**INTERNATIONAL JOURNAL OF eBUSINESS AND eGOVERNMENT STUDIES**
**Vol:** 16 **No:** 3 **Year:** 2024 **ISSN:** 2146-0744 (Online) (**pp.**43-62) **Doi:** 10.34109/ijebeg.2024160303
**Received:** 15.04.2024 | **Accepted:** 25.10.2024 | **Published Online:** 30.10.2024

**-RESEARCH ARTICLE-**

# THE IMPACT OF ARTIFICIAL INTELLIGENCE ON THE TONE OF ACCOUNTING DISCLOSURE IN FINANCIAL REPORTS AND ITS REFLECTION ON AUDIT QUALITY

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**─Abstract─**

This research seeks to investigate the influence of advanced artificial intelligence (AI) applications on the tone of accounting disclosures within financial reporting. The AI applications explored include big data analytics, machine learning, and financial robotics. A robust research methodology was employed, comprising the design of questionnaires for financial industry professionals and interviews with experts in both artificial intelligence and accounting. Data necessary for the study's objectives and recommendations were gathered through these instruments. The findings of this research underscore the significance of enhancing understanding and awareness

Citation (APA): Muter, K. J., Al-Dulaimi, J. A. A. B., Younis, N. N. (2024). The Impact of Artificial Intelligence on the Tone of Accounting Disclosure in Financial Reports and its Reflection on Audit Quality. *International Journal of eBusiness and eGovernment Studies*, *16*(3), 43-62. doi:10.34109/ijebeg.2024160303

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regarding the role of technology in advancing accounting practices, particularly in terms of improving the quality of financial reporting. This study contributes to the existing body of literature by introducing a novel concept concerning the impact of AI applications on accounting disclosure, highlighting their role in fostering transparency and financial accountability. The results provide valuable insights for researchers and financial and accounting institutions regarding using technologies to optimize systems performing a competitive edge in the financial services sector.

**Keywords:** Artificial Intelligence, Accounting Disclosure Tone, Accounting Disclosure, Financial Reports

## INTRODUCTION

In recent times, unprecedented development and transformation have overwhelmed the world, with information and communications technology being one of them that dominates most of them. Economic entities in modern times depend a lot on new technology in accomplishing work that in times past could have only been achieved through manpower and convention (J.ie et al., 2024). One of the key developments in this regard is the rise of artificial intelligence (AI), a major outcome of the Fourth Industrial Revolution. Due to its wide-ranging applications across various sectors, AI has become increasingly discussed and recognized. (Malpani et al., 2024). As a relatively new computer science field, AI involves studying and knowing about intelligence in humans to replicate itreplicatinging a new age of smart machines. AI processes a lot of information, employing many smart techniques for identifying trends, trends, and information that are improving disclosures' tone in accounting. AI can, in such a case, make preparation, submission, and ongoing periodical checking of financial statements efficient and effective, improving transparency and trust in key accounting processes. With AI, numerous tasks can be executed more effectively (Han et al., 2023).

The integration. Han et al., 2023telligence in financial and business administration can make a significant contribution towards altering working processes and improving operational efficiency. AI, in studies, has been observed to contribute to business administration in a significant manner (Al-Okaily et al., 2020). However, there hasn't been a significant concern about AI's contribution to incorporating financial reporting and disclosures in accounting. In an endeavor to give a general picture of artificial intelligence (AI) and its contribution towards financial reporting disclosures in terms of disclosures in accounting, with a strong focus towards disclosing contribution in accounting and an endeavor to understand through analysis in what way AI can contribute towards disclosures' tone, such a study will undertake it. There will be an effective introduction of AI's fundamentals in a way that will allow for an effective grasp of the issue for effective reading and analysis. Furthermore, this study will seek to understand its implications for audit quality (Tiwari & Khan, 2020). What is

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significant about this study is that it will seek, in part, to understand the potential contribution of AI applications in accounting and its contribution, if any, towards shaping disclosures in financial reporting (Commerford et al., 2022).

This research aids significantly in describing AI in financial reporting, financial control, and financial reporting and control audit quality. It even renders useful direction for administration in a business through its emphasis on AI integration with proper training for employees. Besides, it reveals AI capabilities and its potential for driving improvements in a business, financial reporting, and overall development. Additionally, AI can have a significant contribution in terms of financial reporting efficiency and fraud protection in a big way. What this study can reveal can benefit companies, specifically banking companies, in terms of operational efficiency through AI. The study is designed in a format comprising a review of literature, methodology, findings, discussion, and conclusion.

## REVIEW OF LITERATURE

AI encompasses computers with capabilities to perform complex operations with unmatched expertise, leveraging complex decision and language processing capabilities. (Agostino et al., 2022). In the financial sector, AI employs new technology to enable computer programs to mimic intelligence through big-data analysis, providing sound financial prediction, and improving reporting and tracking processes. (Han et al., 2023; Kroon et al., 2021). AI's applications span various fields, each performing specific tasks. (Abrokwah-Larbi & Awuku-Larbi, 2024). Despite advancements, these applications may not always operate with the speed and accuracy anticipated. Key AI fields include expert systems, which apply expert knowledge to solve problems Atayah and Alshater (2021), and natural language processing, which enables software to analyze and simulate human language comprehension. (Shanmuganathan, 2020).

An artificial neural network (ANN) is a computer system designed to work similarly to a brain, an animal brain, in processing and translating information. It is composed of a collection of entities, for instance, neurons, that work in concert in processing and translating information. (Woldseth et al., 2022). One growing application of artificial intelligence in business is fuzzy logic, a system used when intelligent computer systems rely on data that is specific and well-established. Fuzzy logic allows for the handling of vague, imprecise, or probabilistic information by employing human-like reasoning, which permits the use of approximate values and incomplete data to make inferences (Lu et al., 2022). The concept of "tone" is firmly established and applied in numerous branches, including in artwork, music, phonetics, literature, and political studies. In them, it explains through which social impressions are communicated through a

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selection of words. Tone explains through which selection of specific words in a message can frame a message, conveying a writer's stance to a listener (Mansoor et al., 2022). In the field of accounting, disclosure is a conveyance of information, positive or not, about an entity's performance and its management, who serve as representatives for its owners (Eulerich et al., 2022). The tone of accounting disclosure is a way financial information is conveyed in reports and whether such information is positive or not. Accounting disclosure tone is important in generating an impression regarding disclosure quality and in molding accounting information.

The concept of disclosure tone refers to the practice of framing negative financial performance in a positive light, intending to downplay or conceal poor results while still disclosing them (D'Augus.ta & DeAngelis, 2020). Conversely, good financial performance is typically communicated using favorable language that can be easily understood by users of financial statements and reports.(Kang et al., 2018). According to manager strategies for regulating disclosures' tone in accounting, such techniques have been designed in a quest to mold external users' perception. Figure 1 illustrates when and through which manner such strategies function through manager actions in molding financial information interpretation through external stakeholders.

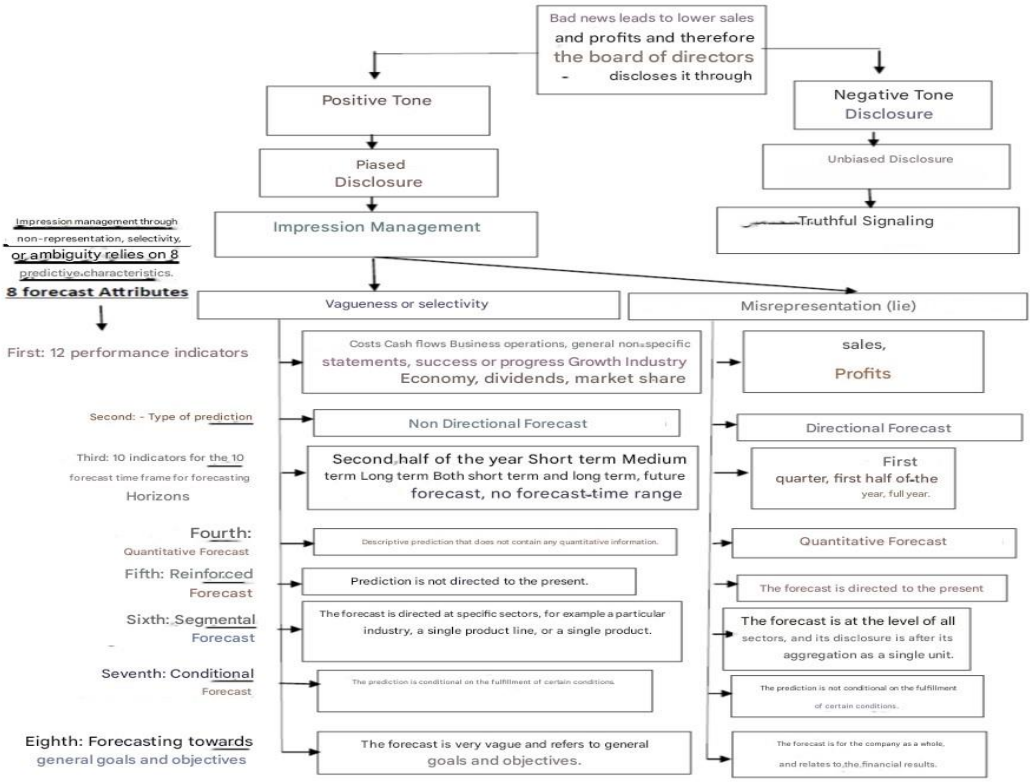


**Figure 1:** Managing the Formulation of Accounting Disclosure of Bad News by Disclosing it in a Positive Tone

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The audit process must meet the required quality standards, with auditors ensuring that their tasks are completed efficiently and to the highest quality (Chowdhury, 2021). This ensures that the final report reflects honesty and reliability. Similarly, system management strives to conduct the audit stages effectively and with quality, ensuring that the financial regulations developed under its supervision are characterized by credibility and reliability (Tiron-Tudor & Deliu, 2022). Beneficiaries, in turn, seek assurance regarding the validity and credibility of the financial regulations presented to them, expecting the audit stages to be carried out with optimal quality. Thus, a high-quality audit is crucial for all parties involved in the process (Otia & Bracci, 2022).

The accounting and auditing profession is significantly impacted by the adoption of artificial intelligence, as auditors must stay abreast of the accounting systems employed by the entities they audit (Kanaparthi, 2024). Consequently, the profession can no longer rely solely on traditional methods. Auditors must continuously adapt to technological advancements, enhancing their technical, technological, and cognitive skills to remain effective. The integration of artificial intelligence into the audit process can enhance both the efficiency and effectiveness of external audits. The model has been developed using a systems approach, which emphasizes the interdependence, integration, and coordination of its components (subsystems) to achieve the overall objectives of the system. This approach considers all relevant factors, both environmental and organizational, that influence the operations of the economic entity in which the system is implemented, as well as those external to it. Consequently, the proposed model will incorporate inputs, processes, outputs, and feedback, as depicted in Figure 2.

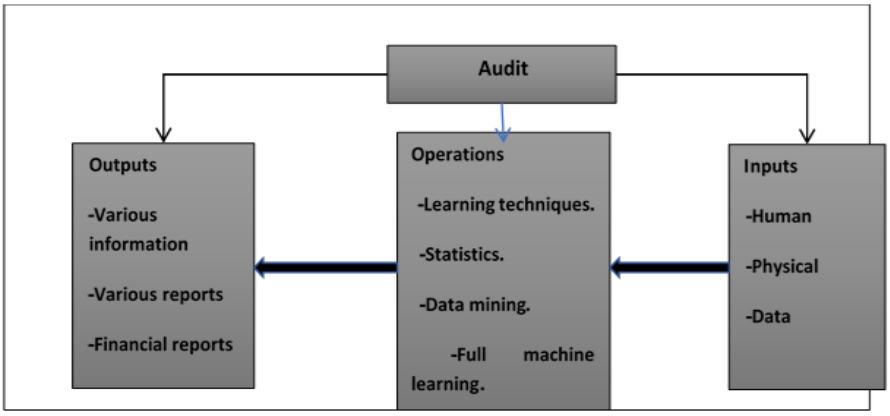


**Figure 2:** A Proposed Model for Accounting Disclosure in the Light of Artificial Intelligence

## Inputs

For the model to be effective, it is crucial to have personnel with specialized expertise

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and qualifications, particularly in the field of information technology, especially within the IT environment (Gonçalves et al., 2022). This necessitates the presence of skilled staff in various areas, such as database management, artificial intelligence, data mining, and other technologies integral to data analysis and storage. Furthermore, a key component of intelligence lies in the data itself, which must be systematically collected, organized, and cleaned to facilitate accurate and efficient processing.

**Processes**

The economic unit initially stores data on storage platforms, serving as the preliminary stage for managing big data before it is transferred to the analytical database. (Si et al., 2023). Once the data is complete and prepared, it is processed using advanced analysis programs, where various artificial intelligence techniques can be applied. These techniques, some of which are outlined in Figure 2, assist economic units in enhancing accounting disclosures. Data mining, for instance, refines data and identifies various types and patterns within it. The predictivenalysiutilizeses AI tools to create probability models, forecasting future trends and customer behavior, as well as their preferences and requirements. Machine learning, on the other hand, processes large datasets using sophisticated algorithms to derive insights.

**Outputs**

The outcome of the interaction between operational processes is the result of data collection, organization, and analysis using artificial intelligence techniques, followed by interpretation through speciaspecializedanalysis programs process generates a series of reports and information related to the management of the company's assets. (Clatwo.rthy et al., 2024). Through data analysis, it becomes possible to identify fluctuations in asset values, whether increases or decreases, beyond the required thresholds. Additionally, customer reports are generated, as each economic unit has beneficiaries, and analyzing their data can reveal behavioral patterns. Reports on human resources, as well as various administrative reports, are also produced according to the needs of the economic unit.(Yang et al., 2024). Among the most critical reports are the financial statements and related information, which are of particular interest to stakeholders such as investors, lenders, and others, to support informed decision-making regarding investments, loans, and other strategic decisions.

**Hypothesis Development**

AI plays a crucial role in modern accounting management, significantly enhancing the dynamics of business development (Kureljusic & Karger, 2023). By automating data extraction from various invoices and bank statements, AI streamlines and improves the efficiency of accounting systems, enabling automation of the entire bookkeeping process within a business. Moreover, AI can efficiently manage data from different

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types of statements and receipts, facilitating more effective accounting practices (Chen, 2021). The likelihood of errors is reduced regarding humans, all thanks to AI's basis in machines. AI, in its role, assists in fraud detection in financial management through fraud analysis and issuing fraud warnings autonomously. As AI keeps developing, its processes become even efficient, more therefore, enhancing financial security in most financial institutions (Al-Okaily, 2024). AI plays a significant role in fraud prevention and strengthening fraud detection processes, and therefore, it is a key tool for fraud avoidance and compiled data processing. By including AI in bookkeeping processes, financial operations can be optimized effectively by management.

Additionally, AI monitors financial transactions for compliance with regulators, checking them for compliance with accounting standards. (Zhang et al., 2020). Understanding AI's increased presence in a commercial environment is important. AI is important in financial forecasting and bookkeeping system administration. AI can make sound forecasts about future commercial activity through the analysis of information that is accessible. AI in an accounting system fortifies planning in a company, with forecasting through past information offering a deeper analysis of future tr. ends. (Gambhir & Bhattacharjee, 2022). The integration of AI and historical data offers businesses valuable insights into financial trends, production needs, and market service demands. (Estep et al., 2024). Thus, financial forecasting and compliance checks, supported by AI, have become critical components of modern business operations.

AI also plays a pivotal role in understanding customer insights by analyzing historical data. (Al Najjar et al., 2024). By utilizing bookkeeping documents and processing a variety of computations, AI creates useful information about future markets and the purchasing behavior of buyers. It helps companies make proactive decisions through early detection of trends' automation, improvement in transaction analysis, and proactive decision-making. Port. (Abu Afifa et al., 2024). Additionally, marketing techniques increasingly become crafted with AI techniques, in which a variety of techniques are adopted in an endeavor to address a range of trends. AI application for tax optimization is yet another important application. AI program scan for potential tax allowances and credits, providing companies with tools for effective planning and development for taxes (Zheng, 2022). AI also enhances audit efficiency by supp. Zheng, 2022n auditors in calculating data with minimal risk of bias or errors, thus enabling more accurate analysis and identification of potential risk.s (Liu et al., 2022). As such, AI has become a vital tool for integration into accounting systems, ensuring the accuracy of financial work and improving audit performance.

The role of AI is increasingly crucial in enhancing the efficiency of automating repetitive tasks within accounting systems, thus facilitating more advanced analysis

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(Norzelan et al., 2024). This is particularly significant as AI-driven algorithms are designed to process large volumes of data with minimal errors. By automating routine work, AI lessens workers' burden, and overall efficiency is boosted. As a result, it can work with financial information in real-time effectively, deeper analysis can be conducted, and the use of assets can be maximized. AI lessens costs, and companies can save in terms of accounting costs, as well (Al Najjar et al., 2024). In this, AI operations and business development become critical in terms of maximizing filings in taxes, computerizing processes in a business, and forecasting trends driving increased activity in the marketplace. AI, in such a case, is part of ongoing financial and bookkeeping management, with processing through a variety of algorithms (Zheng, 2022). Moreover, the application of AI in managing accounts is pivotal for developing mechanisms that reduce unnecessary costs and improve business practices.

In conclusion, AI is revolutionizing the commercial sector, particularly in financial and bookkeeping operations tracking. It is a key driving force in infrastructure development for commercial and financial operations automation. (Liu et al., 2022). The automation of financial tasks in accounting systems through AI ensures improved productivity and operational efficiency. Therefore, AI can be regarded as a future solution for financial improvement and overall administration of a business. (Abu Afifa et al., 2024). To maximize AI capabilities, proper training will have to go to financial and accounting departments. That will also go towards minimizing bias and errors in financial operations and audits. (Estep et al., 2024). AI represents a cutting-edge tool for managing accounting functions and addressing financial challenges, making it an indispensable factor in business management, particularly in the reduction of fraud and error.

AI is a transformative force in the modern workplace, driving business growth and operational efficiency. (Fedyk et al., 2022). Many organizations are adopting AI-integrated platforms and software to streamline their operations and enhance business functions. (Musleh Al-Sartawi et al., 2022). According to Leitner-Hanetseder et al. (2021), integrating AI into accounting management is vital for mitigating errors and improving accuracy. AI offers an advanced approach to business operations, ensuring tasks are performed efficiently and correctly. Furthermore, Gonçalves et al. (2022) highlight that AI in accounting enables the smooth execution of various tasks crucial for business development. Similarly, AI plays a significant role in managing accounting books and facilitating streamlined financial reporting. (Munoko et al., 2020). Damerji and Salimi (2021) also emphasize that AI-powered systems can actually make audits better, supporting sound and reliable financial reporting. On that basis, following discussion, following hypothesis is developed.

**H1:** *There is a significant contribution of artificial intelligence in defining financial reporting and audit quality through disclosures in accounting.*

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## METHODOLOGY

The required information and data are collated to assess and audit numerous segments of the system, including inputs, processes of operations, and output, and authenticate them for accuracy and viability in terms of desired ends. To authenticate the research hypothesis that artificial intelligence holds a significant contribution towards the tone of accounting disclosures in financial statements and effectiveness in audits a 2021 and 2023 sample of three banks, respectively, is discussed in detail below.

### National Bank of Iraq

The bank was founded on 1st February 1992 under the establishment license (MW/5802), with an initial capital of JD 400 million. On 28th March 1995, it received approval from the Central Bank of Iraq to operate as an investment bank. Shortly thereafter, on 8th April 1995, the bank commenced its operations under the name "National Bank for Investment and Agricultural Finance." In response to its success and to foster future growth, the bank's capital was raised from JD 400 million to 250 billion dinars in December 2013. A key milestone in the bank's development occurred in 2005 when Capital Bank (Jordan) acquired 61.85% of the shares in the National Bank of Iraq. This acquisition enabled the bank to enhance its product and service offerings. Capital Bank serves as a gateway for the bank to access global economies, facilitating both domestic and international remittances, as well as offering credit facilities. Consequently, the National Bank of Iraq is now positioned to engage in trade on behalf of its customers both in the Jordanian market and internationally, with support from Capital Investments, the investment division of Capital Bank.

### Commercial Bank of Iraq

The bank was founded as a private entity on 11th February 1992, marking it as one of the first private banks licensed in Iraq. It was established as a commercial supervisor for private sector banks under the establishment license number MW/4524, issued by the Ministry of Commerce – Companies Registration Department, on the same date. The bank received approval to operate in the banking sector through a letter from the Central Bank of Iraq, No. 14314/9, dated 12th July 1992. In 2014, Arab Union Bank (AUB) acquired a 49% stake in the bank, valued at KD 50 billion, and later increased its ownership to 75% in 2020.

### Al-Mansour Investment Bank

The bank was founded as a private joint-stock company, as per the Certificate of Incorporation No. (M.S.C./27520) dated 13th September 2005, with a fully paid-up capital of JD 55 billion. Approval to operate as a banking institution was granted by the Central Bank of Iraq through letter No. (9/3/368) dated 20th February 2006, allowing it to practise banking under the name of Al-Mansour Investment Bank – PJSC, in

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accordance with the applicable Banking Law. This followed the completion of the preparation of the bylaws for Al-Mansour Investment Bank.

## DATA COLLECTION

A questionnaire was developed based on the proposed model in Figure 2 concerning accounting disclosure in the context of artificial intelligence. The responses from the research sample (banks) will be analyzed and interpreted, with the arithmetic mean, standard deviation, and relative importance being utilized in the analysis of the responses.

### Data Analysis and Findings

Table 1 presents the banks' responses to the input items, with the arithmetic mean increasing from 0.51 in 2021 to 0.78 in 2023, surpassing the hypothetical mean of 0.50. The standard deviation decreased from 0.51 in 2021 to 0.43 in 2023, showing greater consistency. The relative importance increased from 50% in 2021 to 77% in 2023, indicating growing agreement with the model. The results suggest that as the years progress, the model's input requirements are better met. Additionally, the response to the operations axis in the model showed significant improvement in 2023, with an arithmetic mean of 62% and a standard deviation of 0.49, reflecting the increasing application of information technology, particularly AI technologies.

Regarding the output axis of the proposed model, the arithmetic mean for 2023 was 0.72, which exceeds the hypothetical mean of 0.50, indicating a notable improvement in accounting disclosure through the application of artificial intelligence technologies when compared to prior years. As for the control and auditing axis, the arithmetic means for 2023 rose to 0.76, with a relative importance of 77%. This increase reflects the research sample's response to technological advancements in information systems and their impact on the control and auditing of financial operations. To assess the tone of accounting disclosure within the research sample, a content analysis of the financial reports was conducted. This involved counting the number of optimistic and pessimistic words, revealing 31 optimistic words and 25 pessimistic words.

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**Table 1: The Level of Response of the Sample Members to the Proposed Model of Accounting Disclosure in the Light of Artificial Intelligence**

| | | Years | 2021 | | | 2022 | | | 2023 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Axis | no | Questions | Questions | Mean | Standard Deviation | Relative Importance | Mean | Standard Deviation | Relative Importance | Mean | Standard Deviation |
| input | 1 | The bank has enough specialists in information technology and computer specialization | 1.00 | 0.00 | 100% | 1.00 | 0.00 | 100% | 1.00 | 0.00 | 100% |
| | 2 | Has the bank been able to attract experts, professionals, and data analysts | 0.40 | 0.55 | 40% | 0.60 | 0.55 | 60% | 1.00 | 0.00 | 100% |
| | 3 | Does the bank have the financial capabilities of advanced devices and equipment in data management and processing | 0.60 | 0.55 | 60% | 0.80 | 0.45 | 80% | 1.00 | 0.00 | 100% |
| | 4 | The bank has advanced technologies to obtain accurate data and process it. | 0.40 | 0.55 | 40% | 0.60 | 0.55 | 60% | 0.60 | 0.55 | 60% |
| | 5 | The bank can obtain integrated data from multiple sources. | 0.40 | 0.55 | 40% | 0.60 | 0.55 | 60% | 0.60 | 0.55 | 60% |
| | 6 | Does the bank can organize and clean the data from any errors before analyzing it | 0.29 | 0.45 | 20% | 0.45 | 0.55 | 40% | 0.46 | 0.55 | 40% |
| | Total Indicator for the Element | | 0.51 | 0.51 | 50% | 0.67 | 0.48 | 67% | 0.78 | 0.43 | 77% |
| العمليات | 7 | The bank employs modern artificial intelligence technologies to store, process and analyze data | 0.20 | 0.45 | 20% | 0.40 | 0.55 | 40% | 0.60 | 0.55 | 60% |
| | 8 | Does the bank use artificial neural network technology in data processing, which is one of the artificial intelligence technologies to collect and analyze data for processing | 0.20 | 0.45 | 20% | 0.40 | 0.55 | 40% | 0.60 | 0.55 | 60% |
| | 9 | Does the company use advanced technology in data processing, which is one of the methods that help artificial intelligence collect and analyze data for processing | 0.20 | 0.45 | 20% | 0.40 | 0.55 | 40% | 0.60 | 0.55 | 60% |
| | 10 | The bank can store huge data to serve customers. | 0.40 | 0.55 | 40% | 0.60 | 0.55 | 60% | 0.60 | 0.55 | 60% |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **11** | Does the bank rely on cloud computing to store its data | 0.00 | 0.00 | 0% | 0.20 | 0.45 | 20% | 0.40 | 0.55 | 40% |
| | **12** | Does the bank have special programs and tools to perform the analysis process | 0.60 | 0.55 | 60% | 0.80 | 0.45 | 80% | 0.80 | 0.45 | 80% |
| | **13** | Does the bank use data mining, where it refines the data in addition to searching for all types and patterns of data | 0.40 | 0.55 | 40% | 0.60 | 0.55 | 60% | 0.80 | 0.45 | 80% |
| | **14** | Does the bank use artificial intelligence tools to build a probability model and predict future developments and customer behavior and movement related to their opinions and requirements**.** | 0.20 | 0.45 | 20% | 0.40 | 0.55 | 40% | 0.60 | 0.55 | 60% |
| | **15** | Does the bank use machine learning, which works to anaanalyzerge amounts of data based on advanced algorithms**?** | 0.20 | 0.45 | 20% | 0.40 | 0.55 | 40% | 0.60 | 0.55 | 60% |
| | **16** | Are there other programs and tools used by the bank to analyse its huge data other than what was mentioned above | 0.39 | 0.55 | 40% | 0.57 | 0.55 | 60% | 0.59 | 0.55 | 60% |
| | Total Indicator for the Element | | 0.28 | 0.45 | 20% | 0.48 | 0.50 | 38% | 0.62 | 0.49 | 52% |
| المخرجات | **17** | The bank issues various reports by analysing and processing its data | 1.00 | 0.00 | 100% | 1.00 | 0.00 | 100% | 1.00 | 0.00 | 100% |
| | **18** | Does it use electronic disclosure in addition to paper disclosure | 1.00 | 0.00 | 100% | 1.00 | 0.00 | 100% | 1.00 | 0.00 | 100% |
| | **19** | Does the bank complete statements, and budgets and draw up plans quickly using artificial intelligence technologies | 0.60 | 0.55 | 60% | 0.60 | 0.55 | 60% | 0.60 | 0.55 | 60% |
| | **20** | By using artificial intelligence technologies, does the bank provide error-free information? | 0.40 | 0.55 | 40% | 0.40 | 0.55 | 40% | 0.60 | 0.55 | 60% |
| | **21** | Has the use of artificial intelligence technologies improved the quality of financial reports through the integrated information available to the bank? | 0.40 | 0.55 | 40% | 0.40 | 0.55 | 40% | 0.60 | 0.55 | 60% |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| | **22** | Has the use of artificial intelligence technologies improved the comparability between company departments or between their years of performance, which contributes to making the right decision? | 0.60 | 0.55 | 60% | 0.60 | 0.55 | 60% | 0.60 | 0.55 | 60% |
| | **23** | Has the use of artificial intelligence technologies led to providing realistic and verifiable accounting information? | 0.40 | 0.55 | 40% | 0.60 | 0.55 | 60% | 0.80 | 0.45 | 80% |
| | **24** | The bank's possession of artificial intelligence technologies enables it to provide the types of information required with high accuracy. | 0.59 | 0.55 | 60% | 0.59 | 0.55 | 60% | 0.60 | 0.55 | 60% |
| | Total Indicator for the Element | | 0.62 | 0.49 | 36% | 0.65 | 0.48 | 49% | 0.72 | 0.45 | 60% |
| Control and Audit | **25** | Does the bank monitor and audit all applied AI technologies**?** | 0.40 | 0.55 | 40% | 0.60 | 0.55 | 60% | 0.80 | 0.55 | 80% |
| | **26** | Does the bank use specific control and auditing systems to monitor the work within the bank? | 0.80 | 0.45 | 80% | 0.80 | 0.45 | 80% | 0.80 | 0.45 | 80% |
| | **27** | | 0.60 | 0.55 | 60% | 0.60 | 0.55 | 60% | 0.80 | 0.45 | 80% |
| | **28** | Does the bank develop a control and auditing plan and update it continuously according to the requirements of the work? | 0.00 | 0.55 | 40% | 0.60 | 0.55 | 60% | 0.80 | 0.45 | 80% |
| | **29** | | 0.00 | 0.45 | 80% | 0.80 | 0.45 | 80% | 0.80 | 0.45 | 80% |
| | **30** | Does the bank use advanced technology software based on artificial intelligence in auditing operations? | 0.00 | 0.55 | 60% | 0.59 | 0.55 | 60% | 0.74 | 0.45 | 80% |
| | Total Indicator for the Element | | 0.00 | 0.00 | 60% | 0.67 | 0.48 | 67% | 0.79 | 0.41 | 80% |

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Table 2 highlights the frequency and proportion of optimistic and pessimistic tone words derived from the textual analysis of financial reports across the research sample and study period. The data indicates a notable rise in the use of optimistic words among the banks in the sample, particularly during the research years (2021–2022). This trend suggests that the application of information technology, specifically artificial intelligence techniques, has contributed to enhancing the tone of disclosure.

**Table 2: Optimistic Words, Pessimistic Words, Tendency and Arithmetic Average of the Accounting Disclosure Tone for the Years (2021-2023)**

| Bank | Details | | 2021 | 2022 | 2023 | Means |
|---|---|---|---|---|---|---|
| National Iraqi Commercial Iraqi National Iraqi | Optimistic Words | Number | 5 | 10 | 22 | 0.40 |
| | | Ratio | 16% | 32% | 71% | |
| | Pessimistic Words | Number | 7 | 8 | 10 | 0.33 |
| | | Ratio | 28% | 32% | 40% | |
| | Accounting Disclosure Tone Tendency | Number | -2 | 2 | 12 | 0.13 |
| | | Ratio | -6% | 6% | 39% | |
| Commercial Iraqi National Iraqi | Optimistic Words | Number | 7 | 12 | 15 | 0.37 |
| | | Ratio | 23% | 39% | 48% | |
| | Pessimistic Words | Number | 5 | 10 | 12 | 0.36 |
| | | Ratio | 20% | 40% | 48% | |
| | Accounting Disclosure Tone Tendency | Number | 2 | 2 | 3 | 0.08 |
| | | Ratio | 6% | 6% | 10% | |
| Commercial Iraqi | Optimistic Words | Number | 9 | 10 | 24 | 0.46 |
| | | Ratio | 29% | 32% | 77% | |
| | Pessimistic Words | Number | 11 | 8 | 9 | 0.37 |
| | | Ratio | 44% | 32% | 36% | |
| | Accounting Disclosure Tone Tendency | Number | -2 | 2 | 15 | 0.09 |
| | | Ratio | -4% | 4% | 27% | |

Figure 3 reveals that the National Bank of Iraq achieved the highest accounting mean (0.40), indicating a stronger focus on disclosing information to support decision-making. The other two banks recorded similar accounting means, reflecting a shared inclination towards optimistic disclosure. The integration of artificial intelligence techniques has immensely boosted disclosure in terms of accuracy, efficiency, and velocity, and in return, positively contributed to audit quality. The application of high-tech auditing software supplements this observation, with an observation in the analysis of questionnaires, in which the controlling and auditing axis posted the largest arithmetic mean (0.79) and relative importance (80%). All these observations validate the study hypothesis that artificial intelligence is a key player in molding the tone of accounting disclosure in financial reporting and in contributing to an improvement in audit quality.

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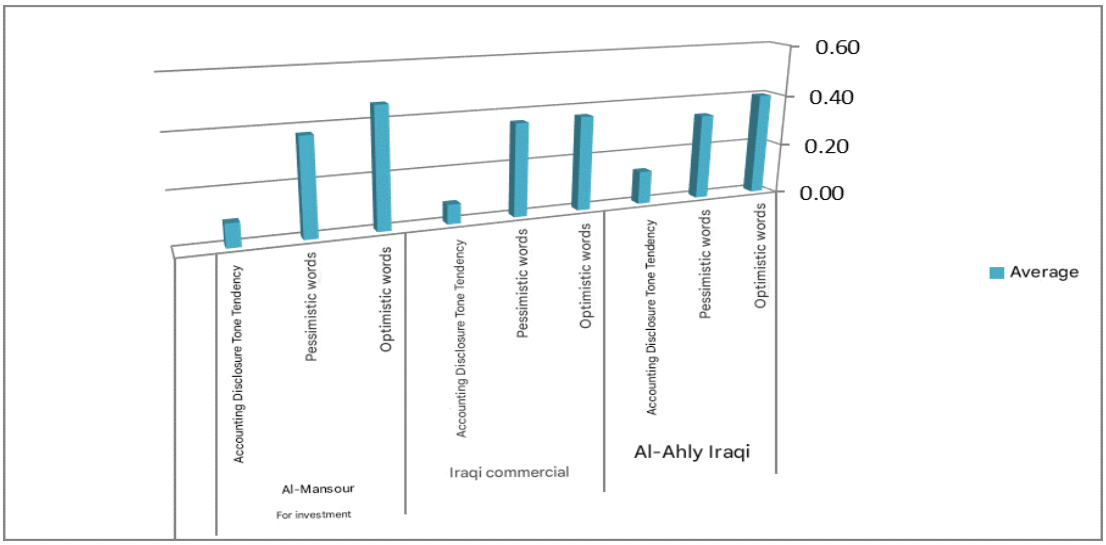


**Figure 3:** The Arithmetic Mean of the Optimistic and Pessimistic Words and the Tendency of the Tone of the Accounting Disclosure

## CONCLUSION

In conclusion, artificial intelligence technology is no longer an optional tool in current development, and machines can conduct operations that have traditionally required intelligence in humans. AI technology is increasingly being adopted in most sectors and society in general. Accounting disclosure, in terms of financial information conveyed in reports, positively or negatively, is a critical consideration in measuring information quality and accountability of information in accounting. Furthermore, this tone significantly enhances the transparency of financial reports, thereby bolstering investor and user confidence. The application of artificial intelligence to refine the tone of accounting disclosure is particularly valuable in analyzing financial data and forecasting, ultimately improving the overall quality and reliability of financial reporting.

## IMPLICATIONS

This study generates significant information regarding AI's transformational function in reorienting practice, in its function in reorienting disclosures' tone in financial reporting. Academic, it enriches the emerging corpus of work in utilizing emerging technology, including big data analysis, financial robots, and machine learning, in financial processes. In researching AI's function in reorienting AI use and disclosures in accounting, work in the study reveals AI's potential for heightened transparency and financial accountability and generates a strong platform for future work.

The findings serve to reiterate the necessity for instilling AI thinking in finance and accounting curriculums for future professionals with competencies to function in a technology-intensive financial environment. For academicians, the study creates avenues for researching the broader implications of AI, including its contribution towards improving audit quality, dealing with risk, and financial reporting ethics concerns. Integration with AI comes with considerable concerns about compliance requirements and governance frameworks, offering avenues for multi-disciplinary studies.

For practitioners and regulators, the report re-affirms the value of embracing AI technology in supporting financial reporting accuracy and integrity. It re-affirms the competitive advantage organizations can obtain through leveraging AI in creating new financial disclosures and under picking decision processes. In describing AI's role in supporting improvement in audit quality, the report generates actionable guidance for creating collaboration between technology professionals and auditors, to have AI development align with ethical values and professional accounting standards.

## FUTURE DIRECTIONS

This research focused in one country, and therefore, its generalizability is restricted. In future, studies could try to collect information in several countries and geographical locations in an endeavour to verify and extend these findings. In such a case, a larger picture will be gained, and useful insights will be generated in a variety of settings. Besides, a relatively small dataset was used in this study for its analysis, and such a restriction curtails its inductive inferences drawn out of it.

Researchers are encouraged to employ longitudinal or time-series data in future investigations to comprehensively examine the role of AI in enhancing audit quality and accounting practices. By adopting these methodologies, future studies could make a significant contribution to the academic body of knowledge, enriching the understanding of AI's impact across diverse financial and regulatory environments.

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