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THE ROLE OF ARTIFICIAL INTELLIGENCE AND THE IFRS DIGITAL TAXONOMY IN THE DIGITALIZATION OF FINANCIAL REPORTING: A COMPARATIVE ANALYSIS OF THE EXPERIENCE OF UZBEKISTAN AND INTERNATIONAL PRACTICE

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Abstract: The digital transformation of financial reporting has become an important component in enhancing corporate transparency, accountability, and the quality of financial information. The integration of artificial intelligence (AI) and the International Financial Reporting Standards (IFRS) Accounting Taxonomy creates opportunities to automate financial reporting processes, improve data quality, facilitate regulatory oversight, and enhance the comparability of financial statements across different jurisdictions. This article examines the role of artificial intelligence and the IFRS digital taxonomy in the preparation and public disclosure of financial statements prepared in accordance with IFRS, drawing on the experiences of Uzbekistan and international practices.

Keywords: artificial intelligence, IFRS, IFRS Accounting Taxonomy, digital financial reporting, financial reporting automation, digitalization of accounting, Uzbekistan, international experience, financial transparency.

Introduction

The development of digital technologies is fundamentally changing the ways in which financial information is collected, processed, analyzed, and presented. Traditional financial reporting systems, which rely heavily on manual data entry, spreadsheet-based calculations, and the submission of document-style reports, are increasingly being replaced by integrated accounting platforms, automated reporting systems, machine learning algorithms, and structured digital data formats.

Financial statements prepared in accordance with International Financial Reporting Standards (IFRS) play an important role in ensuring transparency, increasing investor confidence, and comparing the performance results of companies at the international level. However, compliance with accounting standards alone does not guarantee that financial information will be easy to use, machine-readable, or effectively comparable. For this reason, a digital reporting infrastructure is necessary to convert standardized accounting information into structured data that can be processed by regulators, investors, auditors, and analytical systems.

Uzbekistan is an important example for studying this transformation. The country has carried out regulatory reforms to expand the scope of IFRS application and has introduced mechanisms for automating the preparation and monitoring of IFRS-based financial statements. In particular, Presidential Resolution No. PQ-282 of 15 September 2025 created an additional basis for improving the financial accounting system in accordance with international requirements and standards. Subsequently, a mechanism for the automatic generation of IFRS-based reporting forms was technically implemented in the Unified Reporting System [1].

The purpose of this article is to examine the complementary role of artificial intelligence and the IFRS Accounting Taxonomy in the digitalization of financial reporting and to compare the approach developing in Uzbekistan with international reporting practices.

The study seeks answers to the following questions:

1. How does the IFRS Accounting Taxonomy contribute to the digitalization and standardization of financial reporting?
2. What tasks can artificial intelligence perform in the preparation, verification, and analysis of IFRS-based financial statements?
3. How can the developing digital reporting infrastructure of Uzbekistan be conceptually compared with international practice?
4. What institutional, technological, and professional measures are necessary to accelerate the integration of artificial intelligence and the digital taxonomy in Uzbekistan?

Literature Review and Conceptual Framework

Digital Financial Reporting and International Standards

Digital financial reporting refers to the preparation, classification, verification, transmission, and analysis of financial information using standardized electronic formats and information systems. Unlike traditional document-style reporting, digital reporting makes it possible to identify individual elements of financial data, link them to accounting concepts, and process them automatically.

The IFRS Accounting Taxonomy provides the relevant accounting concepts for tagging financial information prepared under IFRS. Its elements reflect presentation and disclosure requirements, as well as certain notes that are widely used in practice. This ensures that financial statements are expressed in digital form in a more consistent manner [2].

The distinction between accounting standards and the digital taxonomy is important. IFRS establishes the requirements for recognition, measurement, presentation, and disclosure in accounting. The taxonomy, in turn, provides a structured digital representation of the relevant reporting concepts. It does not replace professional judgment and does not independently determine the correctness of a particular accounting approach.

Artificial Intelligence in Accounting and Financial Reporting

In accounting, AI can be used at all stages of the financial reporting cycle:

✓ Data extraction: Optical character recognition and natural language processing technologies can extract data from invoices, contracts, bank statements, and other supporting documents.

✓ Transaction classification: Machine learning models can suggest accounting classifications and identify possible misclassifications.

✓ Reconciliation: Automated systems can compare general ledger balances with bank data, invoices, subsidiary ledgers, and other financial data.

✓ Anomaly detection: AI models can identify unusual transactions, unexpected changes, duplicate entries, and potentially suspicious accounting situations.

✓ Assisting in the preparation of notes: Language models can help organize textual notes, identify missing information, and compare drafts against established reporting requirements.

✓ Analytical review: Predictive and statistical models help analyze trends, perform financial forecasting, and identify inconsistencies between reporting periods.

These capabilities should be regarded not as tools that replace professional accounting judgment, but as tools that support decision-making.

The Complementary Relationship between Artificial Intelligence and the Digital Taxonomy

Artificial intelligence and the IFRS Accounting Taxonomy perform different but mutually complementary functions. AI helps to process and interpret financial information, while the taxonomy defines the standardized digital tags and relationships for expressing this information in the report.

This relationship can be expressed as follows:

Accounting records → processing and verification with the help of AI → accounting review based on IFRS → alignment with the taxonomy → automated validation → digital financial statements.

The Role of the IFRS Accounting Taxonomy in Digital Financial Statements

Improving Comparability and Usability

The IFRS Foundation emphasizes that the IFRS Accounting Taxonomy enables users to extract, compare, and analyze financial statements in digital formats [2].

This capability supports the following:

- automated comparison of financial indicators;
- comparative analysis across reporting periods;
- faster identification of significant changes in financial indicators;
- improved data usability for investors and researchers;
- more effective analytical oversight by regulators.

These benefits are particularly important in markets where investors, creditors, and supervisory authorities need to assess the financial information of organizations that use different accounting software.

Taxonomy Updates and Version Management

Digital reporting systems must maintain compliance with the relevant taxonomy version and reporting requirements. When accounting standards change, reporting elements and the related guidance may also be updated.

As of October 2026, the 2025 version of the IFRS Accounting Taxonomy remains the current version for the 2026 reporting period. The IFRS Foundation has indicated that it expects the next annual taxonomy to be published in the first quarter of 2027 [3].

Methods

This study applies a qualitative research design based on comparative analysis of digital reporting technologies, document review, and conceptual assessment.

The research methodology consists of three main components.

First, the document analysis method is used to examine official materials published by the IFRS Foundation and the Government of Uzbekistan on IFRS adoption, digital reporting, and financial reporting reforms.

Second, comparative analysis is used to identify similarities and differences between Uzbekistan's developing reporting infrastructure and international structured financial reporting practices. The comparison focuses on the regulatory and legal framework, digital reporting, automation, data quality, and the role of professional accountants.

Third, conceptual process analysis is applied to assess how AI applications and taxonomy-based reporting can be integrated into a unified financial reporting process.

The main analytical directions are presented below.

Direction	Main content of the analysis
Regulatory and legal framework	Adoption and implementation of IFRS and related requirements

Direction	Main content of the analysis
Digital reporting	Structured data, alignment with the taxonomy, and electronic submission
Artificial intelligence	Automation, anomaly detection, and decision support
Data quality	Accuracy, completeness, consistency, and traceability
Governance	Human oversight, cybersecurity, and accountability
International interoperability	Comparability and compliance across different reporting systems

Results

Uzbekistan's Experience in Digitalizing Financial Reporting

Regulatory Development and the Implementation of IFRS

Uzbekistan has been consistently developing its regulatory and legal framework for the application of International Financial Reporting Standards.

According to the IFRS Foundation's jurisdictional information, Presidential Resolution No. PQ-4611 of 24 February 2020 established requirements, from 1 January 2021, for the preparation of IFRS-based financial statements by designated categories of organizations, such as joint-stock companies, commercial banks, insurance organizations, and large taxpayers [4].

One of the important developments was Presidential Resolution No. PQ-282 of 15 September 2025. This resolution created an additional basis for improving the financial accounting system in accordance with international requirements and standards. The reform agenda also includes the development of national financial reporting standards that are consistent with international practice [5].

Comparative Analysis: Uzbekistan and International Experience

International experience shows that digital financial reporting can be implemented through different institutional and technological approaches. Some jurisdictions emphasize regulatory filing systems and mandatory structured reporting, while others focus more on corporate reporting platforms, data analytics, or integrated digital oversight. For example, in the European Union the European Single Electronic Format (ESEF) has been introduced by the European Securities and Markets Authority (ESMA) [6], while in the United States the Securities and Exchange Commission (SEC) accepts interactive data and XBRL-based reports [7].

The following comparison presents the selected approaches and their significance for Uzbekistan.

Area of comparison	Uzbekistan	International practice and conclusions drawn from it
Regulatory compliance	Alignment of national reporting systems with IFRS and international requirements is ongoing	Jurisdictions use different legal mechanisms to adopt standards and to make digital reporting mandatory
Reporting automation	A mechanism for the automatic generation of IFRS-based reporting forms has been technically implemented in the Unified Reporting System	In advanced digital environments, electronic submission, structured tagging, and automated validation can be combined
Digital taxonomy	Systematically integrating standardized taxonomy mapping into reporting	Tags based on the IFRS Taxonomy ensure a consistent digital

Area of comparison	Uzbekistan	International practice and conclusions drawn from it
	processes is an important development opportunity	representation of financial information
Artificial intelligence applications	AI creates opportunities for intelligent verification, anomaly detection, and support of accounting processes	The adoption of AI depends on institutional capacity, data quality, governance, and systems integration
Regulatory oversight	The Unified Reporting System creates a basis for centralized monitoring	Digital oversight can be strengthened through structured data, analytical tools, and risk-based inspection
Professional skills	Further development of competencies in digital accounting and AI is necessary	International experience shows the importance of continuing education and the integration of knowledge from different fields
Governance and security	Secure integration, access-rights control, and reliable data exchange are important development priorities	Mature digital systems require strong governance, audit trails, and measures to protect confidential data

Discussion and Conclusion

The digitalization of financial reporting is becoming an important component of transparent, efficient, and internationally comparable financial information systems. The IFRS Accounting Taxonomy and artificial intelligence are expected to make complementary contributions to this transformation.

Uzbekistan has taken important steps toward modernizing its financial reporting infrastructure. These steps include the development of regulatory requirements related to IFRS and the technical implementation of a mechanism for the automatic generation of reporting forms in the Unified Reporting System. This development creates an opportunity to further integrate standardized digital reporting and AI-assisted accounting processes.

Nevertheless, successful implementation depends on more than the availability of technology. Reliable source data, correct taxonomy mapping, regulatory consistency, cybersecurity, professional competencies, and human oversight remain important.

The main conclusion of the article is that Uzbekistan should carry out, in a coordinated manner, the transition from electronic reporting to a structured and step-by-step intelligent reporting system. This transition should be based on phased implementation, transparent governance, measurable performance indicators, and compliance with relevant international practices.

If implemented responsibly, the integration of artificial intelligence and the IFRS Accounting Taxonomy can strengthen the quality, usability, and comparability of financial information and help further modernize Uzbekistan's financial reporting system.

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