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Utilizing financial technology to improve auditing processes

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Abstract
Aim: Investigating the practical use of financial technology in Iraqi financial auditing procedures is the goal of the study. Examine the possible advantages of employing financial technology to enhance the accuracy and efficacy of financial audits. Identifying the difficulties and barriers Iraqi institutions face in attempting to use financial technology for financial auditing processes. Providing suggestions on how to maximize the use of financial technology and improve its adoption in financial audits.
Methodology: Information from 100 participants in financial auditing institutions located across multiple Iraqi cities was obtained through the use of a survey approach in conjunction with quantitative data analysis. The sample consisted of one hundred financial auditing professionals in Iraq who were selected at random to represent the range of organizations and backgrounds in this field.
Findings: It was found that most participants believed that the accuracy of the results was improved by financial technology. Because financial technology is expensive and necessitates specialized knowledge most participants experience difficulties. Top management is not as enthusiastic about incorporating financial technology into financial operations.

Keywords: Enhance financial technology and auditing procedures

Introduction
When we examine information technology in a variety of settings we find that it improves a great deal of aspects of our lives on a social commercial and personal level - especially when it comes to profitability in the private sector. Successful and functional information systems supply essential services to the community. They help build profitable businesses cultivate profitable customer relationships and gain a sizable share of the market competition.
They make a variety of decision-making processes easier increase output encourage reflection and foster global competition. It appears that information technology is assisting the economy as a whole in this instance. Information technology has developed into a key economic pillar in countries that have successfully implemented it. Non-profit and profit-making sectors of the economy rely heavily on information technology as the most important tool for organizing managing recording accounting and other business-related tasks. The auditing process has evolved along with the information technology of these corporations and the companies they buy.
Therefore it is possible to see the origins of what is now known as financial information system auditing. With increased recognition for this profession the auditing industry is constantly evolving. Subsequently professional standards were released to assist auditors with this. Chamber. Over the past 20 years interest in audit automation - the use of information technology in the audit process - has grown despite its less sophisticated nature. (Abdullah 2022) [1].

Study importance
This study importance arises from the growing need to advance the auditing profession in Iraq and improve auditor performance by providing the best audit services possible focusing on audit quality and the elements that contribute to it and reducing the tendency of disparaging the auditing profession or those who engage in it. The gap that exists between the public's expectations of the auditing profession and the actual responsibilities and duties of the auditor affects the auditing profession.

One of these components is the use of modern methods which primarily rely on financial technology. This is the reason the study which aims to ascertain the purpose of financial technology is so crucial. In improving the caliber of auditing procedures used in Iraq.

Study problem

The efficiency accuracy and speed of traditional financial auditing processes have faced serious challenges due to the rapid advancement of technology and its expanding application in various industries. Financial technology offers innovative ways to improve these processes but its adoption and application are still limited in many organizations. Finding out how much financial technology is improving financial auditing processes what factors influence institutions adoption of this technology and what the expected effects of this improvement are in the context of finance and administration are the main goals of the research.

Study question

How can financial technology help Iraqi institutions financial auditing procedures?

Study objectives

1. Examining how financial technology is actually used in Iraqi financial auditing operations.
2. Determine the possible advantages of enhancing the effectiveness and precision of financial audits with financial technology.
3. Determining the barriers that Iraqi institutions must overcome in order to implement financial technology for financial auditing operations.
4. Making suggestions on how to maximize the use of financial technology in financial audits and improve its adoption.

Study limits

- **Time constraints:** The study time frame is 2024.
- **Geographical restrictions:** The research is restricted to Iraqi financial institutions and businesses.
- **Objective limitations:** The study does not address other areas of financial technology instead it concentrates solely on the application of financial technology to enhance financial auditing procedures.
- **Real-world constraints:** A subset of Iraqi financial manager's auditors and technicians with expertise in financial technology are included in the study.

Study Concepts

Financial Technology

The term financial technology describes innovative young information technology companies that aim to upend the established financial industry. A term used to characterize the digital transformation taking place in the financial industry is financial technology. (Dapp, Slomka, & Hoffmann, 2014) [8].

Auditing Processes

The steps an auditor takes to complete an audit engagement for a customer are referred to as the audit process. (Turker & Bicer, 2020) [13].

Theoretical background

in step with (Turker & Bicer, 2020) [13], the Fourth commercial Revolution is bringing about changes that move beyond era and want redesigning positive essential thoughts, consisting of the notion of fee, that is the inspiration of the auditing career. despite the fact that auditors will want to elevate the standard for his or her career by way of presenting greater complicated assurance offerings in greater adaptable enterprise contexts subsidized by way of future digital changes, traditional audit offerings are predicted to remain important (Drew, 2018) [9]. Professional offerings may turn out to be less centered on assurance offerings and greater on non- assurance offerings because of the evolving nature of the business surroundings.

On this new and unproven surroundings, meeting stakeholder expectancies will require greater capabilities and a wonderful professional auditing attitude (Nikitin, 2017) [11]. One may argue that economic era traits and the units hired to put into effect them have the potential to impact auditor offerings in three methods: first, by way of encouraging the transition from the vintage audit approach to the actual-time audit approach. 2d: increasing the variety of professional assurance offerings that the auditor presently offers, consisting of verifying non- economic electronic disclosure and the efficiency of the inner manage framework.

Third, the introduction of clean professional assurance offerings suitable for the FinTech putting. One of the primary advantages of blockchains, which might be utilized in FinTech improvements, is that they boom the opportunity of records audibility. Blockchain era no longer most effective prevents errors but additionally fraud and earning management, that is helpful in facilitating the transition from the traditional audit method to the actual-time audit method (Cai & Zhu, 2016) [5]. Moreover, audits may be advanced by way of giving the audit firm follow-up permission, even whilst the relevant agency can most effective be granted permission to feature a new report to the chain thru its very own blockchain infrastructure (O'Leary, 2017) [12].

moreover, audit businesses are setting an excessive fee on era and making an investment heavily in fields like massive statistics evaluation if you want to enhance auditing tactics and find out mistakes and fraud greater exactly (Cohn, 2017) [7]. Therefore, by way of allowing traceable audit sports, the software of blockchain era in auditing will enhance audit transparency and trustworthiness of audit reviews. The new audit enterprise may take over all of the previous audit's operations and results, so that it will enhance the audits exceptional. Moreover, regulatory agencies should broaden new desires for assurance and audit offerings, with a focal point on growing an audit portal for actual-time statistics management (Turker & Bicer, 2020) [13].

To create assurance services, the profession may assess by giving assurance the dependability of blockchains rather than auditing transactions, and it is likely that the audits could be done on the digital environment and would not involve any fieldwork. But new abilities will require refinement. In light of these advances, regulatory authorities must likewise update their guidelines and curricula, and auditors must devise novel approaches to lifelong learning

(Turker & Bicer, 2020) [13].
Appelbaum and Nehmer (2017) [2] have demonstrated that the three primary concerns that could potentially disrupt and reduce the transparency of current audit procedures are data security transaction transparency and data dependability. It can be circumvented by businesses that connect to enterprise resource planning (ERP) systems store accounting data on blockchains and permit auditors to follow up (Christidis & Devetsikiotis 2016) [6]. These businesses may be able to perform audits in real time. This means that the focus of auditing will shift from detecting to preventing fraud and corruption.
As shown by (Gökten & Özdoğan 2020) [10] there are several obstacles that prevent the creation of a full control environment using the corporate resource planning systems currently in use? Among these are the options for ERP and IT users to modify or disable certain controls during or following a transaction. In this case there might not have been any significant misstatements in the audited transactions according to Bumgarner & Vasarhelyi (2018) [3]. Conversely blockchain-based transactions are irreversible and transparent allowing authorized parties to simultaneously watch and audit the entire transaction process. According to Drew (2018) [9] this infrastructure enables both internal and external auditors to conduct real-time audits. According to Byrnes Criste Stewart and Vasarhelyi (2014) [4] allowing remote auditing has the potential to increase audit effectiveness and save a significant amount of money.
In the same context as (Drew 2018) [9] the use of big data analytics (BDA) techniques has altered the way audits are carried out. According to Christidis and Devetsikiotis (2016) [6] BDA techniques promote more effective and efficient audit processes and provide a range of tools including text-mining and sentiment analysis techniques which are appropriate in the pre-acceptance engagement stage to analyze various media aspects in order to establish the clients potential financial reputation and information about its key officials such as the CEO and CFO. Furthermore by comparing a potential customers financial statements to those of other companies in the same industry clustering techniques can be useful in assessing the financial stability of a company (Appelbaum & Nehmer 2017) [2].
The fees and status of audit contract execution are ascertained with the help of big data analytics techniques. While traditional analyses are being conducted during the planning stage clustering descriptive and regression studies can be added to provide the auditor with a more thorough understanding of his client and as a result a greater understanding of risk and materiality (Cohn 2017) [7].

Methodology
The research will employ an inductive and analytical methodology examining secondary data and literature pertaining to financial technology and financial audits. Additionally a questionnaire will be administered to assess the perspectives and practical experiences of experts in these domains.

Study population
In Iraqi financial institutions and businesses in 2024 financial auditors' financial managers and financial technology specialists make up the study population.

The study sample
One hundred randomly selected employees from Iraqi financial institutions including manager's auditors and financial technology experts will make up the study sample.

Study tool
To gather quantitative data a customized questionnaire will be created for the sample participants. They will be questioned on a number of topics regarding their thoughts and experiences using financial technology in financial audits. Final conclusions and suggestions will be generated by statistical analysis of the data.

Analysis of the results
Part 1: Demographic data

Table 1: Qualification

Qualification	Frequency	Percentage
diploma	10	10
Bachelor's	41	41
Master's	17	17
Ph.D	32	32
Total	100	100

Researchers were able to ascertain the distribution of educational levels among survey respondents based on data gathered for the study: 41 percent held a bachelor's degree 32 percent held a doctorate 17 percent held a master's degree and 10 percent held a certificate.

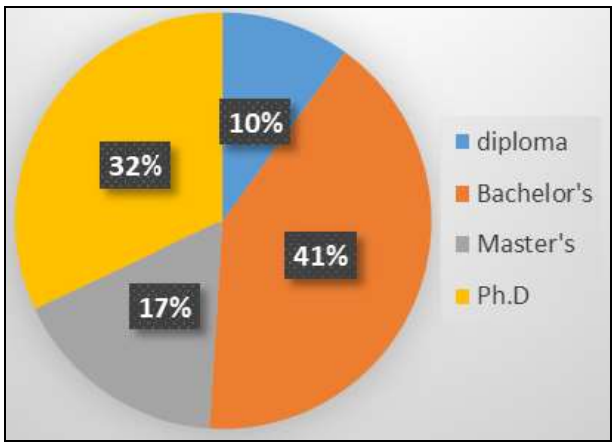

Fig 1: Qualification

Table 2: Practical experience

Practical experience	Frequency	Percentage
Less than 5 years	21	21
From 5 to 10 years	68	68
More than 10 years	11	11
Total	100	100

Research revealed that 68% of participants had worked for five to ten years 21% had worked for fewer than five years and 11% had worked for ten or more.

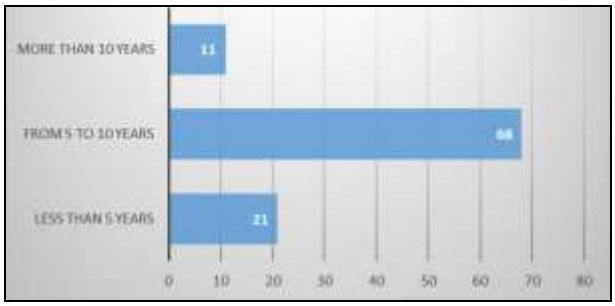

Fig 2: Practical experience

Table 3: Job title

Job title	Frequency	Percentage
Financial auditor	34	34
Financial Manager	45	45
Specialized in financial technology	21	21
Total	100	100

Survey results show that 25% of respondents work as financial auditors and the other 50% hold administrative roles. Twenty-one percent of the workforce is employed in the financial technology sector.

In addition to illustrating the range of roles that respondents filled out in the survey this distribution also shows how financial technology use may affect financial auditing and financial resource management within businesses.

Fig 4: Job title

Part 2: Topics of the study

The first axis examines the practical application of financial technology to financial auditing procedures

	Phrase	Mean	Standard Deviation
1.	Financial technology is used by my organization to conduct financial audits.	4.59	0.70
2.	Financial technologys potential in the field of financial auditing is well known to the management of my organization.	4.72	0.61
3.	The use of financial technology in financial audits is something that my organization is planning to expand on.	4.59	0.78
4.	Financial technology adoption for financial audits is proving difficult for my organization.	4.66	0.67
5.	Employees at my company are receiving financial technology training in order to conduct financial audits.	4.57	0.75

Because most of the axes arithmetic means fall between 4. 57 and 4. 72 and the standard deviation falls between 0. 61 and 0. 78 the study's conclusions suggest that the participating institutions struggle to implement financial technology in financial audits. The information above points to a mediocre degree of knowledge about financial technology's potential and the existence of development plans. Nonetheless challenges arising from its implementation and staff education continue highlighting the need for institutions to embrace more effective approaches to enhance the application of financial technology in financial assessments.

The possible uses of financial technology to raise the precision and efficiency of financial audits comprise the second axis

	Phrase	Mean	Standard Deviation
1.	Financial technology is used in financial audits to lower errors and increase result accuracy.	4.60	0.65
2.	In financial audits the utilization of financial technology expedites task completion and enhances efficiency.	4.41	0.78
3.	In financial audits financial technology facilitates the acquisition of more trustworthy and transparent data.	4.59	0.58
4	The process of analysis and reporting is made easier in financial auditing when financial technology is used.	4.35	0.81
5.	Financial operations can be continuously and instantly audited thanks to financial technology.	4.40	0.81

The results of the study show that using financial technology in financial audits increases accuracy and decreases errors the arithmetic means of the differences range from 4. 35 to 4. 60 with a standard deviation of 0. 58 to 0. 81. These results suggest that financial technology can improve data quality and speed reporting and analytical processes can be optimized effective continuous financial operations auditing can be made possible and overall financial audit standards and efficacy can be raised.

The third axis is dedicated to the difficulties and barriers that arise when financial technology is implemented in financial auditing operations

	Phrase	Mean	Standard Deviation
1.	My organization incurs significant costs when investing in Fintech.	4.28	0.93
2.	In my organization there is a deficiency in the knowledge and abilities needed to use financial technology.	4.39	0.85
3.	My organizations technical setup is unsuitable for integrating financial technology into audits.	4.28	0.94
4.	When employing financial technology for financial auditing privacy and information security are issues.	4.26	0.92
5.	Financial technology adoption for financial audits is not well-received by the management of my organization.	4.29	0.94

The study's conclusions suggest that there are several challenges and obstacles to the use of financial technology in financial auditing activities as evidenced by the arithmetic mean of the axis ranging from 4. 26 to 4. 39 and the standard deviation from 0. 85 to 0. 94. Financial technology adoption and effective application in the context of financial auditing are hindered by a number of issues. The high cost of doing so the insufficient training and experience required to use it the inadequate technical infrastructure privacy and information security worries and the lack of enthusiasm on the part of enterprise management are some of these.

Advice to improve financial technology adoption in financial auditing operations makes up the fourth axis

	Phrase	Mean	Standard Deviation
1.	Educate and raise awareness of the ways in which financial technology can enhance financial auditing procedures.	4.32	0.84
2.	Set aside enough money in your budget to purchase financial technology for auditing purposes.	4.43	0.73
3.	Establishing the security and technical framework required to integrate financial technology into auditing processes.	4.59	0.66
4.	Create training courses and train staff members in the use of financial technology for auditing.	4.44	0.81
5.	Senior management should be involved in the adoption and advancement of financial technology use in financial audits.	4.31	0.95

Important suggestions for improving the financial technology integration procedure within financial audit operations are given by the study sample. It demonstrates the importance of educating the public about the advantages of financial technology investing sufficient funds to support these technologies and developing the infrastructure required to meet both technical and security requirements. Developing training programs that instruct staff members in the use of financial technology and auditing can also enhance the efficacy and efficiency of financial auditing operations. Implementing and developing these technologies requires the involvement of senior management.

Discussion

Due to the Fourth Industrial Revolution the auditing profession is changing. The value propositions of the auditing profession need to be reevaluated in light of this according to Turker and Bicers (2020) [13] research. Although traditional audit services are still important research indicates that in order for the profession to provide assurance services that are more advanced and adaptable enough to meet the demands of the digital age it needs to gain greater recognition. Potential advantages of applying financial technology: Studies show that doing so can enhance audit transparency boost operational effectiveness and improve result precision.

One example of how blockchain technology can help prevent fraud is by speeding up the timely and accurate verification of financial data. Financial barriers including investment costs and skill shortages are major deterrents to the adoption of FinTech in the audit industry according to research (Turker and Bicer 2020) [13].

Some recommendations for expanding the use of financial technology include creating the technical and security framework required to permit the use of FinTech in audits as well as educating people about the technology potential and providing adequate funding for investment (Turker & Bicer 2020) [13]. In summary our study looks into the potential advantages and difficulties of using financial technology in the financial auditing industry in Iraq. The statement underscores the increasing need to enhance the field and adjust to contemporary technological advancements to deliver reliable and efficient audit services in dynamic economic landscapes.

Recommendations

The study conclusions suggest that the following actions could improve the application of financial technology in financial audits:

1. Arranging frequent training programs and events to inform staff members working in financial auditing about the potential advantages and opportunities presented by financial technology.
2. Sufficient funds are needed to invest in financial technologies and infrastructure.
3. For financial technology to be used effectively it is essential to ensure cybersecurity and improve technical infrastructure.
4. Made-to-order training materials to improve the data analysis and financial technology skills of financial audit staff.
5. More involvement from top management is needed to promote and increase the use of financial technology in institutional operations.

Conclusion

Fintech can improve task completion efficiency and result accuracy which makes it a valuable tool for improving financial auditing operations according to the study findings. Concerns about data security inadequate technology infrastructure a lack of necessary expertise and excessive costs are some of the problems that organizations deal with. Encouraging the adoption and advancement of financial technology in financial audits which improves performance and organizational excellence requires allocating sufficient funds developing the necessary infrastructure organizing training programs and involving senior management.

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Appendix

Questionnaire

Part 1: Demographic data

Qualification	Diploma Bachelor's Master's Ph.D
Practical experience	Less than 5 years From 5 to 10 years More than 10 years
Job title	Financial auditor Financial Manager Specialized in financial technology

Part 2: Topics of the study

The first axis: The reality of using financial technology in financial auditing operations

	Phrase	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	My organization uses financial technology for financial audits.					
2.	My organization's management is well aware of the potential of financial technology in the field of financial auditing.					
3.	My organization has clear plans to develop the use of financial technology in financial audits.					
4.	My organization is facing challenges in adopting financial technology in financial audits.					
5.	My organization is training employees to use financial technology in financial audits.					

The second axis: The potential benefits of using financial technology to improve the efficiency and accuracy of financial audits

	Phrase	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	The use of financial technology in financial audits helps reduce errors and improve the accuracy of results.					
2.	The use of financial technology in financial audits increases the efficiency and speed of completing tasks.					
3.	Financial technology helps in obtaining more reliable and transparent data in financial audits.					
4.	The use of financial technology in financial auditing facilitates the analysis and reporting process.					
5.	Financial technology enables continuous and real-time auditing of financial operations.					

The third axis: Challenges and obstacles facing the adoption of financial technology in financial auditing operations

	Phrase	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	The cost of investing in fintech is high for my organization.					
2.	There is a lack of competencies and skills to use financial technology in my organization.					
3.	The technical infrastructure in my organization is not suitable for implementing financial technology in audits.					
4.	There are concerns about information security and privacy when using financial technology in financial auditing.					
5.	My organization's management is not enthusiastic about adopting financial technology in financial audits.					

Fourth axis: Recommendations to enhance the adoption of financial technology in financial auditing operations

	Phrase	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	Increase awareness and education about the potential of financial technology to improve financial auditing processes.					
2.	Allocate sufficient budgets to invest in financial technology for audit purposes.					
3.	Developing the technical and security infrastructure necessary to apply financial technology in auditing operations.					
4.	Develop training programs and develop employees' skills in using financial technology for auditing.					
5.	Involving senior management in adopting and developing the use of financial technology in financial audits.					