: 665–78.
- Wahyuni-TD, Ika Sari, Hasnah Haron, and Yudi Fernando. 2021. The effects of good governance and fraud prevention on performance of the zakat institutions in Indonesia: A Shari'ah forensic accounting perspective. *International Journal of Islamic and Middle Eastern Finance and Management* 14: 692–712. <https://doi.org/10.1108/IMEFM-03-2019-0089>.
- Wu, Wuqing, Fei Peng, Yuan George Shan, and Lu Zhang. 2020. Litigation risk and firm performance: The effect of internal and external corporate governance. *Corporate Governance: An International Review* 28: 210–39.
- Yami, Nafisah, and Hashem Alshurafat. 2024. Gender diversity, corporate governance and firm-specific data of all public listed US firms during 2000–2019. *Data in Brief* 54: 110328.
- Yermack, David. 1996. Higher market valuation of companies with a small board of directors. *Journal of Financial Economics* 40: 185–211.
- Yousef, Ibrahim, Saad Zighan, Doaa Aly, and Khaled Hussainey. 2024. Boardroom dynamics: The impact of board gender diversity on discretionary dividend policy in US REITs. *Journal of Financial Reporting and Accounting*. <https://doi.org/10.1108/JFRA-09-2023-0578>.
- Zheng, Xiaojing, and Xiaoxian Wang. 2024. Board gender diversity and corporate litigation: Evidence from China. *Gender in Management: An International Journal* 39: 427–46.

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.