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The effectiveness of electronic auditing on improving the financial performance: Evidence from the Jordanian banking industry

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ABSTRACT

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The purpose of this research is to find out the effectiveness of E- auditing in improving financial performance at banks operating in Jordan by identifying the association between financial performance, (ROE, Profitability) and E- auditing. To attain the study objectives, A cross-sectional survey method was used to collect data from a sample of employees who work in banks, The preliminary data was collected using electronic structured Likert-Scale questionnaires. The population comprised 25 banks operating in Jordan with 160 employees in the accounting departments. A total of 113 questionnaires were completed and returned electronically from accountants who work in the banks. The SPSS statistical programs were used to analyze the data collected; the results of the analysis found that E- auditing significantly improves the financial performance at banks operating in Jordan. The study concludes that banks should adopt the effective and expanded use of E- audit as it gives independent, truthful, and trusted financial audit information. Banks in Jordan should embrace the effective and expanded use of E- auditing to assure detection of financial fraud, thus sealing routine financial loopholes.

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1. Introduction

The contemporary era has seen significant advancements in information and communications technology (ICT), exemplified by the widespread use of electronic devices and the integration of information technology (IT) across several industries (Abousweilem et al., 2023; Alzghoul et al., 2023). The advancements have had a profound effect on the disciplines of accounting and auditing, facilitating the transition from conventional approaches to more advanced computerized methodologies (Soleri, 2016). In the fiercely competitive landscape of the corporate world, businesses, particularly banks, have embraced technology advancements as a means to augment their accounting information systems (AIS). This strategic move is intended to optimize financial management procedures and ultimately boost overall financial performance (Qaillo & Milad, 2018; Qawaqzeh, 2018). Nevertheless, despite the expeditious progression and assimilation of technology in the realm of accounting methodologies, it seems that the auditing vocation has not effectively exploited these advances, particularly in the domain of electronic auditing (E-auditing) (Messier, 2015). The modern practice of E-auditing has the potential to significantly impact the financial performance and efficiency of banks, particularly those operating within the Jordanian context. However, there is a noticeable deficiency in the existing body of literature, indicating a dearth of thorough studies that investigate the efficacy of E-auditing in improving the financial performance of these institutions. This study unveils a notable void within the current body of literature pertaining to the intricate relationship between E-auditing practices and the financial performance of banks in the context of Jordan. It endeavors to elucidate the degree to which E-auditing contributes to augmenting financial outcomes such as return on equity (ROE) and overall profitability. The extent of region-specific investigations, particularly those centered on Jordan, remains limited. In a comprehensive investigation conducted by Bahjat Abdallah (2017), the focus was placed on assessing the preparedness of Jordanian banks in embracing the utilization of E-

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auditing. The study underscored the crucial importance of bolstering both infrastructural and regulatory frameworks in order to cultivate an environment that is conducive to the successful implementation of E-auditing practices. Notwithstanding the extant corpus of scholarly works, a conspicuous lacuna endures in the holistic comprehension of the direct ramifications of E-auditing on the fiscal efficacy of banks engaged in operations within the confines of the Jordanian jurisdiction. Furthermore, it is imperative to note that the existing body of literature fails to adequately delve into the intricacies of the multifaceted obstacles and catalysts that are specifically relevant to the unique circumstances prevailing within the Jordanian milieu (Al-Rawashdeh, 2021). Thus, the primary objective of the study is to investigate and provide answers to the following research questions:

- What is the present status of E-auditing techniques used by banks operating within the Jordanian context?
- What is the effect of E-auditing on the financial performance, namely in terms of Return on Equity (ROE) and Profitability, for these banks?

The significant aspect of this study resides in its pursuit to reconcile the discerned gaps in research, furnishing invaluable perspectives on the function of E-auditing in enhancing the fiscal efficacy of banks in Jordan. By conducting a comprehensive examination of pertinent scholarly literature, theoretical frameworks, academic publications, and digital resources, alongside employing surveys as a means of gathering and interpreting data, this research endeavors to reveal intricate viewpoints regarding the efficacy of E-auditing. Moreover, the discoveries of this investigation aim to provide guidance to policymakers and stakeholders in the banking industry of Jordan, empowering them to make well-informed choices in order to improve the efficiency of E-auditing. This will help overcome existing obstacles and consequently enhance financial performance and profitability. By undertaking this endeavor, the present study aspires to lay the groundwork for a banking sector in Jordan that is characterized by increased durability and prosperity. This shall be achieved by bolstering financial performance through the proficient execution of E-auditing techniques.

2. Literature Review

The advent of information technology has unquestionably revolutionized the auditing domain, precipitating a transition towards electronic auditing as a pervasive *modus operandi* within the financial industry. As the progression of technological advancements unfolds, it inevitably influences the realm of knowledge management within an organization. This, in turn, assumes a pivotal role in enhancing overall performance and facilitating the organization's distinguished reputation for excellence, sustainability, and long-lasting prosperity (Alshaar et al., 2023; Alzghoul, 2013). Numerous scholarly investigations have undertaken the task of delving into the intricate ramifications of this paradigm shift, with a particular focus on its profound influence on the fiscal efficacy of banking institutions. The development of E-auditing can be attributed to the progressive integration of technological advancements within accounting and financial systems, as elucidated by Al Shbail et al. (2022). The imperative for its evolution arose from the escalating intricacy and magnitude of fiscal transactions, which necessitated the adoption of more streamlined and refined auditing practice (Nugrahanti, 2023). The advent of e-auditing has undoubtedly facilitated the augmentation of conventional auditing methodologies, thereby enabling more exhaustive, precise, and punctual evaluations of financial statements and records.

Extensive scholarly research has been dedicated to investigating the efficacy of E-auditing within the banking sector. The empirical investigation conducted by Jaber and Abu Wadi (2018) elucidated that the implementation of E-auditing yielded substantial enhancements in the precision and dependability of financial statements within the banking sector. The results of their study highlight the inherent capacity of E-auditing to augment the overall financial performance through its facilitation of more scrupulous and streamlined auditing procedures. Although the utilization of E-auditing offers a plethora of advantages, it is imperative to acknowledge that its execution is not devoid of obstacles. The scholarly inquiry conducted by Al-Laith (2012) has successfully discerned a multitude of obstacles that impede the optimization of E-auditing practices within the banking sector. These barriers, which have been meticulously identified, encompass the resistance to change, the ever-present cybersecurity risks, and the indispensable requirement for ongoing updates and training (Solieri & Hodowanitz, 2016).

Hamza et al. (2023) examined how E-internal auditing supports financial performance at Jordanian commercial banks. According to the research finding, using ROA, ROE, and EPS as financial performance metrics. E-internal auditing improves commercial bank financial performance. While Al-Momani and Al-Sahrawi (2022) examined how external auditing improves Jordanian public shareholding industrial business financial performance. Research found a linear association between audit quality and firm financial success. Thus, the research suggested utilizing additional audit quality and financial performance variables to explore how audit quality affects financial report quality. The researcher chose financial performance as the dependent variable and used a different way of measuring variables and study equipment than earlier studies. Moreover, Fulaih & Al-Shammari (2020) examined how electronic programs affect auditing and management standards. The study found that most workers lack expertise and abilities in utilizing data systems that supply information via databases and access to it, which will eliminate hazards since it is particular. The researchers suggested over-structuring the economic unit to suit changing demands. A way that exceeds compatibility with the electronic management system through distinctive (goals, tasks, body communications, procedural guides, service indicators, etc.), reviewing the work structure and re-planning Staff in line with the format and cover the needs of implementing electronic control, and based on the above study, the researcher used the

independent variable without specifying the study's nature. Auditors use different viewpoints than earlier studies.

Malenya and Wekesa's (2020) study examines how audit methods affect Kenya Limited pipeline firm finances. Examines how audit outsourcing, digital auditing, audit reporting, and audit board composition affect performance. Digital audits are dependable and impact the company owner's financial success by ensuring authenticity. Because external audit assets generate independent, legitimate, and trustworthy audit information, organizations should employ them extensively, according to the analysis. Furthermore, Benjamin et al. (2020) examine how E-auditing with internal auditors strengthens Nigerian registered enterprises. The study used survey analysis. The study showed that E-auditing has a significant influence on registered enterprises in Nigeria. The researcher utilized the Also, Wonder and Al-Noor (2019) examines the strengths and limitations of Sudanese commercial banks' accounting systems and their appropriateness to meet objectives to determine how electronic accounting improves financial performance. The researchers found that information systems and document systems E-accounting affect Sudanese commercial banks' financial performance.

According to Hamza et al. (2023), they assert that the use of technological developments, such as E-auditing, has a substantial positive impact on the overall financial performance of banking sectors. The research conducted by the authors largely focused on banks in the Middle Eastern region. Their findings revealed a strong association between the implementation of E-auditing techniques and enhanced Return on Equity (ROE) and profitability. In a study conducted by Zayed (2021), it was observed that the use of E-auditing has the potential to boost the effectiveness and efficiency of auditing procedures. This, in turn, may indirectly lead to improved financial results within the banking sector. Sayed's (2019) study aimed to determine the effectiveness of (AIS), to decrease the risks of electronic audit within the Irbid Electricity Company. The investigation found an actual result on the relation between the competence of accounting data systems and the risks of E- auditing might occur in Irbid Electricity Company research suggested more analysis study to achieve competence in accounting management process and security programs to mitigate control risks. On the other hand, Hamdouneh and Hamdan (2018) emphasized that E-auditing facilitates persuasion inflated with evidence. The most critical modification during this organized profession in Palestine should be the use of electronic auditing along with lateral audit methods with the help of introducing the latest policies and thus developing enormous technical standards.

Al-Qatish et al. (2018) study aims to clarify the impact of electronic tax audits in reducing non-payment to read auditors and encourages the employment of an audit system to solve and limit this tax evasion. Another study by Rashid (2015) recommended that organizations should have thought and psychiatric rules that enable us to move to E-Internal auditing that leads to improving the financial performance of an economic entity. Hamza et al. (2023) showed that the implementation of E-auditing approaches has a significant impact on the enhancement of banks' return on equity (ROE). This is primarily attributed to the reduction of mistakes and the improvement in the accuracy of financial reporting facilitated by such practices. In addition, Hussein and Mustafa (2020) have shown that banks that have successfully implemented E-auditing processes have a greater return on equity (ROE) as a result of enhanced operational efficiency and decreased audit expenses. Furthermore, Mutula (2018) concluded that digital accounting, enterprise liquidity, and enterprise length have high-quality outcomes in the overall economic performance. Youssef and Najm (2018) aim to identify the challenge that the auditing profession faces using database networks. Data network has put the auditing profession under constant challenge, creating an open system for the world constrained by network technology. The importance of this analysis is to determine the character of the risks of E- auditing once the shift from manual auditing to E- auditing is a result of technological developments in all fields mentioned. The dangers of electronic review for the risks of knowledge technology programming, the various communication processes, the application of programs with technical specifications within the method of electronic review can lead to the safety of employees and decrease risks of checking electronic devices to reduce electronic fraud (Karaki et al., 2023). Qasim and Noor (2021) conducted research which revealed that the implementation of E-auditing had a good impact on banks' profitability. This beneficial effect is attributed to many factors, including the promotion of compliance, the mitigation of risks, and the enhancement of the credibility of financial statements. These enhancements provide a setting that is favorable for improved decision-making, hence contributing to increased profitability. On the other hand, AL-Salmi (2022) approved a substantial and favorable association between E-Audit efficiency and the performance of Oman's public organization. Al-Obaidi (2015) shed light on the function of E- auditing in increasing the independence and efficiency level of the internal auditor. The study found that electronic auditing makes the auditor very economical and knowledgeable in the field of laptop computers and electronic data returns and thus allows him to improve the procedures adopted by the sample analysis units within the audit process in Jordan. while Al-Zoubi and Al-Qadi (2016) study aims to clarify the impact of E-auditing in mitigating the constraint of the quality of the electronic settings of the accounting data system (ADS) on the accounting auditor. The researchers advised that auditors raise their interest in this sector due to its effect on mitigating the constraint of electronic environmental quality on the auditor and emphasizing the truthfulness of data that can be used from accounting information systems. After conducting a comprehensive examination and analysis of the available literature, it has been determined that the current study stands out from previous studies in numerous notable aspects. This study aims to provide a complete investigation of the field of electronic auditing, specifically focusing on its influence on the financial performance of banks in Jordan. Previous research mostly restricted their attention to more specific industries, indicating a constraint in their breadth and relevance. The aforementioned studies showed a tendency to function within a limited set of variables, thereby impeding the development of a comprehensive comprehension of the interconnectedness and interdependencies that exist within the wider operational dynamics of the banking industry. On the other hand, the present

study used a broader and more comprehensive methodology. This study surpasses past limitations by including a broader range of factors and conducting a comprehensive analysis of their interconnections. This methodology promotes a more comprehensive and nuanced understanding of the many impacts that electronic auditing has on the financial performance indicators of banks. Driven by the recognition of these deficiencies and the potential to provide a more comprehensive and integrated comprehension, the subsequent hypotheses have been carefully constructed:

Main Hypothesis:

H1: *There is a significant impact of E-auditing in improving the financial performance (ROE, Profitability) at banks operating in Jordan.*

Sub-Hypothesis:

H1-1: *There is a significant effect of E-auditing in improving ROE at banks operating in Jordan.*

H1-2: *There is a significant effect of E-auditing in improving the Profitability of banks operating in Jordan.*

3. Research methods

This study objects to recognize the effect of E-auditing in increasing the competence of financial performance at banks operating in Jordan, through shed light on the strengths and weaknesses of E-accounting systems applied in Jordan banks and their suitability to achieve goals of increasing the efficiency of performance at banks operating in Jordan. In order to reach the goals, an E-questionnaire constructed and distributed in the study population to test the hypothesis, the researcher dealt with many research methods, such as research methodology, research hypotheses, research population, sample size, and research model as follows:

3.1 Research Methodology

The descriptive-analytical method was applied to reach the study's objectives through secondary data after returning to the previously conducted studies associated with the subjects of this present study from the survey by collecting the primary data from the participants (Sekaran & Bougie, 2016).

3.2 Research Hypotheses

In support of the research objectives, this study formulated and tested hypotheses:

Main Hypothesis:

1. H1: *There is a significant impact of E-auditing in improving the financial performance (ROE, Profitability) at banks operating in Jordan.*

Sub-Hypothesis:

2. H1-1: *There is a significant effect of E-auditing in improving ROE at banks operating in Jordan.*

3. H1-2: *There is a significant effect of E-auditing in improving the Profitability of banks operating in Jordan.*

3.3 Population and sample size

After the researcher defines the research problem and its hypotheses and before selecting the measuring tool or collecting information, the study develops the hypothesis in the construct of a phrase consisting of variables denoting the characteristics of the statistical community, that represent all individuals, people or things. Who is the subject of the research problem? The study population consisted of (25) commercial banks in Jordan and (160) employees working in commercial banks in Jordan in the accounting departments of these banks. The study population was compared according to Skaran's Table (2016). As a result of this comparison, the study sample consisted of (113) accountants working at banks operating in Jordan and the accounting departments of these banks. Fig. 1 shows the structure of the proposed study of this paper.

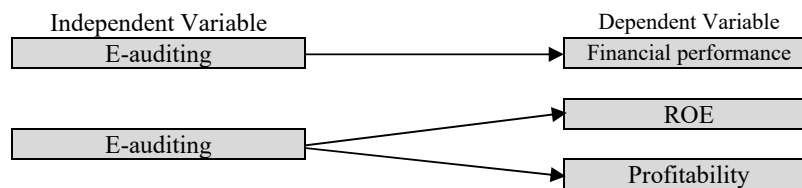


Fig. 1. The proposed study

According to the above research model, the researcher identified the independent variable as the E- audit has no independent sub-variables; as for the dependent variable, the researcher considered it and identified it with financial performance, which he divided into two sub-dependent variables, namely ROE and profitability.

E- auditing: It collects and analyzes data to verify whether computer data can protect the enterprise's assets and achieve its objectives.

Profitability: a status in which the institution is creating a profit, it arises when the total amount of revenue is more than the amount of expenses in a specific period (Horton, 2019).

The Term Return on Equity (ROE) refers to a financial ratio that can be estimated by dividing net income by shareholder equity. Usually, the stockholder's equity is equal to the firm's assets minus its debt, ROE also having regard to the return on net assets. (Messier, 2015).

Financial performance measurements:

Usually, banks follow several methods to measure financial performance, and the most important equation:

The return on equity = (net income after tax / total equity) (Choiriyah et al., 2020),

Return on assets = (net income after tax / total assets) (Al-Shanti & Shuqair, 2005),

Average profit margin = (net income after tax) /total revenue,

Asset Benefit Ratio = (Total Revenue / Total Assets) (Dyachenko et al, 2022).

Commercial Bank: They are financial institutions licensed to receive and accept current and savings deposits and to provide loans. Banks also offer all associated services such as buying and selling all kind of financial and commercial paper, retirement accounts, certificates of deposit, currency exchange, and secure deposit boxes. (www.cjb.gov.jo).

4. Results

In this part, the researcher analyzed the study variables by the SPSS application, extracted the outcomes of the research hypotheses, commented on those results, and clarified the association between the study variables.

4.1 demographic characteristics of the study sample

Table 1 shows the demographic characteristics of the sample.

Table 1

Personal characteristics of the study sample

variable	categorization	Frequency	Percent
Gender	Male	66	58.4
	Female	47	41.6
Total		113	100.00
Variable	Categorization	Frequency	Percent
Age	Less than 35 years	12	10.6
	36-40 years	14	12.4
	41-45 years	33	29.2
	46-50 years	54	47.8
Total		113	%100
Variable	Categorization	Frequency	Percent
Experience	Less than five years	7	6.2
	5-10 years	11	9.7
	11-15 years	50	44.2
	More than 15 years	45	39.8
Total		113	100%
Variable	Categorization	Frequency	Percent
Professional certificates	Bachelor	12	10.6
	Master	68	60.2
	Doctorate	9	8.0
	Other	24	21.2
Total		113	100%

As shown in Table 1 above, (58.4%) of the participants were males, and (41.6%) were females. The outcomes of data analysis indicated that (47.8%) of the participants' ages are between 46-50 years, (29.2%) of the ages are between 41-45 years, (12.4%) of ages are between 36-40 years, and (10.6%) less than 35 years old. The results above indicated that the percentage of those with experience ranging from 11-15 years is (44.2%), and (39.8%) of the participants have experience of more than 15 years,

the percentage of participants with expertise ranging from 5-10 is equal to (9.7%) while the percentage of participants with less than five years of experience is (6.2%). According to the used methods of Professional certificates, the Master's (60.2%) Sample, (10.6 %) bachelor's and other (21.2%), while Doctorate (8.0%) the sample.

4.2 Results of hypotheses testing Independence: E- audit

Table 2 presents some personal characteristics of data.

Table 2

The results of some personal characteristics

No	Questions	Rank	Mean	S.D.
1	Electronic auditing in banks has a procedural audit guide for the mechanisms of work	5	3.68	1.029
2	The Bank has policies for E- auditing and procedures that emphasize the need to provide qualifications for the auditor	2	3.88	0.741
3	All assigned E- audit tasks are completed promptly	1	4.08	0.734
4	Employees in E- auditing have a variety of experiences related to the work of financial and accounting audits	3	3.86	0.833
5	The auditor informs the department as soon as he receives information that may affect the E- audit process	4	3.83	0.925

According to Table 2, the third question maintains the highest level followed by the second question and the fifth question.

4.3 Financial Performance

Table 3 presents the summary of the questions associated with the financial performance.

Table 3

The summary of some basic statistics associated with the financial performance

No.	Questions	Rank	Mean	S D
6	The Banks is keen to apply quality control audit methods	6	3.97	.093
7	The instructions and policies related to the work of the Bank are written	4	4.01	.094
8	The website of the audit unit is linked to the board of directors	3	4.03	.094
9	The auditors have sufficient powers to carry out the work efficiently	2	4.16	.075
10	Auditors have sufficient knowledge of international internal auditing standards	1	4.20	.082
11	The audit department is keen to follow the latest methods used in the field of auditing	5	4.00	.094
12	The E- audit detects the shortcomings in the Bank's audit system	7	3.87	.096
13	Electronic audit detects fraud and fraud at an early date	8	3.81	.114
14	The Bank shall develop a tight audit system in cooperation with the Audit Committee and the Audit Manager	9	3.55	.129
15	The E- audit activities contribute to protecting the Bank's assets and improving its profitability	9	3.55	.129
16	The E- audit activity contributes to the development of stock management	10	3.56	.129
Avg.			3.84	0.73

According to Table 3, question 10 maintains the highest mean, followed by question 9 and 8. Therefore, it appears that Auditors' knowledge of international internal auditing standards play an important role in in financial performance.

4.4 Normality and outliers' assumptions

Before further data analyses, the necessity to examine if the criterion of normality hypothesis has been met. This study utilized IBM SPSS version 22 to test the normality distribution through skewness and kurtosis indices. These two components of normality have to do with symmetry and fatness of distribution, respectively (Hair et al., 2021). A normal distribution is said to be not violated. As Tabachnick et al. (2013) reported, when the sample is more than 200, the deviation from the normality of the two components often does not have a substantial difference in the analysis. That is considered normal if the kurtosis value is between -7 and +7. Additionally, if skewness and kurtosis values are above ± 2 , they are supposed to have abnormal univariate distribution (George & Mallery, 2010). This study's skewness and kurtosis scores are less than ± 1 , and only three kurtosis values fall between 1 and 1.5. Thus, all values were adopted to prove normal distribution, and Table 4 show the usual distribution of the variables of this specific study:

Table 4

The results of testing the normality of the variables

Variable	Mean	Standard dev.	Skewness		Kurtosis	
			Statistics	Std. Error	Statistics	Std. Error
e-auditing	4.31	0.537	-1.00	0.11	-3.00	0.216
ROE	4.22	0.553	-1.00	0.11	-3.00	0.46
Profitability	4.26	0.542	-1.00	0.11	-3.00	0.46

Table 5

The results of Kolmogorov Smirnov and Shapiro-Wilk tests

Variable	Kolmogorov Smirnov			Shapiro-Wilk		
	Statistics	DF	Sig.	Statistics	DF	Sig.
e-auditing	.177	112	.000	0.76	112	.05
ROE	.151	112	.000	0.76	112	.05
Profitability	.223	112	.000	0.76	112	.05

4.5 Factor analysis

Table 6 presents the results of the KMO and Bartlett's tests and they indicate that the data have sufficient stability.

Table 6

The results of KMO and Bartlett's

Kaiser-Meyer-Olkin measure of sampling adequacy		.816
Bartlett's test of Sphericity	Approx. Chi-Square	196.939
	DF	2
	Sig.	.001

4.6 Pearson correlation analysis

In this study, the substantial linear quantitative association among the variables was measured with the help of Pearson correlation analysis. Table 7 below shows the results of the analysis. Correlation analysis was mainly performed to reach the level of association between each variable.

Table 7

The results of the Pearson's correlation analysis of the variables

		Electronic auditing	ROE	Profitability
e- Auditing	Pearson Correlation	1	.719**	.643**
	Sig. (2-tailed)		.000	.000
	N	113	113	113
ROE	Pearson Correlation	.719**	1	.599**
	Sig. (2-tailed)	.000		.000
	N	113	113	113
Profitability	Pearson Correlation	.643**	.599**	1
	Sig. (2-tailed)	.000	.000	
	N	113	113	113

*Correlation is significant at the 0.05 level (1-tailed). **. Correlation is significant at the 0.01 level (1-tailed).

The results reveal that there is a statistically significant E-auditing Person correlation coefficient was Sig. (2-tailed) (0.000), which is less than (0.01), means it has a direct correlation coefficient.

The results also disclose that it is statistically significant ROE Person correlation coefficient was Sig. (2-tailed) (0.000), which is less than (0.01), means it has a positive correlation coefficient.

Finally, there is a statistically significant Profitability Person correlation coefficient was Sig. (2-tailed) (0.000), which is less than (0.01), means it has a positive correlation coefficient.

4.7 Test and Results of Hypothesis 1

H₁: *There is a significant effect of E- auditing in improving the financial performance (ROE, Profitability) at commercial bank in Jordan.*

In this part of the study, the researcher used linear Regression Analysis to test the study questions. This analysis stage was preceded by some statistical techniques by which the researcher examined the validity and reliability of the research tool and tested whether the data followed a normal distribution.

Table 8

The summary of the results for measuring the effectiveness of e-auditing in improving the financial performance

model	R	R Square	Adjusted R Square	Std. Error. of the estimate
1	.758 ^a	.574	.570	.323

a. Predictors: (Constant) Job Satisfaction

The results show that the correlation value of checking the experimental electronic variable (R) is (0.758), where the value of the coefficient of determination is R² (0.574), and this implies that the electronic audit is clearer (57.4%) of the total. The variance while various factors explain the rest. This result suggests a significant association.

Table 9

The results of the ANOVA test

Model		Sum of squares	DF	Mean square	F	Sig.
1	Regression	13.873	1	13.873	133.354	.000
	Residual	10.299	111	.104		
	Total	24.173	112			

As we can observe from the results of the ANOVA test, F-value is statistically meaningful when the level of significance is one percent. Table 10 shows the results of the regression analysis.

Table 10

The results of the regression analysis for the effect of job satisfaction on the performance

Model		Unstandardized coefficients		Standardized coefficients	t	sig.
		Beta	Std. Error	Beta		
1	(Constant)	1.180	.261		4.521	.000
	E- auditing	.693	.060	.758	11.548	.000

Table 10 shows that the significant amount was (0.000), i.e., less than (0.05). Thus, the Hypothesis that assumes. Accepted: *There is a significant effect of E-auditing in improving the financial performance of banks operating in Jordan.*

4.8 Test and Results of Sub-Hypothesis 1

H₁₋₁: *There is a significant effect of E- auditing in improving ROE at commercial bank in Jordan.*

In this part of the study, the researcher used linear Regression Analysis to test the study questions. This analysis stage was preceded by some statistical techniques by which the researcher examined the validity and reliability of the research tool and tested whether the data followed a normal distribution.

Table 11

The results of some statistical observations for measuring the effect of e-auditing in improving ROE

model	R	R Square	Adjusted R Square	Std. Error. of the estimate
1	.719 ^a	.517	.512	.386

a. Predictors: (Constant) Job Satisfaction

The results show that the value of the parametric statistic for the variable quantity (ROE) (R) is (0.719), where the value of the coefficient of determination is R^2 (0.517), and this indicates that the return on assets is clearer (51.7%) of the total. The variance while alternative factors explain the rest. This result suggests a high correlation. Moreover, Table 12 presents the results of ANOVA test.

Table 12

The summary of the ANOVA test for measuring the effectiveness of e-learning in improving ROE

Model		Sum of squares	DF	Mean square	F	Sig.
1	Regression	15.841	1	15.841	106.075	.000 ^b
	Residual	14.785	111	.149		
	Total	30.626	112			

b Dependent variable: ROE

The above tables show that the significance level has reached (0.000), which is less than (0.05). Thus, the Hypothesis was accepted, assuming that E- auditing significantly improves ROE at in Jordan.

4.9 Test and Results of Sub-Hypothesis 2

H₁₋₂: *There is a significant effect of E- auditing in improving the Profitability of in banks operating in Jordan.*

In this part of the study, the researcher used linear Regression Analysis to test the study questions. This analysis stage was preceded by some statistical techniques by which the researcher examined the validity and dependability of the research instrument and tested whether the data followed a normal distribution.

Table 13

The results of some statistical observations for measuring the effect of e-auditing in improving profitability

model	R	R Square	Adjusted R Square	Std. Error. of the estimate
1	.643 ^a	.413	.407	.417

Table 13 reveals the value of “parametric statistics” of the variable (Profitability). The (R) value is equal (0.643), the value of the coefficient of determination R^2 is (0.413), and this indicates that the profit (41.3%) of the total has been explained. The variance while various factors explain the rest. This result suggests a high correlation.

Table 14
The results of ANNOVA test

Model		Sum of squares	DF	Mean square	F	Sig.
1	Regression	12.155	1	12.155	69.768	.000 ^b
	Residual	17.248	111	.174		
	Total	29.403	112			

The results of Table 14 show that the significance level has reached (0.000), which is less than (0.05). Thus, the Hypothesis was accepted, if E- auditing significantly improves the Profitability of Banks operating in Jordan.

5. Discussion

The key objective of this study was to examine the influence of E-auditing on enhancing the financial performance of banks in Jordan, specifically in terms of Return on Equity (ROE) and profitability. The results of our research provide substantial evidence that supports all the proposed hypotheses, shedding light on a significant impact of E-auditing on the financial aspects that were analyzed. The empirical evidence strongly supports our primary hypothesis (H1), as it demonstrates a substantial correlation between the implementation of E-auditing practices and the notable improvement in the financial performance of banks in Jordan. This finding aligns with the research conducted by Abdullah and Yaseen (2020), which demonstrates that the implementation of E-auditing initiatives has the potential to enhance the accuracy and reliability of financial reporting, consequently contributing to the overall improvement of financial performance. The heightened precision and promptness of financial data facilitated by E-auditing ostensibly cultivate superior decision-making and operational strategies, ultimately resulting in augmented financial outcomes.

In accordance with our initial sub-hypothesis (H1-1), the implementation of E-auditing practices exhibited a notable impact on enhancing the banks' return on equity (ROE). The statement aligns with the discoveries made by Al-Hussein (2019), which propose that the implementation of E-auditing contributes to the enhancement of banks' Return on Equity (ROE) through the reduction of errors and inaccuracies in financial reporting, thereby promoting greater precision and efficiency. The augmentation of return on equity (ROE) serves to highlight the effectiveness of banks in utilizing their equity to generate profits, thus indicating a favorable trend in their financial well-being and long-term viability. Furthermore, our research provides empirical evidence that supports the validity of the second sub-hypothesis (H1-2), demonstrating a substantial impact of E-auditing on the financial performance of banks. This observation resonates with the findings of Qasim and Noor (2021), who posited that the implementation of E-auditing serves as a catalyst for enhanced profitability through the establishment of rigorous compliance measures and effective risk management protocols. The integration of E-auditing appears to mitigate fiscal inconsistencies and cultivate an atmosphere conducive to prudent fiscal administration and decision-making, thereby augmenting profitability margins.

The research efforts shed light on the profound understanding of the pivotal significance of E-auditing in augmenting the financial performance of banks in Jordan. It implores the banking industry to augment their investment in electronic auditing technologies and methodologies to leverage heightened financial outcomes. Furthermore, it beckons regulatory entities to champion policies that cultivate a conducive atmosphere for the embracement and enhancement of electronic auditing methodologies. This study attempts to illuminate the inherent correlation between electronic auditing and heightened financial performance, while simultaneously unraveling potential pathways for future investigation. Additional scholarly inquiry could be undertaken to explore the intricate complexities and impediments that hinder the complete actualization of the advantages associated with E-auditing. Furthermore, the implementation of longitudinal studies has the potential to provide a more comprehensive understanding of the enduring effects of E-auditing practices as they unfold over an extended period. The study concluded that the E- audit has a reasonable role in raising the performance of funds due to its contribution to achieving reliable data that produces independent, correct, and reliable money management information. The E-auditing is characterized by positive effectiveness in up to these equities. In banks running in Jordan, e-audit positively impacts profit improvement. The study resulted that configuring E- auditing in terms of diversity improves the financial performance of banks running in Jordan. Where the (SPSS) program was used, which is the optimal program, the results agreed with the analysis of Al-Momani and Al-Sahrawi (2022), Malenya and Wekesa (2020) Hamduna and Hamdan (2018), Al-Ibrahim (2016), Al-Obaidi (2015) and Farhoud (2015)

6. Conclusion

This study undertook an exploratory endeavor to unravel the ramifications of E-auditing on the financial performance of banks operating within the confines of Jordan. The empirical findings of the study highlight the significant impact of E-auditing on the improvement of financial performance metrics, particularly in terms of Return on Equity (ROE) and overall profitability. In accordance with the conjectures put forth, the adoption of E-auditing methodologies emerged as a noteworthy factor in driving enhanced financial results. The empirical evidence substantiated the proposition that financial institutions that have embraced electronic auditing exhibit a perceptible enhancement in their return on equity and overall profitability. The aforementioned discoveries resonate with the harmonious convergence of technology and auditing, which cultivates an

environment permeated with precision, dependability, and elevated financial management. In the ever-changing realm of banking, marked by perpetual advancements and mounting intricacies, the advent of E-auditing arises as an indispensable comrade. The implementation of this adoption not only enhances the accuracy and reliability of financial reporting, but also strengthens the banks' strategic capabilities to effectively navigate the volatile landscapes of financial uncertainties and challenges with increased adaptability and robustness.

The findings extracted from this research shed light on a potential route to attaining a resilient trajectory of financial performance for Jordanian banks. Through the strategic utilization of E-auditing, financial institutions have the opportunity to harness their profound capacity for transformation. This enables them to foster an environment conducive to heightened operational efficiencies, effective risk management, and decision-making paradigms that are optimally aligned with organizational objectives. As the investigation delves into the fundamental aspects of the impact of E-auditing, it also calls for additional scholarly investigations to delve into the wider range of influences and implications in various contexts and temporal frameworks. Undoubtedly, the pursuit of such endeavors would undeniably enhance the understanding and implementation of E-auditing within the worldwide banking sphere, thereby cultivating financial outcomes characterized by exceptional quality, long-term viability, and lasting affluence.

6.1 findings and results

The study found that electronic review has a reasonable role in raising the performance of funds due to its contribution to achieving reliable data that produces independent, correct and reliable money management information. To extract the effect between the independent and dependent variables, which showed a significant impact of E- auditing on the financial performance of banks operating in Jordan.

6.2 Recommendations

Banks operating in Jordan must adopt the effective use of E- auditing and, as a result, produce independent, correct, and reliable accounting information methods. Commercial banks in Jordan must adopt the latest technological knowledge to use e-auditing to ensure immediate catching of economic fraud, thus filling routine financial loopholes. Banks operating in Jordan must adopt audit reports supported by international standards to obtain ready audit reports that guarantee the accuracy of financial reports. Groups. Banks operating in Jordan must consolidate the idea of electronic auditing, train their employees on the concept of it, increase their awareness of its moderate importance in banking transactions, and increase profits among those banks.

6.3 Study Limitation

Human Limitation: employees working at banks operating in Jordan.

Time Limitation: The present study was conducted in September 2023.

6.4 Future Research

1. Working on similar research and in-depth study in the field of electronic payment,
2. Expanding the study sample in future research to cover the most significant possible number of members of the study community and users of electronic payment methods,
3. Dissemination of the idea of electronic payment in all fields and sectors and the impossibility of dispensing with traditional payment.

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