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Internal Audit Governance Factors and their effect on the Risk-Based Auditing Adoption of Commercial Banks in Jordan

Factores de gobernanza de la auditoría interna y su efecto en la adopción de la auditoría basada en riesgos por parte de los bancos comerciales de Jordania

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ABSTRACT

Introduction: this paper aims to explore the impact of internal audit governance factors on the risk-based auditing adoption of commercial banks in Jordan. The population targeted in this paper were managers of the accounting and finance departments in the commercial banks listed on the Amman Stock Exchange.

Method: using the purposive sampling method, 339 responses were obtained in the final sample, which constituted a validity rate of 73,7 %. Structural equation modeling (SEM) was adopted as a statistical approach for hypotheses assessment.

Results: the findings of this paper confirmed the positive impact of internal audit governance factors, including internal audit attributes, audit committee attributes, risk management system, and internal control system, on risk-based auditing adoption.

Conclusion: a set of recommendations was provided to bank managers, such as enhancing the Board's supervision and monitoring of the internal audit function's actions by encouraging Board members to grasp risk-based auditing thoughts and the value it delivers to the Bank.

Keywords: Internal Audit Governance; Risk-Based Auditing; Commercial Banks; Jordan.

RESUMEN

Introducción: este artículo tiene como objetivo explorar el impacto de los factores de gobernanza de auditoría interna en la adopción de auditoría basada en riesgos por parte de los bancos comerciales en Jordania. La población objetivo de este artículo fueron los gerentes de los departamentos de contabilidad y finanzas de los bancos comerciales que cotizan en la Bolsa de Valores de Ammán.

Método: utilizando el método de muestreo intencional, se obtuvieron 339 respuestas en la muestra final, lo que constituyó una tasa de validez del 73,7 %. Se adoptó el modelo de ecuaciones estructurales (SEM) como enfoque estadístico para la evaluación de hipótesis.

Resultados: los hallazgos de este artículo confirmaron el impacto positivo de los factores de gobernanza de auditoría interna, incluidos los atributos de auditoría interna, los atributos del comité de auditoría, el sistema de gestión de riesgos y el sistema de control interno, en la adopción de auditoría basada en riesgos. **Conclusión:** se proporcionó un conjunto de recomendaciones a los gerentes de los bancos, como mejorar la supervisión y el seguimiento de las acciones de la función de auditoría interna por parte del Directorio al alentar a los miembros del Directorio a comprender los pensamientos de auditoría basada en riesgos y el valor que aporta al Banco.

Palabras clave: Gobernanza de Auditoría Interna; Auditoría Basada en Riesgos; Bancos Comerciales; Jordania.

INTRODUCTION

Companies nowadays confront several internal and external challenges and risks that influence the outcomes of their operations. Audits were traditionally done using a preset checklist of processes encompassing a variety of a company's operations. However, this method may not be beneficial for detecting and managing prospective hazards in the current context that might have a detrimental influence on a company's financial health, regulatory compliance, or attainment of strategic objectives (Sarairah et al., 2022). Numerous audit frameworks, like the International Standards on Auditing (ISA), have highlighted the relevance of risk evaluation and response in audits (Čular et al., 2020). Moreover, Authorities encourage companies to implement risk-based auditing approaches to ensure financial reporting dependability and the efficacy of internal controls (Gallati, 2022). Hence, risk-based auditing is an approach to planning that allows auditors to concentrate on the most critical issues confronting a business (Le et al., 2022). Auditors could provide more relevant and meaningful insights to assist companies in addressing risks efficiently and accomplishing their objectives by changing audit methods to deal with various risks (Ferdinand et al., 2023).

Companies could establish robust internal governance systems and procedures to ensure that internal auditors have the independence and assistance needed to deliver impartial and valuable assurance and consulting services to address possible risks (Al Matari & Mgammal, 2019). Internal audit governance is critical for increasing openness, accountability, and trust in the company's internal audit function (Kaawaase et al., 2021). The major goal of internal audit governance is to increase the integrity and credibility of the internal audit function, which is crucial in assisting companies in achieving their goals and improving their operations (Al-Jaifi et al., 2019). On the other hand, Effective internal audit governance emphasises that internal auditors have the power, resources, and support they need to successfully carry out their obligations in a professional and fair manner (Amri et al., 2023).

Currently, there is limited research on the specific relationship between internal audit governance factors and the adoption of risk-based auditing in the context of commercial banks in Jordan. This knowledge gap hinders the development of best practices and guidelines for banks for the effective implementation of risk-based auditing, which can lead to sub-optimal risk management and control processes. Therefore, the purpose of this research is to provide insight into the variables influencing the adoption of risk-based auditing approaches. It aims to identify the problems, impediments, and opportunities that banks encounter when implementing risk-based auditing while taking into consideration the relevant governance structures and procedures. Understanding these variables can help Jordanian banks improve their internal audit governance policies and risk management skills.

The outcomes of this study will have practical consequences for Jordan's banking system. They could assist regulators, bank management, and internal audit teams in implementing successful risk-based auditing procedures. Furthermore, the research will add to the academic literature on internal audit, risk management, and governance by offering insight into the unique context of Jordanian commercial banks.

Internal audit governance

Internal audit governance describes the system and processes that monitor and supervise a company's internal audit function (Almasria, 2022). It includes the structures, rules, and procedures to make certain internal audit operations are carried out successfully, independently, and in accordance with the goals of the business (Mwape, 2022). Internal audit governance is defined by the Institute of Internal Auditors (IIA) as "a variety of rules and regulations implemented by the board of directors to inform, direct, control, and evaluate the activities of the company's internal audit team in order to obtain accurate and fraud-free financial information that can be used by stakeholders with confidence" (Capraru, 2009). According to Zainal Abidin (2017), internal audit governance is concentrated on four major facets:

- Internal audit attributes are the primary features or behaviours which influence the role and effectiveness of a company's internal audit operations. These attributes include independence and objectivity, timeliness and appropriateness, and the professional standards and ethics used in internal auditing.
- Audit committee attributes could be defined as the basic qualities and duties necessary for the audit committee's effectiveness and governance. These attributes include a variety of elements, such as the committee's components, the experiences and credentials of its members, the committee's roles in financial verification, and communication and reporting methods.
- The risk management system is described as the company's methodical approach to identifying, evaluating, prioritizing, and mitigating risks that could compromise its objectives. In the internal governance context, it encompasses the procedures, rules, tools, and practices utilized by the internal audit committee to identify and proactively manage risks across its many areas of operations.
- The internal control system is a collection of organizational regulations and processes developed by a company to provide reasonable certainty about its financial statements and the degree of its performance enhancement. It contains regulations regarding compliance that allow for more openness, accountability, and the effective use of the company's resources.

Risk-based auditing

Risk-based auditing is a method of internal auditing which concentrates on recognizing and evaluating risks in order to establish the scope, type, and extent of audit processes (Le et al., 2022). This method confirms that audit resources are targeted to areas of higher risk and possible influence on the goals of the company. Esmail and Haque (2022) explained risk-based auditing as a systematic and disciplined strategy for directing internal audit resources to where they may add the greatest value to the company. It includes concentrating internal audit skills on high-risk areas, enabling greater efficiency and effectiveness in resource use while maintaining board confidence (Ali, 2022). Risk-based auditing definitions emphasize the deliberate allocation of audit resources based on recognized risks to ensure that the internal audit function generates value, tackles essential risks, and facilitates effective decision-making. Three functional dimensions are included in the risk-based auditing approach (Puad et al., 2020). (a) Audit planning is a manner of identifying audit goals, scope, and methods. It entails the systematic identification and evaluation of risks, the setting of audit goals and criteria, and the creation of an audit plan to direct the audit engagement's implementation. (b) Audit execution relates to the actual implementation and conducting of audit processes and activities as stated in the audit plan. It entails carrying out scheduled audit tests, acquiring and analyzing audit evidence, and assessing an organization's controls, operations, and financial information. (c) Audit reporting is the method of presenting the audit's findings, conclusions, and recommendations to the right stakeholders. It comprises preparing and submitting an audit report, which serves as official evidence of the auditor's perceptions or assessment of the audited entity's financial statements, controls, or activities.

Internal audit governance and risk-based auditing

Internal audit governance may probably play a significant role in developing and influencing risk-based auditing procedures in Jordanian commercial banks. Lois et al. (2021) presented empirical evidence that the qualities of an active internal audit committee had a beneficial influence on identifying possible risks and adopting a risk-based auditing approach in research they did on a sample of 90 internal auditors, CEOs, and accountants in Greek enterprises. Kalamanova and Prodanova (2021) carried out a systematic study on the theoretical foundations of risk-based internal auditing as well as the basic terminologies and concepts associated with it. The findings demonstrated that the global framework for the professional practice of internal auditing is crucial for improving the governance strategy aimed at preserving and increasing the value of the organization through objective internal audits based on a risk-based approach, advice, and knowledge exchange. Adebawojo (2020) found from an exploratory study on how corporate governance influences audit risk that when there is effective governance in the company, the quality of the financial report would increase, lowering audit risk. Based on the previous literature review, research hypotheses could be proposed to include:

- H1. Internal audit attributes positively impact risk-based auditing adoption.
- H2. Audit committee attributes positively impact risk-based auditing adoption.
- H3. Risk management system positively impacts risk-based auditing adoption.
- H4. Internal control system positively impacts risk-based auditing adoption.

Figure 1 illustrates the proposed research model and summarizes the hypotheses that the research seeks to evaluate.

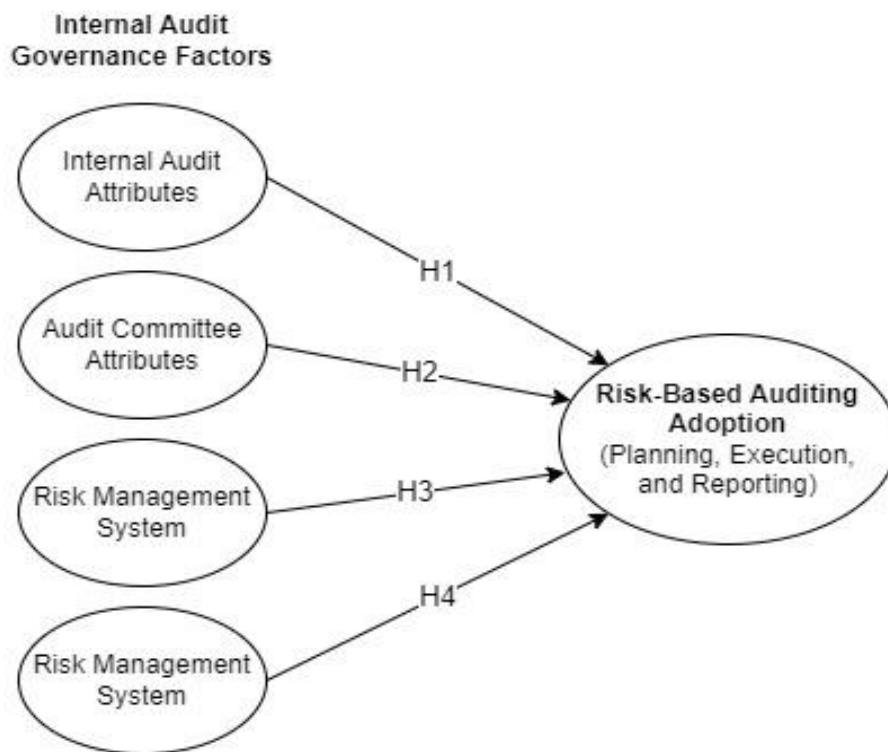


Figure 1. Conceptual model and hypotheses

METHOD

The impact of internal audit governance factors on the risk-based auditing of the banking industry in Jordan was investigated through a cross-sectional design based on quantitative data collected by a questionnaire. The target population in the research was the managers of the accounting and finance departments in the commercial banks listed on the Amman Stock Exchange since they have the experience and knowledge necessary to evaluate the items of the questionnaire. The target population is relatively large, and all its components cannot be accessed, thus it was necessary to use the sampling method (Esbensen, 2020). Accordingly, the study questionnaire was distributed to a sample of 460 managers of accounting and financial departments in Jordanian commercial banks. 372 questionnaires with a response rate of 80,9 % were answered. It was found through a deep review that they include 33 incomplete responses that were removed from the final sample of the research. Thus, the data used in the analysis were representative of 339 responses and constituted the validity percentage of 73,7 % of the total sample.

The research questionnaire was developed by reviewing the relevant literature and designed electronically to comply with environmental sustainability standards and to facilitate the data collection process. It includes three parts in addition to the introduction, which emphasizes the commitment of the authors to the ethics of research. The first part of the questionnaire was for the categorical variables used to determine the demographic characteristics of the sample. The remaining parts were for the research variables whose items were rated according to a five-point Likert scale, with a minimum (1) for strongly disagree, and a maximum (5) for strongly agree.

The third part of the questionnaire was for the independent variable, i.e., internal audit governance factors, which included 18 items borrowed from Zainal Abidin (2017). These items were divided into four first-order constructs: four items for internal audit attributes, four items for audit committee attributes, five items for the risk management system, and five items for the internal control system. The fourth part of the questionnaire was for the dependent variable, i.e., risk-based auditing, which included 11 items according to Puad et al. (2020). These items were divided into three first-order constructs: four items for audit planning, four items for audit execution, and three items for audit reporting.

RESULTS

Measurement model

Confirmative factor analysis (CFA) is the statistical technique used to check the validity and reliability of internal audit governance factors and risk-based auditing constructs. CFA is a type of structural equation modelling frequently utilized when researchers have a particular theory or previous comprehension of the

latent constructs and their interactions (Sureshchandar, 2023). Moreover, it determines if the observed data matches their theoretical assumptions (Khalayleh & Al-Hawary, 2022). Table 1 provides insight into the results of the validity and reliability of the measurement model.

Table 1. Validity and reliability of measurement model

Variables	Items	Factor Loading	AVE	MSV	\sqrt{AVE}	CR	VIF
Internal Audit Attributes	IAA1	0,734	0,580	0,415	0,761	0,846	2,085
	IAA2	0,791					
	IAA3	0,755					
	IAA4	0,764					
Audit Committee Attributes	ACA1	0,802	0,572	0,458	0,756	0,842	2,225
	ACA2	0,781					
	ACA3	0,703					
	ACA4	0,735					
Risk Management System	RMS1	0,668	0,535	0,409	0,731	0,851	1,985
	RMS2	0,715					
	RMS3	0,797					
	RMS4	0,752					
	RMS5	0,718					
Internal Control System	ICS1	0,744	0,569	0,433	0,754	0,868	1,857
	ICS2	0,819					
	ICS3	0,762					
	ICS4	0,711					
	ICS5	0,731					
Audit Planning	AP1	0,738	0,566	0,483	0,752	0,839	---
	AP2	0,716					
	AP3	0,772					
	AP4	0,781					
Audit Execution	AE1	0,725	0,537	0,479	0,733	0,823	---
	AE2	0,757					
	AE3	0,708					
	AE4	0,740					
Audit Reporting	AR1	0,794	0,618	0,497	0,786	0,829	---
	AR2	0,811					
	AR3	0,753					

The findings of table 1 reveal a robust connection between the observable variables and their latent constructs based on factor loadings that were within the range between 0,668 to 0,819, which is more than the lower limit of 0,50 (AlBrakat et al., 2023). The average variance extracted (AVE) values were greater than the least limit of 0,50, which confirms that convergent validity was achieved (Al-Rwaidan et al., 2023). Besides, it was proved that the discriminant validity of the measurement model was achieved based on the fact that the values of AVE were greater than the values of maximum shared variance (MSV), along with the square root values of AVE exceeding the minimum of 0,70 and the correlation values among constructs (Al-Abbadi et al., 2022). According to Al-Hawary and Al-Fassed (2022), reliability was evaluated by relying on Macdonald's omega coefficients. The results demonstrated that the values of these coefficients were within the range of (0,823-0,868), indicating that they exceeded the 0,70 thresholds used for composite reliability (ALTaweel & Al-Hawary, 2021). On the other hand, the results of the above table verified that the independent constructs, i.e., internal audit governance factors, were free from multicollinearity since their values of the variance inflation factor (VIF) were extremely less than the upper threshold of 5 (Marcoulides & Raykov, 2019).

Structural model

Structural equation modeling (SEM) was used for testing internal audit governance factors on risk-based auditing. This technique allows the testing of hypotheses about direct and indirect effects between latent constructs (Tariqa et al., 2022). Moreover, they provide different fit indicators to assess the goodness of the assumed model to the observed data (Alqahtani et al., 2023). Figure 2 illustrates the structural model used for tracking the impact of internal audit governance factors on risk-based auditing.

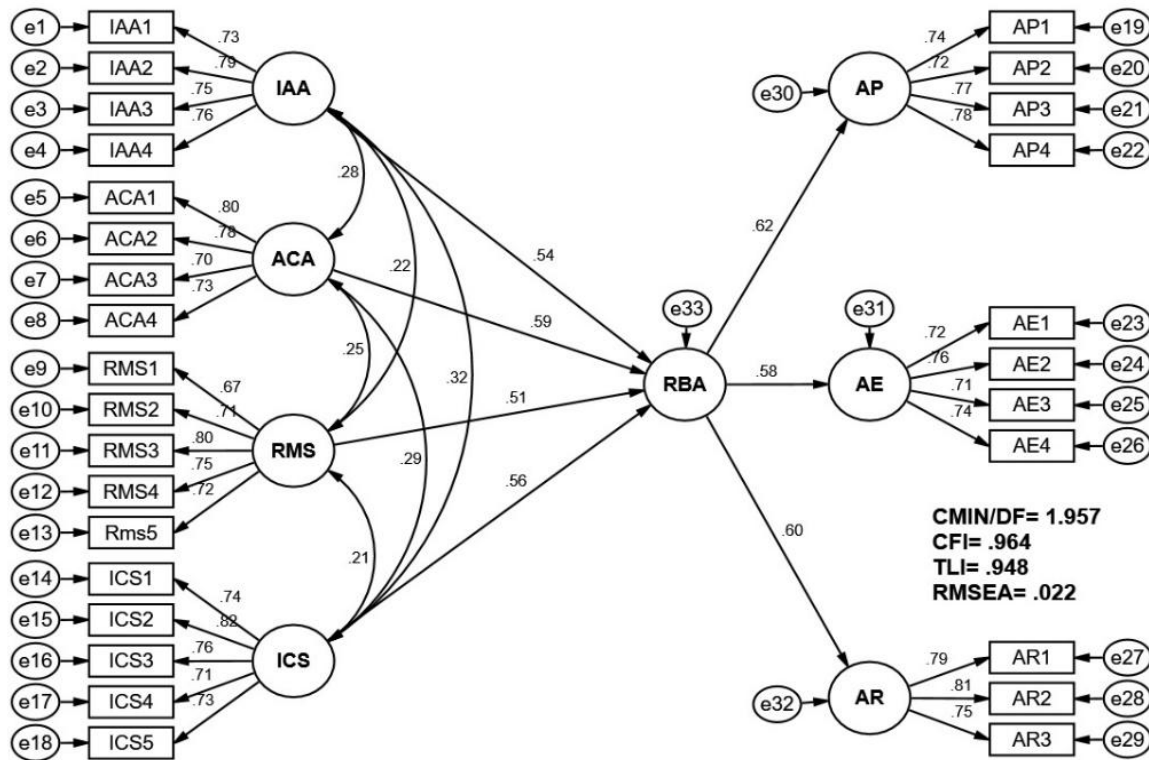


Figure 2. Model for testing the effect of IAG on RBA

The results of figure 2 explained that the chi-squared test (CMIN/DF) obtained a value of 1,957, which is less than the highest accepted value of 3. Both the comparative fit index (CFI) and the Tucker-Lewis index (TLI) had values greater than the lower threshold of 0,90. Moreover, the results indicated that the root mean square error of approximation (RMSEA) was 0,022, thus it did not surpass the upper value of 0,80. Accordingly, the previous results were considered evidence of the fitness of the structural model to test the impact of internal audit governance factors on risk-based auditing (Nattino et al., 2020). Table 2 lists the results of the path coefficients extracted to evaluate the hypothesized impacts.

Paths	B	S.E	B	t	p
Internal Audit Attributes <input type="checkbox"/> Risk-Based Auditing	0,551	0,062	0,537	8,88	0,009
Audit Committee Attributes <input type="checkbox"/> Risk-Based Auditing	0,602	0,057	0,587	10,56	0,000
Risk Management System <input type="checkbox"/> Risk-Based Auditing	0,524	0,068	0,508	7,70	0,003
Internal Control System <input type="checkbox"/> Risk-Based Auditing	0,579	0,058	0,562	9,98	0,000

Note: (p ≤ 0,05)

The results presented in table 2 indicated support for research hypotheses related to the impact of internal audit governance factors, i.e., internal audit attributes, audit committee attributes, risk management system, and internal control system, on risk-based auditing adoption. Moreover, the results showed the size of the discrepancy in the effect between these factors, where the greatest effect was for audit committee attributes ($\beta = 0,587$, $t = 10,56$, $p = 0,000$), followed by internal control system ($\beta = 0,562$, $t = 9,98$, $p = 0,000$), then internal audit attributes ($\beta = 0,537$, $t = 8,88$, $p = 0,009$), and finally risk management system ($\beta = 0,508$, $t = 7,70$, $p = 0,003$).

DISCUSSION

According to the findings, internal audit governance factors have a positive effect on the implementation of risk-based auditing in Jordanian commercial banks, which is consistent with Kalamanova and Prodanova (2021). Therefore, internal audit governance gives the internal audit function an explicit mandate and authority assisting in the effective implementation of risk-based audit practices by demonstrating independence, defining roles and

responsibilities, and ensuring management support and cooperation. Internal auditors with a stated mandate and authority could prioritize and focus on higher-risk areas, allocating resources accordingly. Additionally, internal audit governance develops a risk-aware culture by highlighting the significance of risk management and establishing the route from the top by promoting proactivity, analyzing, and dealing with uncertainties. This strategy fosters a climate in which risk-based auditing is seen as a vital instrument for recognizing risks and management, and senior management actively supports and participates in the risk-based auditing process. On the other hand, internal audit governance frameworks serve as a compass for performing risk assessments and designing audit strategies. Companies may successfully identify and prioritize critical risks by using well-defined risk assessment methodology and audit planning procedures. This enables internal auditors to align their audit activities with the risk profile of the organization, ensuring that audits focus on areas of highest relevance and possible effect.

The positive effect of internal audit governance factors on risk-based auditing adoption in Jordanian commercial banks produces various recommendations for commercial bank managers. First, enhance the Board's supervision and monitoring of the internal audit function's actions by encouraging Board members to grasp risk-based auditing thoughts and the value it delivers to the Bank. Second, create a thorough risk assessment approach that encompasses all aspects of the bank's activities. This comprises detecting and analyzing internal and external risks, determining their potential impact, and ranking them in order of significance. Third, adopt continuous education and training for internal auditors to improve their abilities and proficiency in risk-based audit procedures, such as Certified Internal Auditor (CIA) or Certified Risk Management Assurance (CRMA).

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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