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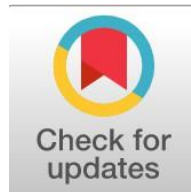
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Artificial Intelligence and its Applications from a Financial and Monetary Perspective - Iraq a Case Study

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Abstract

General Background: Artificial intelligence has emerged as a transformative technology of the Fourth Industrial Revolution and has increasingly become integrated into economic, financial, and monetary activities worldwide. **Specific Background:** Financial institutions are adopting artificial intelligence to improve operational efficiency, support decision-making, strengthen fraud detection, enhance customer services, and facilitate financial management processes. **Knowledge Gap:** Despite the growing adoption of artificial intelligence in financial systems, limited studies have comprehensively examined its financial and monetary applications within the Iraqi context and its potential contribution to public financial management. **Aims:** This study aims to examine the concept of artificial intelligence, identify its major applications in financial and monetary activities, and explore its role in supporting financial development in Iraq. **Results:** The study found that artificial intelligence contributes to risk assessment, fraud detection, anti-money laundering activities, customer service, investment management, financial planning, and public financial administration. Statistical indicators also show substantial growth in digital financial infrastructure in Iraq, including automated teller machines, point-of-sale devices, electronic cards, bank accounts, and digital wallets between 2017 and 2024. **Novelty:** The study combines theoretical and practical perspectives by linking artificial intelligence applications with monetary and financial developments in Iraq. **Implications:** The findings highlight the growing importance of artificial intelligence in improving financial performance, supporting financial governance, strengthening digital transformation, and facilitating efficient monetary and financial operations.

Keywords: Artificial Intelligence, Financial Systems, Monetary Systems, Digital Banking, Financial Technology

Key Findings Highlights

Electronic financial infrastructure recorded substantial growth during the study period.
Intelligent technologies support fraud prevention and regulatory compliance activities.
Advanced computational models facilitate auditing and public resource management.

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Introduction

The main objective of this study is to highlight the benefits and potential of artificial intelligence, to understand modern developments and trends, and to explore its economic and financial applications. This includes assessing its ability to increase revenues, reduce costs, and guide the government's general budget technologically, thereby improving financial services and performance. While acknowledging some challenges facing AI, such as difficulty in understanding, regulatory obstacles, and accountability issues (as indicated in the study), the study also notes that enhanced computing power, improved data volume and quality, and significant achievements in various research fields, such as machine learning and speech recognition, have led to its application across all economic and non-economic sectors. Furthermore, the study explores the potential of AI's ability to handle large amounts of data and identify effective trends. The study's hypothesis is that AI can facilitate diverse and informed choices, leading to improvements in the financial sector, the use of effective measures to prevent fraud and financial scams, the development of advanced investment strategies applicable to the financial and monetary fields, and its ability to perform specific tasks related to determining public spending and taxes, recording financial credit, conducting financial evaluations, and improving the financial and investment portfolios of users and clients.

Keywords: Artificial intelligence, financial aspect, monetary aspect, artificial intelligence applications, artificial intelligence challenges, financial and monetary funding.

First: Definition of Artificial Intelligence

Most practitioners, academics, and other specialists agree that artificial intelligence is the third transformative force in economic history after the Industrial Revolution in the nineteenth century and computing in the twentieth century. It is a digital legend (Mohamed Ali Trabelsi, 2024, p. 16). It is also viewed as a comprehensive term for a computer system that exhibits intelligent behavior, possessing the ability to sense, think, act, learn logic, and solve problems, just as humans do (Erik Brynjolfsson, 2023, p. 2). The term artificial intelligence is divided into two parts: artificial, which means human creation, i.e., the activities or actions through which things are created and shaped; and intelligence, which is the ability to think, generate new ideas, perceive, and learn (Mudit Verma, 2018, P 6). It is also referred to as a human-made object, possessing the power of thought, which is represented by the ability to understand new and changing conditions or situations through perception, understanding, and learning (Sheela Margaret et al., 2023, p. 379). It is inseparable from the need for human intelligence, hence artificial intelligence is called machine intelligence. John McCarthy defined it as "the science and technology," which is the engineering related to the manufacture of intelligent machines (H. Mallick et al., 2023, p. 395). It is used to describe machines that perform cognitive functions similar to human work, such as learning, understanding, thinking, and interacting. It can take many forms, such as the technical infrastructure (algorithms), or part of a process (production), or the end user (the product) (Marcin Szczepański, 2019, p. 6). This indicates that it is a combination of cognitive skills: automation, machine learning, reasoning, hypothesis generation and analysis, and natural language processing. The algorithmic leap, which in all of this leads to insights and analyses similar to human intelligence (Amel Benali, 2024, p188), while the general meaning of artificial intelligence indicates that it is the new science of technology that integrates theory, method, technology, and application system through computer simulation, to be similar to human thinking (Yuxin Li, et al, 2021, p99).

These multiple concepts of artificial intelligence have led to the emergence of various forms of information and models, ranging from mimicking human cognitive functions to the ability to interact with the general environment through the machine's capacity to achieve goals independently. Today, the technological advancement of artificial intelligence lies primarily in the field of machine learning, that is, all the algorithms that make it possible to identify relationships within data and produce predictive models (Olivier Flicheleche, et al., 2018, p. 18). Thus, it can be said that artificial intelligence encompasses a set of technologies that enable machines to simulate human intelligence, machine learning, and the automation of robotic processes in the financial, monetary, and various service sectors. It also includes large-scale analysis of datasets and the extraction of insights to enhance decision-making and processes across various functions such as financial trading, financial risk management, and customer service. The adoption of artificial intelligence in the financial and monetary sector has developed rapidly, driven by several factors. First, the increasing volume of data generated by financial and monetary transactions and financial market activities has prompted clients and users to create numerous opportunities to leverage artificial intelligence for analysis and prediction in various activities. Second, advancements in computing power have also contributed to this growth. Algorithmic techniques have made artificial intelligence more accessible and scalable from a financial and monetary perspective across various sectors. This, in turn, has fueled competition and continuous pursuit of financial advantages, driving operational efficiencies and advanced innovations, thus motivating companies to invest in order to gain a competitive edge within the financial and monetary environment (Shubham, Anjali Dharniwal, 2024, p. 4). Here, we can discuss how artificial intelligence refers to two fundamental concepts: the first focuses on examining the cognitive and informational processes of the human mind, while the second focuses on representing these cognitive processes using machine learning techniques (Stephanie Ness, et al., 2024, p. 2460). Artificial intelligence is typically characterized by a number of capabilities that may resemble human capabilities, as illustrated in Figure (1) (Uno Ijim Agbor, et al, 2024,p.39

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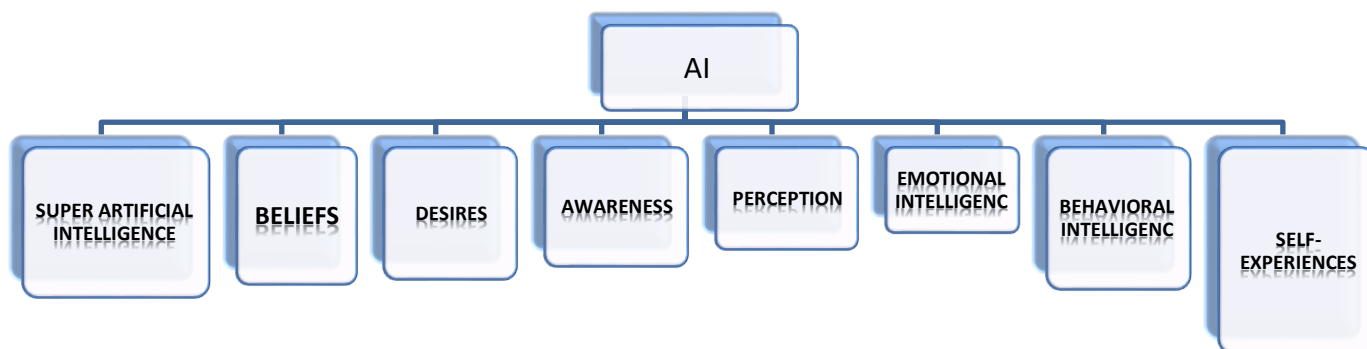


Figure (1) Artificial Intelligence Capabilities

There are also a number of key, multi-purpose applications of artificial intelligence that can be outlined as follows:

Machine Learning: This involves translating, processing, and validating data using algorithms with complex mathematical capabilities, encoded in machine language, Its purpose is to address problems such as estimation software, transportation management, smart email programming, banking and personal and social finance software, media software, smart assistant devices, etc. (Amel Benali, Modern, 2024, p. 186).

Natural Language Processing: NLP focuses on enabling machines to understand, interpret, and generate human language, It includes techniques such as text analysis, sentiment analysis, language translation, and speech recognition, as well as applications in various fields such as customer service, chatbots, and language processing (Milad Shahvaroughi Farahani & Ghazal Ghasem, 2024, p. 4).

Automation and Robotics: The goal of automation and robotics is to enable machines to handle repetitive tasks, This helps boost productivity and leads to more cost-effective and efficient results, Many companies use technologies such as machine learning, neural networks, and graphs for automation, for example, They use CAPTCHA to stop fraud during online financial transactions (Riya Gupta, 2023, p. 565).

Knowledge-based systems: Knowledge-based systems can be understood as computer systems capable of providing advice for various fields, The defining characteristic of knowledge-based systems lies in the separation of knowledge, which can be represented in a number of ways, such as rules or cases, and the inference engine or algorithm that uses the knowledge base to reach a conclusion (Neha Sain, 2023, p. 357).

Neural networks: These are biologically inspired systems consisting of a highly connected network of computational neurons, organized in layers, Neural networks can be trained by adjusting the network's weights to approximate any nonlinear function to the required degree of accuracy, Neural networks are typically provided with a set of input and output models, and then a learning algorithm such as back propagation is used to adjust the weights in the network so that the network gives the desired output (H. Pati, 2023, p. 236).

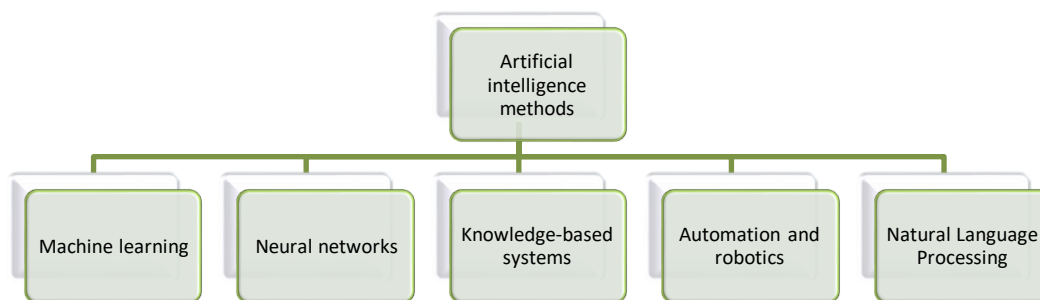


Figure (2) Multiple artificial intelligence methods

The adoption of artificial intelligence by the financial sectors came as a result of a set of financial supply and demand motives, which are represented in meeting the needs of users such as increasing revenues and reducing costs, reducing financial risks, and improving production processes (Report the FSB Financial Innovation Network 2017, p42).

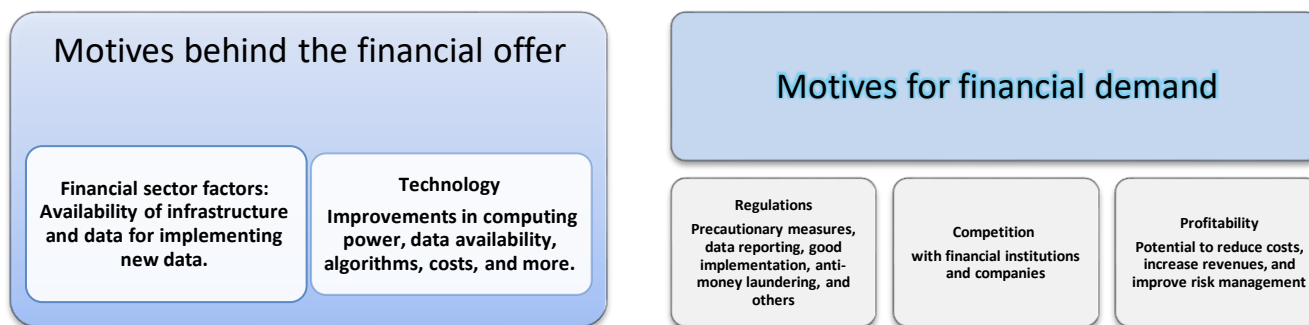


Figure (3) Financial supply and demand motives in artificial intelligence

Some of the capabilities and potential applications of artificial intelligence (AI) in the financial and monetary sectors include the following (VEDAPRADHA, HARIHARAN RAVI, 2018, p. 135)

Risk Assessment: This involves due diligence processes and risk assessment of complex data and its monitoring to facilitate efficient lending to users and clients.

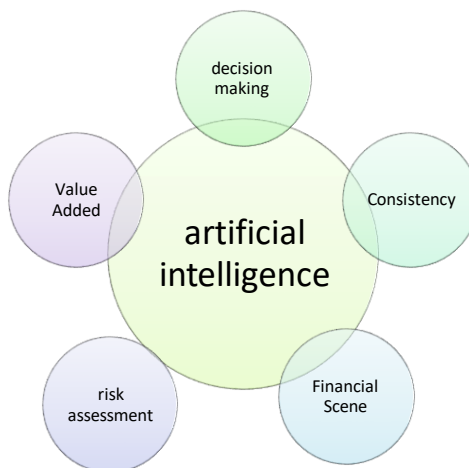
Financial Landscape: AI can contribute to various changes in the financial and banking system.

Added Value: AI replaces repetitive tasks performed by humans in the financial field, resulting in reduced costs and increased accuracy and speed, thus adding value for clients and users.

Consistency: AI ensures that financial and monetary institutions are more specific and consistent in their operations, leading to more efficient handling of user and client inquiries.

Decision-Making: Errors can be completely avoided or minimized by improving the quality of decisions made at various management levels, which also ensures more accurate forecasting.

Figure (3) Financial and monetary capacity of artificial intelligence. Some of the practical applications of artificial intelligence (AI) that play a prominent role in the financial sector include (Olivier FLICHE & Su YANG, 2018, p. 17).



Marketing: Data analysis helps identify the financial and monetary needs of both producers and consumers more clearly. This assists stakeholders, whether producers or users, in understanding and improving aspects that ultimately lead to more adaptive financial products.

Business: AI technologies can provide effective tools to improve business processes, facilitating the understanding of financial products and services that may sometimes appear complex or overwhelming to the producer, customer, or user.

Regulatory: AI typically helps detect financial fraud, money laundering, and other financial activities within a regulatory framework, addressing critical challenges to the integrity and stability of the financial system.

Risk Management: AI enables the mitigation of various risks by providing a range of effective tools capable of controlling and managing these risks, thereby supporting the financial decision-making process.

Financial Aspect: Artificial intelligence has the potential to achieve significant savings in final output by automating and optimizing repetitive tasks, as well as streamlining financial processes and transactions.

Furthermore, AI can provide services to the financial and monetary sectors through a variety of financial environments, These typically include complex legal and compliance processes, fraud prevention, biometrics, credit underwriting, and voice assistants using smart contract infrastructure (Krutika Sawant et al., 2023, p. 42), Figure 4 illustrates the expansion of financial and monetary services using AI technologies to improve user and customer experiences and operations (RennyThomas,2021,p.54).

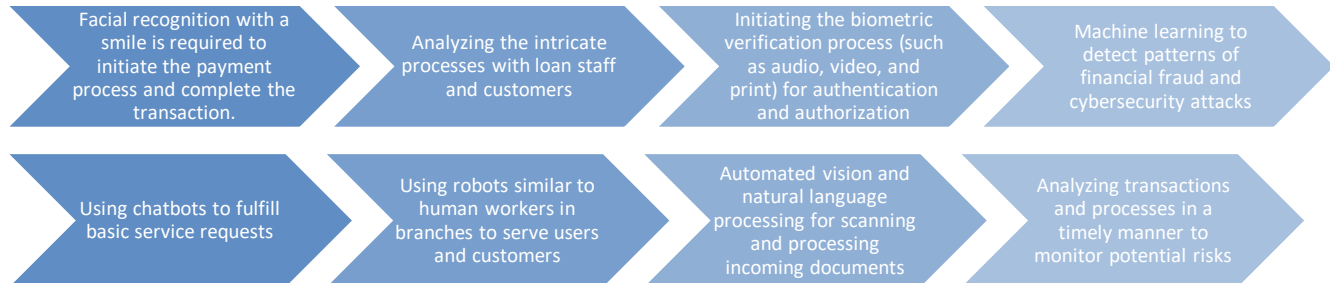


Figure (4) Financial and monetary expansion of artificial intelligence

Second: The Financial and Monetary Application of Artificial Intelligence

Recently, artificial intelligence applications have proliferated in the financial and monetary sectors to provide financial services more accurately and securely ,This is achieved through digital payment services, crypto currencies, cross-border transfers, multi-payment processes, reducing financial losses, generating higher revenues, and other financial transactions and operations (Narmin Magdy, 2020, p. 17), To illustrate this, there are numerous applications of artificial intelligence in the financial and monetary field, the most important of which are the following (Pinky Soni, 2021, p. 226)

- **Stock Market and Trading System Forecasting:** Stock markets, securities markets, and trading systems may experience operational disruptions. Therefore, artificial intelligence systems play a crucial role in analyzing data, identifying the cause of failures, and providing appropriate solutions. This is done by training the computer system to predict stock trading times to maximize revenues and minimize losses during periods of uncertainty, This provides an incentive for clients or financial institutions to make informed and timely decisions.
- **Predicting Stock Markets and Trading Systems:** Stock markets, securities markets, and trading systems may experience operational disruptions.
- **Enhanced Security:** Machine learning algorithms need only a fraction of a second to detect fraudulent transactions in real time, not after the fact. Therefore, many financial institutions are striving to implement artificial intelligence to enhance security in online transactions and related services.
- **Risk Management:** Machine learning technology has focused on current market trends in preventing financial crimes, predicting financial crises, assessing creditworthiness, and mitigating underwriting risks in the areas of loans, health insurance, mortgages, and life insurance, It can help manage all risks and is perfectly suited to common underwriting tasks in the finance and insurance sectors.
- **Credit Card and Loan Decisions:** In the credit card and loan decision-making process, AI automatically evaluates the creditor's profile, significantly reducing costs and effort and making the entire process fair and transparent (Ana Fernandez, 2019, p. 4)
- **Customer protection through predictive spending patterns:** The economy is entirely dependent on electronic transactions, If a customer's card/mobile phone is stolen or their account hacked, artificial intelligence plays a valuable role in detecting customer spending to prevent fraud or theft, AI identifies the user and allows for the complete completion of transactions.
- **Personal banking:** In the banking and financial sectors, AI plays a crucial role in completing all online transactions, such as financial payments, credit deposits, and more, Customers no longer need to visit banks in person, AI provides guidance and advice to customers through online platforms, offering accurate information and quick solutions.
- **Process automation:** Process automation is essential for boosting productivity and reducing operational costs by completing tasks in minutes, It also efficiently interprets documents and identifies problems that require human intervention through services such as call center automation, chatbots, and paperwork automation.
- **Global financial data security:** Cyberattacks and viruses, such as worms and Trojan horses, pose major challenges in the modern era, Machine learning security solutions can secure global financial data by providing the power of intelligent pattern analysis, in addition to the capabilities of big data.
- **Marketing:** Artificial intelligence demonstrates its importance in the financial field through predictive marketing, where it facilitates the analysis of past behavior in the marketing process and helps in accurately forecasting sales by analyzing customer expectation, It can also monitor web activity and understand the use of mobile applications to discover marketing trends and patterns.

- **Regulatory Compliance - Fraud Detection and Prevention:** With the increase in online financial transactions, financial fraud has also increased, This is where artificial intelligence plays a role in combating and detecting electronic activities and fraud, Therefore, the banking and financial sectors usually have fraud detection programs that can identify patterns using predictive analytics and apply machine learning algorithms to detect fraudulent transactions and reduce fictitious losses (Andreas Svoboda, 2023, p. 11).
- **Smart digital wallets:** The invention of smart digital wallets has helped raise the level of digital money, and the best part of these smart digital wallets is that users and customers can buy anything online either using a mobile phone or a computer, and they can also do this through non-cash transactions (Sabina Joan Dsouza, 2019, p 265).
- **Anti-Money Laundering (AML):** AML refers to a set of procedures, laws, or regulations aimed at preventing the generation of income through illegal means. Often, money laundering involves concealing financial assets obtained through illicit activities by passing them through a complex series of financial, banking, transfer, or commercial transactions, making them appear to have been earned legitimately, Most major financial and banking institutions worldwide have begun transitioning from traditional rule-based software systems to artificial intelligence-based systems, which are faster, more flexible, more accurate, more powerful, and more intelligent in combating money laundering (Ashima Narang, et al., 2024, p. 133).
- **Chatbots:** are among the most widely used artificial intelligence applications. They have the potential to provide high returns and low costs through money transfers, and efficiently handle mini-statements and balance inquiries, Chatbots possess advanced features for effectively managing user and customer inquiries submitted via electronic platforms. Therefore, customers and users can be directly connected with the responsible person to provide a suitable and rapid solution, and to handle their transactions directly and immediately (Amel Benali, 2024, p. 189).

Artificial intelligence typically uses a set of tools and a series of processes that can be represented by front offices, or what is known as reception offices, middle offices, and back offices, The work of the front offices in these institutions is to act as a channel of communication between users in an automated way, such as opening their accounts and transferring data and information, which is usually automatic, including credit and insurance registration and chatbots that deal with users and customers. The work of the middle offices is to detect and avoid financial fraud and money laundering related to financial services, by interpreting, monitoring, and analyzing the largest possible amount of data and linking this data with new sources of information to facilitate its work. As for the back offices, they are known for the uses that focus on processes that facilitate the work of financial loans and bank credit by activating bank underwriting processes, including improving capital, managing risks, and analyzing market impact. Figure (5) illustrates the financial offices used in artificial intelligence (Fernandez, A., 2019,p4).



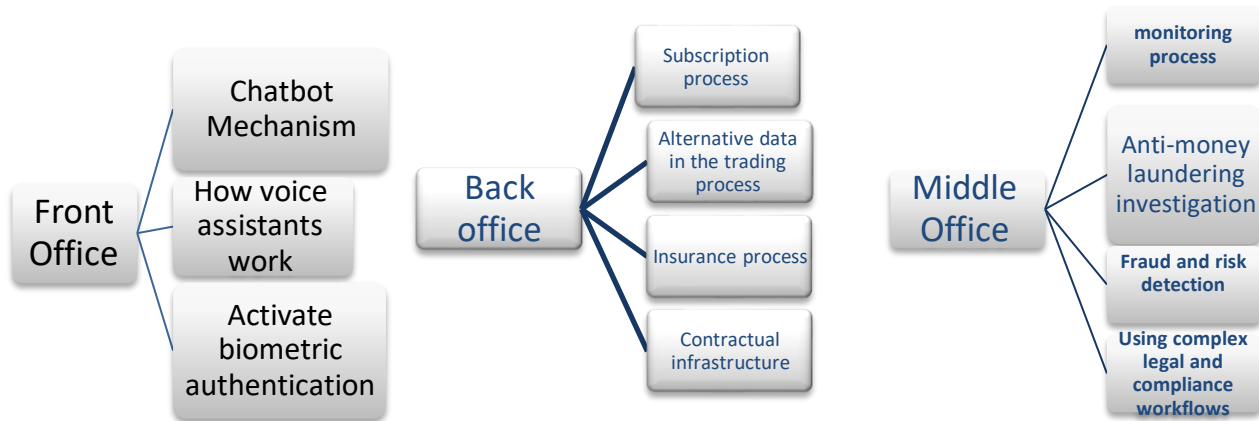


Figure (5) Financial offices used in artificial intelligence

Third: Financial challenges of artificial intelligence

Despite the widespread use of artificial intelligence across all fields, particularly in the financial and monetary sectors, it faces several challenges that limit its application. Among the most significant are (Pinky Soni, 2021, p. 228):

Difficulty in Understanding: Learning machine learning is not easy. This leads to a high degree of financial risk and governance issues, To mitigate these difficulties and complexities, the financial sector needs to clearly communicate the models and underlying principles to clients and users to prevent incorrect financial decisions.

Reliance on Data Availability and Quality: Artificial intelligence technology depends on big data and its quality, Sufficient and high-quality data requires reliable information sources within the financial sector and end-to-end data matching. However, reference data often suffers from quality issues, Therefore, data quality assurance programs are essential for any large-scale AI initiative, The absence of such programs can lead to significant losses for users, Accountability: Another key challenge with artificial intelligence is determining responsibility for errors, accountability, and auditing, The lack of explanation for why an algorithm provides a positive or negative answer to a specific question can be a source of concern for financial and banking institutions, Therefore, human oversight becomes essential to verify the machine's decisions in critical activities such as disbursing funds, freezing payments, or verifying financial transfers.

Rapidly Changing Technology: With rapid technological advancements, every financial institution must strive to translate abstract concepts of artificial intelligence from theory into practical application for use in daily operations, The reliability of AI depends on its data and the degree of control exerted over its electronic system.

Lack of Emotional Intelligence: While AI excels at solving numerous financial problems, processing information transfers, and detecting fraudulent activities, it lacks intelligent chatbots, empathy, and other such capabilities.

Regulatory Barriers: Transparency in AI is crucial for success in the highly regulated world of financial services, This necessitates an expert capable of explaining the logic and underlying context of regulatory data. Machine learning's ability to communicate regulatory logic will significantly contribute to overcoming regulatory hurdles and gaining user acceptance.

Measuring Success: AI prediction relies on future projections and does not offer a 100% guarantee of whether investments will yield a return or incur a loss, Therefore, measuring success presents a clear challenge, such as how machine learning positively impacts human behavior, how it reduces costs, and how it improves efficiency.

Fourth: The Role of Artificial Intelligence in Cash Finance

The rapid and modern technological advancements in artificial intelligence have played a significant role in developing cash services, electronic payment systems, and electronic payment methods in Iraq. This has spurred the adoption of digital technology and the development of more efficient digital transactions to facilitate financial operations, improve decision-making accuracy and predictive analytics, reduce financial fraud and risks, and more, As shown in Table (1), there is clear growth in AI-related electronic systems, The number of ATMs jumped from 656 in 2017 to 4781

in 2024, while the number of AI-enabled point-of-sale (POS) terminals reached 50645 in 2024, up from 918 in 2017, This growth has impacted banking services, increasing the total number of bank accounts to 16397131 in 2024, and the total number of electronic cards to 20883254. Likewise, the total number of electronic wallets continued to increase and their integration with artificial intelligence technology, reaching 5860921 in 2024, up from 222442 in 2017, Thus, artificial intelligence plays a clear role in enhancing the operation of these electronic systems and enabling secure access to them.

Table (1) Artificial Intelligence Indicators in Monetary Finance

Total e-wallets	Total electronic cards	Total bank accounts	Number of point-of-sale devices	Number of ATMs	Year
222442	6377305	1361034	918	656	2017
271906	8810030	1630677	2200	865	2018
403797	10506725	3039522	2226	1014	2019
1226235	1749408	6126976	7540	1340	2020
2107265	4906294	6696657	8329	1566	2021
2970390	16202771	8795891	10718	2223	2022
4980427	19754229	13289332	11837	3099	2023
5860921	20883254	16397131	50645	4781	2024

Source: Central Bank of Iraq Statistical Web site www.cbi.iq

4

Fifth: The role of artificial intelligence in financial finance

The use of artificial intelligence has become evident in many countries due to its widespread economic and non-economic applications at various levels, The role of AI is particularly apparent in state finance, where it has become essential for analyzing financial and monetary operations, directing public revenues and expenditures, controlling taxes, managing public debt, bank credit and loans, and facilitating financing and auditing processes within record timeframes, This, in turn, contributes to improving the country's GDP, The allocation of financial resources in Iraq is a fundamental tool for budgeting and managing the national economy, Therefore, the use of AI is essential in addressing the economic and financial challenges facing Iraqi finance through several applications, the most important of which are: (Stuart J. Russell and Peter Norvig, 2016, p. 3).

- **Detecting Fraud and Financial Corruption:** AI technology can be used to detect fraud in financial activities and identify financial and administrative corruption, This is achieved through the use of intelligent systems and the analysis of financial data to identify illegal and suspicious electronic transactions, which contributes to improving revenue and expenditure processes. In a transparent manner.
- **Sustainable Financial Planning and Organization:** Artificial intelligence analyzes past data and predicts future data trends to develop organized plans for sustainable financial management. This aims to reduce financial pressures and challenges and achieve economic growth for the country.
- **Big Data Analysis:** Artificial intelligence is commonly used to analyze large amounts of financial and economic data to obtain accurate estimates of public revenues and expenditures, This improves the accuracy of financial planning and identifies potential financial gaps.
- **Improved Allocation of Financial and Economic Resources:** Optimizing the use of financial resources through artificial intelligence, based on data analysis and sound economic recommendations, helps reduce the economic challenges and pressures facing financial management in Iraq. It also ensures the more sustainable use of public funds to achieve effective economic growth(Phua, C., Lee, et al. 2010, p8) Based on this, a number of artificial intelligence techniques, genetic algorithms, neural networks, and block chain were applied or used to connect sub-units to main units and then to the relevant ministries, and thus backtrack in a reverse manner(Mitham Malik Al-Khaqani Abdul Zahra Salman Al-Rawazqi 2024 p. 99).

-Using Block chain in Financial Management

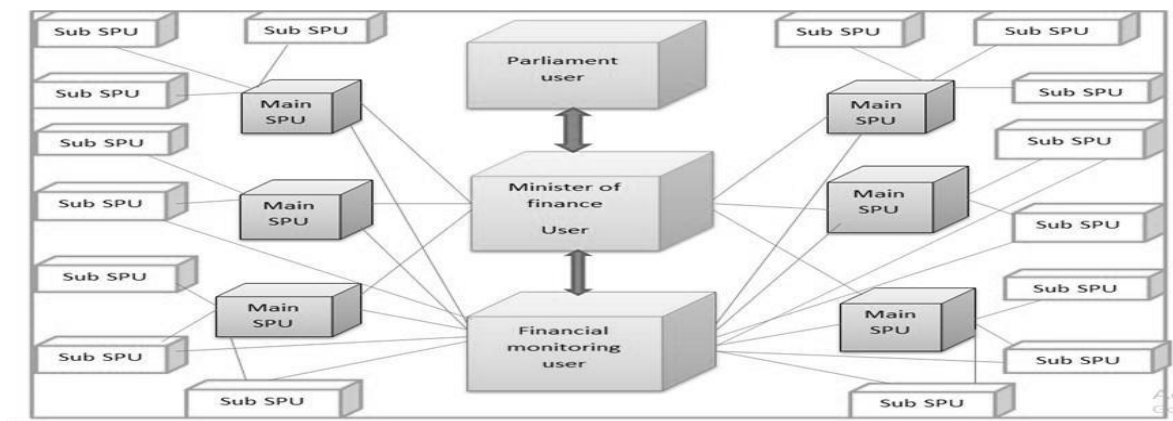
This process is carried out by creating independent main and sub-account books, then linking the ledgers related to the sub-units with the ledger records of the main units, i.e., from the private ledger to the general ledger, and then linking them to the Ministry of Finance's account, as it is the main funder of the funds. In this way, the main units instruct the disbursement of funds to the sub-units, and the Ministry of Finance notifies government banks of the financial disbursements. It can be noted that there are a number of related administrative functions that operate windows facilitating transfers to the financial

Figure (6) Using Block chain in Financial Management

oversight departments and the financial body in Parliament for the purpose of auditing and submitting reports to the relevant authorities through the windows dedicated to transfer operations, as illustrated in Figure (6).

-Using genetic algorithms in financial financing

Genetic algorithms play a role in financial financing by linking the computational processes of sub-units with the main units in the relevant ministries, and then linking these processes directly with the Ministry of Finance, which has a connection with the regulatory



bodies (which work on analyzing financial performance and correcting financial and administrative errors) as well as the financial body in Parliament. From here, the transfer process begins sequentially from the sub-units to the competent body in the Ministry of Finance, which conducts the audit and then transfers it to the regulatory bodies. This process can be repeated in reverse. This process can increase the efficiency of government performance in the financial financing process, as shown in Figure(7).

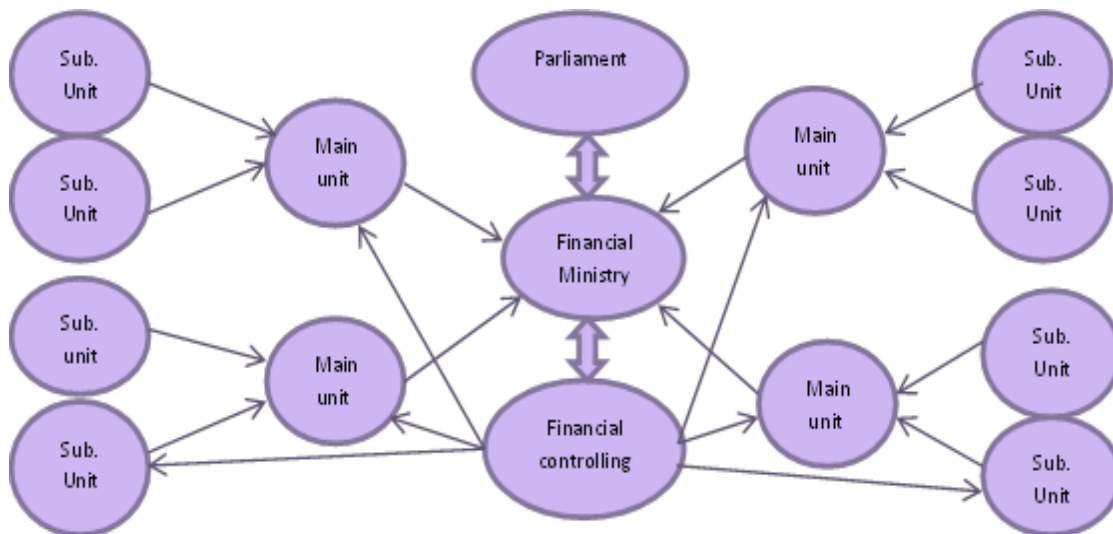
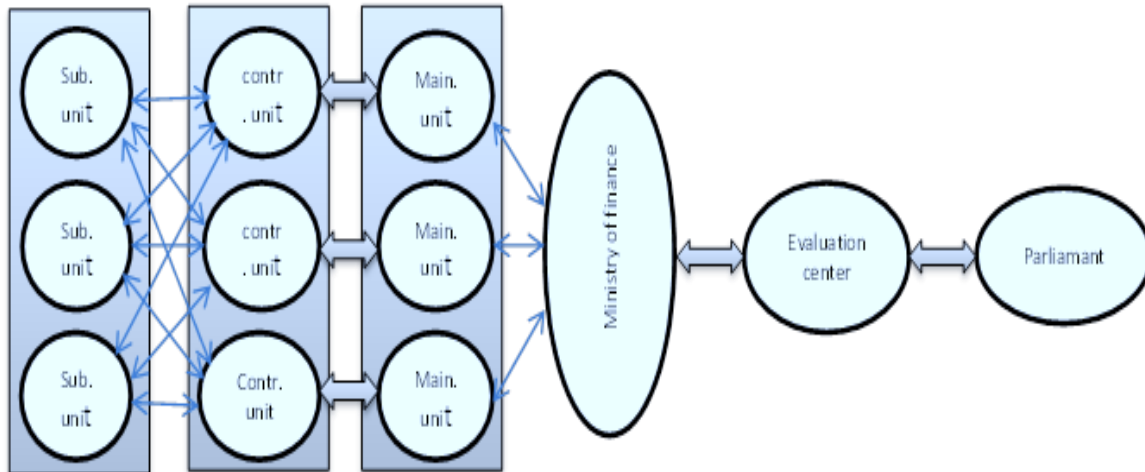


Figure (7) Using genetic algorithms in financial financing

-Neural networks (deep learning) and financial financing

This technology is no different from the previous technologies, as this process also starts from sub-units that are linked to the main units to carry out the process of conversion and control in a sequential manner, reaching the implementation and validation processes, because this works to focus on matching public revenues with scientific expenditures according to economic requirements, but it requires an evaluation center to carry out the adjustment process. It can be noted here that these processes require special programs that prevent financial fraud and unofficial electronic breaches, as shown in Figure (8).

Figure (8) Neural networks (deep learning) and financial financing



The use of block chain technology, deep learning, and genetic algorithms is considered one of the artificial intelligence technologies, as it is capable of directing funding and improving auditing and control processes in estimating revenues and expenditures and evaluating financial and administrative performance in record time periods and in accordance with the economic situation. It also contributes to the transfer and analysis of big financial data and financial transfer operations on the side of public revenues and public expenditures, as well as tax collection, credit and investment operations, preventing financial manipulation and supporting information and knowledge security, in addition to improving administrative and financial efficiency.

Conclusion

The activation of computer systems and artificial intelligence in performing their advanced tasks usually requires human intelligence. These tasks typically involve learning, reasoning, solving diverse and varied problems, perception, language comprehension, and even the ability to interact with the surrounding environment. Furthermore, creating systems that can more accurately mimic human cognitive functions allows artificial intelligence to make highly accurate decisions. These decisions include drawing on experience and knowledge, adapting to new information, and mimicking various cognitive functions such as perception and memory, or reproducing skills like organizing, describing, and processing information. This stimulates the capabilities and work of artificial intelligence in many diverse fields, including its application in financial and banking transactions. This is done to detect financial fraud, provide customer service, manage financial and monetary risks and portfolios, manage investments and financial assets, and verify information. This helps financial institutions increase productivity and financial returns while reducing costs, all with accuracy and customer and user satisfaction. Thus, we find that artificial intelligence has achieved significant progress in the monetary and financial field. There was an increase in the number of ATMs, reaching 4,781 in 2024. This was also evident in the number of points of sale, which reached 50,645 in the same year, while this was evident in the total number of bank accounts, which reached 16,397,131. On the financial side, artificial intelligence has the ability to transfer money more accurately and securely under electronic strategies, whether it be block chain, genetic algorithms, or deep learning.

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