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*Article*

# The Effect of The Audit Committee on The Voluntary Risk Disclosure In Jordanian Commercial Banks: The Moderating Role of Family Ownership

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**Abstract:** Corporate governance has received increasing attention from practitioners and politicians after the collapse of large companies due to accounting errors and failure to disclose information that reflects the true financial condition of companies. Voluntary risk disclosure includes several aspects, including financial risks, including risks of interest rate, exchange rate, liquidity as well as risks of operations. In Jordan, the most common type of business is family businesses, where boards of directors usually serve the interests of the family that owns the majority stake in the company. This study identifies the moderate effect of family in the link joining the audit committee with the voluntary risk disclosure of financial institutions in Jordan. It's population is the Jordanian commercial banks registered and operating in Jordan during the period extending from 2017 to 2023. Significantly, it concluded with revealing that the characteristics of the audit committee; namely, independence, experience, and committee size, obviously impact disclosure of voluntary risk in the selected banks. However, the results made it obvious that the number of audit committee meetings did not affect the degree of voluntary risk disclosure. In addition, the results view family ownership as moderately affecting the relationship joining some audit committee characteristics with voluntary risk disclosure.

**Keywords:** audit committee; voluntary risk disclosure; financial companies; family ownership; Jordan

## 1. Introduction

Corporate governance attracted increasing attention from practitioners and politicians following the collapse of significant corporations due to accounting errors and a failure to disclose information that accurately represented the businesses' true financial status. A few of these failed businesses include WorldCom and Enron from the previous ten years, as well as the Lehman Brothers affair that caused the financial crisis of 2008–2009[1–5]. Investor trust was put at risk after these incidents, underscoring the importance of sound corporate governance. To protect stakeholders' and shareholders' interests, regulators had to arrange, oversee, observe, and regulate the information that businesses disclosed. [6]Most scandals related to the collapse of companies were related to the lack of transparency and disclosure of important information [7]

Agency theory proposes that mechanisms of corporate governance, like audit committees, can align the expectations of different parties[8,9]. Audit committees are an efficient monitoring mechanism that increases the effectiveness of corporate governance characteristics [10]. Furthermore, the ownership structure is crucial to the corporate governance effectiveness. In the context of Jordan, ownership concentration is high, and the dominant business model is the family business[11].

Contrastingly, voluntary disclosure lessens information asymmetries as well as the possibility that managers receiving private benefits, while corporate governance mechanisms limit the managers' opportunistic behavior through contracts, rewards, and other rules...[12]. In addition to

lowering agency costs, voluntary disclosure is driven by several advantages for capital market players, such as bettering stock liquidity and business performance at a lower cost of capital[13].

Voluntary risk disclosure consists of several aspects, including financial risk (risk related to interest rate, exchange rate, liquidity), risk of operations (like the risk related to customer dissatisfaction with product and service), risk of integrity (like the risk related to illegible acts, creative accounting, and earnings management) and strategic risks (this includes risks related to level of competition and industry) [4,14–16].

There are various reasons why voluntary risk disclosure is crucial. It first takes into consideration potential threats that the organization may face in the future and the present. Second, it has several effects on lessening information asymmetry and the agency problem. With knowledge of risk disclosure, stakeholders and shareholders can decide on financing, investments, and liquidity with knowledge[4,17] Lastly, the ICAEW states that risk disclosure is critical because it can strengthen investor rights, stewardship accountability, and the utility of financial reporting from businesses, all of which contribute to better risk management[18].

The level of disclosure varies and is, to some extent, dependent on the companies' characteristics and level of corporate governance practice[19–22].

The establishment of enterprises is contingent upon the implementation of corporate governance processes. They contribute significantly and efficiently to company disclosure, boosting confidence in financial rules and stimulating capital inflows. Thus, a number of concerns are brought up regarding the efficiency of the corporate governance practices used by Jordanian financial institutions as well as their potential contribution to boosting stakeholder confidence through voluntary disclosure[23]. To improve disclosure, corporate governance was first presented in the Cadbury Report, which was released in 1992. It underlined how important it is to set up internal controls to thwart unethical corporate practices, such as those revealed by the WorldCom affair at the beginning of the twenty-first century [24].

Since the OECD's Code of Corporate Governance was introduced, both OECD member nations and non-member nations use it as the main foundation for their national codes of corporate governance[25]. For example, Jordan utilized the OECD principles to develop its national corporate governance framework. These principles were used to set up the philosophy and principles of corporate governance in financial listed companies. Such a move contributed to encouraging investments and stabilizing global economies, including Jordan [26]

In 2012, a scandal associated to the Jordan Phosphate Mines Company, one of Jordan's major enterprises, was attributed to the BOD's role, as well as the audit committee's role, and the separation of CEO duality[27]. A report issued by the Jordanian Companies Control Department (CCD) showed that more than 44 companies went bankrupt between 2000 and 2011 due to issues of corporate governance and disclosure activities (Addustour, 2017).

In Jordan, the most common business type is family control. The family that holds the majority stake in the business is the one that the BOD works to accommodate[28]. Local studies unveiled that family control represents an important variable to consider in voluntary disclosure[29,30].

Alkurdi, et al. [31] stressed the necessity of studying the family members' effect in the BOD and its impact on voluntary risk disclosure Makhoul, Laili, Ramli, Al-Sufy and Basah [30] emphasized that the family control's moderating effect in the context of Jordan must be examined. Top management's misuse of corporate resources for personal benefit has negatively impacted public firms in Jordan, robbing shareholders and connected parties of their legitimate rights in the end [32,33]

The main issue is the unsatisfactory disclosure by Jordanian companies, which is below the average of other countries(Alhosban & Al-Sharairi, 2017[25,34]

Moreover, corporate governance standards vary per country. Developed countries tend to apply transparency more rapidly and comprehensively than emerging nations, in part because corporate governance is not established in developing nations and because their financial and administrative institutions are relatively weak[35,36].

Previous studies that examined the corporate governance' impact on disclosure were limited, to a large extent, to developed countries in comparison with developing countries [36]. The majority of previous studies have also focused either on mandatory disclosure [19,20,22,37] or voluntary disclosure [38–40] among industrial and service companies [34,41–43].

Previous research was restricted in terms of the number of variables. Malak (2014), for instance, looked at how executive director compensation affected voluntary disclosure, whereas Al-Hadi et al. (2016) concentrated on how the governing family affected voluntary disclosure. Furthermore, Ompusunggu (2016) investigated how voluntary disclosure was impacted by ROA, ROE, and net profit margin. In their 2017 study, Tejedo-Romero, Rodrigues, and Craig looked at women's roles on boards related to voluntary disclosure. Zaini, et al. (2019) looked at the ownership structure's impact on voluntary disclosure. In this sense, the new study adds to the existing literature.

This research's significance is evident through its addition to the existing literature and knowledge base on voluntary risk disclosure and corporate governance in Jordan and other developing nations. It looks at how corporate governance practices affect financial organizations' voluntary risk disclosure. Corporate governance procedures in general and their effects on disclosure in developing nations have received little attention, despite prior research emphasizing the corporate governance' significance and its influence on disclosure.

From a practical standpoint, multiple stakeholders find value in the current study. The study provides financial organizations with insights and recommendations to improve their transparency, hence improving public impression of these companies and making them more appealing to investors. This is significant because it enables investors to make more informed decisions by disclosing risks voluntarily. The importance of this study extends to Jordanians, as the prosperity of the financial sector supports employment growth, stimulates the economy through tax revenue, and funds public initiatives. In Jordan, voluntary risk disclosure will improve business transparency and attract more investment. Furthermore, the implementation of strong corporate governance will result in a drop in bankruptcy proceedings.

Moreover, this study is important because it will be conducted in the financial company sector, whereas the previous studies examined disclosure among service and industrial companies (Abed, Al-Najjar, & Roberts, 2016; Alqatamin, Aribi, & Arun, 2017; Mnif Sellami & Borgi Fendri, 2017; Saggar & Singh, 2017, 2019; Sartawi et al., 2014; Sharma, 2014). Thus, it contributes to the literature by examining disclosure in this extremely important sector, including banking, which is the engine of economic growth and activities in Jordan and developing countries.

## 2. Review of Literature and Hypothesis Development:

The Audit Committee is considered an essential element in promoting transparency and voluntary disclosure of risks in companies through its careful supervision of financial reports and the internal control system [44,45]. The Audit Committee comprehensively reviews the financial statements as well as risk-related information to ensure that they reflect the reality of the company's financial position and the potential risks it may face [11,32]. This ensures that the information provided to investors and shareholders is comprehensive and factual, enhancing their trust in the company.

In contrast, family ownership plays an important role in determining how companies deal with voluntary risk disclosure [16]. In family-owned businesses, there may be an overlap between personal and corporate interests, which can affect the level of disclosure. Ownership families [11] may be wary of revealing information that might negatively affect their reputation or the company's value in the market. This may lead to reduced voluntary risk disclosure to protect family interests. However, in other cases, ownership families focused on the long-term sustainability of the company may seek to improve the level of disclosure to enhance trust and attract more investment [9,46].

When the audit committee interacts with family ownership, the committee may face challenges in providing objective oversight due to the influence of family interests[5,10,46]. There may be pressure on the audit committee to avoid disclosing information that might negatively affect the reputation of the family ownership. To achieve a balance between providing accurate and comprehensive information and protecting the family's interests, the audit committee must remain independent and adhere to international standards. Cooperation between the Audit Committee (AC) and the Family ownership can help in improving the process of voluntary risk disclosure by achieving a balance between transparency and protecting personal interests, which enhances the effectiveness of the disclosure process and contributes to achieving long-term benefits for the company, investors, and shareholders.

### *2.1. Independence of the Audit Committee*

The available literature suggest that an independent AC is a relevant and necessary variable that ultimately construes the difference in discourses of corporate risk [14]. Davidson, et al. [47] stressed that problems of agency between shareholders and managers are believed to have lower levels in firms with independent ACs. This is stressed by [46,48] that hypothesize that an independent audit committee is possibly to oppose management influence as well as advocate for the release of information to the capital markets to lessen information asymmetries.

A positive link joining the independence of an audit committee with voluntary disclosure is found in [5,7,15,49]. Thus, this study hypothesizes that the link joining the independence of an AC with voluntary risk disclosure is positive.

**H1a: There is a statistically significant effect of the independent AC on the voluntary risk disclosure in Jordanian commercial banks.**

### *2.2. Experience of the Audit Committee*

Experience in auditing is crucial for the audit committee as it helps in understanding and overseeing the company's financial reporting system [38]. The findings of related studies are mixed regarding the link joining the experience of the audit committee with disclosure.

Venturelli, et al. [50] showed that AC experience has a negative link with voluntary disclosure in the UK and Italy, whereas Alkurdi, Hussainey, Tahat and Aladwan [31] indicated a positive link joining AC with voluntary disclosure in Jordan. Accordingly, the present paper hypothesizes the following:

**H1b: The experience of the AC significantly affects voluntary risk disclosure in Jordanian commercial banks.**

### *2.3. Number of AC Meetings (NACMs)*

It refers to the frequency of audit committee meetings every year. In a study conducted by Allegrini and Greco [13], they found that the NACMs has a positive and significant link with voluntary disclosure levels among Italian public listed companies. However, Abdullah and Ahmad [51] unveiled no obvious link between such variables and the compliance level with disclosure in Malaysia. Similar findings were derived by [49,52], and [16]found that ownership concentration is high, a positive link is expected between audit committee meetings and the degree of voluntary risk disclosure. Accordingly, this study hypothesizes that:

**H1c: The number of AC meetings significantly affects voluntary risk disclosure in Jordanian commercial banks.**



#### 2.4. The Audit Committee's Size

This can have a critical role in the disclosure level [49,53]. Madi [54] found that the AC's size is crucial to enhance the level of voluntary disclosure and reduce the asymmetry problem resulting from agency theory. And reached the same conclusion. Albitar [55] supports this point, whereas Basah [56] that such a variable has an insignificant relationship with the voluntary disclosure's level. Audit committee size enhances the ability of the committee to monitor and present high-quality information [7,57,58]. Therefore, this study assumes the following:

**H1d: The audit committee size significantly affects voluntary risk disclosure in Jordanian commercial banks.**

#### 2.5. Moderating Effect of Family Control

Family ownership dominates Jordanian business, and a high percentage of companies are owned by families (Sawalqa, 2014). In Kuwait, the study of Alfraih (2016) indicated that the increase in family ownership has a negative link with voluntary disclosure. Sartawi et al. (2014) indicated that companies owned by families tend to disclose less information in the context of Jordan. The increase in the combination of family ownership, control, and management can shape the BODs' decisions on voluntary disclosure. Nevertheless, the companies owned by families limit their disclosure to the MD [59]. Also, a positive link joining family ownership with disclosure was found in [4] in Indian listed companies. Previous studies in Jordan suggested that family control or ownership plays an obvious role in voluntary disclosure and shapes the decision of the BOD, audit committee, and CEO (Makhlouf et al., 2017). For this reason, previous studies suggested studying the family ownership's moderating role (Alkurdi et al., 2019; Makhlouf et al., 2017). In this context, several previous studies revealed that family ownership moderately affects voluntary disclosure. Akhtaruddin, et al. [60] found that family control with the audit committee negatively affects voluntary disclosure. Muttakin and Subramaniam [61] pointed out that in family-controlled firms, there is less need to report on voluntary disclosure. Thus, the hypothesis below is proposed.

**H2: The family ownership affects the AC characteristics on voluntary risk disclosure in Jordanian commercial banks**

### 3. Methodology

This study is considered a quantitative study, as it relies mainly on numerical and statistical data to analyze the relationship between different variables. Various statistical methods, including descriptive analysis, model fit tests, and tests of hypothesis, were used to examine the effects and relationships between voluntary risk disclosure, audit committee characteristics, and family control in the selected banks.

#### 3.1. Population and Sample:

The Jordanian commercial banks registered and operating in Jordan during the period extending from 2017 to 2023 represent the research population. For this study, a sample of these banks was selected according to specific criteria that ensure an appropriate and comprehensive representation of the study population. The main selection criteria included the availability of complete financial and non-financial data available for study during the selected period.

#### 3.2. Measurement of Variables:

- 1. Dependent Variable :**  
**voluntary risk disclosure:**

The index was measured as a percentage of the actual disclosed information divided by the total possible disclosure. The formula is given as follows:

$$Disclosure\ Index = \frac{Actual\ Disclosure}{Total\ possible\ disclosure} = \frac{\sum_1^m di}{\sum_1^n di'}$$

Where di=1 if the item is disclosed and zero if not disclosed ,  
m= number of items disclosed ,  
n=maximum number of disclosure items possible.

3.2. Independent Variable:

Variable		Measurement
The AC Independence	IND	measured as the percentage of independent audit committee members divided on the total number of audit committee member
The AC Experience	EXP	takes the value of 1 if all audit committee members are qualified (holding an undergraduate degree in accounting or finance), and at least one of them has an accounting professional qualification (as specified in the CG code for Jordan), and 0 otherwise
Number of AC Meetings	MEET	measured as the number of meetings of the audit committee held during full year
Size of the AC	SIZE	audit committee size is measured by the number of audit committee members reported in the firm’s annual financial reports
Family Control	FO	measured by the percentage of 5 percent or more of shares held by a family

4. Result and Discussion

This section includes the results related to statistical analysis that includes descriptive measures;. The statistical treatment is based on the financial and non-financial data related to the selected banks for seven years extending from 2017 to 2023.

4.1. Descriptive Statistics

The dependent variable represents voluntary risk disclosure, while the independent variable represents the characteristics of the AC, which is the independence, experience, number of meetings, and size of the AC, while the moderating variable is represented by family ownership in the selected banks during (2017-2023).

**Table 1.** Statistics of voluntary risk disclosure, characteristics of the audit committee, and family ownership in the selected banks for (2017-2023).

Variables	Measure			
	Mean	Max	Min	Stdev.
DRISK	0.566	0.793	0.172	0.122
IND	0.887	1.0	0.333	0.169
EXP	1.476	8.0	0.0	1.936

<b>MEET</b>	7.405	19.0	4.0	2.319
<b>SIZE</b>	3.953	8.0	3.0	1.221
<b>FO (After first difference)</b>	13.433	59.926	0.0	16.384

**DRISK:** Voluntary risk disclosure, **IND:** Independence of the audit committee, **EXP:** Experience of the audit committee, **MEET:** Number of meetings of the audit committee, **SIZE:** Size of the audit committee, **FO:** Family ownership

Table (1) above reveals that:

1. The mean of risk disclosure rate in the selected banks for (2017-2023) was (0.566), having the deviation (0.122). Besides, the highest observation recorded (0.793), while the value of the lowest observation was (0.172). The values indicate a difference between the selected banks in disclosing risks, which may be due to the difference in the banks' internal policies related to disclosure, their difference in size, and their investment in technology and advanced information systems.
2. The mean of Independence of the audit committee in the selected banks for (2017-2023) was (0.887), with a deviation of (0.169), and the value of the highest observation was (1.0), while the value of the lowest observation was (0.333). The values indicate a difference between the selected banks in the independence of the audit committee, which may be due to the difference in the size of those banks, size of their board of directors, the organizational structure followed by them, and the shareholders' orientations in imposing oversight and accountability.
3. The mean of experience of the audit committee in the selected banks for (2017-2023) was (1.476), with a deviation of (1.936), and the value of the highest observation was (8.0), while the value of the lowest observation was (0.0). The values indicate a difference between those banks in the experience of the audit committee, which may be due to the difference in the composition of the board of directors, and its inclusion of members who hold certificates, skills, and competencies in the field of accounting and finance.
4. The mean of number of meetings held by the audit committee in those banks for the period (2017-2023) was (7.405), recording a deviation of (2.319). Besides, the value of the highest observation during the period was (19.0), while the value of the lowest observation was (4.0). The values indicate that there is a difference in the number of audit committee meetings, which is due to the difference in the size of commercial banks, the level of complexity in their activities and operations, the level and type of risks they deal with, and the difference in the organizational and administrative structure followed in the bank.
5. The mean of size of the audit committee in those banks for the period (2017-2023) was (3.953), recording a deviation of (1.221). Furthermore, the highest observation's value during the said period was (8.0). Contrastingly, the lowest observation's value was (3.0). The values denote a difference between the selected banks in the size of the audit committee, and this may be due to the difference in the number of board members, the diversity in its activities and operations, the complexity of the financial services provided, and the extent of its commitment to governance standards regarding the size of audit committees.
6. The mean of Family ownership in those banks for (2017-2023) was (13.433), recording the deviation (16.384). Besides, the highest observation's level during the said period was (59.926), while the lowest observation's level was (0.0). The values indicate a difference between the selected banks in family ownership, and this may be due to the difference in investment strategies in commercial banks and internal policies that encourage family participation.

#### 4.2. Test of Multicollinearity:

Testing multicollinearity between model variables requires the calculation of Pearson correlation coefficients between the independent variables.



**Table 2.** Correlation matrix for predictor variables.

Variable	<i>IND</i>	<i>EXP</i>	<i>MEET</i>	<i>SIZE</i>	<i>FO</i>
<b>IND</b>	1.000				
<b>EXP</b>	-0.257**	1.000			
<b>MEET</b>	0.023	0.373**	1.000		
<b>SIZE</b>	-0.253**	0.667**	0.147	1.000	
<b>FO</b>	-0.155	0.240**	0.056	-0.022	1.000

**IND:** *AC Independence*, **EXP:** *Experience of the AC*, **MEET:** *Number of meetings of the AC*, **SIZE:** *Size of the AC*, **FO:** *Family ownership*.

(\*\*) Significant at 0.01

Table (2) unveils that the maximum value of correlation coefficient (0.667) occurred between (EXP) and (SIZE). Therefore, multicollinearity is not applicable, as the values were less than ( $\pm 0.80$ ). In statistics, the value of (0.80) and more denotes multicollinearity (Gujarati, 2004). To verify this point, VIF was calculated as follows:

**Table 3.** VIF for independent variables.

Variable	VIF
IND	1.117
EXP	2.403
MEET	1.208
SIZE	2.008
FO	1.158

**IND:** *AC Independence*, **EXP:** *AC Experience*, **MEET:** *Number of meetings of the AC*, **SIZE:** *Size of the AC*, **FO:** *Family ownership*.

Table (3) evidently reflects that the VIF recorded values higher than (1). Furthermore, they were less than (10). These values indicate no multicollinearity among the variables (Gujarati, 2004).

#### 4.3. Stationary Test:

It is processed to determine if a systematic change exists in either the mean or the variance in the data. In this respect, the LLC test is applied.

**Table 4.** Results of the stationary test.

Variables	LLC-statistic	Prob.	Results
<b>DRISK</b>	-5.283	0.000	Stationary at level
<b>IND</b>	-3.265	0.020	Stationary at level
<b>EXP</b>	-2.967	0.042	Stationary at level
<b>MEET</b>	-4.159	0.001	Stationary at level
<b>SIZE</b>	-4.261	0.001	Stationary at level
<b>FO (After first difference)</b>	-8.122	0.000	Stationary at level

**DRISK:** Voluntary risk disclosure, **IND:** AC Independence, **EXP:** AC Experience, **MEET:** AC Number of meetings, **SIZE:** Size of the AC, **FO:** Family ownership

It is clear from Table (4) that the variables are stable, as the probability values (Prob.) did not go beyond the level of 0.05, with the exception of the variable (family ownership), whose probability value was greater than 0.05, and for this reason the first difference was taken for the variable.

#### 4.4. Estimate the Model

The econometric analysis was adopted in this study. In doing so, panel data of time-series and cross-sectional data was used. To investigate the effect in study models, the following was relied upon:

1. Pooled Regression Model (PRM)
2. Fixed Effect Model (FEM)
3. Random Effect Model (REM)

Furthermore, selecting the proper model was done using Lagrange Multiplier. Besides, the appropriate model was selected by using Hausman test.

**Table 5.** Lagrange Multiplier test and Hausman test results.

Hypothesis	Lagrange Multiplier		Hausman		Appropriate Model
	Chi <sup>2</sup>	Sig.	Chi <sup>2</sup>	Sig.	
<b>H1</b>	101.041	0.004	3.992	0.407	REM
<b>H1-a</b>	106.071	0.001	2.190	0.139	REM
<b>H1-b</b>	114.976	0.000	2.211	0.137	REM
<b>H1-c</b>	105..045	0.002	0.051	0.821	REM
<b>H1-d</b>	112.082	0.000	1.971	0.160	REM
<b>H2</b>	90.183	0.026	2.922	0.967	REM

Table (5) denotes the accuracy of REM, being the most accurate model in estimating the study hypotheses model, as the significance level values when conducting the Lagrange Multiplier test appeared less than 0.05, while the significance level values when conducting the Hausman test appeared greater than 0.05.

#### 4.5. Hypothesis Testing

This part deals with the results of hypothesis testing. In testing the hypotheses, multiple regression analysis was applied.

**The first main research hypothesis:**

**H1: The audit committee characteristics significantly affect voluntary risk disclosure in the selected banks.**

**Table 6.** REM for the first main hypothesis and its subscales.

Variable	Co-eff	Std Error	T-value	P-value*
<b>IND</b>	0.035	0.006	5.697	0.000
<b>EXP</b>	0.029	0.006	5.192	0.000
<b>MEET</b>	0.006	0.005	1.168	0.246
<b>SIZE</b>	0.005	0.002	2.745	0.008

<i>R-squared</i>	<i>0.384</i>
<i>Adjusted R-squared</i>	<i>0.353</i>
<i>F-statistic</i>	<i>12.327</i>
<i>Prob*(F-statistic)</i>	<i>0.000</i>
<i>D-W</i>	<i>1.831</i>

\*Significant at 0.05 level.

Table (6) reflects that R Square is (0.384), proving that the model explains about (38.4%) of the variation in voluntary risk disclosure. Besides, the significance value of the F statistic is less than 0.05. Therefore, the above said hypothesis is accepted, revealing that the audit committee characteristics significantly affect the voluntary risk disclosure in Jordanian commercial banks.

The sub-research hypotheses

The regression coefficients states demystify that the (IND) positively affects voluntary risk disclosure, as the coefficient value is (0.035), being significant with (t=5.697) as well as with(P-value=0.000). Based on the above, the said hypothesis is accepted, denotinh that **the independent of audit committee significantly affects the voluntary risk disclosure in the selected banks.**

The regression coefficients proves that the (EXP) positively affects voluntary risk disclosure. In this respect, the coefficient value is (0.029), being significant with (t=5.192) as well as with (P-value=0.000). Based on the above, the second hypothesis is accepted, denoting that **the experience of the audit committee significantly affects the voluntary risk disclosure in the selected banks.**

The regression coefficients of the (MEET) doesn’t significantly affect voluntary risk disclosure, as the coefficient value is (0.006), being significant with (t=1.168) as well as (P-value=0.246) greeter than 0.05. Based on the above, the third hypothesis is rejecting, and following the alternative hypothesis instead, which states that the **number of audit committee meetings doesn’t significantly affect the voluntary risk disclosure in the selected banks.**

The regression coefficients of the (SIZE) reveals that (SIZE) positively affects voluntary risk disclosure. In this respect, the coefficient is (0.005), being significant with (t=2.745) as well as with (P-value=0.008). Based on the above, the said hypothesis is adopted, denoting that **the audit committee size positively affects the voluntary risk disclosure in Jordanian commercial banks.**

The second main research hypothesis:

**H2: There is a mediating effect of family ownership on the effect of audit committee characteristics on voluntary risk disclosure in the selected banks**

Table 7. Random Effect Model for the second main hypothesis.

Variable	Co-eff	Std Error	T-value	P-value*
IND	0.007	0.014	0.480	0.633
EXP	0.006	0.007	0.944	0.348
MEET	0.025	0.005	4.601	0.000
SIZE	0.003	0.015	0.177	0.860
FO	0.007	0.002	3.448	0.001
IND*FO	0.002	0.001	0.525	0.601
EXP*FO	0.001	0.003	2.091	0.040
MEET*FO	0.002	0.001	3.780	0.000
SIZE*FO	0.001	0.001	1.659	0.101

<i>R-squared</i>	<i>0.388</i>
<i>Adjusted R-squared</i>	<i>0.313</i>
<i>F-statistic</i>	<i>5.210</i>
<i>Prob*(F-statistic)</i>	<i>0.000</i>
<i>D-W</i>	<i>1.706</i>

\*Significant at 0.05 level.

Table (7) reveals that R Square is (0.388), denoting that nearly (38.8%) of the difference in voluntary risk disclosure is construed by the adopted model. Furthermore, the F statistic (F=5.210) and (Prob F = 0.000), which is less than the level of 0.05, denoting that there is an effect of the independent variables on the dependent variable.

It is clear from the table that the coefficient value at (IND\*FO) reached (0.002). Besides, the calculated T reached (0.525), with (SigT=0.601), denoting no presence of a significant effect of family ownership on the effect of the independent of the audit committee on Voluntary disclosure of risks in the selected banks.

The coefficient at (EXP\*FO) reached (0.001), and the calculated T reached (2.091), with (SigT=0.040), which highlights the presence of a significant effect of family ownership on the effect of the experience of the audit committee on Voluntary disclosure of risks in the selected banks.

The coefficient at (MEET\*FO) reached (0.002), and calculated T reached (3.780), with (SigT=0.000), denoting the presence of a significant effect of family ownership on the number of the AC meetings on Voluntary disclosure of risks in the selected banks.

The coefficient at (SIZE\*FO) reached (0.001), and the calculated T reached (1.659), with (SigT=0.101), revealing no presence of a significant effect of family ownership on the audit committee size on Voluntary disclosure of risks in the selected banks.

Thus, the said hypothesis is adopted, denoting that family ownership affects the AC characteristics on voluntary risk disclosure in the selected banks.

5. Conclusions

The results of this study show many important indications about the impact of AC characteristics on voluntary risk disclosure in Jordanian commercial banks and the effect of family ownership as a moderating factor on this relationship. By analyzing the financial and non-financial data of the selected banks over seven years, starting from 2017 until 2023, a set of results was reached that highlight the link joining these variables and provide a deeper understanding of the regulatory dynamics that affect the level of financial disclosure.

The multicollinearity test’s result proved that the independent variables in the study do not suffer from multicollinearity problems, which means that the data used were suitable for statistical analysis and there were no significant interactions between the variables affecting the results. This enhances the reliability of the results and allows a clearer view of the factors influencing voluntary risk disclosure.

The results of the reliability test (Levin-Lin-Chu) demonstrated that most variables were stationary at the original level, with the exception of the family ownership variable, which required taking first differences to ensure stationarity. This indicates that the data are stable over time, meaning that the results from the analysis actually reflect the relationships between the variables and not random fluctuations in the data. The Lagrange Multiplier’s result, as well as Hausman test’s result, showed that the REM was the most accurate model. This indicates that random variances across banks were important in analyzing the link between AC characteristics and voluntary risk disclosure.

The study revealed that the AC’s characteristics, including independence of the audit committee experience, and committee size, significantly affect voluntary risk disclosure in the selected banks. This result agrees with the findings of [14] which imply that one important factor explaining

heterogeneity in business risk disclosures is the independent audit committee. It also concurred with the arguments made by [46,48] who claim that an impartial audit committee is possibly to oppose management influence as well as support information release to the markets to reduce knowledge asymmetries. and each of the studies revealed a favorable correlation between voluntary disclosure and audit committee independence [5,7,15,49]. Regarding the connection between disclosure and the audit committee's experience, the results of earlier research are conflicting. While [31] discovered a favorable link with voluntary disclosure in Jordan, [50] demonstrated that audit committee experience negatively impacts voluntary disclosure in the UK and Italy which is not consistent with our study findings. Moreover, the results are consistent with those of Madi [54] who discovered that a key element in increasing voluntary disclosure and decreasing agency theory-related asymmetry is the audit committee's size. While Albawwat and Basah (2015) found no evidence of a link to join the audit committee size with the voluntary disclosure degree, Albitar (2015) discovered that the audit committee size had a significant effect on the voluntary disclosure level. The size of the audit committee improves its capacity to track and provide high-quality data (Buallay, 2018; Al-Musali, et al., 2019). These results were expected based on previous literature that confirms that strong, independent, and highly experienced audit committees are better able to monitor financial disclosure and ensure transparency. This understanding reinforces the importance of enhancing these characteristics in audit committees to enhance the voluntary risk disclosure level.

However, it is obvious that the number of AC meetings did not impact the voluntary risk disclosure level. This suggests that increasing the number of meetings does not necessarily mean improved financial transparency, and the quality as well as the effectiveness of meetings may be more important than the number. This reflects the need to focus on the quality of meetings and ensure that each meeting adds real value to the audit and financial disclosure process. These findings did not align with the results of Allegrini and Greco's (2013) study, which indicated the existence of a positive and substantial correlation joining the audit committee meetings number with the levels of voluntary disclosure among Italian public listed businesses,

In addition, the results show that family ownership moderately affects the link between some audit committee characteristics and voluntary risk disclosure. For example, it was demystified that family ownership significantly affects audit committee experience. Besides, the number of their meetings affects voluntary risk disclosure, while there no effect was reported on the effect of independence and committee size. This reflects that family-owned banks may particularly benefit from the experience of audit committee members and the number of their meetings in enhancing financial transparency.

These results contribute to a deeper understanding of the regulatory dynamics that affect financial disclosure in the selected banks. It indicates the importance of enhancing the audit committee's characteristics, like independence, expertise, and committee size, to ensure greater transparency in financial disclosure. It also highlights the role that family ownership can play in enhancing or modifying the effect of these characteristics.

Based on these findings, it can be said that strong and independent audit committees has a crucial role in enhancing the level of voluntary risk disclosure in banks. Experience and independence are essential factors that increase the Audit Committee's effectiveness and ensure that financial disclosure is carried out in a transparent and accurate manner. This understanding reinforces the importance of providing ongoing training and development to audit committee members to guarantee they possess the knowledge as well as the skills essential to do their role effectively.

Ultimately, this study highlights the complex link joining audit committee characteristics, family ownership, and the voluntary risk disclosure level in Jordanian commercial banks. It is important to strengthen the characteristics of the audit committee to ensure a greater level of financial transparency, while considering the impact of internal dynamics of banks such as family ownership. These findings provide valuable insights for decision-makers and financial management practitioners, helping to improve policies and procedures that enhance financial transparency and support financial system stability.



## 6. Limitation and Future Studies

Despite the importance of its findings, this study is not without limitations that could affect the generalizability of the findings. In this respect, it is based on data from Jordanian commercial banks over the period (2017-2023). This time period may be insufficient to generalize to longer periods of time or to other financial sectors. Also, focusing on commercial banks only may not reflect the situation in other financial sectors such as investment banks or non-banking financial institutions. Second, the study relied on a specific set of variables to measure audit committee characteristics and family ownership. There may be other significant variables which are relevant to the topic but were not included in the model. This could ultimately affect the comprehensiveness of the results. For example, the impact of macroeconomic factors or regulatory changes that may affect voluntary risk disclosure is not considered. Third, the study used traditional regression models to analyze the data. Although these models are effective, the use of advanced statistical or economic techniques such as dynamic panel data models or machine learning techniques may provide deeper and more accurate insights into the relationship between variables. Fourth, the study relies on measuring voluntary risk disclosure as a dependent variable. There may be different ways to measure this variable, and each method may give different results. In addition, disclosure standards may ultimately vary, making direct comparisons between banks more complex.

Future studies could develop new and more precise ways to measure voluntary risk disclosure. These methods can include qualitative or quantitative indicators that combine various aspects of disclosure and improve the accuracy of measurement and comparison between banks. Future studies could also explore the influence of organizational and cultural factors on voluntary risk disclosure. These factors may include regulatory policies, legal frameworks, and cultural trends within financial institutions. This will help in a deeper understanding of how these factors affect the level of transparency and disclosure.

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