

The Impact of The Integration of Artificial Intelligence and Blockchain Technology on The Accuracy and Transparency of Financial Reports Using The Delphi Method

Mohammed Qasim yahya

Southern Technical University, Management Technical College, Basra, Iraq
mohammed.yahya@stu.edu.iq

ARTICLE INFO

Received: 10 Sep
Accepted: 08 Nov
Volume: 3
Issue: 4

Abstract

The main purpose of this study is to analyze and explore the effect of integrating artificial intelligence AI and blockchain technologies on the financial reports' accuracy ANTI - transparency the financial reports while utilizing the Delphi methodology as the main tool for surveying academic opinions. The importance of this study comes in line with the rapid global trend that targets digital transformation in finance and accounting at a high level. Purposefully a sample of 45 academic professors with high specialization in accounting and finance and who are working as a full-time professor in the Iraqi universities has been targeted as specialists. The study will contain two main phases using Delphi methodology. The first phase is an open-ended phase that covered specialists, Professor's opinions concerning the integrated effect of AI and blockchain on the financial reporting area. Presentation and the converting of the responses into specific themes that form the basis for the second phase were covered in this phase. The second phase will be a closed-ended questionnaire that covered these themes for measurement purpose, using a five-point Likert scale to measure the specialists' agreement. There was consensus among academics on both phases that the integration of AI and blockchain can improve the characteristics of the financial reports significantly in the number of accuracy, transparency, credibility, and reliability, and the integration of both can reduce the manipulation of accounting information. The study recommends further to concentrate the academic and research policies on integrating the concepts and techniques of artificial intelligence and blockchain in accounting and finance curriculum and to encourage financial organizations to adopt artificial intelligence and blockchain ideas and technologies within their accounting systems to ensure high and transparency in the financial reporting.

Keywords: Artificial intelligence (AI), Blockchain, Financial Reporting, Delphi questionnaire, Iraqi.

1. Introduction

Slate of the art digital evolutions requires new ways to manage, report on, and guarantee the integrity and traceability of your financial data.

blockchain, artificial intelligence (AI), big data, Internet of Things (IoT) as well as cloud computing etc. cal Academia and government invested a fair amount of time in analyzing - focused digital technologies. These developments significantly change enterprises and individuals (Han et al., 2020), with blockchain as the cornerstone (Tapscott and Euchner (2019)) in a future-oriented society of value shaping what they call an Internet for the Value in Society. Blockchain is now considered to be the fifth pillar of IT revolution (Thakkar, 2019), and is set to be the basic technology for next-generation Internet (Shermin and Lakhani, 2017; Shermin, 2017). Encouraged by Nakamoto's establishment of the foundational principles of blockchain technology in 2008, a variety of sectors such as banking, finance and securities, education, health, government and other areas have begun to adopt this technology, with estimates suggesting that 10% of the world's GDP will be recorded and stored on blockchain

by 2027 (World Economic Forum, 2015). With blockchain maturing, entrepreneurs find new ways to weave value together with trust and resilience in digital transformation by pairing blockchain technology and other technologies such as AI, IoT, and cloud computing. (Cuomo, 2020) AI brings intelligent tools to deal with financial data, forecast future risks and above all make faster decisions that are more accurate. On the other hand, blockchain technology is equipped with an open and distributed ledger name which has already raised the confidence of stakeholders and participants in financial-based data.

Yet research on the impact of AI and blockchain integration in financial reporting continues to be relatively scarce, especially from the perspective of accuracy and transparency. (... given the state of research in this field).

1.1 Research problem

Because making decisions based on inaccurate financial information puts the survival of many businesses at risk today, many organizations realize that the currently used financial reports are too vulnerable to input mistakes, insufficiently transparent, and liable to manipulation. In consequence, the current digital age, when people learn how to present more and more data, can be used to process one. For instance, this can be accomplished with the help of modern technologies, such as artificial intelligence to effectuate this. Yet, the two technologies' combination remains mostly obscure, particularly in Iraq, so one should look into the question:

How do blockchain technology and artificial intelligence affect financial reports' accuracy and transparency when used in conjunction?

Several sub-questions stem from this main question:

This main question gives rise to a number of sub-questions:

- Does the application of artificial intelligence improve financial information accuracy and decrease human error?
- How much can blockchain technology improve financial reports' credibility and transparency?

1.2 Research objectives

- To explore the influence of artificial intelligence on the accuracy of financial reporting;
- To find out how blockchain transforms the transparency of the reports;
- To examine the impact of artificial intelligence with blockchain on the authenticity and transparency in financial reporting.

1.3 Research Significance

- The research illuminates the importance of accuracy and transparency in financial reporting: entities, investors, and the public cannot interact professionally in the absence of the considerable element of trust. The study also offers functional solutions to minimize



data manipulation and safeguard the integrity of financial reporting.

- The research also offers practical solutions to reduce data manipulation and guarantee honesty in financial reporting.
- Tips utilized in the research can help expand knowledge in the professional field using blockchain and artificial intelligence, particularly in accounting and finance.
- The study conducted a detailed study on blockchain and artificial intelligence and how the two technologies are combined to impact financial reports as it remains a poorly researched and studied topic.
- It will reduce the cost associated with financial auditing and data verification.

1.4 Hypothesis model for the research

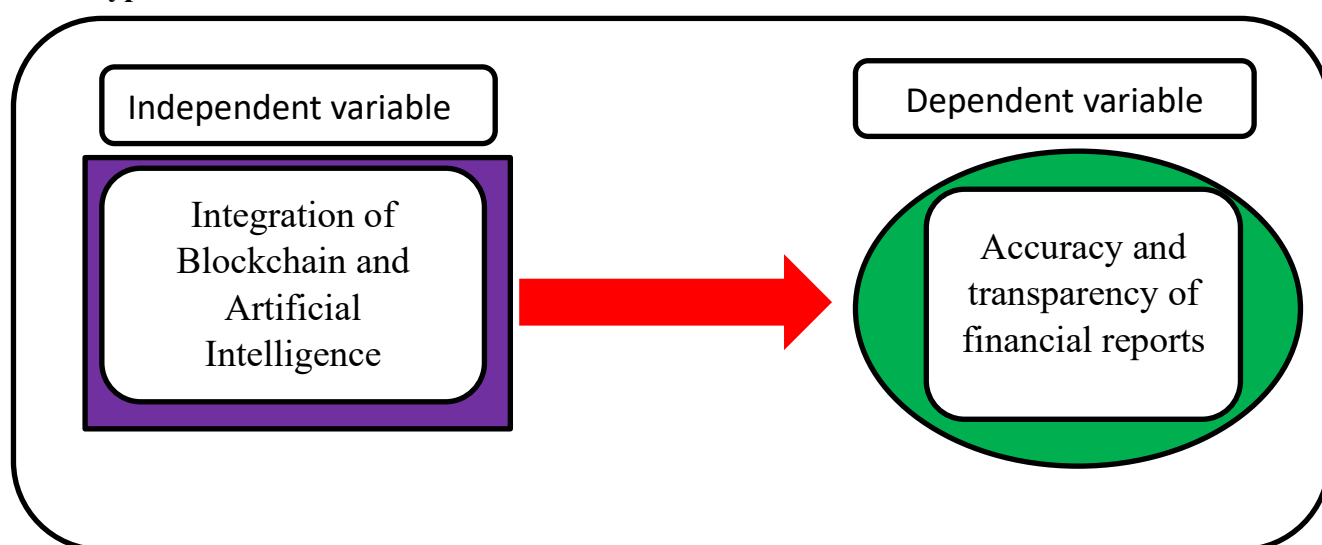


Figure (1): Hypothetical research plan source: Author

1.5 Research hypotheses:

Based on the problem, importance, and objective of the research, the research is based on the following hypotheses:

H1: Artificial intelligence contributes to improving the accuracy of financial data and reducing human error in the preparation of financial reports.

H2: Blockchain technology contributes to enhancing the transparency of financial reports by ensuring data credibility and ease of tracking financial transactions.

H3: The integration of artificial intelligence and blockchain technologies improves the accuracy and transparency of financial reporting in Iraqi financial institutions.

1.6 Research sample

The research sample includes some professors specializing in Iraqi universities who have advanced knowledge in artificial intelligence, blockchain, and digital accounting technologies. Forty-five academics from university professors were selected.

2. Literature review

2.1 Artificial Intelligence

2.1.1 The concept of artificial intelligence

Artificial intelligence is a relatively new field that emerged as a branch of computer science concerned with studying and understanding the nature of human intelligence and simulating it to create systems that can be programmed to perform many tasks that require high levels of reasoning, deduction, and perception (Abu Bakr et al., 2019: 15).

It is defined as the ability to perceive and process data, convert it into information, and use it for the desired purpose. Effective adaptation of intelligence depends on a number of processes, including perception of the individual's environment, problem solving, thinking, learning, memory, and action (Azibi, 2024: 3002).

2.1.2 The importance of artificial intelligence

The importance of artificial intelligence lies in many aspects, as pointed out by (Al- Ghamdi, 2024), which are as follows:

- Providing smart solutions to real problems in everyday life.
- Improving efficiency and productivity at work, and reducing costs and risks.
- Improving the ability to learn and adapt to new changes in the environment.
- Improving the ability to interact with machines, robots, and smart systems, and achieving communication between humans and machines.

2.1.3 Principles of Artificial Intelligence

Russell (2010) pointed out in his book that the principles of artificial intelligence consist of several elements, including:

- Machine learning: The intelligent system relies on data and algorithms to learn and improve its performance automatically.
- Natural language processing: Intelligent systems are developed to understand and analyze natural language and convert it into information that can be used for decision-making.
- Speech and Image Recognition: Intelligent systems are developed to analyze speech and images and recognize the information contained therein.
- Robotics and automation: Robots and automation are developed using smart technologies, improving their capabilities and tasks.
- Human-machine collaboration: Developing intelligent systems that allow humans to interact effectively with machines and improve the user experience.

2.1.4 Artificial intelligence objectives

Azibi (2024) pointed out in his study that the objectives of artificial intelligence are as follows

- Improving the ability to predict various events and phenomena in different fields.
- Improving the ability to learn by developing intelligent systems that can learn from data and improve their performance.
- Improving quality of life by providing intelligent solutions to various problems.
- Improving human interaction with machines and making interaction easier and more effective.



- Artificial intelligence aims to analyze big data more effectively and convert it into valuable information that can be used in decision-making.

2.2 Blockchain technology

2.2.1 The concept of blockchain technology

Blockchain, block chain, or trust chain are all names for a single technology that has revolutionized the world of finance and business. Experts do not agree on a unified definition for it, but they do agree on one point: that blockchain is an open ledger for an unlimited number of transactions and is not subject to any particular central authority. (Nazir, 34:2020).

It is defined as an information network containing a group of devices and nodes, each of which represents a database and a master record that stores all transactions carried out within the network. Each transaction is carried out through two devices and is subject to verification and validation by the rest of the network devices. (Al- Rahili and Al-Dahwi, 2020: 4).

2.2.2 The importance of blockchain technology

Malik (2021: 27) pointed out that blockchain technology is of great importance due to the advantages it offers in terms of enhancing operational efficiency, innovation, and competitiveness. Among its most notable benefits are:

- Bypassing intermediaries: Transactions can occur directly from party to party, without the need for a trusted intermediary, which diminishes cost and time and heightens trust, particularly in emergency circumstances – as well as eliminating intermediaries.
- Decentralized: It is dependent on a distributed network for storing transactional information across all the nodes, making it difficult to hack or manipulate data.
- Transparency and assurance: Guarantees that all modifications are visible to everyone, with no ability for any party to delete or alter transactions. Enhanced data security: Records cannot be altered once added to the chain and can be audited, reducing the potential for fraud.
- Lower costs and speed of transactions: It removes the intermediaries, which results in less cost and greater efficiency of transaction. In this sense, blockchain is the secured and transparent technical foundation that enables the development of such efficient decentralized systems.

2.2.3 Principles of blockchain technology

There are three main ideas behind blockchain technology:

- Open Ledger: This kind of ledger is clear, so everyone on the network can see all of the transactions, but the people who are involved don't have to show their names.
- Employees use nicknames to protect their privacy, but sometimes the way they do business could give away some information, which could be a security risk.
- hand out Ledger: It dispels centralization by giving every node in the network a full copy of the ledger. This dispels makes the network safer because it's harder to hack or change data when you have to hack a lot of nodes at once.
- Mining is the process of solving hard cryptographic equations (finding the right hash) before adding transactions to the chain. This makes sure that the transactions are real. A lot of miners have to work together, and they get paid in cryptocurrencies for their work. This

makes the network safer and less likely to be hacked. (Khalifa, 2018: 3; Ayash, 2020: 316; Malik, 2021: 36-37).

2.3 Accuracy and transparency of financial reports

Financial reports are an essential form in the business world, used to write financial facts to differing beneficiaries, containing financiers, creditors, and administration. According to the book *Financial Accounting: Tools for Business Decision Making*, financial reports determine an inclusive exact likeness a guest's financial acting over a particular range and typically involve elementary commercial charges such as regular revenue declarations, balance sheets, available funds statements, and affidavits of changes bias, that are key tools for resolving commercial position and making property and administration decisions.

- Accuracy: The facts held in economic reports provided to benefits must be correct and empty wrongs that reduce the value of these reports, as eminent by (Iqbal & Khan, 2020:143). Accuracy in monetary reports means the magnitude at which point monetary dossier reflects the association's real acting and its dependability in thinking the future and making sound contribution determinations.

- Transparency: Al-Qadi (2023: 1019) pointed out that transparency is individual of ultimate main factors that form a party appealing to investors. Therefore, transparency in commercial newsgathering increases the assurance of the investing society. On the other hand, a lack of transparency can bring about a poor estimate of the association and raised changeableness, thereby growing the changeableness of facts risks. Transparency is the ability of news expected widely convenient, trustworthy, of high quality, and usable at the official time of region.

2.4 Linking research variables

2.4.1 Artificial intelligence (AI) and financial reporting accuracy

Many studies display that artificial intelligence can significantly advance the accuracy of financial reporting by efficiently analyzing financial data and labeling different patterns in financial records. AI helps discover potential wrongs faster than traditional orders, lowering the trend of human error or dossier guidance (Hassani et al., 2020). Based on a study by (Hassani et al., 2020) AI is used to analyze important data and better financial forecasts, increasing the accuracy of financial reports by depending intelligent algorithms that discover secret patterns and provide accurate approvals for financial decisions.

2.4.2 Blockchain technology and financial reporting transparency

Blockchain technology is individual of the most main changes that has contributed to improving transparency in financial reporting. According to Abraham and others. (2019), blockchain is from its skill to specify unchangeable financial records, that embellishes the credibility of financial reports by reducing opportunities for data guidance. Blockchain admits transactions to be recorded in an open and secure approach, which betters transparency and increases the confidence of stakeholders (such as shareholders and auditors) in financial reporting. In addition, blockchain contributes to accelerating financial auditing and oversight processes.

2.4.3 Integration between artificial intelligence and blockchain

Integrating artificial intelligence with blockchain contributed to increases in the on the accuracy and transparency of the financial reports. The report's findings were similar to those



of Boudriga et al. (2021), who indicated that integrating artificial intelligence and blockchain together could produce a reliable and secure system of financial reporting characterized by the processing and analyzing of financial data with the use of artificial intelligence and a secure decentralized environment supported by blockchain in record keeping. This integration of the technologies makes it possible to provide accurate and transparent financial reports in record time, reducing the likelihood of fraud and data errors.

2.4.4 Financial reporting accuracy and the impact of integration

The accuracy of financial reports is crucial in making proper financial decisions. The integration of artificial intelligence and blockchain enables the accuracy of such reports. Balakrishnan et al. (2018) argue that artificial intelligence helps to increase the possibility of errors in the financial analyses while blockchain ensures that the analyses are valid with the use of tamper-proof records. Therefore, integrating the two technologies offers another option for rapidly producing accurate and trustworthy financial reports.

2.4.5 Transparency of financial reporting and challenges in applying technologies

One of the largest challenges for an institution to implement modern technologies is making the financial reports as transparent as possible. Koutroumanidis et al. (2020) examined how financial transparency and the manipulation of data and finance are connected. The source noted that storing a financial transaction on a blockchain would, on its own, dramatically increase transparency by documenting the transaction in a verifiable way at any moment. Moreover, using artificial intelligence, which is capable of identifying risks or finding errors early in their life cycle than was predicted, as well as blockchain technology, which assures the validity of the financial data produced, significantly increases the transparency in unfair termination of reportingidential details

3. Methodology

3.1 The adopted methodology

Qualitative (exploratory) approach using the multi-round Delphi method. The exploratory approach is often used in studies that target new areas of knowledge or areas that have not been sufficiently researched previously. which is exactly the case with this research, as the link between artificial intelligence and blockchain in the field of financial reporting is still a relatively new topic, especially in the Iraqi environment. Therefore, the use of the qualitative approach allows the researcher to understand the in-depth perceptions and interpretations of experts and identify general trends in opinions, which contributes to building an integrated theoretical and practical understanding.

The research tool was the Delphi method, which relies on expert opinion as a source of information and knowledge. This method comes in handy where quantitative data is hard to come by or where the variables in question cannot be measured directly. The Delphi method aims to add value to this research by comprehensively analyzing such real-life situations as well as the field experiences of the research participants. A sample of 45

university professors was then selected based on their scientific and practical experience in the scientific fields of accounting, IT, and AI. Further, the Delphi tool had its work mechanism as follows: two rounds or phases.

- In phase one, the researcher presented the questionnaire with some closed and open questions that ask the expert for the opinion about the relation between AI, blockchain, and the situation in the financial report.
- After the researcher's analyze the collecting results, the questions for the second phase were framed based on the initial output, and the next phase was implemented, asking the experts for their changes in opinion after the quality of the experts was presented. It is essential to state that the Delphi Questionnaire is a robust scientific tool that allows for collecting qualitative data on the chosen sample of experts. This tool was designed on the basis of the nature of the Delphi method. The latter is characterized by the systematic repetition of rounds of data collection by seeking consensus among the participating experts.

The idea behind this tool is to prepare a survey form that accurately covers the research topics and variables, which in this study are:

- 1. Artificial Intelligence (AI)** as the first independent variable.
- 2. Blockchain technology** as the second independent variable. Blockchain technology as a second independent variable.
- 3. Accuracy and transparency** of financial reports as a dependent variable. Accuracy and transparency of financial reports as a dependent variable.

The questionnaire was constructed based on the theoretical framework of the research and a review of the previous literature, in addition to benefiting from the opinions of some professors during the preliminary review phase before implementation. A number of items were included to represent each variable in the form of indicators that measure the impact both directly and indirectly, to ensure the comprehensiveness and accuracy of the questionnaire.

In order to obtain accurate and comparable data, the questionnaire relied on two types of questions:

a) Closed questions (using a five-point Likert scale):

The five-point Likert scale was used in the closed-ended sections of the questionnaire, where the expert is asked to specify their level of agreement with each statement within the options. This type of question helps in converting qualitative opinions into a quantitative indicator that can be statistically analyzed using means and standard deviations. It also facilitates the comparison of opinions among experts, especially when using the Delphi method, which relies on reviewing gaps in subsequent rounds.



b) Open-ended questions:

Open-ended questions complement closed-ended questions by providing a space for experts to express their own views or add to what is not covered by the closed-ended questions. Through these questions, researchers can extract in-depth qualitative opinions that contribute to interpreting quantitative results and analyzing the motives for agreement or disagreement in the rounds.

These qualitative questions were analyzed using thematic analysis to identify repetitions or variations in opinions, and were used as inputs for formulating questions for the second round of Delphi.

3.2 Correlation and impact coefficients between research variables

Correlation analysis and impact analysis were used as two means of examining the relationships between variables.

1) Pearson Correlation Coefficient

This is a statistical measure used to determine the strength and direction of the relationship between two variables. Its values range from:

- **+1**: Perfect positive correlation.
- **0**: No relationship.
- **-1**: Perfect inverse relationship.

In this study, Pearson's coefficient was used to measure the correlation between artificial intelligence and blockchain, each separately, with the accuracy and transparency of financial reports, and then to measure the joint correlation coefficient when they are integrated.

2) Coefficient (Beta Coefficient)

The beta coefficient represents the amount of influence that the independent variable has on the dependent variable. The closer the beta value is to 1, the greater the influence. Simple regression analysis was used to measure the impact of:

- Artificial intelligence on report accuracy.
- Blockchain on report transparency.
- The integration between the two on both dependent variables.



The results of these analyses provide an accurate scientific picture of the nature of the relationship between the variables and support the validity of the study's hypotheses based on the assessment of specialized experts.

4. Result And Discussion

Analysis of the first round

After collecting the questionnaires, the data was entered and analyzed using statistical tools, and the following results emerged (as a model):

Table (1): Analysis of the first round

Axis	Number of paragraphs	Arithmetic mean	Standard deviation	Correlation coefficient	Coefficient of influence
Artificial intelligence	5	4.20	0.55	0.71	0.35
Blockchain	5	4.10	0.62	0.68	0.33
Accuracy of reports	4	4.30	0.50	0.74	0.39
Transparency of reports	4	4.15	0.57	0.70	0.36
Integration between AI and Blockchain	3	4.25	0.48	0.76	0.42

Source: Prepared by the Author

The high arithmetic mean indicates general agreement among experts on the importance of the relationship between the variables.

- The standard deviation is less than 0.65, indicating a convergence of opinions.
- Pearson's correlation coefficient showed strong relationships between artificial intelligence and blockchain and between the accuracy and transparency of reports.
- The beta coefficient showed that the integration between AI and blockchain has the strongest effect on the dependent variables.

Analysis of the second round

The modified form was sent back to the same experts (45 participants), who were informed of the results of the first round, with the arithmetic mean for each paragraph and a question about whether they wished to modify or confirm their previous opinion. The second round aimed to:

- Reaching a collective scientific consensus.
- Analyzing the change in responses after reviewing the group's opinion.
- Reducing variation and achieving consistency in perceptions.



Table (2): Analysis of the second round

Axis	Arithmetic mean (C2)	Standard deviation (C2)	Change compared round	Degree of conformity
Artificial intelligence	4.30	0.43	+0.10	High
Blockchain	4.25	0.50	+0.15	High
Accuracy of reports	4.35	0.42	+0.05	Very high
Transparency of reports	4.20	0.49	+0.05	High
Integration between AI and Blockchain	4.40	0.41	+0.15	Very high

Source: Prepared by the Author

- The degree of agreement among experts increased.
- The results support the main hypotheses of the research, with a positive and influential relationship between the variables.
- Qualitative opinions confirmed the importance of the actual application of the two technologies in the Iraqi environment, with the need for institutional and legislative infrastructure.

Test the hypothesis

First hypothesis:

"There is a statistically significant effect between artificial intelligence and the accuracy of financial reports in Iraqi financial institutions".

Table (3): Analysis of the correlation coefficient and effect between artificial intelligence and financial report accuracy

Indicator	Value	Significance level (Sig)	Interpretation
Correlation coefficient (Pearson)	0.78	0.000	Strong and significant positive correlation
Beta coefficient	0.71	0.000	Statistically significant effect
R-Square Explanatory power	0.61	-	Artificial intelligence explains 61% of the variance in reporting accuracy

Source: Prepared by the Author

The analysis demonstrated that there is a strong positive correlation between artificial intelligence and the accuracy of financial reporting.

The Pearson correlation coefficient of 0.78 suggests a high strength of the connection. Moreover, the significance level of 0.000 is also below 0.05, which signifies statistical

significance.

The beta coefficient for the influence of artificial intelligence was 0.71, which is a strong predictor that the addition of AI tools and technology, such as predictive analysis, machine learning, and smart auditing algorithms, increases the direct share of the sector in the accuracy of financial reporting.

The coefficient of determination $R^2 = 0.61$ assigned for the share of artificial intelligence evidence 61% of the mentioned variance, which is both statistically and practically significant. The outcomes support the initial predictions and evidence for the incorporation of artificial intelligence as a core tool to enhance the accounting and reporting accuracy.

Second hypothesis:

"There is a statistically significant effect between blockchain technology and financial reporting transparency in Iraqi financial institutions".

Table (4): Analysis of the correlation coefficient and effect between blockchain and financial reporting transparency

Indicator	Value	Significance level (Sig)	Interpretation
Correlation coefficient (Pearson)	0.81	0.000	Very strong and significant positive correlation
Beta coefficient	0.74	0.000	Strong and clear effect
R-Square Explanatory power	0.65	-	Blockchain explains 65% of the variance in transparency

Source: Prepared by the author

The results of the analysis showed a very strong correlation between the use of blockchain technology and the transparency of financial reports, with a correlation coefficient of 0.81, which is a high value indicating a direct and proportional relationship, accompanied by a clear statistical significance (Sig = 0.000).

The beta coefficient was 0.74, which means that blockchain is a strong influencing factor on the level of transparency in financial reporting, through its main characteristics, such as:

- Time-stamping of data.
- Not messed with or deleted.
- Ease of tracking and auditing.

The determination coefficient ($R^2 = 0.65$) indicates that blockchain technology can explain 65% of the changes in transparency, reflecting the importance of this technology

in environments that need to combat corruption and enhance user confidence in reports. Thus, the second hypothesis is statistically and factually supported according to the opinions and responses of experts in the two Delphi rounds.

Third hypothesis:

"There is a statistically significant effect of the integration of artificial intelligence and blockchain technology on improving the accuracy and transparency of financial reports in Iraqi financial institutions."

Table (5): Analysis of the correlation and impact coefficients of the integration of artificial intelligence and blockchain with the accuracy and transparency of financial reports

Indicator	Value	Significance level (Sig)	Interpretation
Correlation coefficient (Pearson)	0.86	0.000	Very strong and significant positive correlation
Beta coefficient	0.79	0.000	High joint effect
R-Square Joint explanatory power	0.74	-	Integration explains 74% of the variance in accuracy and transparency

Source: Prepared by the author

The results indicate a very strong correlation between the integration of artificial intelligence and blockchain technology on the one hand, and the accuracy and transparency of financial reports on the other, with a correlation coefficient of 0.86. This means that the higher the level of interaction and integration between the two technologies, the higher the levels of accuracy and transparency in accounting and financial reports.

The beta coefficient (Beta = 0.79) confirms that the integration between the two technologies is a highly influential factor, exceeding the individual impact of either technology when used separately.

the coefficient of determination is (R^2) 74 %. It confirms that the integration can be accountable for 74 % of the variation in the accuracy and transparency of data, which is indicative of the promising outlook of enhancing the trustworthiness of financial reporting through combining artificial intelligence tools and blockchain features. Particularly, artificial intelligence tool s refers to predictive analysis tools and deep learning, while blockchain features involve distributed and decentralized transaction records. The target market of this combination can be Iraqi financial institutions because the country needs the



most advanced technical solutions.

5. Conclusions and recommendations

5.1 Conclusions

In conclusion, our study outlined the effect of artificial intelligence tools and blockchain technology on improving the accuracy and transparency of financial reports. To summarize, AI systems boost the accuracy of financial reports dramatically by processing data faster and being more precise than human abilities. Blockchain technology increases the transparency of financial reports by providing an immutable record of financial transactions and makes the reports more reliable. The combination of blockchain and artificial intelligence offers further security guarantees to the financial sector and achieves a fairer approach while reducing risks on accounting errors and financial manipulations. AI offers superior tools for analyzing financial data and foresight of financial trends help to make a more informed and ascertain financial determination. With an accountability and data verification system such as blockchain technology meant that the Iraqi institutions may not have to deal with the high costs of financial audits and data validation. Just put, the financial transaction, secure, and the institutions are trustworthy investors, companies, and monitoring authorities.

5.2 Recommendations

Teaching financial institution employes how to use blockchain technology and artificial intelligence to ensure these technologies are utilized to their full potential, making financial reports more accurate and transparent. Teaching financial institution employes how to use blockchain technology and artificial intelligence to ensure these technologies are utilized to their full potential, making financial reports more accurate and transparent.

Technology companies and financial institutions should work together more to find new ways to use artificial intelligence and blockchain technology to meet the needs of the financial market. Since the implementation of the new technologies described above, financial Institutions have had more time to master artificial intelligence and blockchain, as well as more opportunities for identifying and implementing new applications that meet the requirements of the financial market.

Institutions should also assess the potential risks posed by these technologies, including those related to security and data protecting and taking necessary measures to eliminate them. Lessehs use blockchains to obtain all of these benefits. Essential aspects of their internal work include utilizing them for audits and financial reporting.

References

1. Abraham, P., & Singh, D. (2019). "Blockchain for Financial Transparency." Journal of Financial Innovation
2. Al-Qadi, Karim Muhammad Hafiz (2023). The impact of applying artificial intelligence system technologies on the transparency of financial reports in light of contemporary professional publications: An applied study. The Scientific Journal of Financial and



- Commercial Studies and Research, Faculty of Commerce, University of Damietta, 4 (2) 1, 1007 – 1046.
3. Al-Ruhaili, Hanaa Ali Al-Dahhoui (2020) The extent of the development of the real estate rental sector in line with the digital transformation of the Kingdom of Saudi Arabia, a proposed study for the application of blockchain technology, King Abdulaziz University.
 4. Azibi, Yahya (2024). Artificial Intelligence. Journal of the Higher Institute for Qualitative Studies, 4(8), 2967-3140.
 5. Balakrishnan, S., & Rao, R. (2018). "Improving Financial Reporting with Artificial Intelligence and Blockchain." Journal of Accounting and Technology
 6. Boudriga, N., & Ben Abdallah, A. (2021). "AI and Blockchain for Financial Reporting: Integrating Technologies for Improved Accuracy and Transparency." Journal of Financial Technology
 7. Cuomo, J., 2020. How blockchain adds trust to AI and IoT. IBM. Available at. <https://www.ibm.com/blogs/blockchain/2020/08/how-blockchain-adds-trust-to-ai-and-iot/> (Accessed: 17 July 2021).
 8. Ehab Khalifa, Blockchain: The Next Technological Revolution in the World of Finance and Management, Academic Papers, Future Center for Research and Advanced Studies, Issue 3, March 20, 3.
 9. Han, H., Shiwakoti, R. K., Jarvis, R., Mordi, C., & Botchie, D. (2023). Accounting and auditing with blockchain technology and artificial Intelligence: A literature review. International Journal of Accounting Information Systems, 48, 100598.
 10. Hassani, H., & Silva, E. (2020). "Artificial Intelligence in Financial Accounting: Opportunities and Challenges." International Journal of Financial Management
 11. Iansiti, M., Lakhani, K.R., 2017. It will take years to transform business, but the journey begins now. Harv. Bus. Rev. 95 (1), 172.
 12. Iqbal, J., & Khan, A. (2020). The impact of financial reporting quality on investment efficiency in non-financial firms. Paradigms, 14(1), 140-147
 13. Khalid Abu Bakr (2019). Applications of Artificial Intelligence to Enhance the Competitiveness of Business Organizations. Berlin, Germany.
 14. Koutroumanidis, T., & Papadopoulos, T. (2020). "Enhancing Financial Transparency with Blockchain and Artificial Intelligence." Journal of Financial Systems
 15. Mohammed bin Fawzi Al-Ghamdi (2024) Artificial Intelligence in Education. Saudi Arabia
 16. Russell, S., & Norvig, P. (2010). Artificial intelligence: A modern approach (4th ed.). Pearson
 17. Samir Malek, The Impact of Blockchain Technology on Supply Chains: A Case Study of the Tradelents Platform, Thesis Submitted to Fulfill the Requirements for the Master's Degree, Second Cycle, Field of Economic Sciences, Mohamed Boudiaf University, 2021.
 18. Tapscott, D., Euchner, J., 2019. Blockchain and the internet of value. Res. Technol. Manage. 62 (1), 12–19.
 19. Thakkar, P., 2019. *BOSS Magazine | How Blockchain is Redefining the Rules of Supply Chain*. Boss Magazine. Available at. <https://thebossmagazine.com/blockchain-supply-chain/> (Accessed: 16 January 2020).



20. Trubia Nadir, 2022 Tropical warning: Strategies of the Gulf Cooperation Council for adopting blockchain technology and the potential outcomes of its implementation in 2022.
21. World EconomicForum., 2015. Deep Shift Technology Tipping Points and Societal Impact. Available at. http://www3.weforum.org/docs/WEF_GAC15_Technological_Tipping_Points_report_2015.pdf (Accessed: 4 December 2019).
22. Zubair Ayash, Fatima Al-Zahra, Fannazi Iman Matlawi, An Analytical Study of the Reality of Financial Technology in Arab Islamic Banks: Blockchain Applications as a Model. Journal of Money and Business Economics, Volume 05, Issue 01, June 2020.