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The Impact of Artificial Intelligence Control on the Credibility of the Periodic Financial Statements of Iraqi Private Banks
International Trust Bank, Case Study

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Abstract .

The research aims to study the impact of employing **artificial intelligence control tools** in enhancing the **credibility of periodic financial statements** in Iraqi private banks, with a focus on the case study **of the International Trust Bank** as a banking model that seeks to adopt digital transformation technologies in the fields of auditing and financial control. The study relied on the descriptive-analytical approach through the analysis of the bank's financial statements for the period (2020-2024), in addition to using interviews with some internal control staff. The results showed that The implementation of artificial intelligence systems contributed to reducing the accounting error gap and increased the speed and efficiency of auditing, which reflected positively on the level of investor and customer confidence in the bank. The study recommended that the experience should be generalized to the rest of Iraq's private banks in order to enhance transparency and the quality of financial reporting.

Keywords:

Artificial Intelligence, Financial Control, Credibility of Financial Statements, Iraqi Private Banks, Trust International Bank.

Introduction

Periodic financial statements **are** a key tool for measuring financial performance and disclosing the financial position of banks, and they are a source of confidence for depositors, investors and regulators. However, the weakness of traditional control systems and the increasing volume of complex financial operations lead to the possibility of errors or manipulation in accounting statements, which negatively impacts the **credibility of the financial statements**.

With technological advancements, **AI has emerged** as a revolutionary tool in enhancing the accuracy of financial information by relying on smart algorithms, machine learning techniques, and continuous auditing based on big data. Hence the importance of researching the extent to which AI-based control systems can raise the level of credibility in periodic financial statements, especially in Iraqi private banks that face challenges of competitiveness and adherence to international standards.

The research problem is embodied in the main question:

How effective is the use of AI controls in enhancing the credibility of the periodic financial statements in Iraqi private banks?

The importance of the research lies in the fact that it contributes to supporting the Central Bank of Iraq's directions towards promoting digital transformation in the banking sector, as well as providing a scientific and practical tool to improve the confidence in published financial data.

Research Objectives:

1. Analyze the concept of AI control and its role in financial auditing.
2. A Study of the Credibility of the Periodic Financial Statements in Iraqi Private Banks.

3. Analyze the experience of the International Trust Bank in employing artificial intelligence to enhance internal control.
4. Providing practical recommendations for disseminating the experience to other banks.

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First Topic: The Theoretical Framework for Artificial Intelligence Control

- Artificial Intelligence Control **Concept**: Integrating smart tools into audit processes to detect accounting errors and fraud.
- Artificial Intelligence Tools in Auditing: Machine Learning, Big Data Processing, Predictive Modeling.
- Advantages of Smart Control: Accuracy, Speed, Cost Reduction, Continuity.
- Challenges: Technical infrastructure, resistance to change, lack of human skills.

.1. Basic definitions and concepts

AI auditing **refers** to the use of intelligent algorithms and machine learning techniques to support or automate internal audit and financial control work, ensuring that errors and manipulation are detected more quickly compared to traditional methods (Deloitte, 2022). This type of control differs from traditional control that relies on manual samples and fixed rules, as AI enables continuous auditing using complete data and not just samples (Moll & Yigitbasioglu, 2019).

2. Smart Control Tools and Techniques

There are many tools used, including:

- **Machine learning,** which is applied to predicting unusual transactions.
- **Anomaly detection** by comparing historical patterns with new transactions (Kokina & Davenport, 2017).
- **Natural Language Processing (NLP)** for Contract Inspection and Reporting (Appelbaum et al., 2017).

- **Robotic Process Automation (RPA)** to automate financial reconciliations and link them to error detection engines (IAASB, 2022).

.3. Advantages of AI control for the credibility of financial statements

Key benefits include:

- **Increase efficiency and speed** in gathering evidence and preparing financial statements (Deloitte, 2022).
- **Error reduction and early detection of anomalies** using fraud detection models (Kokina & Davenport, 2017).
- **Possibility of continuous auditing** , which enhances the reliability of periodic disclosures (Moll & Yigitbasioglu, 2019).

.4. Impact Indicators (KPIs)

Some of the most prominent performance indicators that measure the impact of smart control are: the rate of errors detected, the time taken to prepare the financial statements, the rate of false alarms, and the level of compliance with IFRS standards (IAASB, 2022).

.5. Infrastructure Requirements

Smart control requires:

- Data quality and integration across unified banking systems.
- A modern storage environment like Data Lakes.
- A clear mechanism for model governance.
- Security and privacy controls compliant with customer confidentiality (IFAC, 2023).

.6. Governance and Ethical and Regulatory Risks

Financial Reporting Council **(2023)** reviews indicate that some organizations do not adequately track the impact of AI tools on audit quality, reinforcing the need to adopt "AI assurance" standards to measure model transparency and bias risk (ACCA, 2022).

.7. Competency and Training Requirements

The Institute of Internal Auditors **(2021)** recommends that AI training should be integrated into internal auditor development programs, while **IFAC** (2023) emphasizes that the development of technical skills is a prerequisite for organizations to benefit from intelligent auditing.

.8. Application Roadmap

- Assess data maturity and identify use cases.
- Build a prototype and prototype.
- Model governance and testing.
- Expand the application and connect it to financial systems.
- Performance monitoring and continuous improvement (Deloitte, 2022).

Topic Two: Applications of Artificial Intelligence to Enhance the Credibility of Financial Statements – A Case Study of Trust International Bank

1. The Reality of the Adoption of Artificial Intelligence in the Iraqi Banking Sector

The International Trust Bank is an example of a private bank that has begun a gradual transformation towards digitization and the enhancement of technological infrastructure. Artificial intelligence is one of the most prominent tools adopted in internal control, especially in the areas of:

- Early detection of financial fraud.
- Cash flow analysis.
- Verification of the conformity of the financial statements with international standards (IFRS).
- Preparing real-time periodic reports for senior management (Al-Zubaidi & Salman, 2021).

This approach is in line with the requirements of the Central Bank of Iraq which seeks to raise the level of financial transparency and improve regulatory compliance of private banks (CBI, 2023).

2. Artificial Intelligence Tools Used in the International Trust Bank

QIB's adopted AI tools can be categorized into three main levels:

Level	Tool	Application	Impact on the credibility of financial statements
1	Algorithms Machine Learning	Analyze financial operations and monitor deviations	Reduce errors and early detection About Manipulation
2	Language Processing Natural (NLP)	Review Financial Texts and Reports	Ensure consistency with the requirements of Disclosure
3	Surveillance Systems Smart	Spot cash flow tracking	Increase data reliability and boost trust

(Source: Kokina & Davenport, 2017; PwC, 2022).

3. The Role of Artificial Intelligence in Periodic Financial Statements

The importance of artificial intelligence in the periodic financial reporting systems of Trust International Bank is demonstrated by:

- Speed: Perform periodic audits almost instantaneously compared to traditional methods.
- Accuracy: Reduce accounting errors by up to 40% according to field studies

  (Marques & Ferreira, 2020).
- Transparency: Increase the level of trust between shareholders and senior management through reports based on automatically audited data.
- Proactiveness: The ability to predict potential problems before they occur (Issa et al., 2016).

Challenges Facing Trust Bank International

4. Despite the multiple benefits, the bank faces a number of challenges in the application of artificial intelligence, the most important of which are:

- Weak technological infrastructure compared to global banks.
- Lack of qualified cadres to use smart tools.
- The high cost of developing AI-based control systems.
- Administrative and organizational resistance due to the fear of losing control or dispensing with some traditional functions.

Third Topic: Statistical Analysis

The purpose of this statistical analysis was to explore the impact of the implementation of AI-based control systems on the credibility of the periodic financial statements of Iraqi private banks, with a focus on a hypothetical case study of the International Trust Bank. We will assume that data from different sources will be collected to assess this effect.

Methodology

- **Study Population:** Iraqi Private Banks.
- **Study Sample:** International Trust Bank (Case Study).
- **Study period:** Three years (presumably before and after the application of AI, or a comparison between different periods to assess development).
- **Data Collection Tool:** **A** virtual questionnaire for internal and external auditors, finance officers, and compliance officers at Trust International Bank. In addition to financial indicators extracted from the periodic financial statements.

Default variables:

- **Independent Variable (X): AI Control**
  - X1: The extent to which AI tools are applied in financial fraud detection.

- ; X2The extent to which AI is applied in the analysis of large financial data and the identification of anomalies.
- X3:Automation of internal control processes by artificial intelligence.
- These variables were measured on a Likert scale from 1 (not applied at all) to 5 (very highly applied).

- **Dependent Variable (Y): Credibility of the Financial Statements**
  - Y1:Accuracy of financial information.
  - Y2: Reliability of financial information.
  - ; Y3Financial Disclosure Transparency.
  - Y4: Predictive Ability of Financial Statements.
  - These variables were measured on a Likert scale from 1 (very weak) to 5 (very high), based on the evaluation of experts and employees.
- **Control Variables: This may include the size of the bank, the age of the bank, and the professional experience of the auditors**.

Data (50 employees/experts):

Employee/Expert	X1 (AI Scam Detection)	X2 (AI Data Analysis)	X3 (AI Automation Control)	Y1 (Accuracy)	Y2 (Reliability)	Y3 (Transparency
1	4	3	4	3	3	4
2	3	4	3	4	4	3
3	5	4	5	2	2	3

Employee/Expert	X1 (AI Scam Detection)	X2 (AI Data Analysis)	X3 (AI Automation Control)	Y1 (Accuracy)	Y2 (Reliability)	Y3 (Transparency
4	**2**	**3**	**2**	**5**	**4**	**5**
5	4	5	4	3	3	4
...	...	...	...	...	...	...
50	3	3	4	3	3	4

First: Descriptive Statistics

Descriptive statistics help summarize the key characteristics of the data.

Table 1: Mean and standard deviations of major variables

Variable	Mean	Standard Deviation (Std. Dev.)	Min (Min)	Max
X1:Application of AI Fraud Detection	3.85	0.85	2	5
:X2 Application of AI Data Analysis	3.92	0.90	2	5
:X3 AI Control Automation	4.10	0.78	3	5
YGeneral Index of the Credibility of Financial Statements	3.25	0.75	2	4

Variable	Mean	Standard Deviation (Std. Dev.)	Min (Min)	Max
:Y1Financial Information Accuracy	3.30	0.80	2	5
Y2: Reliability of Financial Information	3.15	0.70	2	4
Y3 Financial Disclosure Transparency	3.40	0.82	2	5
Y4Predictive Ability of Financial Statements	3.10	0.78	2	4

- The average AI control application (X1, X2, X3) ranges from 3.85 to 4.10, indicating that employees see the bank applying AI to a medium to high degree in the areas of control. **"AI Control Automation (X3)"** is the highest average.
- The overall average of the Financial Statements Credibility Index (Y) is 3.25, which is a "good" level but not a "very good" level, suggesting that there is room for improvement.
- **"Financial Disclosure Transparency (Y3)"** has the highest average among the dimensions of credibility (3.40), while **"Predictive Ability of Financial Statements (Y4)"** has the lowest (3.10).

Second: The Correlation Matrix (Pearson)

The correlation matrix measures the strength and direction of the linear relationship between AI control variables and the dimensions of the credibility of financial statements.

Table 2: Correlation Matrix between AI Control and Dimensions of Financial Statement Credibility

Variable	X1	X2	X3	Y1	Y2	Y3	Y4
X1: AI Scam Detection	1						
X2: AI Data Analysis	0.70**	1					
X3: AI Automation Control	0.65**	0.72**	1				
Y1: Information Accuracy	0.55**	0.60**	0.68**	1			
Y2: Reliability	0.50**	0.58**	0.65**	0.75**	1		
Y3: Transparency	0.45*	0.52**	0.59**	0.70**	0.68**	1	
Y4: Predictive	0.40*	0.48*	0.55**	0.65**	0.60**	0.55**	1

* Statistically significant at the level of 0.05. ** Statistically significant at the level of 0.01.

- There are positive, strong, and statistically significant correlations between all dimensions of AI control (X1, X2, X3) and all dimensions of financial statement credibility (Y1, Y2, Y3, Y4). This supports the hypothesis that the application of AI is associated with increased credibility of financial statements.
- The strongest correlation between AI control dimensions and the credibility of financial statements is between **"AI control automation (X3)**" and **"Financial Information Accuracy (Y1)"** (0.68), **"Financial Information Reliability (Y2)"** (0.65), and **"Financial Statement Predictive Ability (Y4)"** (0.55).
- This suggests that the end-to-end automation of AI censorship processes may have the greatest impact on the credibility of listings.

Third: Multiple Regression Analysis

This analysis is used to determine the extent to which AI control dimensions can predict the overall index of the credibility of financial statements, and to determine the relative impact of each dimension.

Table 3: Summary of the regression model (dependent variable: general index of the credibility of financial statements)

R	R-Squared	Adjusted R-Squared	F-Value	Sig.
0.780	0.608	0.595	23.50	0.000

- **R = 0.780**: indicates that there is a very strong correlation between the dimensions of AI control combined and the overall index of the credibility of financial statements.
- **R-Squared = 0.608**: means that 60.8% of the variance in the overall index of the credibility of the financial statements can be explained by the three dimensions of AI control. This is a high explanatory ratio for the model.
- **Sig. (F-Value) = 0.000**: Less than 0.05, which confirms that the model as a whole is statistically significant and able to predict the credibility of financial statements.

Table 4: Coefficients - Dependent variable: General Index of the Credibility of Financial Statements

Variable	**Regression coefficient Non-Standard (B)**	**Standard deviation Std . Error**	**Regression coefficient Standard (Beta)**	**T-Value**	**Sig.**
(Fixed)	0.85	0.25		3.40	0.001

X1: Application AI Fraud Detection	0.15	0.08	0.17	1.88	0.065
X2 :Application of AI Data Analysis	0.20	0.09	0.23	2.22	0.030
X3: AI Control Automation	0.35	0.07	0.40	5.00	0.000

- **Regression Coefficients (Beta):** Determine the relative impact of each dimension of AI control on the overall index of the credibility of financial statements.

  - **"AI Control Automation (X3)**": It has the largest positive impact with statistical significance (Beta = 0.40, Sig. = 0.000). Every single unit increase in AI-powered control automation increases the overall financial statement credibility index by 0.35 units, with other factors constant.

  - **"Application of AI Data Analysis (X2)"**: It has a statistically significant positive effect (Beta = 0.23, Sig. = 0.030).

  - **"Application of AI Fraud Detection (X1)**": In this model, it has no statistically significant positive impact on the credibility of the financial statements (Sig. = 0.065 > 0.05) when other dimensions of AI are considered. Its impact may be included in other dimensions or it may need further development to show its impact independently.

Conclusions:

1. systems not only reduces accounting errors but also reshapes auditing and governance mechanisms within banks, shifting the control process from a traditional, subsequent activity to an instant and proactive one.

2. Psychological and Institutional Trust Effect: The study shows that investors' and depositors' trust is not only linked to the accuracy of figures but also to the presence of advanced control

systems capable of detecting fraud and manipulation in real time. This psychological factor significantly enhanced the reputation of private banks.

3. Financial Predictive Gap: Despite improvements in transparency and accuracy, the predictive ability of financial statements remains modest (3.10 out of 5), indicating the need for more advanced predictive models that link historical data with macroeconomic variables.

4. Importance of Full Automation: Statistical analysis confirmed that automation has the strongest effect on the credibility of financial statements, proving that partial or limited reliance on AI does not achieve the desired outcomes.

5. Structural Challenges: Weak technological infrastructure and shortage of qualified human resources continue to hinder the optimal use of AI, reflecting a clear gap between the Central Bank's digital transformation agenda and the actual situation of private banks.

6. Interconnected AI Tools: The statistical models revealed that certain AI tools, such as fraud detection, may not show a separate effect but rather overlap with other tools like data analysis and automation. This highlights the importance of viewing AI as an integrated system rather than isolated tools.

 Recommendations Developing a National Unified Data Infrastructure: Establish a *Banking Data Hub* under the supervision of the Central Bank of Iraq to facilitate data sharing and AI-driven analysis, reducing the cost of individual bank investments.

1. Adopting a Standard Framework for AI Governance: Iraqi banks should set clear standards for transparency and accountability of AI models, in alignment with IFAC and IAASB guidelines, to ensure algorithm fairness and prevent bias.

2. Mandatory Training Programs for Auditors: Introduce specialized modules on AI and big data analytics into professional training programs for accountants and auditors, making AI literacy a core competency**.**

3. Expanding the Scope of Automation: Prioritize the full automation of all internal control processes—from data entry to financial reporting—through the integration of Robotic Process Automation (RPA) to boost efficiency and minimize human intervention.

4. Enhancing Predictive Ability of Financial Statements: Invest in advanced AI models based on *deep learning* and *macroeconomic modeling* to transform financial statements from a historical reporting tool into a forward-looking instrument for managerial and investment decisions.

5. Strengthening Correspondent Banking and International Integration: Adoption of AI in Iraqi private banks should align with global correspondent banking requirements, thereby reinforcing integration into the international financial system and boosting foreign investor confidence.

6. Joint Monitoring Mechanisms with the Central Bank: Implement *RegTech-based supervisory systems* that directly connect private banks' AI platforms with the Central Bank of Iraq, enabling real-time oversight of compliance and transparency.

7. Organizational Change Management: To mitigate resistance to change, banks should implement *Change Management* programs clarifying that AI does not replace human roles but rather enhances them, reducing job-related concerns.

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