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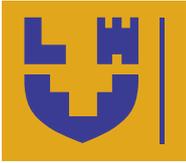
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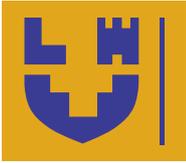
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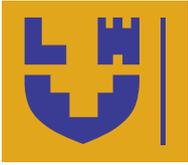
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Financial assistance transactions: International standards, tax rules, and accounting and taxation arrangements

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Abstract. The study aimed to substantiate the conceptual principles of accounting and taxation of financial assistance transactions, integrating the requirements of international and national standards, tax rules, and best practices for disclosure. The methodological basis consisted of an analysis of the provisions of the Tax and Civil Codes of Ukraine, regulatory documents of national legislation, a comparative review of national accounting provisions (standards) and international standards (recognition, measurement, disclosure), content analysis of public reporting, and theoretical modelling of the stages of providing repayable and non-repayable assistance. Empirical materials included reports from the National Bank of Ukraine, the World Bank, and the Organisation for Economic Co-operation and Development. The results obtained made it possible to classify financial assistance (repayable/non-repayable; intra-group/external; market/preferential) as an economic unit, establish the sequence of initial recognition and subsequent measurement with the reflection of the time value of money, outline the requirements for notes (contract terms, discount rates, sensitivity of estimates, related party transactions) and demonstrate how temporary and permanent tax differences arise and were reconciled. The results achieved were summarised in a comprehensive applied framework: the classification of financial assistance according to the "return – remuneration" matrix has been systematised, the accounting approaches of accounting provisions (standards) and international financial reporting standards have been harmonised with tax regulations, and an algorithm has been developed from initiation to disclosure, including a list of primary documents. Using the example of the Joint-Stock Company "Ukrnafta", reproducible identification of transactions, reconciliation of the relationship "profit – taxes – dividends", and typical temporary and permanent differences have been demonstrated. The practical value lies in the list of control points for internal control (contractual terms, primary documents, marketability of intra-group instruments, cash flow tracking), as well as in the applied recommendations for transparent disclosure and neutralisation of tax risks, including hybrid mismatches and transfer pricings

Keywords: international norms; concessional loans; non-repayable aid; repayment and remuneration; dividends

Introduction

The organisation of accounting and taxation of financial assistance transactions determined the ability to convert financial flows into transparent and reproducible indicators, which increased the efficiency of resource use and reduced the cost of capital. Despite significant institutional potential, the national system faces challenges of inconsistent application of standards, fragmented documentation of aid conditions, as well as risks of

intra-group financing and hybrid mismatches. Therefore, the development and implementation of coordinated approaches to embedding accounting and tax solutions into corporate practice was crucial both for reducing fiscal risks and for strengthening the competitiveness of enterprises and the stability of the financial system. In Ukraine, there was still a gap between the declared focus on transparency and accountability in

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financial assistance accounting and actual practice, which was dominated by fragmented decisions and inconsistent application of international and national standards. At the same time, performance assessment was largely focused on process indicators and initial costs, while indicators reflecting the full accounting cycle, from recognition and presentation in financial statements to the formation of tax differences, were not integrated into a single monitoring model. The uncertainty of key performance indicators and the lack of an emphasis on changes in liquidity, cost of capital, and tax base sustainability hinder the transition to a consistent policy for accounting and taxation of financial assistance and made it impossible to verify the long-term effects of such programmes on business competitiveness and fiscal sustainability. The study by L. Chyzhevska & D. Osipchuk (2020) compared international and national approaches to the recognition of government assistance. The study proved that the determining factor was the terms and conditions of the provision and implementation of assistance. The study described in detail two acceptable methods of reflection: as income for the period or as a reduction in expenses or the initial cost of an asset. At the same time, S. Frolov *et al.* (2021) proposed strategic and tactical guidelines for restructuring the financial system, emphasising the coordination of institutions, support instruments and financing channels. The study showed that the effectiveness of state and donor interventions was determined not by individual programmes, but by the transparency of beneficiary selection criteria, the predictability of conditions and reporting requirements. The study highlighted the need to introduce a system of indicators that would record not only cash flows, but also the results achieved.

K. Romenska *et al.* (2020) examined the relationship between budget planning and the development of the budget process, with an emphasis on the transparency of rules, the consistency of procedures, and the quality of performance indicators. The study asserted that the effectiveness of support programmes depended not on the number of instruments, but on the predictability of conditions, the clarity of beneficiary selection, and proper control of targeted use. In contrast, V. Rysin & R. Pechenko (2024) described structural shifts in the financial services market during wartime, noting changes in user behaviour, sources of liquidity, and lending channels. The study showed that the redistribution of risks and the changed price of resources affect financing parameters, including preferential loans and other forms of support. At the same time, I. Sadovska & K. Nahirska (2023) emphasised accounting and taxation of targeted financing in terms of grant funds, distinguishing between assistance related to asset formation and assistance aimed at reimbursing expenses. The study revealed the conditions for recognition, methods of presentation in financial statements, and typical errors that led to distortions in financial results and the tax base. Documentation of

targeted use and the need for consistent accounting policies were emphasised: from the moment of reasonable assurance to the reflection of the consequences of non-compliance with the conditions.

Scientists S. Lehenchuk & N. Vyhovska (2024) critically re-evaluated the practice of accounting for government grants under the International Accounting Standard on Aid and Disclosure of Support. The study emphasised key issues, including ambiguity in the interpretation of recognition criteria and inconsistency in presentation methods. The experts highlighted the principle of substance over form and proposed practical guidelines for developing a consistent accounting policy that ensured the reproducibility of decisions and increased the confidence of users of financial statements. At the same time, D. Zakharov (2024) analysed the significance of introducing a two-tier tax solution in the international taxation system, emphasising the minimum global tax rate and the redistribution of tax rights between jurisdictions. The author outlined the changes in the tax environment for transnational groups, particularly in terms of intra-group financing. A. Kaminskyi *et al.* (2023) developed a dynamic model for forecasting the consumer credit market, which incorporated changes in demand, the cost of resources, and the risks of default. The study demonstrated that loan terms were influenced by many factors, such as household income and interest rates, and therefore a fair assessment of such instruments required correct discounting and consideration of expected credit losses. The proposed approach can be used to distinguish temporary price fluctuations from systemic changes in risk.

Existing studies on accounting and taxation of financial assistance transactions focused predominantly on individual instruments (grants, concessional loans, intra-group contributions), while a comprehensive model combining recognition and reporting rules, tax difference formation and disclosure requirements in a single reproducible cycle of management and tax accounting remained underdeveloped. Issues related to the reconciliation of the valuation of concessional loans with expected credit losses, the neutralisation of hybrid mismatches, the limitation of interest expenses, and the beneficial owner test in cross-border payments were not fully addressed in the studies. The study aimed to substantiate the conceptual basis for organising accounting and taxation of financial assistance transactions, considering the requirements of international and national standards, tax legislation, and the need for transparent disclosure of information. To achieve this goal, a set of tasks was defined: to identify the features and approaches to accounting and taxation of financial assistance transactions, including interest expenses and exchange rate differences; to outline mechanisms for neutralising the risks of hybrid mismatches in cross-border transactions; to propose a system of indicators for assessing the effectiveness of financial assistance at the enterprise level and its impact on the tax base.

Materials and Methods

The study was empirical in nature and covered the period from 2020 to 2025, during which financial assistance operations became a key tool for supporting liquidity and redistributing resources in the corporate sector. The study used a combination of conceptual and theoretical generalisation and structural and logical analysis to formulate definitions and distinguish financial assistance from loans and dividends. The classification scheme "return – reward" was constructed using the typology method with subsequent verification using examples of typical operations (repayable forms of financial assistance, non-repayable forms of support, transactions with deferred movement of funds and changes in value over time), where categories were used to distinguish between repayable (loans, guarantees, prepayments) and non-repayable forms of assistance (grants, capital contributions), which made it possible to classify each transaction according to the appropriate type of accounting and determine its impact on the financial result and tax differences. To describe the process models, theoretical modelling was used with the fixation of control points in document flow, and the risks of intra-group transactions were assessed using the scenario comparison method of the consequences of alternative classification (debt versus equity), with subsequent verification of sensitivity to key assumptions. Empirical materials included reports from the OECD (2015), National Bank of Ukraine (2024), the World Bank (International Bank for Reconstruction..., 2015; World Bank Group, 2024).

The legal component was developed using a regulatory and legal analysis method, comparing the provisions of the Civil Code of Ukraine (2003) and Law of Ukraine No. 1946-IX (2021) with accounting standards. For national and international standards, including Order of the Ministry of Finance of Ukraine No. 318 (1999), International Accounting Standards Board (2001), International Financial Reporting Standard 9 (IFRS 9) "Financial Instruments" (2012), a comparative analysis of the requirements for recognition, measurement and disclosure was applied, including tracing the "chain" from primary documents to notes. International Accounting Standard 24 (IAS 24) "Related Party Disclosures" (2012) was also considered. Anti-hybrid rules and approaches to related party transactions were assessed using a compliance review method: a list of evidence and disclosures required to prove the economic substance of a transaction was formalised, and their consistency across reporting forms was verified. The case study analysed the practical implications for accounting and taxation of specific financial assistance transactions.

Based on content analysis, an empirical study of public cases was conducted, focusing on the Joint-Stock Company (JSC) "Ukrnafta" as a representative example of a large company with a full cycle of disclosures (audits, reports, official announcements) and key financial agreements (Dividend payments complete..., 2024;

Ukrnafta, 2025a; Ukrnafta, 2025c). The analysis included data for 2020 on the settlement of tax arrears through a related package of agreements with the National Joint Stock Company "Naftogaz of Ukraine" (Ukrnafta, 2020), as well as financial results for 2023-2024, which showed stabilisation of profitability, tax payment dynamics and dividend policy. In particular, the study analysed the classification of instruments (repayable and non-repayable aid, market and non-market remuneration), the economic content of prepayments and intra-group financial agreements. The choice of research case was based on the availability of complete and consistent sources of information (audit reports, public announcements, production indicators), formal signs of compliance with contractual terms, and the ability to trace the entire "chain" from the contract to the notes in the financial statements. Profitability, net income, tax and dividend movements for 2023-2024, and operating parameters (oil and gas production) were analysed as a basis for verifying the validity of accounting judgements regarding a significant component of financing, credit risk assessment, and the accuracy of disclosures in the notes. The statistical data was processed using the method of theoretical generalisation and structural-analytical comparison of dynamic indicators, which was used to track trends in profitability, tax revenues and the distribution of the company's financial resources.

The tax implications were examined using a comparative method, and based on the provisions of the Tax Code of Ukraine (2010), permanent and temporary differences were identified for repayable, non-repayable and preferential financial assistance (State Tax Service of Ukraine in Odesa region, 2023). Permanent differences arose in relation to non-repayable assistance, while temporary differences arose in relation to repayable and preferential assistance, where the difference in the recognition of interest and discount caused differences between accounting and tax accounting. To verify the impact of such differences, tax calculations were reconstructed based on corporate income tax return data. The risks of hybrid mismatches were assessed using the approach of neutralising the effects of "double deduction" or "deduction without inclusion" based on the requirements of Council Directive (EU) No. 2016/1164 (2016), and data from Ministry of Finance of Ukraine (2016), European Commission (2017). For intra-group transactions, an economic analysis of market conditions was conducted based on criteria such as interest rate, term, collateral and subsidisation.

Results

Economic essence and classification of financial assistance operations

The economic essence of financial assistance lies in the targeted redistribution of monetary resources outside the logic of ordinary commodity exchange: one party provides the other with funds or other financial resources

with (or without) defined repayment terms. In the system of financial relations, it was a tool that mitigates cyclical fluctuations and supports the viability of enterprises, when sources of liquidity were insufficient or access to market financing was limited (Lagovska & Loskorikh, 2023). Experience with public support programmes around the world showed that a combination of subsidies, concessional loans, guarantees and other forms of assistance can reduce market gaps and support investment activity, but only if the design was transparent and there were clear rules for reporting, supervision and disclosure (World Bank Group, 2024). Such approaches were structured in the World Bank's principles for credit guarantee schemes, which emphasised requirements for mandate, pricing, partial risk coverage, independent oversight and regular auditing (International Bank for Reconstruction and Development..., 2015). This defined the place of financial assistance in the financial ecosystem as a tool that transformed public or corporate incentives into measurable results, while minimising the risk of distortion of competition.

The difference between aid and traditional loans and dividends lies in the purpose and distribution of risk. A loan granted on market terms involved an equivalent exchange and price compensation for risk, while aid may contain a wholly or partly gratuitous component that deliberately redistributed benefits in favour of the recipient (Kollruss, 2023). Dividends were a distribution of already generated profits among owners and do not serve as a mechanism for supporting solvency in periods of instability. Grants, preferential loans and guarantees, on the other hand, act as a financial "shock absorber": it reduced the cost of capital, expanded access to loans and reduced the likelihood of a sharp decline in investment (National Bank of Ukraine, 2024). The European Commission's regulatory practice reflected this difference and explicitly lists forms of state support: grants, tax incentives, state-supported loans, guarantees, and the provision of resources on preferential terms, with an emphasis on the need to control the impact on competition and the transparency of conditions (Council Directive (EU) No. 2016/1164, 2016).

Classification approaches to financial assistance should be structured along two interrelated vectors: repayment and remuneration (International Bank for Reconstruction and Development..., 2015). In terms of repayment, a distinction was made between repayable assistance (loans on market or preferential terms, including those with a state guarantee component) and non-repayable assistance (grants, subsidies, transfers). In terms of remuneration, there was a distinction between market and non-market, depending on whether the price of the instrument compensates for the actual risk and the time value of money (Hess & Mills, 2025). This distinction was not purely theoretical: it determined the moment of recognition in reporting, the basis for assessment and the method of presenting results. For

non-repayable transfers, it was necessary to correlate the recognition of income with the expenses that were compensated or with the formation of assets if the aid was intended for investment; for loans on preferential terms, it was necessary to calculate the present value of the liability and systematically reflect the interest effect over time. When aid was provided in the form of a refund on terms that deviated from market conditions, the difference between the nominal amount and the present value of the obligations forms a separate economic effect, which must be transparently explained in the notes. For programmes where part of the risk was assumed by the state through a guarantee, international approaches explicitly required documentation of the scope of coverage, the price of the guarantee, the procedure for settling claims and control over additionality, i.e. whether the instrument provided access to finance (Committee of Sponsoring Organizations of the Treadway Commission, 2023).

Intragroup forms of support, such as interest-free or preferential loans between related parties, capital contributions, guarantees, and combined schemes, required separate identification, as this was, where hybrid mismatches most often arise. When the same payment was treated differently in different jurisdictions, there was a risk of double deduction of expenses or deduction without corresponding taxation of income (Kahlenberg & Kopec, 2016). The OECD (2015) described typical scenarios of such mismatches and propose mechanisms for their neutralisation in internal law in order to restore symmetry in tax consequences. For corporate practice, this meant the obligation to unambiguously classify instruments according to the "return – reward" matrix, verify the presence of related party characteristics, and align accounting logic with tax classification in the relevant countries. All critical assumptions, from the justification of interest-free status to the method of reflecting the difference between the nominal amount and the present value, must be disclosed directly in the notes.

Process models for assisting begin with setting business objectives and verifying market conditions, and end with transparent monitoring of the fulfilment of obligations. At the operational level, this equated to a sequence of actions from initiation to closure: determining the type of assistance and verifying the grounds, formalising the terms and conditions in contracts and primary documents, classifying and evaluating based on the time value of money, disclosing material assumptions and monitoring the targeted use. At the internal control level, it was advisable to use recognised components of the control system: environment, risk assessment, control measures, information and communication, and monitoring to provide an evidence base for audit and reproducibility of decisions. Where aid involved public funds or state guarantees, the European Commission's regulatory practice additionally required transparency of objectives, proportionality of instruments and

accountability of results, making proper disclosure and quality documentation an integral part of the process (Council Directive (EU) No. 2016/1164, 2016). It was worth noting the requirement to test the sensitivity of key assumptions, primarily the discount rate, as well as to disclose the consequences of non-compliance with the conditions, as these two elements were most often the subject of comments by reviewers and supervisory authorities. As a result, it was possible to build a comprehensive framework: from defining the place of financial assistance in financial relations and distinguishing it from loans and dividends to classification based on repayment and remuneration criteria, identification of intra-group risks, and description of process steps and control points.

Regulatory framework for accounting and taxation of financial assistance transactions

The system for regulating financial assistance transactions can be viewed as three interrelated areas: private law (contracts and primary documents), taxation (classification of income/expenses and tax differences) and standards (national and international financial reporting standards). In the private law plane, key definitions were stipulated in the Civil Code of Ukraine (2003), according to which a loan was the provision of money or other material things with an obligation to return them, while a gift was free of charge and does not require any reciprocal action on the part of the recipient. This dichotomy of "repayment" and "gratuitousness" immediately affected the accounting classification and tax consequences. In practice, this required clear formulation of the terms and conditions in the contract, recording of the business purpose and a complete set of primary documents (contract, schedules, acts, internal approvals).

In contrast, the Tax Code of Ukraine (2010), in particular Article 14, unified terminology and sets a framework for determining the tax base (Law of Ukraine No. 1946-IX, 2021). This regulatory document used the categories of "repayable financial assistance" (funds provided without interest or other fees for use, but subject to repayment) and "non-repayable financial assistance" (amounts provided without a reciprocal obligation under gift agreements or similar agreements, or without an agreement). The classification of a transaction into one category or another determined the procedure for inclusion in income or expenses and the occurrence of tax differences at the end of the reporting period, especially regarding unrecovered amounts from non-taxpayers or beneficiaries of tax privileges. To ensure the legitimacy of their approaches, auditors require not only a contract, but also correspondence, internal decisions and an explanation of the economic substance of the transaction. In the standard plane, Ukrainian accounting provisions (standards), P(S)BO, establish the basic logic: financial instruments were recognised at fair value upon initial recognition, including transaction costs

(Order of the Ministry of Finance of Ukraine No. 318, 1999). At the same time, liabilities were classified and measured in accordance with the terms of the contract, and income was recognised on an accrual and matching basis. For financial assistance, this meant that repayable amounts were liabilities of the borrower (financial assets of the lender); non-repayable amounts remained on the recipient's side, and income or targeted receipts (depending on the terms and purpose) remained on the provider's side. The notes to the financial statements required disclosure of the types of instruments, terms, risks and elements of accounting policy for recognition and measurement.

International Financial Reporting Standards (IFRS) and International Accounting Standards (IAS) detailed special cases that most often arise in practice: preferential/interest-free intra-group loans, government grants and aid, as well as transactions with related parties (Tawiah & Soobaroyen, 2022). For example, International Financial Reporting Standard 9 (IFRS 9) "Financial instruments" (2012) required financial assets or liabilities to be initially measured at fair value; if a loan was issued or received on terms below market conditions, the difference between fair value and nominal value was recognised on the date of recognition and subsequently "disclosed" through amortised cost and effective interest rate. In addition, the standard established an expected credit loss approach: a provision was formed from day one and adjusted to reflect changes in credit risk over the life of the instrument. The approach also applied to liabilities for financial guarantees provided and undrawn credit facilities. The 2024 post-implementation review confirmed that the model works as intended, although it required more accurate disclosures and improved explanations regarding modifications, write-offs and amortised cost, which was crucial for the transparent presentation of preferential loans and group guarantees (IFRS, n.d.).

International Accounting Standards Board (2001) outlined the rules for grants and broader "government assistance". According to the standard, recognition was possible only if there was reasonable assurance that the conditions will be met and the grant will actually be received; grants related to expenses were recognised in profit systematically against the corresponding expenses, and grants related to assets were recognised either through income over time or by reducing the carrying amount of the asset. Separately, International Accounting Standard 20 (IAS 20) clarified that loans and benefits from loans at below market rates were forms of government support where the "preferential" component was measured as the difference between the initial carrying amount under IFRS 9 and the funds received. Disclosures of accounting policies, the nature and extent of support, and unfulfilled conditions were critical for reporting purposes. Another standard applies, where financial assistance was related to intra-group transactions. This concerned the disclosure of transactions with

related parties under International Accounting Standard 24 (IAS 24) "Related Party Disclosures" (2012). According to this standard, it was necessary to identify control/joint control relationships, disclose the nature of transactions, balances and key terms (including interest-free loans, guarantees, collateral), as well as remuneration of key management personnel. This reduced the risk of "hidden" transfers of value and helped explain to investors the economic substance of preferential loans, guarantees or capital contributions within the group.

According to International Financial Reporting Standard 9 (IFRS 9) "Financial Instruments" (2012), a preferential or interest-free loan between related parties was recognised at fair value on the date the funds are received. If, for example, a parent company provided a subsidiary with an interest-free loan with a nominal value of UAH 10 million for three years, and the market rate was 15%, the loan was recorded at a present value of approximately UAH 6.6 million, and the difference of UAH 3.4 million was recognised as a capital contribution as a form of support. Subsequently, the discount was "unwound" through the accrual of interest expense at the effective rate, which ensured a transparent reflection of the economic benefit of the concession. For a financial asset on the provider's side, an expected credit loss provision was formed from the first day (Stage 1), with subsequent review depending on changes in credit risk. Following International Accounting Standards Board (2001), government grants were recognised only, when there was reasonable assurance that all conditions will be met. For example, a grant of UAH 2 million for the purchase of equipment worth UAH 10 million can be presented in two ways: as deferred income, recognised gradually over the depreciation period of the asset, or by reducing its carrying amount. If the support was provided in the form of a preferential government loan, the difference between the fair value of the loan (determined in accordance with IFRS 9) and the funds actually received was treated as government assistance and recognised in accordance with IAS 20.

In the case of a financial guarantee between related parties (IFRS 9, International Accounting Standard 24 (IAS 24)), the guarantor recognised an estimated liability at fair value and subsequently reviews it based on

expected credit losses. For the beneficiary, the effect of the guarantee was usually reflected in a lower contractual interest rate on the loan (which affected the subsequent calculation of the effective interest rate and amortised cost); no separate asset from the guarantee was recognised unless a fee has been paid for it. In the notes to the financial statements, both parties must disclose the nature of the relationship, the terms of the guarantee, the collateral and the risk assessment methodology. These examples demonstrated how the principles of IFRS 9, IAS 20 and IAS 24 were translated into specific accounting procedures and disclosures, ensuring consistency between financial and tax logic in reporting. The European and international regulatory framework warned against hybrid mismatches, where the same payment was treated as an expense in one jurisdiction and not included in income in another. Council Directive (EU) No. 2016/1164 (2016) in the European Union and the Recommendations for the implementation of the BEPS Action Plan (base erosion and profit shifting) described neutralising mechanisms designed to restore tax symmetry (Ministry of Finance of Ukraine, 2016; European Commission, 2017). From a practical point of view, this meant that policies and notes should explicitly explain the basis for classifying instruments (debt or equity), remuneration terms and the existence of guarantees/collateral to minimise tax risks in cross-border schemes. Requirements for internal control and documentation were addressed separately. Based on the five components of the control environment (environment, risk assessment, control activities, information and communication, monitoring), the reproducibility of decisions on classification, discounting, impairment tests and the fulfilment of grant conditions was ensured (Committee of Sponsoring Organizations of the Treadway Commission, 2023). Managers and supervisory bodies should be able to trace the document's "path" from the initiation and verification of market conditions to its reflection in accounting and disclosures that track key assumptions (primarily the discount rate) and the consequences of non-compliance. To summarise the rules into a single applied framework, a brief comparison of the accounting and tax implications for typical forms of financial assistance can be made (Table 1).

Table 1. Comparison of accounting and tax implications for typical forms of financial assistance

Form of transaction	Initial recognition (IFRS/P(S)BO)	Further valuation/profit or loss	Mandatory items to be disclosed in the notes
Revolving assistance on market terms (loan)	The enterprise recognises the liability at fair value on the date of receipt of funds; at the same time, the provider recognises a financial asset for the same amount. This means that the movement of funds is accompanied by the emergence of debt with a defined repayment schedule and interest remuneration	Subsequently, the amount of debt is recorded at amortised cost with interest accrued on an effective interest rate basis; the lender recognises interest income accordingly, and the asset is tested for expected credit losses. Interest expense/income is recognised in the income statement, and the balance of the liability/asset at the end of the period is recognised in the statement of financial position	The parties must disclose the key terms of the agreement, including the interest rate and terms; the risks of non-payment, valuation methods and changes in the carrying amount during the period should be explained, and if there is a relationship, the nature of the relationship and its impact on the terms of the agreement should be described

Table 1, Continued

Form of transaction	Initial recognition (IFRS/P(S)BO)	Further valuation/profit or loss	Mandatory items to be disclosed in the notes
Revolving assistance on preferential or interest-free terms	The entity recognises the liability at fair value, which is usually lower than the nominal amount; the difference between the nominal amount and fair value is immediately identified as a separate economic effect (e.g., income from support or contribution to capital within the group). This means that the "preferential component" is not hidden in the body of the debt, but is transparently reflected from the outset	Subsequently, the liability is accounted for at amortised cost with the discount being unwound to the nominal value through the recognition of interest expense; the lender symmetrically recognises interest income and a provision for expected losses on the asset. The effect of initial discounting, interest movement during the term and the balance of debt at the end of the reporting date are shown in the financial statements	The notes should justify the choice of discount rate, describe the nature of the benefit and its amount at the date of initial recognition, indicate the impact on equity or income, and explain why the terms of the transaction are considered non-marketable; for intra-group transactions, the relationship between the parties and the pricing logic should be disclosed separately
Non-repayable assistance (grant or subsidy)	The recipient recognises the support only when there is reasonable assurance that all conditions will be met and the funds will actually be received; this means that a formal decision to grant support is not yet sufficient grounds for recognising income without verifying the conditions	If the assistance compensates for expenses, income is recognised systematically in the periods in which the corresponding expenses are incurred; if the assistance is related to an asset, it is shown either through gradual recognition in income together with depreciation or through a reduction in the carrying amount of the asset. The financial statements should show the timing of income in relation to expenses or depreciation of the asset	It is necessary to disclose the accounting policy regarding the method of presentation (through income or through a reduction in the value of the asset), describe the conditions and restrictions on the use of funds, indicate existing unfulfilled obligations and risks of return, and quantitatively show the balance of undisputed amounts at the end of the period
Intragroup interest-free loans and guarantees	The recipient entity recognises the liability at fair value and, in the case of support from the parent company, may attribute the difference from the nominal value to equity as a contribution from the owner; the provider recognises a financial asset or liability under the guarantee. This means that the economic substance of the support is reflected separately from the debt component	Subsequent accounting is based on amortised cost with recognition of "implicit" interest; an estimated liability is formed for the financial guarantee, which is reviewed based on expected payments. Interest effects, changes in the valuation of guarantees and intragroup balances are reflected in the financial statements	The nature and level of control between the parties, financing terms, collateral and guarantees, approach to determining fair value and discount rates should be disclosed, and an explanation should be provided of how the company prevents tax risks, in particular hybrid mismatch risks in cross-border structures

Source: Ministry of Finance of Ukraine (2016), European Commission (2017), Committee of Sponsoring Organizations of the Treadway Commission (2023), National Bank of Ukraine (2024), M. Fan et al. (2025), P.V. Thyayib (2025)

Thus, the regulatory framework established a specific sequence of actions. At the contract level, clearly defined the nature of the transaction (repayment/gratuitousness, marketability, guarantees), established the terms and conditions, and supported them with primary documents. At the accounting level, classify and measure at fair value upon initial recognition, with subsequent measurement at amortised cost, considering the effective rate and provision for expected losses for assets; for grants, systematically match income and expenses or adjust the value of the asset. At the disclosure level, explained accounting policies, significant assumptions (primarily the discount rate), related parties and unfulfilled conditions. At the tax level, applied the definitions of the Tax Code of Ukraine (2010) to the content of the transaction, track temporary and permanent differences, and check cross-border transactions for hybrid mismatches. This procedure synchronised civil law

grounds, accounting logic and tax consequences, reducing the risks of misclassification and claimed by regulatory authorities.

Organisation of accounting for financial assistance transactions at the enterprise level

The organisation of financial assistance transactions starts with a well-defined policy that established the sequence of actions from initiation to closure of the transaction and identified those responsible for finance, legal support, accounting and internal audit. At the initiation stage, the business objective and type of assistance (repayable or non-repayable; market or preferential) were formulated, after which the initial assumptions for the assessment were agreed: discount rate, payment schedules, collateral, early repayment terms, and control of the intended use. The agreement and the related package of primary documents (internal decisions, cash flow

schedules, confirmation of use) must directly reflected these conditions, as it was the actual content of the transaction that determined its accounting classification and subsequent disclosure. The internal control system was based on the five components of the Committee of Sponsoring Organizations of the Treadway Commission (2023) framework (control environment, risk assessment, control activities, information and communication, monitoring), which ensured the reproducibility of decisions regarding classification, discounting, contract performance and compliance with grant conditions; ultimately, this reduced the risk of errors and enhanced the confidence of users of financial statements.

In the cash flow statement, receipts and repayments of repayable assistance were classified as cash flows from financing activities. At the same time, interest payments and interest income were reflected in accordance with the rules specified in the latest amendments (updated link to operating profit and clarified requirements for interest classification), which improved comparability between companies (IFRS, 2025a). To ensure transparency, the classification of cash flows should be linked to contractual terms and accounting policies in the notes so that users can trace the entire "chain" from contract to reporting. On the date of receipt of funds, repayable assistance was recognised as a financial liability at fair value, including transaction costs. For market loans, this amount was close to the nominal value, and for preferential or interest-free loans, it was the present value of future payments calculated at the borrower's market rate. Subsequently, the liability was accounted for at amortised cost using the effective interest method, which "unwinds" the initial discount to par value through the uniform recognition of interest expense over time, while modifications of terms, write-offs or derecognition were reflected in accordance with the criteria of the standard (International Financial Reporting Standard 9 (IFRS 9)..., 2012).

Revolving financial assistance (loan, credit, advance with mandatory repayment) was recognised as a liability in the balance sheet (under "long-term bank loans" or "other current liabilities") with subsequent recognition of interest expense in the statement of financial performance. If the deferral exceeded 12 months, under IFRS 9, such assistance was recognised as a financial instrument, and the difference between the nominal and present value was discounted and accounted for as an element of interest expense, reflecting the effective interest rate in accordance with the amortised cost method (International Financial Reporting Standard 9 (IFRS 9)..., 2012). Non-repayable financial assistance, on the other hand, was recognised as other operating income in the period, in which the funds were received (under "other income" in the income statement). If the source of assistance was a related party or parent company, the amount may be reclassified as additional capital (as a contribution from owners without increasing

the authorised capital) in accordance with International Accounting Standard 1 (IAS 1) "Presentation of Financial Statements" (2012) and International Accounting Standard 32 (IAS 32) "Financial Instruments: Presentation" (2012). Where financial assistance was provided in the form of a guarantee, compensation or cost coverage, its classification depended on whether it created a legal obligation or deferred income. For example, a guarantee received without payment was recognised as deferred income with gradual recognition of income over the term of the guarantee, and compensation for expenses was recognised as other income simultaneously with the recognition of the expenses being compensated. For income tax reporting, these differences were critical: repayable assistance created a temporary difference through the recognition of interest and discount, non-repayable assistance created a permanent difference as income that does not result in a tax adjustment to the financial result, and contingent assistance was a potential subject for review for hybrid mismatch.

If assistance was provided within a group on non-market terms, the difference between the nominal and fair (discounted) value at the recipient may be reflected in equity as a contribution from the owner, when the economic substance of the transaction was capital support (Hoor, 2023). On the provider's side, this difference was classified as an investment in a subsidiary or a corresponding element of capital. This approach was consistent with the logic of initial measurement and subsequent accounting for financial instruments and required transparent disclosure of assumptions about the discount rate and terms (International Financial Reporting Standard 9 (IFRS 9)..., 2012.). At the same time, the entity must disclose the risks and valuation methods for instruments, including a table of reserve movements and a qualitative description of the credit risk management process. The requirements for such disclosures were contained in a separate standard on financial instruments (IFRS, 2025b). It was essential for users of financial statements that typical business transactions (interest accrual, principal repayment, exchange rate differences) were consistent with the schedules and terms of contracts, and that the tax implications of the interest portion and possible exchange rate differences were explained in the section on tax differences.

Irrevocable support was recognised only, when there was reasonable assurance that the conditions will be met and the resources will actually be received. If the assistance compensated for expenses, the income was recognised systematically in the periods, in which the corresponding expenses were incurred; if it was related to an asset, two approaches were permitted: through deferred income with gradual transfer to profit together with depreciation of the asset, or through a reduction in its initial value, which will result in lower depreciation charges in the future. Breach of the terms and conditions results in the recognition of a repayable liability and

corresponding adjustments in the financial statements. The following notes were essential for users: the nature and extent of the support, unfulfilled conditions, the method of presentation (through income or reduction in the value of the asset) and the timing of recognition. From a cash flow perspective, non-repayable receipts were reported in the section that corresponds to the nature of the cash flows being financed (operating or investing activities), ensuring consistency between the form of assistance and its economic purpose (IFRS, 2025a).

Interest-free loans, guarantees, capital contributions and combined schemes within a group required increased classification and disclosure discipline (Pappas *et al.*, 2024). If a parent company provided a subsidiary with an interest-free long-term loan, the subsidiary initially recognised a liability at fair value (through discounting), and the difference from the nominal value was attributed to capital as an owner's contribution; the amount was then "unwound" through the accrual of internal interest. This approach followed from the requirements for initial measurement and amortised cost. At the same time, full disclosure of related parties was crucial for users: the nature of control relationships, terms, collateral, rates, outstanding balances and signs of subsidisation (International Financial Reporting Standard 9 (IFRS 9)..., 2012). For financial guarantees, the guarantor recognised an estimated liability with subsequent revision depending on expected payments, and the beneficiary reflected

the corresponding effect and interconnection with the loan instrument. The risk of misclassification was most common: a transaction was presented as a loan, but in essence it functions as a capital contribution (or vice versa). To avoid such situations, it was advisable to explicitly establish a "return on reward" matrix in the policy as a test for distinguishing debt from equity, as well as to require disclosures that can be used to assess the marketability of the terms and conditions and the impact on the financial result and capital structure. At the same time, accounting judgements should be consistent with risk disclosures and financial instrument valuation methods (IFRS, 2025a).

Therefore, accounting techniques can be reduced to verifiable steps: policy and document flow recorded the economic substance of transactions, measurement and recognition ensured accurate reflection of value over time, and disclosure and internal control provided the user with a complete picture of the impact on liquidity, capital and risks. All statements and approaches here were based on modern requirements for accounting for financial instruments, grants, disclosures and cash flow statements, as well as on generally accepted principles for building an internal control system. An applied study of the application of accounting and taxation rules to real transactions was conducted at JSC "Ukrnafta". The dynamics of the company's profits, taxes paid and dividends for 2023-2024 were shown in Figure 1.

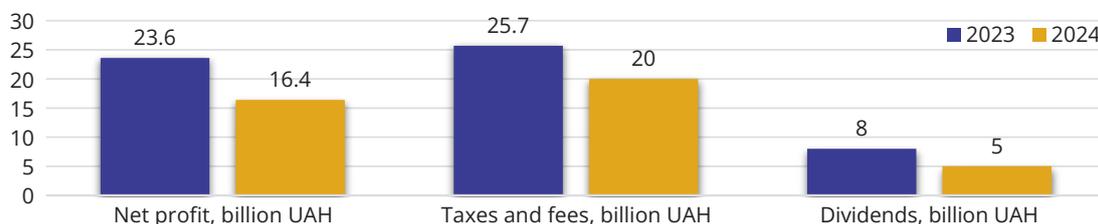


Figure 1. Dynamics of profits, taxes paid, and dividends of JSC "Ukrnafta" in 2023-2024

Source: Ukrnafta (2024a), Ukrnafta (2024b), Ukrnafta (2025b)

According to the results of 2023, JSC "Ukrnafta" confirmed a net profit of UAH 23.6 billion based on the results of an independent audit. In 2024, net profit amounted to UAH 16.38 billion, which can be used for a comparison of profit distribution policy and tax liabilities within 2023 and 2024. According to corporate report Ukrnafta (2024b), JSC "Ukrnafta" transferred UAH 25.7 billion in taxes and fees for 2023 (UAH 20 billion in 2024) and paid dividends totalling over UAH 8

billion according to schedule; in February 2024, the first tranche of UAH 3.9 billion was transferred to the state budget. According to the results of 2024, dividends to the state budget amounted to UAH 5 billion. In terms of this enterprise, the key event for accounting and tax logic was the settlement in December 2020 of existing tax arrears through a related package of agreements with Naftogaz of Ukraine. Figure 2 showed the oil and gas production figures for JSC "Ukrnafta" in 2024.

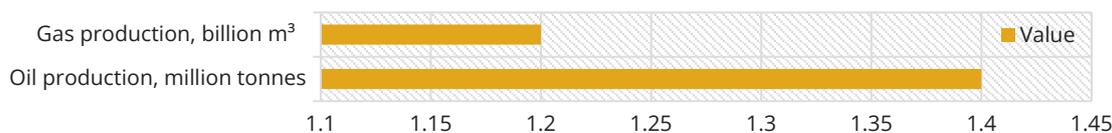


Figure 2. Oil and gas production volumes of JSC "Ukrnafta" in 2024

Source: Ukrnafta (2025a)

JSC “Ukrnafta” transferred UAH 28.9 billion to a special fund of the state budget to cover tax debt, while JSC “Naftogaz” paid UAH 15.1 billion for 2.061 billion m³ of gas produced in 2006 and provided an advance payment of UAH 23.5 billion for future gas production; at the same time, JSC “Ukrnafta” repaid UAH 2.5 billion of a short-term loan and paid UAH 3.9 billion of current value-added tax (VAT) and UAH 3.3 billion of advance income tax (Ukrnafta, 2020). For accounting purposes, this was a package of different types of instruments: a short-term loan (financial instrument), commercial payment for gas supplied and prepayment for future period products (contractual settlements with the customer), as well as targeted budget payments (tax settlements). It was necessary to emphasise the correct classification: the prepayment of UAH 23.5 billion was a contractual obligation under IFRS 15 (the obligation to supply gas in future periods), and if there was a significant financing component, the transaction price was adjusted with the recognition of the interest component over the term of the obligation. This was not a financial liability within the meaning of IFRS 9, so the discount was amortised within the IFRS 15 revenue model. The second dimension was the reconciliation of accounting judgements with the “physical” dynamics of the business. In 2024, JSC “Ukrnafta” increased oil production to 1.418 million tonnes (+0.6% compared to 2023) and gas production to 1.17 billion m³ (+6.5% compared to 2023), despite prolonged power outages that limited mechanised production (Ukrnafta, 2025a). This production stability supported the assumption that contractual obligations under the prepayment agreement can be met, justified the rates used to estimate the significant financing component in revenues, and reduced the risk of modifications to the terms that could require a revaluation of liabilities or adjustments in the notes.

From the point of view of tax consequences and disclosures, the “profit, taxes, dividends” block served as an indicator of proper classification and completeness of notes. For 2023, UAH 25.7 billion in taxes and over UAH 8 billion in dividends; for 2024, dividends of UAH 5 billion with a profit of UAH 16.38 billion. The following were expected in the notes to the financial statements: a description of the accounting policy for classifying the interest component by significant financing component in IFRS 15; detailed of key contracts with related parties (rates, terms, collateral, outstanding balances) under IAS 24; reconciliations between accounting and tax accounting for temporary and permanent differences (Dividend payments complete..., 2024). Another example of systematic cash flows to the budget was the payment of 1.074 billion UAH from the profits of the Private Joint-Stock Company “Ukrnaftoburinnya” for 2024, which was managed by JSC “Ukrnafta” (Ukrnafta, 2025b). For consolidated reporting, this was a separate distribution channel, which must be reflected in disclosures about related parties and the movement of

profit/dividend shares. In summary, it was worth noting that in 2023-2024, JSC “Ukrnafta” demonstrated an exemplary, verified case model for accounting and taxation of financial assistance transactions.

Taxation of financial assistance and neutralisation of hybrid mismatches

Taxation of repayable and non-repayable financial assistance in Ukrainian practice was based primarily on the definition in the Tax Code of Ukraine (2010): financial assistance may be provided on a non-repayable or repayable basis; non-repayable assistance includes funds under gift agreements, reimbursement of bad debts after their cancellation, as well as debts not collected after the expiry of the limitation period (Main Department of the State Tax Service in Vinnytsia region, 2024). This distinction determined the tax consequences: non-repayable assistance to the recipient generally constituted income, while repayable assistance created a debt obligation with subsequent consideration of interest expenses or the effect of a significant financing component in the case of deferred payments. Repayable assistance, formalised as a loan, affects the income tax base through the rules on interest differences and the debt-to-equity ratio.

Accounting for and taxing non-repayable assistance required special attention to the contractual nature and source of funds. If funds were received from related parties or within a group, transfer pricing rules may apply, as well as verification of the business purpose of the transaction. Cross-border intra-group payments interest, guarantee fees, support compensation, and impose an additional layer of compliance through international standards for neutralising hybrid mismatches. The OECD’s recommendations under Action 2 of the BEPS Plan required jurisdictions to neutralise the effects of schemes that result in double deduction of expenses or “deduction without inclusion in income” due to differences in the classification of instruments or entities. These approaches have formed the basis for European Union rules, in particular Council Directive (EU) No. 2017/952 (2017), which established the obligation to deny a deduction in the payer’s country or to include the amount in the recipient’s income depending on the type of mismatch, and also contained a special rule for “reverse hybrids” and dual residency situations (OECD, 2015). For the taxpayer, the practical requirement was simple: document that the payment did not result in a hybrid mismatch in the chain of transactions and, if necessary, adjusted the accounting based on the primary jurisdiction of “denial/inclusion”. Lastly, intra-group financial transactions must comply with the arm’s length principle not only in terms of interest rates but also in terms of the appropriateness of the instrument itself (Rathke, 2023). The OECD (2015) guidelines on financial transactions described in detail how to justify the marketability of intercompany loans, guarantees, letters of support and intra-group cash pools. For

Ukrainian taxpayers, this meant the need to compile a complete dossier: the borrower's creditworthiness, comparable transactions, adjustments for collateral and subsidisation, as well as an explanation of why financial assistance, rather than a capital contribution or advance payment, corresponded to the economic substance of the transaction. In transfer pricing documentation, this should appear as a logical chain: financing purpose – choice of instrument – valuation method – numerical result – tax implications.

Additional compliance requirements apply to payments abroad: reduced tax rates on non-resident income may only be applied if the status of beneficial owner was confirmed and there was no abuse of the advantages of conventions. Ukrainian court rulings and explanations from tax authorities emphasised that the beneficiary must be the actual recipient of the income, not a transit link, and verification was conducted incorporating the general anti-abuse approaches of the BEPS Plan (the "principal purpose test"). For financial assistance transactions, therefore, the formal existence of a contract was not sufficient; economic logic and transparent disclosure of the ultimate beneficiary were required (State Tax Service of Ukraine in Odesa region, 2023). In reporting, this involved detailing two levels of disclosure: identifying tax differences arising between accounting and tax accounting (in particular, regarding accrued but unpaid interest, discounts, and non-refundable receipts), and an explanation of the methodology for their adjustment in Appendix RI to the corporate income tax return. For repayable financial assistance, the adjustment was made by increasing the financial result by the amount of excess interest above the limit specified by the thin capitalisation rules, or by reducing it by the amount of recognised income at the effective interest rate. For non-repayable assistance, on the contrary, if it was not recognised as income in accounting, the financial result shall be increased by the corresponding amount. In conclusion, it should be emphasised that the tax treatment of financial assistance was based on the correct initial classification (non-refundable/refundable; contractual obligation or financial instrument) to control interest rate differences and market conformity, and in a cross-border context, to prove the absence of hybrid mismatches and beneficial ownership status.

Discussion

In the national economy, the effectiveness of financial assistance was determined not only by its volume, but all by the quality of the accounting and tax architecture. Correct classification of repayable and non-repayable forms, differentiation between commercial subscriptions and financial instruments, reflection of the time value of money for deferred payments, reconciliation of accounting judgements with tax differences, and transparency of transactions with related parties transform aid into a manageable investment resource. In this

context, the results of the study showed that it was the discipline of contracts and primary documents, the established contours of internal control, consistent disclosure of conditions and sensitivity of estimates in the notes, as well as compliance with transfer pricing requirements and neutralisation of hybrid mismatches form a bridge between financial support and the real strengthening of liquidity, capital and tax stability of enterprises. The study by P. Kubera (2021) demonstrated the state aid instruments used during the crisis period: direct grants, tax deferrals, state guarantees, preferential loans, and equity participation. Notably, each instrument created a separate chain of accounting events, affects the recognition of income and expenses in different ways, and generated different tax consequences. The author concluded that a matrix of characteristics was needed to compare economic substance and legal form. This was consistent with the study, which used a matrix approach of "return – reward" and proposed process models from initial recognition to disclosure in the notes.

In contrast, T. Jafarli (2022) systematised European approaches to state aid during the pandemic, focusing on temporary legal frameworks, eligibility criteria, transparency and principles for phasing out support once the market stabilises. Considering various forms of aid, the study demonstrated how legal conditions and public commitments become part of companies' accounting policies and affect the recognition of income, expenses, and liabilities. These conclusions were confirmed by research on the importance of contractual terms, the distinction between non-repayable and repayable support, and the need to align tax treatment with disclosures on restrictions and intended use. A. Hozzman *et al.* (2023) traced how approaches to state aid for airlines changed during the coronavirus pandemic in the EU: from direct grants and guarantees to instruments with strict transparency conditions, restrictions on dividends and management remuneration, and requirements for reporting on the targeted use of funds. The study emphasised that the nature of the aid (repayable or non-repayable), the availability of payment deferrals and the conditions for exiting the programmes have different implications for accounting and taxation and require careful documentation. These conclusions correlated with the study in terms of the priority of correct classification, the requirement for completeness of notes and the recording of contingent restrictions that affected tax differences and profit distribution policy.

At the same time, B. Engelmann & H. Pham (2020) demonstrated that the transition from loss assessment to the expected credit loss model under international financial reporting standards and the American expected loss model changes the income and expense profile of banks due to a different trajectory of provisioning and different risk sensitivity. For financial assistance operations, this meant the need to record the level of credit risk at the time of initial recognition, document

assumptions about the recipient's solvency, construct an effective interest rate for deferred payments, and disclose the sensitivity of estimates in the notes. A comparison with the study showed complete consistency in approaches: the classification of repayable assistance, discounting and separation of the interest effect from risk adjustments were implemented in a similar methodological manner. E. Gschossmann *et al.* (2025) revealed the essence of the issue related to how European initiatives to equalise the tax treatment of debt and equity and introduce a global minimum tax rate change the effective rates and incentive structure for corporate groups. Following the authors, the reduction in the tax advantage of debt financing shifts the optimal mix between loans and capital contributions, increasing the requirements for justifying the marketability of intra-group loans and for transparency of disclosures. This was confirmed by the findings of the study: recommendations on choosing the form of aid based on economic substance, the priority of full disclosures on rates, terms and collateral, and warnings about tax differences were consistent with the practical conclusions of the study.

At the same time, S. Hansen *et al.* (2023) emphasised how the rules for expected credit losses under international financial reporting standards affected the cyclicity of provisions: early recognition of losses mitigated peaks in provisioning during crisis periods, but increased the requirements for the quality of macroeconomic assumptions and procedures for their revision. For financial assistance in the form of loans or guarantees, this directly implied continuous monitoring of credit risk throughout the term of the agreement, a clear distinction between interest income and changes in provisions, and detailed explanations in the notes. The authors' proposed organisation of accounting, internal control and documentation of assumptions was consistent with the logic demonstrated in the study and reinforced the conclusions about the transparency of tax consequences. A study conducted by G. López-Espinosa & F. Penalva (2023) using the Spanish banking system as an example demonstrated the impact of the introduction of international financial reporting standards and the crisis period on lending and regulatory capital. The authors showed that early recognition of expected credit losses changes the dynamics of reserves and interaction with capital buffers, and thus affected the cost of financing and the structure of loan terms. The study's emphasis was consistent with the research conducted in terms of the need for continuous credit risk assessment for preferential and interest-free forms of support, correct discounting and explanation of the sensitivity of estimates in the notes.

In contrast, B. Peeters & L. Vanneste (2020) examined hybrid financial instruments in the context of the OECD's (2015) action plan. The study demonstrated how different tax treatments of the same instrument in different jurisdictions lead to inconsistencies that must

be neutralised by refusing to deduct or include it in income. This analysis fully correlated with the study conducted, where for intra-group loans, guarantees and capital contributions, marketability checks, absence of hybrid effects and completeness of disclosures were proposed in order to minimise tax risks and ensure compliance. O.R. Hoor (2020) highlighted the reverse hybrid mismatch rule as a mechanism for neutralising schemes, where differences in the classification of instruments or entities result in the non-inclusion of income or double deduction of expenses. The study consistently demonstrated that proper structuring of intra-group financial instruments and full disclosure made artificial tax advantages impossible and reduce the risk of adjustments. These conclusions confirmed a direct correlation with the study: the requirement to avoid hybrid effects, describe in detail the rate, term, collateral and links between the parties, and verify the business purpose of transactions, was reflected in practical recommendations and corresponded to the approach proposed by the author.

In the research on the beneficial owner of dividend income, B. Kuźniacki (2025) revealed how the determination of the actual recipient affected the application of international conventions on the avoidance of double taxation and access to reduced tax rates, when paying income abroad. The study emphasised that formal intermediation without economic control does not entitle one to benefits, and proving beneficiary ownership status required comprehensive evidence. The conclusions correlated with the study on intra-group financial transactions, which emphasised transparent documentation of relationships, conditions and business purposes to avoid tax adjustments and ensure predictability of payments. In conclusion, it was worth noting that the effectiveness of financial assistance operations was determined not by their volume, but by the quality of accounting and tax organisation. When assistance was correctly classified (repayable or non-repayable), deferred payments were reflected, incorporating the time value of money, credit risk was assessed continuously, and noted to the financial statements disclose the terms, rates, maturities and sensitivity of estimates, the enterprise obtained transparent financial results without artificial fluctuations. Compliance with requirements for related party transactions, marketability of intra-group instruments, transfer pricing and neutralisation of hybrid mismatches minimised fiscal risks and aligned practices with European rules. Within this framework, financial assistance became a manageable tool for supporting liquidity and capital and strengthens the long-term sustainability of the business without conflicts between accounting and tax dimensions.

Conclusions

The study provided a comprehensive overview of the organisation of accounting and taxation of financial

assistance and proved that the effectiveness of transactions depended on the quality of the accounting and tax architecture. Correct classification of aid, differentiation between prepayments and financial instruments, reflection of the time value of money, and consistent documentation ensured transparent recognition and assessment. The significance of process organisation had been empirically confirmed: effective document flow, clear responsibility, and control of flows reconcile financial and tax data. For repayable aid, discounting and credit risk assessment were key, while for non-repayable aid, correct allocation to income or targeted financing was key. Systemic consequences for taxation manifested themselves in the timely formation of temporary and permanent tax differences resulting from discounting, provisioning and classification of payments. The study determined that intra-group instruments such as interest-free loans, guarantees and capital contributions required justification of marketability, a transparent description of rates, terms, collateral and interrelationships between the parties, as well as verification of the absence of hybrid mismatches. Together, this ensured the predictability of fiscal consequences, consistency of the tax base and reduced the risk of additional charges.

The case study of JSC "Ukrnafta" demonstrated that preferential or interest-free advances, counter-settlement packages and large budget payments can be reliably tracked in financial statements provided that it was correctly classified and fully disclosed. A comparison of the dynamics of profit, taxes and dividends, as well as

operating indicators with accounting decisions, confirmed that high-quality notes (on the nature of instruments, discount rates, sensitivity of estimates and related party transactions) were key to user confidence and the stability of results over time. The conceptual and process model described links the choice of form of assistance to the principles and approaches to recognition, measurement, disclosure and taxation, supplemented by a list of control points for internal audit: from identifying the nature of the instrument to reconciling the income statement, cash flow statement and tax disclosures. The limitations of the study were related to the availability of detailed disclosures in public sources and the diversity of national practices in the interpretation of individual instruments. Further research should focus on validating approaches across a wider range of industries, comparing alternative disclosure policies for preferential loans and grants, modelling the long-term impact on the tax base and equity, and developing standard compliance checklists for intra-group financial transactions in a cross-border context.

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Conflict of Interest

None.

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Операції з фінансовою допомогою: міжнародні стандарти, податкові правила та організація обліку й оподаткування

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Аспірант

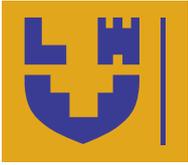
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Анотація. Метою роботи було обґрунтування концептуальних принципів побудови обліку й оподаткування операцій фінансової допомоги з інтеграцією вимог міжнародних і національних стандартів, податкових правил та належних практик розкриття інформації. Методологічну основу становили аналіз норм Податкового та Цивільного кодексів України, нормативних документів національного законодавства, порівняльний огляд національних положень (стандартів) бухгалтерського обліку і міжнародних стандартів (визнання, оцінка, розкриття), контент-аналіз публічної звітності, теоретичне моделювання етапів надання поворотної і безповоротної допомоги. Емпіричні матеріали включали в себе звіти Національного банку України, Всесвітнього банку, Організації економічного співробітництва та розвитку. Отримані результати дозволили класифікувати фінансову допомогу (поворотна/безповоротна; внутрішньогрупова/зовнішня; ринкова/пільгова) як економічну одиницю, встановити послідовність первісного визнання та подальшої оцінки із відображенням вартості грошей у часі, окреслити вимоги до приміток (умови договорів, ставки дисконту, чутливість оцінок, операції з пов'язаними сторонами) і продемонструвати, як виникають та узгоджуються тимчасові й постійні податкові різниці. Досягнуті результати зведено у цілісну прикладну рамку: систематизовано класифікацію фінансової допомоги за матрицею «повернення – винагорода», узгоджено облікові підходи положень (стандартів) бухгалтерського обліку, міжнародних стандартів фінансової звітності із податковими нормами та сформовано алгоритм від ініціації до розкриття, включно з переліком первинних документів. На прикладі Акціонерного товариства «Укрнафта» продемонстровано відтворювану ідентифікацію операцій, узгодження зв'язку «прибуток – податки – дивіденди», типові тимчасові та постійні різниці. Практична цінність дослідження полягає у сформованому переліку контрольних точок для внутрішнього контролю (договірні умови, первинні документи, ринковість внутрішньогрупових інструментів, відстеження руху грошових коштів), а також у прикладних рекомендаціях щодо прозорого розкриття та нейтралізації податкових ризиків, включно з гібридними невідповідностями і трансфертним ціноутворенням

Ключові слова: міжнародні норми; пільгові позики; безповоротна допомога; повернення та винагорода; дивіденди



The extent of credit rating agencies' contribution to revitalising the Iraqi Stock Exchange during the period 2020–2024

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Abstract. The research aimed to highlight the role of credit rating agencies, their contribution to revitalising the Iraqi Stock Exchange, and their importance for financial and international institutions in contexts characterised by the diverse use of high-risk investment tools, weak information flows, and low efficiency. In this research, it had become very difficult to obtain information about what was traded in the financial markets. The study analysed credit rating agencies in order to evaluate, determine, and disclose information in a more transparent, accurate, and objective manner, to attract the largest possible number of investors and provide support to dealers within these markets. The analysis relied on a group of banks that obtained a credit rating and presented a clear comparison between 2020 – before obtaining the credit rating – and the years 2021-2024 – after obtaining the rating. The results indicated that Iraq had suffered from a lack of specialised organisations or bodies that promoted the importance of credit rating at the local and global levels, especially since some banks had fallen under the rating ceiling. The credit rating was issued after obtaining approvals from the Central Bank of Iraq to provide services, including expanding the base of foreign transactions, such as the provision of contractual credits. The largest share of the benefit derived from the rating went to the National Bank of Iraq, followed by the Regional Commercial Bank. The practical value of the study lies in the possibility of adopting its results by decision-makers and policymakers to improve the performance of the Iraqi Stock Exchange. Activating and reinforcing the role of credit rating agencies will contribute to enhancing investor confidence and attracting capital to the Iraqi market

Keywords: creditworthiness; financial confidence; attracting capital; investment; average Q index

Introduction

The importance of this research stemmed from the major developments witnessed by financial markets, their increasing openness, expansion, and speed, the availability of financial capabilities, and their leadership in development-oriented investments. This was due to the strength of the banking sector, which represented a fundamental pillar of the economic and financial system. This had prompted the Central Bank of Iraq to increase the volume of commercial transactions and encourage all banks to enter the world of credit rating and obtain their own ratings from international credit rating agencies. This had also led to increased financial and banking performance rates and ensured that all services and products

provided by banks fall within the specified frameworks in terms of credit risk, in accordance with the international standards adopted in the global banking sector.

Credit rating was an important topic, given its multiple functions, including controlling and determining the creditworthiness and strength of entities covered by the rating cycle, such as securities. It served as an investment guide, providing advice, guidance, and information to many investors in making their investment decisions, thus projecting a positive image that supported the banking sector. Researchers Z. Afik & Yu. Zabolotnyuk (2023) analysed the extent of market activity in relation to the availability of information and its

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effectiveness, as well as how it was affected by regulatory legislation. Scientists noted that they had provided insights and ideas about market policy and the extent of the development of the regulatory structure of markets, which called for enhancing and strengthening efficiency levels in transitional and emerging financial markets. In addition, the researchers showed how announcements related to the classification of debt affect the behaviour of investors, the market, and their wealth. A. Saadaoui *et al.* (2022) presented a study that indicated that the credit rating granted by agencies, whether positive or negative, affects the security according to the method by which the rating was assigned. The study showed that the credit rating was not merely an image that reflected the degree of creditworthiness and strength, but also influenced the behaviour of investors and the real market, which must be taken into account by investors and regulators, when designing investment strategies and financial policy. O. Kowalewski *et al.* (2025) analysed the impact of obtaining the first sovereign credit rating on the development of the financial system in emerging countries. Scientists focused on whether obtaining this rating induces a financial and structural transformation, such as the redistribution of assets, the growth of the bond market, and the flow of capital. This was supported by a study by T.H. Nguyen *et al.* (2023), which analysed the relationship between credit rating downgrades and the risks of price collapses.

Researchers examining private equity securities globally also sought to understand whether the event reduced or increased the likelihood of sudden collapses in stock prices, and found that downgrading the rating contributed to mitigating risks by accelerating the flow of negative information to the markets. S. Lovo *et al.* (2022) conducted a study that sought to understand whether credit rating agency announcements affect information asymmetry and improve liquidity in the bond market. The authors also investigated how these announcements affect price volatility and bid-ask spreads in the over-the-counter bond market. Researchers Y. Huo & B. Gong (2022) demonstrated how corporate credit ratings change dynamically over the company's life cycle and the extent to which this change is affected by the nature of the company (governmental or private) and the rating agency's payment model – whether paid for by companies, beneficiaries, or investors. In addition, corporate credit ratings do not remain constant, but evolve according to their stage, with a consensus that companies with higher ratings are typically those in the growth and maturity stages. K. Krystyniak & V. Staneva (2024) evaluated evidence indicating that credit rating agencies had become more conservative over time, i.e. their rating criteria had become more stringent. In addition, the assumption was made through a new model to determine whether raising the Level of caution in the rating explains the temporal changes in the criteria actually used, or whether other elements, such as the nature

of the market, were responsible for these changes. The study challenged the prevailing belief that ratings had become more conservative in 2014-2024 due to a failure to take into account market changes. Therefore, there was a need to resort to credit rating agencies in order to evaluate information in a more objective manner, attract the largest possible number of investors, and provide support to those operating in these markets.

Materials and Methods

This study covered the period 2020-2024 for the sample banks to measure and analyse the extent of the contribution of credit rating agencies to the Iraqi Stock Exchange, relying on the Average Q method. Five Iraqi private and commercial banks were selected – Gulf Commercial Bank (n.d.), Ashur Bank (n.d.), the Regional Commercial Bank (n.d.), the International Development Bank for Investment and Finance (n.d.), and the National Bank of Iraq (n.d.) – to be the study sample. The selection of these banks was not arbitrary, but was based on a set of scientific and practical criteria, namely diversity in the nature of ownership and services in terms of the size of services and capital, which ensured adequate representation of the Iraqi banking sector and the availability of data for these banks in terms of their commitment to publishing their data and annual reports on their official websites or through the Central Bank of Iraq (n.d.). This facilitated the process of quantitative analysis and comparisons, as well as the market importance of each bank, as each held a strong position in the financial market. The geographical spread of these banks provided the study with greater comprehensiveness, in addition to the balance between long-established and more modern institutions, as some banks were relatively old. This diversity helped to test the age of banks and their experience with the studied indicators. The data received from the selected banks in the study sample were also analysed, and the method of analysis and comparison between the years for each bank separately was applied, comparing performance before 2020 with performance after the banks entered under the credit rating ceiling, according to the years selected in the research. The study also formulated the hypothesis of whether credit rating agencies contributed to revitalising the Iraqi stock market. In order for the study to be more comprehensive, the research recommended that the competent authorities place credit rating agencies under full responsibility, when classifying banks and institutions deserving of this, bringing them under the scope of transparency, integrity, and credibility. This included imposing strict rules on institutions that have obtained a credit rating, given the significant role these institutions play in achieving balance in the financial markets. Average Q was one of the important indicators used to measure the efficiency of an institution and the extent of its ability to rely on its assets to reach the market value for shareholders. When Average Q was greater than 1, this served as a

strong incentive for investment and expansion because the market values the private assets of companies at a higher rate than the cost used. However, if it was less than 1, this indicated significant weakness in levels of confidence and predictions as well (Zalloum, 2013). The replacement cost of assets was used, and due to the difficulty of estimating it, the book value of the assets was relied upon (Yildirim & Efthyvoulou, 2018). This indicator can be calculated using the following equation:

$$\text{Average Q} = (\text{MVE} + \text{BVA} - \text{BVE}) / \text{BTA}, \quad (1)$$

where Average Q – financial institution rating scale; MVE – market value of shares, calculated by multiplying the share price by the number of outstanding shares; BVA – accounting value of the total assets of the institution; BVE – accounting value of shareholders' equity; BTA – book value of total assets. This equation was used to assess whether a company was overvalued or undervalued, as it compared the company's market valuation to its book value.

Results and Discussion

The concept of credit rating agencies and their historical roots

The credit ratings set by international agencies for long-term credit reflected the rating agency's opinion of credit risk for debts with a maturity period of more than one year. There is a set of symbols used by international rating agencies to indicate the Level of long-term credit quality: Level 1: Excellent (Aaa/AAA) – highest credit quality. This rating indicates the lowest expected default risk. It is assigned only in cases where the ability to meet

financial obligations is exceptionally strong and unlikely to be adversely affected by foreseeable events. Level 2: Very Good (Aa/AA) – very high credit quality. This rating represents a strong assessment of solvency, as its holder has a high capacity to meet obligations as they fall due. It is not significantly different from the previous rating. Level 3: Good (A) – high credit quality. This rating expresses a good degree of solvency, as its holder has a high capacity to meet obligations. However, this capacity may be more vulnerable to adverse commercial or economic conditions than is the case for higher ratings. Level 4: Acceptable (Baa/BBB) – good credit quality. This rating indicates satisfactory solvency, but adverse business or economic conditions are likely to weaken this capacity. Level 5: Cautiously Acceptable (Ba/BB) – below-average credit quality. "BB" ratings indicate a high degree of exposure to default risk, particularly in the event of adverse changes in business or economic conditions over time. However, there is business or financial resilience to support the servicing of financial obligations. Level 6: B – poor credit quality. "B" ratings indicate a material risk of default, but a limited margin of safety remains. Financial obligations are currently being met; however, the ability to continue to pay is vulnerable to deterioration in the business and economic environment. Level 7: Caa/CCC – substantial credit risk. This rating is considered marginally acceptable. Level 8: Ca/CC – high credit risk. Level 9: Doubtful Facilities (C) – lowest credit quality. This rating is considered below standard, indicating a high likelihood of default due to financial losses, elevated debt levels, and low activity. Table 1 presented the banks in the research sample, classified by the rating agencies and their respective rating.

Table 1. Banks classified by credit rating agencies

Bank name	Gulf Commercial Bank	Ashur Bank	The Regional Commercial Bank	International Development Bank for Investment and Finance	National Bank of Iraq
2020	CCC+	Caa1	CCC+	B-	B-
2021	-	Caa1	CCC+	B-	Caa1
2022	CCC+	Caa1	CCC+	B-	Caa1
2023	CCC+	Caa1	CCC+	B-	B3
2024	CCC	Caa3	CCC+	B-/BB	BB
Rating agency	Fitch	Moody's	Fitch	Capital intelligence	Capital intelligence

Source: Fitch Ratings (2025)

Credit rating agencies have emerged with multiple concepts. Moody's Ratings (2025) defined the ratings assigned to Moody's global long-term and short-term rating scales as forward-looking opinions of the relative credit risk of financial obligations issued by non-financial corporations, financial institutions, structured and project finance instruments, and public sector entities. Moody's Ratings (2025) defined credit risk as the risk that an entity will fail to meet its contractual financial obligations as they fall due and any estimated financial loss in the event of default or impairment. M. Hartwall & C. Pettersson (2005) also defined credit risk as the rating

agency's assessment of the borrower's future ability and legal obligation to repay the principal and interest due on time. In the same context, and in a broader sense, Fitch Ratings (2025) defined credit ratings as forward-looking opinions about the relative ability of an entity or pledge to meet financial obligations across corporations, sovereign entities, and institutions. "Ratings are an assessment of an issuer's ability to service debt on a timely basis". Thus, the rating informs an investor of the degree of risk or safety associated with investing in a particular security. Definitions of credit ratings extend further. A credit rating is also defined as a

forward-looking opinion by S&P Global (n.d.) about the creditworthiness of an obligor with respect to a particular security, a particular class of securities, or a specific financial programme (including ratings on medium-term note programmes and commercial paper programmes). It takes into account the creditworthiness of guarantors, insurance companies, or other forms of credit enhancement on the security, and the currency in which the security is denominated. S&P Global (n.d.) reflects the global view of a debtor's ability and willingness to meet its financial obligations when due. It may assess conditions such as collateral and subordination that could affect final repayment in the event of default.

The major transformation of the global economy following the end of the Second World War prompted a revival of the so-called intermediaries market, which facilitated various forms of financial transactions. With the opening of markets, which began primarily in Western Europe, North America, Japan, and South Korea, commercial banks and financial institutions, which were increasingly open to diverse financing operations, were forced to resort to what became known as credit rating agencies (Sinclair, 2021). The first credit rating agency, the "Merchants Agency", emerged in New York in 1841. The credit rating market in the United States experienced significant development with the rise of companies operating in the railroad sector and their increasing need to raise funds from investors to finance their expansion projects. In 1909, John Moody established Moody's Investors Service. Poor's Publishing was founded in 1916, Standard & Poor's Financial Services in 1922, and Fitch Ratings in 1924. Standard & Poor's was merged in 1941 (White, 2010). Thus, there are three major credit rating agencies that control more than 90% of the global rating market: Moody's Investors Service, Standard & Poor's Financial Services, and Fitch Ratings. Initially, these agencies provided their services to institutions free of charge, as they relied on advertising for their income. However, this quickly changed, and these agencies began offering their advice in exchange for commissions.

The importance of credit rating agencies became evident starting in 1980, which marked the start of financial liberalisation and the development of financial intermediation. During the 1990s, the role of these agencies became entrenched, coinciding with the spread of financial engineering techniques, most notably securitisation. They also provided advice on how to structure issued securities by identifying different tranches, including the guaranteed tranche (A), the medium-quality tranche (B), the lower-quality tranche (C), and the tranche with the highest risk (D). Credit

ratings granted by rating agencies, particularly for governments and banking financial institutions, were heavily relied upon to predict the occurrence of non-payment risks based on quantitative and qualitative criteria. Capital markets became increasingly sensitive to the credit ratings issued by rating agencies, as these ratings affected the ability of companies and countries to access international capital markets and obtain the required financing (Besedovsky, 2017). The lack of sufficient information to make an investment decision regarding the purchase of issued financial instruments prompted investors to resort to credit ratings to measure the Level of financial risk and the debtor's ability to meet financial obligations. Changing the rating of issued bonds also influenced their prices in stock markets. The main objective of credit rating is to provide information to investors and help them determine the relative probability of losing money on their investments. In other words, a credit rating serves as an indicator of investment risk and a standard that reflects the borrower's ability and willingness to repay the due amount along with the interest owed on the due date (Hartwall & Pettersson, 2005).

Standard & Poor's was one of the most prominent global credit rating agencies. Its offices were located across 23 countries around the world, and it employed approximately 6,300 staff members (S&P Global, n.d.). It began issuing credit ratings in 1922. Standard & Poor's was a financial services company headquartered in the United States. It was a subsidiary of the McGraw-Hill Companies, which published financial research and analysis on stocks and bonds. It also produced general indices for a number of major global stock exchanges, including those in the United States, Australia, Canada, Italy, and India. The history of this agency dates back to 1860, with the publication by H.V. Poor (1860). In his book, the author attempted to compile comprehensive information on the financial and operational status of railroad companies in the United States. Henry Varnum Poor and his son, William Henry, established the Poor Company. Meanwhile, Luther Lee Blake founded Standard Statistical in 1906 to provide financial information on non-railroad companies. Poor and Standard Statistical merged to form Standard & Poor's in 1941. In 1966, the McGraw-Hill Companies acquired Standard & Poor's, which included the financial services sector. Standard & Poor's controlled approximately 40% of the global credit market (Fieberg *et al.*, 2016). Table 2 presented the most important international rating agencies, the ownership of each, the number of employees in each agency, and their respective market shares.

Table 2. Information on major international credit rating agencies

The company	Standard & Poor's	Moody's	Fitch Ratings
Ownership	A unit of McGraw-Hill, Inc., listed on the New York Stock Exchange	Listed on the New York Stock Exchange	A subsidiary of Vimalek

The company	Standard & Poor's	Moody's	Fitch Ratings
Number of employees	9,000	4,000	2,500
Market capture ratio, %	40	40	10-15

Source: based on R.R. Aroul & M. Rodriguez (2024)

So, the three leading international credit rating agencies differ in corporate ownership, operational scale, and global market share, yet all play a central role in shaping the structure and stability of the global financial system.

Objectives, criteria, and criticisms of credit rating agencies

Through their objectives, credit ratings seek to meet investors' needs by enhancing their decision-making ability. Credit ratings also aim to provide reliable information about the ability of economic units, or even governments, to repay principal and interest on loans on time and generate future cash flows. Credit ratings also serve to measure the creditworthiness of an entity, such as a company. They represent an agency's opinion. A rating assesses the underlying credit strength of an issuer and its ability to fully and punctually meet its debt obligations. In the global political economy, credit ratings are intended to reduce inefficient transaction costs and mitigate information asymmetry between borrowers and lenders in financial markets (Matthies, 2013). Credit rating agencies operate on a set of criteria that define and distinguish their impact and effectiveness. Objectivity: credit rating agencies must adhere to accurate and consistent standards, and all ratings must be subject to ongoing review. Prior to approval, a method must be established for rating each market sector. Independence: credit rating agencies must be independent and not subject to pressure from any political or economic entity that might influence the rating process. Transparency: ratings issued by credit rating agencies must be accessible to both local and foreign institutions on equal terms. The methods used in credit ratings must be disclosed, including the default rate and timeframe, the meaning of each rating, and the actual default rates encountered in each rating category. Information sufficiency: credit rating agencies must have adequate information sources to enable them to conduct high-quality credit ratings (Sharma *et al.*, 2022). These sources must also allow for ongoing communication with senior management. Credibility: credibility is partly derived from the consistent application of standards. Furthermore, the reliance on ratings issued by credit rating agencies by parties such as insurance companies, investors, and banks is considered evidence of the credibility of the ratings issued by these agencies. Credit rating agencies have constituted a significant development in financial markets, especially in light of rapid growth. However, they have not been without drawbacks and criticisms. The impact of credit rating agencies became evident through a series

of events, beginning with their failure to assess the risks associated with mortgage-backed securities, which led to the global financial crisis at the end of 2008.

Following the subprime mortgage crisis in the United States, the credit rating industry faced severe criticism when it was revealed that it had systematically inflated the ratings of mortgage-backed securities during 2003-2007. This dealt a severe blow to the credibility of credit rating agencies, as many assets received high credit ratings while their owners incurred losses amounting to hundreds of billions of dollars. Perhaps one of the consequences of this was that these agencies adopted a more stringent stance than before in assessing risks, the most recent of which was the downgrade of the United States' credit rating by Standard & Poor's in August 2011 (Nästegård, 2016). They were accused of having conflicts of interest with debt issuers, who were also their clients and paid them in exchange for rating their debt issues. These agencies have been criticised for contributing to the collapse and bankruptcy of European countries such as Greece and Portugal, while major countries such as France faced the threat of a downgrade, making these institutions key actors in shaping the global economic climate. Rating agencies have received significant criticism since 2008, when they failed to assess the risks associated with subprime mortgage bonds, which led to the financial crisis. Credit rating agencies came under increasing criticism and scepticism following the collapse of Lehman Brothers two days after it was assigned its AAA rating (the safest). No institution had experienced the same economic and political turmoil as the major rating agencies Standard & Poor's, Moody's, and Fitch. These agencies failed to sound the alarm promptly regarding the risks of U.S. mortgages and the derivatives and securities underlying them. R. Gupta (2021) noted that these agencies played a prominent role in the financial collapse and economic repercussions that followed the 2008 financial crisis. The inability of credit rating agencies to assess future risks and the delay in detecting negative trends that some debt issuers were exposed to after the issuance process led to delayed responses to downgrade ratings and contributed to the failure of credit rating agencies and their inability to predict the Asian-Mexican crisis.

Stages and characteristics of financial market development

Financial markets are defined as a system that brings together buyers and sellers of a specific financial asset or type of securities. Investors can buy and sell various

stocks and bonds within this market through operating companies or brokers working in such fields. However, physical presence at the headquarters of the central stock market had become less important due to the growth and development of modern communication methods and the emergence of various communication networks that allow brokerage firms located in different countries to operate outside the market (Rousseau & Wachtel, 2000). R. Zaman *et al.* (2020) referred to markets as a framework through which savings units seeking to invest were brought together with deficit units in need of such funds for reinvestment through specialised groups operating in the market, provided that effective means of communication were in place. The roots of financial markets go back to ancient financial practices, as the emergence and development of financial markets reflected the growing economic conditions and needs in the countries in which they existed. The emergence of markets was not a coincidence, but rather a result of the requirements of commercial and economic development in those countries (Capiou-Huart & Antoine, 2012). The idea of these markets emerged when people began to consider exploiting their savings, and they were aided in this by scientific development and the emergence of companies with financial surpluses, as these companies sought to invest such surpluses through these markets.

The spread of joint-stock companies created a strong movement in dealing in financial instruments, and governments' desire to borrow increased, which encouraged the emergence of stock exchanges. A.K. Al-Dumay (2010) emphasised that dealing in these instruments initially took place informally, on the side of the road in major countries such as France, England, and America, and then dealings settled later in a designated place known as the stock market. In developed and developing countries alike, stock markets have received great attention, and they served as a mirror of the economy in which they exist, due to their important role in mobilising national savings and directing them to investment areas that support the country's national economy, leading to the well-being and benefit of society as a whole (DeFond *et al.*, 2015). Among the oldest stock exchanges established were the Anvers Stock Exchange, Frankfurt, Barcelona, Lyon, the New York Stock Exchange (1993), the Liverpool Stock Exchange (1873), and the New Orleans Stock Exchange (1880). In the Arab world, the Alexandria Stock Exchange (1883) and the Cairo Stock Exchange (1890) were established. A. Nashef & K. Al-Hindi (2000) indicated that the first stock exchange appeared in France in 1824 by royal decree. It was located in Paris at the Brongniart Palace, named after the engineer commissioned by Napoleon to build a palace for the stock exchange. Construction was completed in 1827. In England, stock exchange operations were established in the early nineteenth century in a special building called the Royal Exchange, while in America,

the first stock exchange was established in 1821 on Wall Street, where these transactions took place.

Financial markets have gone through a series of stages, and each stage demonstrated the nature of market transitions based on financiers, investors, and returns. The first stage was characterised by a large number of exchange offices and private banks and a relatively high standard of living, which generated interest among individuals to invest their savings in agricultural, industrial, commercial, and other projects. This led to the expansion of commercial transactions and an increase in the size of these projects, which required large sums of money that individuals could not finance, resulting in significant financial strain. The second stage followed, beginning with the emergence of central banks, which began to supervise commercial banks after the latter enjoyed absolute freedom in the first stage. In the second stage, commercial banks began to carry out their traditional work, namely the discounting of commercial papers and the provision of credit, in accordance with the rules and orders of central banks (Dang *et al.*, 2017). The third stage marked the beginning of the emergence of banks specialising in providing medium- and long-term loans, such as industrial, agricultural, and real estate banks, as well as development and investment banks. These banks began issuing medium and long-term bonds to meet their financial needs and to finance various projects. The central bank also issues treasury bonds, while the fourth stage witnessed the emergence of money markets, during which the movement of securities, commercial papers, and negotiable certificates of deposit increased. This was considered the beginning of the integration of the money market with the financial market. Finally, the fifth stage marked the point of integration of the money markets with the stock markets, and the integration of the financial markets with the international markets due to the development of various means of communication. At this stage, stock markets began to facilitate the purchase and sale of long-term securities and forward operations (Zhang & Nam, 2016).

Financial markets were based on a set of interconnected characteristics that reflected the nature, impact, and effectiveness of the market. This was achieved through operational efficiency, defined as the financial market's ability to transfer resources and funds to those who need them at a lower cost than conventional transaction costs, such as the cost of transferring securities and the cost of financial intermediation. Therefore, the success of this market depended on reducing such costs, as well as allocating resources efficiently. The primary mission of the financial market was to channel surplus funds from those who possessed a surplus to those who required them. One of the conditions for this was that it must be carried out efficiently, which was not an easy task. Furthermore, it was necessary to provide liquidity, as it was common for shares to be without a maturity date, but shareholders were able to return them

to the issuing company (Yaremko & Dumych, 2024). This was also the case for bonds, despite their different maturity dates. Therefore, the market was considered the only refuge for investors, enabling them to sell securities and convert them into cash. It provided information and responded immediately to new events, as the market was a very important source of information about the investments that were being traded, especially the volume, price, and trading movement. Its work was not limited to providing information, but it was also required to respond quickly to events and changes because these affected the stock price.

Contributions of credit rating agencies to stimulating the Iraqi stock market

The Iraqi stock market officially commenced operations on 24 June 2004, replacing the Baghdad Stock Exchange. It was a self-financed public benefit institution managed by the Board of Governors, which represented the various economic sectors of the investment environment in the country. Pursuant to Article (6) of Section (5) of Law (74), the Iraq Stock Exchange authorised the work of brokers accredited and licensed by the dissolved Baghdad Stock Exchange, including those who were brokers on 19 March 2003 (Coalition Provisional Authority Order No. 74..., 2004). The number of brokerage companies and offices reached 51, including 29 limited brokerage companies and 22 banks, of which 5 were government banks and 17 non-government banks. Shares of Iraqi joint-stock companies that were listed on the Baghdad Stock Exchange and met all the listing requirements specified in the Market Law, as well as new joint-stock companies that were not listed, were accepted for trading on the stock market (Hussein & Hussein, 2024). The Exchange aimed to develop the financial market in Iraq to serve the national economy and assist companies in building capital, to organise and train market members and listed companies, while protecting investors and enhancing investor confidence in the market. It also aimed to organise and simplify securities transactions in a fair, effective, and regular manner, including clearing and settlement processes for these transactions, as well as to promote the interests of investors in a free, safe, effective, competitive, and transparent market. It regulated the transactions of its members in everything related to buying and selling securities, and determined the rights and obligations of the parties and means of protecting their interests. It also educated Iraqi and non-Iraqi investors about investment opportunities in the market, communicated with markets in the Arab world and global markets with the aim of developing the market, and finally collected, analysed, and published the statistics and information necessary to achieve the objectives stipulated in the bylaws (Endri *et al.*, 2021).

G.E. Pinches & J.C. Singleton (1978) were among the first to investigate the impact of credit rating changes on stock prices. Using a sample of Moody's bond credit

ratings from 1950 to 1972 and their monthly abnormal returns, the researchers attempted to determine the impact of an announcement. They found that as bond credit ratings declined, abnormal returns on stock prices either increased or decreased, depending on the context. P.A. Griffin & A.Z. Sanvicente (1982) examined the impact of credit rating announcements for both Moody's and Standard & Poor's and concluded that bond rating downgrades had a significant impact on stock prices before and after the announcement. However, the effects of rating downgrades were insignificant for the period following the announcement, but were significant for the months preceding the announcement (Gupta, 2021). This pattern reflected a stronger market reaction to rating downgrades than to upgrades, as downgrades had an empirically significant effect on stock prices in most studies on the subject, unlike rating upgrades, which had no effect in most studies. This meant that downgrades contained valuable information, whereas upgrades did not (Matthies, 2013).

The scores assigned by credit rating agencies to bonds represented collective information about issuers, borrowers, and the economic conditions in which they operated. This information helped investors and financial intermediaries make investment decisions in financial securities and facilitated the work of financial market authorities and other market participants. From the perspective of issuers, credit ratings played an important role in increasing their ability to raise capital, as they had a direct impact on the conditions imposed on rated issuers. They also played an important role for companies wishing to assess the quality of loans to counterparties in financial or commercial transactions. Credit ratings were extremely useful to issuers and were sometimes essential for financing their activities in local and international markets. For example, enhancements to reputation and brand image were facilitated by credit ratings issued by agencies, which were widely disseminated in the specialised press and on television. In addition to increasing access to capital markets, credit ratings expanded the scope of investors interested in a company. Some market experts noted that credit ratings were a passport to capital access, enabling issuers to access more capital internationally, allowing for diversification of funding sources and reducing reliance on narrow markets.

When researching data on the Iraqi stock market, it was noted that 2024 recorded the highest closing price per share for the Gulf Commercial Bank, at 0.30, compared to 2020, when the price per share was 0.14 for the same bank. This was the last price before the bank obtained a credit rating from international agencies. As for Ashur Bank (n.d.), the closing prices per share were highest in 2020 and 2021, compared to the remaining years in the research sample, and this was both before and after the bank came under the credit rating framework. In the same context, it was found that the

Regional Commercial Bank (n.d.) maintained the same closing price Level in 2020, which was before the bank obtained a credit rating, followed by increases during 2022-2024. It was also observed that the International Development Bank for Investment and Finance had the highest closing price in 2021, during the period in which the bank obtained a credit rating, at 0.89; however, this price did not remain at the same level. The price entered a phase of fluctuation, and in 2022, a significant decrease was recorded, with the closing price falling to 0.05, followed by a notable improvement in 2023 and 2024, when it reached 0.17. It was also observed that the clos-

ing price of one share of the National Bank of Iraq (n.d.) was the highest compared to the rest of the years and the rest of the banks, recording the highest price of 3.21 in 2024, while the lowest closing price for the same bank was recorded in 2020, at 0.92, before the bank obtained a credit rating from the agencies. Table 3 shows that the Average Q index recorded its highest value, 0.9289, in 2021, due to the Regional Commercial Bank, while the lowest value for the same indicator was 0.4895, recorded by the Gulf Commercial Bank in 2023. This can be seen in Table 3, which presents commercial banks with a credit rating according to the Average Q index.

Table 3. Commercial banks with a credit rating according to the Average Q index

Banks	Years	Closing price, IQD	Number of shares	Total market value	Total assets	Total liabilities	Average Q value, %
Gulf Commercial Bank	2020	0.14	499,038,487.30	698,653,882.2	510,798,283.63	203,626,171.80	0.5354
	2021	0.15	201,205,717.17	301,808,575.8	538,490,755.39	234,164,978.56	0.4909
	2022	0.16	212,652,148.91	340,243,438.3	553,057,328.64	244,416,465.63	0.5034
	2023	0.18	161,782,469.52	291,208,445.1	572,648,573.13	251,192,346.01	0.4895
	2024	0.30	192,770,309.41	578,310,928.2	567,300,300.14	233,982,457.32	0.5143
Ashur Bank	2020	1	250,000,000.00	250,000,000.00	475,519,025.00	201,955,349.00	0.9504
	2021	1	250,000,000.00	250,000,000.00	613,502,839.00	332,130,921.00	0.9488
	2022	0.28	250,000,000.00	700,000,000.00	779,419,575.00	485,090,691.00	1.5204
	2023	0.27	250,000,000.00	675,000,000.00	757,756,437.00	450,918,079.00	1.4858
	2024	0.29	250,000,000.00	725,000,000.00	269,691,943.70	143,220,634.40	3.2193
The Regional Commercial Bank	2020	1	250,000,000.00	250,000,000.00	644,518,584.20	346,096,823.47	0.9248
	2021	1	250,000,000.00	250,000,000.00	807,038,837.65	499,709,370.35	0.9289
	2022	1	250,000,000.00	250,000,000.00	112,864,934.30	810,798,117.94	9.3988
	2023	1	300,000,000.00	300,000,000.00	100,104,685.46	641,555,006.68	1.4057
	2024	1	350,000,000.00	350,000,000.00	952,991,382.83	541,627,916.71	0.9356
International Development Bank for Investment and Finance	2020	0.81	250,000,000.00	202,500,000.00	106,974,529.50	787,250,695.00	9.2522
	2021	0.89	250,000,000.00	222,500,000.00	150,785,537.60	120,912,141.70	2.2774
	2022	0.05	250,000,000.00	125,000,000.00	179,895,216.30	148,746,928.90	1.5217
	2023	0.17	300,000,000.00	510,000,000.00	256,869,469.80	220,443,139.50	2.8436
	2024	0.17	400,000,000.00	680,000,000.00	296,610,922.80	242,353,771.00	3.1096
National Bank of Iraq	2020	0.92	250,000,000.00	230,000,000.00	893,205,652.00	585,910,726.00	0.9134
	2021	1.23	250,000,000.00	307,500,000.00	182,134,184.00	150,547,969.10	2.5148
	2022	1.23	270,000,000.00	332,100,000.00	241,608,878.00	208,292,189.40	2.2366
	2023	1	300,000,000.00	300,000,000.00	398,298,486.30	347,789,470.30	1.6263
	2024	3.21	400,000,000.00	128,400,000.00	514,423,292.20	444,672,798.90	1.1140

Source: Iraqi Securities Commission (n.d.)

The change rates fluctuated among the banks that obtained a rating between 2020 and 2021, as the goal was to determine the market value of the bank before and after obtaining the credit rating. Based on the ratios, it was found that the highest change rate of Average Q was achieved by the National Bank of Iraq, at 175.323%, which was highly favourable for raising the bank's competitive and economic value. The lowest change rate was recorded by the International Development Bank for Investment and Finance (n.d.), amounting to -75.3853%. The Gulf Commercial Bank achieved an change rate of Average Q in 2020 of 0.5354, but this rate decreased in 2021, resulting in a significant decline of -8.3115%. This was due to the decrease in the volume of revenues arising from the slowdown in economic activity caused by

the spread of the coronavirus pandemic in 2020-2021, which led to the deterioration of the bank's conditions and increased its financial distress. As for Ashur Bank, it was found that the Average Q index reached 0.9504 in 2020, followed by a slight decrease in 2021, when it reached 0.9488. This decrease was due to the very weak stock trading price compared to the rest of the banks, which resulted in a decrease in the change rate between the two years, amounting to -0.1683%.

It was noted that the Regional Commercial Bank was in a period of recovery and relative improvement compared to other banks, as the Average Q index in 2020 reached 0.9248, and in 2021 it reached 0.9289, followed by an increase of 0.4433%. This was due to the increase in the size of assets, which led to an in-

crease in the economic and market value of the bank despite the stability of traded share prices, in addition to prudently assessed lending decisions during those years. This was also supported by the large number of customers and the increase in deposit volumes. Meanwhile, it was found that the International Development Bank for Investment and Finance witnessed a decrease in the Average Q index, as it recorded 9.2522 in 2020 and 2.2774 in 2021. This decrease resulted in a substantial decline in the two-year change rate, amounting to -75.3853%, which may be attributed to fluctuations in securities prices, affecting the bank's reputation and

standing, as well as the decrease in asset size in 2021 compared to 2020. Also, it was observed that the National Bank of Iraq achieved 0.9134 in 2020 compared to 2021, when it recorded an increase in the index value to 2.5148, corresponding to an increase in the percentage change of 175.323%. This result indicated an improvement in the bank's market value, a rise in stock trading, and the bank's recovery from the COVID-19 pandemic, which spread in 2020. In addition, the increase in banking liquidity resulting from the substantial growth in deposit volumes enabled the bank to expand its credit base (Table 4).

Table 4. Comparison of the change rates of the Average Q index for commercial banks with a credit rating, 2020-2021

Bank name	2020	2021	Rate of change, %
Gulf Commercial Bank	0.5354	0.4909	-8.3115
Ashur Bank	0.9504	0.9488	-0.1683
The Regional Commercial Bank	0.9248	0.9289	0.4433
International Development Bank for Investment and Finance	9.2522	2.2774	-75.3853
National Bank of Iraq	0.9134	2.5148	175.323

Source: Iraqi Securities Commission (n.d.)

National Bank of Iraq achieved the highest percentage change in the Average Q index, while the lowest percentage was recorded by the International Development Bank for Investment and Finance at -83.5531%, a figure that negatively affected its market value. It was also noted that Gulf Commercial Bank experienced a significant decline in 2022, with its Average Q index falling to 0.5034, compared to 0.5354 in 2020. The decline was attributed to reduced market activity and weak trading volumes. Despite asset instability and growth, the change rate decreased by -5.9768%. However, this decline did not apply to Ashur Bank. The bank maintained a strong market value, with its Average Q index reaching 0.9504 in 2020. Trading volume increased in 2022, resulting in a change rate of 59.9747%. This was driven by growth in banking activity, particularly in credit and deposits, due to the bank's effective utilisation of available resources, which positively influenced its market value. In the same

context, it was found that the Regional Commercial Bank also benefited from operating under the credit rating ceiling, as its market value increased slightly. Compared to Ashur Bank, stock trading remained stable, yet changes in asset size played a major role in this improvement, amounting to 51.2543%. In 2020, the Average Q index of the International Development Bank for Investment and Finance reached 9.2522, a strong result relative to the other banks. However, this increase did not continue, and the index fell to 1.5217 in 2022. Consequently, this bank recorded the lowest change rate among all banks. As for the National Bank of Iraq, it was found that the bank's change rate between 2020 and 2022 was strong and the highest among the banks, amounting to 144.8653%. This was attributed to technological modernisation and the adoption of electronic governance, which facilitated exchange transactions, increased liquidity, and expanded the banking and credit base (Table 5).

Table 5. Comparison of the change rates of the Average Q index for commercial banks with a credit rating, 2020-2022

Bank name	2020	2021	Rate of change, %
Gulf Commercial Bank	0.5354	0.5034	-5.9768
Ashur Bank	0.9504	1.5204	59.9747
The Regional Commercial Bank	0.9248	1.3988	51.2543
International Development Bank for Investment and Finance	9.2522	1.5217	-83.5531
National Bank of Iraq	0.9134	2.2366	144.8653

Source: Iraqi Securities Commission (n.d.)

The National Bank of Iraq had the largest share in 2023 in terms of the percentage change in the Average Q index, recording an increase of 78.04905%, which indicated financial resilience and growth in its market value. In contrast, the lowest percentage for the same index was recorded by the International Development Bank for Investment and Finance. This resulted from a

substantial decline in 2023 compared with 2020, the period prior to the bank's receipt of a credit rating, meaning that its value fell to -69.2657%. This decline may have been driven by a marked reduction in trading volume, which diminished market interest in the bank's position. In addition, instability in the Iraqi market discouraged customers from increasing their engagement with the

bank and depositing funds. It was found that in 2020, the Average Q index of Gulf Commercial Bank (n.d.) was high, but it decreased by 2023, which was considered an unfavourable indicator of the bank's market value. The difference in the decline between 2020 and 2023 amounted to -8.57303%, which may be explained by the strict measures imposed by the Central Bank of Iraq (n.d.) regarding dollar transactions. These restrictions removed the bank from currency auctions and forced it to rely on alternative funding sources and deposits of varied and unstable origin. It was also found that Ashur Bank and the Regional Commercial Bank experienced a period of

improvement and significant share trading. It was noted that the Average Q index increased, along with a positive rise in their market value, possibly due to capital growth in 2023, which enhanced the banks' financial standing and increased their credit activity. Furthermore, inflation fell to 3.4% from 7%, encouraging investors to expand their investment and borrowing activity. This stimulated deposit growth, supported by the entry of foreign investors and the expansion of foreign investment portfolios within the country and the banks. In addition to the profits achieved by Ashur Bank, which reached 630 billion IQD in 2023 compared with 2020 (Table 6).

Table 6. Comparison of the change rates of the Average Q index for commercial banks with a credit rating, 2020-2023

Bank name	2020	2023	Rate of change, %
Gulf Commercial Bank	0.5354	0.4895	-8.57303
Ashur Bank	0.9504	1.4858	56.33418
The Regional Commercial Bank	0.9248	1.4057	52.00043
International Development Bank for Investment and Finance	9.2522	2.8436	-69.2657
National Bank of Iraq	0.9134	1.6263	78.04905

Source: Iraqi Securities Commission (n.d.)

Ashur Bank achieved a change rate in the Average Q index of 238.7311%, the highest among all banks relative to 2020, a Level that approached 200%, and this represented a strong opportunity for investors. This improvement was driven by the bank's recovery from the period of market and economic contraction experienced in 2022, which increased credit and deposit

levels and strengthened exchange liquidity. Moreover, the decline in the inflation rate in 2024, which fell to 4% from 6% in 2023, served as a significant incentive for supporting purchasing power and enhancing economic and monetary stability after interest rates were increased to 7%, thereby strengthening the culture of banking activity (Table 7).

Table 7. Comparison of the change rates of the Average Q index for commercial banks with a credit rating, 2020-2024

Bank name	2020	2024	Rate of change, %
Gulf Commercial Bank	0.5354	0.5143	-3.94098
Ashur Bank	0.9504	3.2193	238.7311
The Regional Commercial Bank	0.9248	0.9356	1.16782
International Development Bank for Investment and Finance	9.2522	3.1096	-66.3907
National Bank of Iraq	0.9134	1.1140	21.9619

Source: Iraqi Securities Commission (n.d.)

The Average Q index continued to decline in 2024, with the percentage decrease reaching -66.3907%. According to annual reports, this was due to the weakening volume of loans provided by the bank, which had reached a doubtful stage, leading to government delays in paying dues and consequently reducing asset volume. In contrast, the National Bank of Iraq recorded the highest percentage change among the banks in 2024, followed by the Regional Commercial Bank, with an increase of 1.16782%, which represented a favourable outcome for the bank. Overall, the analysis showed that Iraqi commercial banks experienced varying degrees of growth and decline throughout 2020-2024. Some banks demonstrated strong financial recovery and improved market performance, reflecting increased investor confidence and greater stability in the banking sector. Others, however, faced challenges associated with market instability, regulatory restrictions, and reduced trading

activity, which negatively affected their value. These trends highlighted the uneven development of the banking industry amid evolving economic and monetary conditions in Iraq.

Conclusions

The study revealed an improvement in the performance of Iraqi banks and other institutions that received credit ratings from international agencies. While these ratings were not optimal, they were acceptable and consistent with the research hypothesis, reflecting positive, albeit limited, progress. Most of the rated banks in the sample was not achieve a rating above 1.0, which was a weak indicator of their financial performance and market value. This finding was reinforced by the decline in trading volumes of bank shares during 2020-2024, both before and after the ratings were issued. The study highlighted that investor awareness of the rating process was

limited and that the rated banks themselves did not disclose sufficient information regarding the significance of their credit ratings. This lack of transparency diminished the potential benefits of obtaining a rating. The results showed that the comparison percentage between 2020 and 2021, before and after the banks were classified, varied considerably. The National Bank of Iraq experienced the greatest change between the two years, reaching 175.323%, the highest percentage among the banks in the study sample. The National Bank of Iraq maintained this upward trend, with its comparison percentage between 2020 and 2022 reaching 144.8653%. The change rates for the average credit quality of banks with a credit rating also showed that in 2023, the National Bank of Iraq benefited the most from the rating, at 78.04905%, compared with the period before the banks were classified under the credit rating ceiling. In 2024, Ashur Bank had the highest share of the change percentage, at 238.7311%, indicating that the contribution of rating agencies clearly enhanced credibility and

performance. These results underscored the urgent need to strengthen financial literacy, promote disclosure practices, and establish specialised organisations in Iraq to raise awareness of the importance of credit ratings at both the national and international levels. Future research should focus on assessing the long-term impact of credit ratings on bank performance, investor behaviour, and market efficiency, as well as exploring regulatory frameworks that would encourage wider adoption and more transparent use of credit ratings in emerging economies.

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Conflict of Interest

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Ступінь внеску кредитних рейтингових агентств у процес активізації діяльності Іракської фондової біржі у 2020–2024 роках

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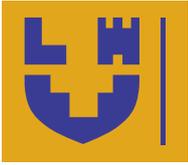
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Анотація. Метою дослідження було висвітлення ролі кредитних рейтингових агентств, їхнього внеску в активізацію діяльності Іракської фондової біржі, а також визначення їх значення для фінансових і міжнародних інституцій в умовах широкого використання високоризикових інвестиційних інструментів, обмеженості інформаційних потоків і низького рівня ефективності ринку. У сучасних умовах істотно ускладнилося отримання достовірної інформації щодо операцій, що здійснюються на фінансових ринках. У межах дослідження проаналізовано діяльність кредитних рейтингових агентств з метою оцінювання, визначення та розкриття інформації у більш прозорий, точний і об'єктивний спосіб, що сприяло залученню максимальної кількості інвесторів і наданню інформаційної підтримки учасникам ринку. Аналітична база дослідження ґрунтувалася на вибірці банків, які отримали кредитний рейтинг, та передбачала порівняльний аналіз показників за 2020 рік – до присвоєння рейтингу – і за 2021-2024 роки – після його отримання. Результати дослідження засвідчили, що в Іраку тривалий час відчувався дефіцит спеціалізованих організацій та інституцій, покликаних популяризувати значення кредитного рейтингування на національному й міжнародному рівнях, зокрема з огляду на те, що окремі банки опинилися в межах рейтингової «стелі». Присвоєння кредитного рейтингу здійснювалося після отримання відповідних дозволів Центрального банку Іраку на надання фінансових послуг, зокрема щодо розширення обсягу зовнішньоекономічних операцій шляхом надання контрактних кредитів. Найбільший економічний ефект від отримання кредитного рейтингу зафіксовано у Національного банку Іраку, другим за рівнем вигод став Регіональний комерційний банк. Практична цінність дослідження полягає у можливості використання його результатів органами державного управління та розробниками економічної політики з метою підвищення ефективності функціонування Іракської фондової біржі. Активізація та посилення ролі кредитних рейтингових агентств сприятиме зростанню довіри інвесторів і залученню капіталу на іракський фінансовий ринок

Ключові слова: кредитоспроможність; фінансова довіра; залучення капіталу; інвестиції; середній індекс Q



Cost management strategy under conditions of inflation and currency risks at Kyrgyz enterprises

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Abstract. The aim of the study was to identify effective methods of cost management under conditions of inflation and currency risks in order to increase the sustainability and competitiveness of Kyrgyz enterprises. The study used theoretical analysis and case analysis methods to assess the effectiveness of cost management tools and develop practical recommendations for improving the financial sustainability of enterprises. The study identified key factors affecting the cost structure of Kyrgyz enterprises in conditions of inflation and exchange rate fluctuations. The analysis showed that the most vulnerable items of expenditure were imported purchases, energy resources, logistics and employee salaries. The study showed that the use of modern management accounting methods, such as activity-based costing, standard costing, rolling forecasting and cost analysis, allowed for accurate control of expenses and allocation of resources. Scenario planning and digitalisation of processes using enterprise resource planning systems and analytical business tools ensured a timely response to changes in exchange rates and inflation levels. An analysis of practical examples from Kyrgyz enterprises has shown the successful use of various cost management methods, such as localisation of procurement, currency risk insurance, inventory optimisation and long-term contracts. Technodom reduced costs by 6.5%, increased profitability by 4.8% and improved process efficiency by 5.2%. Limited Liability Company "Stroy Invest Service" achieved an 8.0% reduction in costs, a 12.0% increase in profitability and a 7.5% improvement in process efficiency. "Kant Sut" LLC reduced costs by 5.2%, increased profitability by 3.6%, reduced inventory by 10.0% and increased process efficiency by 6.0%. Asia Transit Logistic Company reduced costs by 7.0%, increased profitability by 5.0% and improved process efficiency by 15.0%. The introduction of a management control system and regular analysis of deviations contributed to more effective cost management. As a result, the study confirmed that the comprehensive cost management strategy applied in such companies significantly increases the resilience of enterprises to external economic risks and ensures stable business development

Keywords: profitability; localisation; digitalisation; controlling; scenario planning; optimisation

Introduction

Modern enterprises in Kyrgyzstan operate under conditions of high economic instability caused by inflation, fluctuations in the national currency exchange rate, and rising costs of imported resources. These factors directly affected production costs, company profitability, and competitiveness in domestic and foreign markets, making the search for effective approaches to cost reduction

and financial risk management particularly relevant. The research problem lies in the fact that traditional methods of planning and controlling expenses, based on static budgets and simple cost accounting, no longer enable enterprises to respond promptly to changes in the external economic environment. This was especially evident in companies dependent on imported supplies

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and energy resources, where changes in exchange rates and raw material prices led to increased costs. Under such conditions, it became necessary to develop adaptive cost management methods that took into account inflationary processes, currency risks, and the potential of digitalisation in management accounting.

C. Amanbaeva *et al.* (2024) noted that adaptive budgeting enabled enterprises to adjust expenditures in a timely manner in response to exchange rate fluctuations and inflation. The application of such methods ensured a more stable financial position for companies under conditions of instability. X. Teng *et al.* (2022) emphasised that the use of digital tools increased the accuracy of cost forecasting and reduced financial risks. The implementation of enterprise resource planning (ERP) systems and analytical platforms contributed to more rapid managerial decision-making. K. Georgiadis *et al.* (2022) argued that the introduction of analytical platforms made it possible to monitor key cost indicators promptly and improved the controllability of business processes. Digitalisation reduced errors in cost accounting and accelerated the analysis of financial data. K. Goldschmidt *et al.* (2020) pointed to the importance of localising supplies in order to reduce dependence on imports and minimise the impact of currency fluctuations. The development of regional partnerships enhanced supply stability and reduced the risk of production disruptions. L. Guinness *et al.* (2022) noted that resource diversification contributed to enterprise resilience to external economic shocks. Distributing supplies among multiple suppliers helped to minimise potential disruptions in production processes.

F.O. Tavares *et al.* (2023) showed that the application of value analysis and activity-based costing made it possible to optimise production costs and increase profitability. This approach helped to identify inefficient processes and reduce excessive expenditures. M.M. Weber *et al.* (2024) argued that scenario planning and modelling of various economic conditions helped to assess financial consequences in advance and develop measures to mitigate them. This ensured that enterprises were better prepared for potential adverse market changes. B.-C. Egbide *et al.* (2022) confirmed that the implementation of a management control system and regular monitoring of key indicators contributed to business sustainability. Such an approach allowed deviations to be identified in a timely manner and resource expenditure strategies to be adjusted accordingly. A. Ali *et al.* (2023) drew attention to the fact that integrating control methods with employee motivation systems increased the efficiency of resource use. Employee involvement in cost management processes contributed to higher overall productivity and reduced losses. A. Kadyraliev *et al.* (2024) believed that the combination of digitalisation, strategic planning, and localisation of supplies ensured comprehensive cost reduction and strengthened the competitive position of enterprises. The application of

this approach enabled companies to adapt more quickly to changing economic conditions.

The results of these studies showed that adaptive budgeting, process digitalisation, localisation of supplies, and scenario planning contributed to cost reduction, increased profitability, and enhanced enterprise resilience under conditions of inflation and currency instability. At the same time, gaps remain in assessing the long-term impact of integrating these methods on innovative development, the effectiveness of human resource management, and enterprise resilience to large-scale economic crises. The aim of the study was to examine approaches to cost optimisation and financial risk management aimed at strengthening stability and improving the economic efficiency of Kyrgyz enterprises under conditions of inflation and an unstable exchange rate. The objectives of the study were: 1) to analyse existing approaches to cost control and optimisation at Kyrgyz enterprises under conditions of inflation and exchange rate fluctuations; 2) to examine mechanisms for enhancing financial sustainability through process digitalisation, localisation of procurement, and the implementation of management control; 3) to assess the potential for reducing financial risks and improving economic efficiency through scenario planning, value analysis, and resource diversification.

Materials and Methods

The study involved comprehensive research into the theoretical foundations and practical approaches to cost management in conditions of inflation and exchange rate fluctuations in Kyrgyzstan. Modern methods of management accounting and controlling were analysed, including Activity-Based Costing (ABC), Standard Costing, Value Engineering, scenario planning, and dynamic methods such as rolling forecasts. The aim of this stage was to identify tools that could be used to improve financial stability and cost management at Kyrgyz enterprises, as well as to identify opportunities for the introduction of digital technologies such as ERP systems and analytical platforms. Adaptive budgeting methods allowed for regular adjustments to plans and forecasts depending on changes in the macroeconomic environment and exchange rate fluctuations. The study developed a step-by-step cost management strategy. It analysed expenditure diagnostics, classified costs as fixed, variable and currency-dependent, and analysed contractual obligations to identify the items most sensitive to inflation and currency fluctuations. Planning scenarios were developed – baseline, stress and optimistic – to prepare companies for different economic conditions. Response measures were considered, including localisation of procurement, long-term contracts, currency risk hedging and just-in-time inventory optimisation. The use of digital tools for visualising indicators and automating accounting in ERP systems was also studied, and the controlling system was analysed as a basis for supporting management decisions.

Specific enterprises were selected for the analysis of the practical application of cost management methods, allowing for a clear demonstration of different approaches to cost control and minimisation of financial risks. The trading company Technodom (n.d.) examined methods of managing import purchases and the implementation of business intelligence (BI) systems for monitoring currency risks. The construction company Limited Liability Company "Stroy Invest Service" (n.d.), approaches to localising cement and metal purchases and the implementation of scenario-based budget planning were analysed. The manufacturing enterprise "Kant Sut" LLC (n.d.) was studied in terms of the use of rolling forecasting to adjust raw material purchases and manage production costs. The logistics company Asia Transit Logistic Company (n.d.) examined methods of route optimisation and supplier diversification to reduce transport costs and the impact of fuel price fluctuations. These companies were selected for the study because they represent different sectors of the Kyrgyz economy and demonstrate diverse approaches to cost management and financial risk reduction in conditions of inflation and exchange rate fluctuations. Also, the study included the development of recommendations for the implementation of a comprehensive cost management strategy aimed at improving budgeting adaptability, integrating digital tools, localising procurement and diversifying suppliers. Measures were considered to create a management control system with regular monitoring of deviations, setting expenditure limits and performance indicators for departments. Approaches to staff motivation and employee involvement in cost control processes were studied to improve the efficiency of resource use.

Results

Modern economic realities require enterprises to demonstrate a high degree of flexibility and the ability to adapt to changes in the external environment. Under conditions of instability, where inflationary processes and exchange rate fluctuations directly affect production costs and financial performance, effective cost management becomes one of the key factors for business survival. Global practice has accumulated substantial experience in this area, developing a range of management accounting and controlling tools that help companies make informed decisions and maintain resilience even during periods of crisis. The Activity-Based Costing method was one of the most accurate management accounting tools, as it made it possible to identify, which specific business processes generated the highest costs. It was based on the allocation of costs by activities, allowing resource-intensive operations to be identified and their efficiency to be assessed. The application of ABC costing contributed to a more objective distribution of costs across departments and products, enables adjustments to the cost structure, and supported process optimisation, particularly in organisations

with complex structures and multiple cost centres. In addition, the method made it possible to assess the cost of individual processes and to make decisions on resource reallocation in order to improve economic efficiency (Yu *et al.*, 2025).

Standard Costing was used to establish cost norms and standards for production, service provision, or the performance of specific operations. This method involved continuous comparison of planned indicators with actual results, creating a basis for variance analysis. Based on identified deviations, management can make decisions aimed at reducing costs, increasing productivity, and improving expense control. Standard costing ensured transparency of financial processes and contributed to the systematisation of cost accounting (Hung & Shanmugam, 2023). Dynamic methods such as rolling forecasting allowed budgets to be regularly revised in line with current changes in macroeconomic conditions. Unlike static planning, rolling forecasts enabled prompt adjustments, when exchange rates, inflation levels, or demand fluctuate. This approach increased managerial flexibility, prevented budgets from becoming outdated, and supported timely decisions on resource reallocation and cost optimisation (Msiza *et al.*, 2022).

Value Engineering, or value analysis, was aimed at identifying opportunities to reduce production costs without compromising product quality. The method involved analysing design, technological, and organisational aspects of production in order to optimise costs. It promoted the adoption of innovative solutions, reduced expenses, and enhanced company competitiveness by maintaining a balance between cost and product quality (Rush & Roy, 2023). Scenario planning was used to model different development paths, ranging from optimistic to stress scenarios. It enabled the assessment of potential consequences of external and internal factors such as changes in raw material prices, exchange rate fluctuations, or rising inflation. This method was particularly significant for economies with a high degree of instability, including Kyrgyzstan, as even minor changes in external conditions can have a substantial impact on enterprise financial performance. Scenario planning supported the preparation of corrective measures and increased business resilience to uncertainty (Mortlock & Osiyevskyy, 2023).

For Kyrgyz companies, a key priority was the integration of these methods with modern digital solutions, including ERP systems, BI analytics, and cloud services. These technologies made it possible not only to collect and analyse data in real time, but also to visualise financial flows, forecast cost changes, and automate management processes. Such a combination of classical management accounting tools with digital technologies forms the basis of an adaptive and resilient cost management system capable of operating effectively even under conditions of high economic uncertainty. Effective cost management under conditions of economic

instability required a systematic and phased approach that allowed not only for expense control but also for flexible responses to changes in the external environment. The development of a cost management strategy was carried out step by step, combining a set of methods

and instruments that ensured a structured approach to expense control and business adaptation to changing economic conditions. This approach ensured a balance between operational management and long-term business sustainability (Fig. 1).



Figure 1. Cost management strategy: A step-by-step approach

Source: based on E.-J. Goode *et al.* (2021), A. Vivek & C.H.H. Rao (2022), P. Beusch *et al.* (2022), K. Cordova-Pozo & E.A.J.A. Rouwette (2023), D. Arkhipova *et al.* (2024)

Cost diagnostics represented a systematic examination of an enterprise's cost structure with the aim of identifying the factors that exerted the greatest influence on the cost of products or services. The classification of costs into fixed, variable, and currency-dependent categories made it possible to analyse their behaviour under changing macroeconomic conditions. Particular attention was paid to expense items exposed to external risks, including fuel, energy resources, and imported raw materials. An analysis of contractual obligations and delivery terms allowed the degree of an enterprise's dependence on exchange rate fluctuations and external suppliers to be determined. The outcome was the formation of an analytical

base required for subsequent strategic planning and for improving the effectiveness of cost management (Vivek & Rao, 2022). The scenario modelling method made it possible to assess potential financial and economic consequences arising from changes in key macroeconomic factors and to plan corrective measures for cost management. Within the framework of the study, three scenarios were applied: baseline, stress, and optimistic, reflecting different trajectories of exchange rate movements, inflation levels, and resource costs. For each scenario, projected costs, working capital requirements, and a set of measures aimed at stabilising the organisation's financial position were calculated (Table 1).

Table 1. Scenario-based modelling of costs and working capital requirements in Kyrgyzstan

Scenario	Projected costs, %	Change in working capital requirements, %	Corrective action plan
Baseline	4.5-5.0	3.5	Inventory optimisation, partial reallocation of procurement among suppliers
Stress	12-15	10-12	Currency risk hedging, localisation of procurement, revision of lending terms
Optimistic	1-2	0-1	Partial inventory optimisation

Source: based on K. Cordova-Pozo & E.A.J.A. Rouwette (2023)

Scenario modelling demonstrated how changes in the macroeconomic environment affect costs and working capital requirements. Baseline, stress, and optimistic scenarios made it possible to assess an enterprise's financial resilience under different conditions and to identify areas for corrective action aimed at risk reduction and improved cost management efficiency. One of the key directions involved the development of response instruments aimed at stabilising financial flows. The instruments applied included the conclusion of long-term contracts with fixed prices, the use of currency risk hedging mechanisms, localisation of procurement, and the implementation of the Just-in-Time inventory management principle. In parallel, the structure of credit liabilities and foreign currency assets was analysed in order to reduce dependence on external sources of financing and strengthen financial sustainability (Goode *et al.*, 2021). A significant role in modern

cost management was played by the digitalisation of analytical and accounting processes. The use of BI systems (Power BI, Qlik, Tableau) ensured real-time visualisation of cost indicators and currency risk dynamics. The integration of ERP platforms (1C, Systems, Applications, and Products in Data Processing, Odoo) contributed to the automation of management accounting and the formation of consolidated budgets. The use of digital dashboards with key performance indicators (KPIs) enhanced the transparency of financial control, while early warning systems enabled the timely identification of deviations from planned parameters (Arkhipova *et al.*, 2024).

Controlling served as a tool for systematic monitoring of budget execution and the analysis of the effectiveness of financial decisions. It integrated planning, accounting, and analytical functions, providing feedback between strategic and operational levels of management. Within the controlling framework, regular

assessments of deviations between actual and planned indicators were conducted, expenditure limits were adjusted, key performance indicators were reviewed, and budgets were adapted to changes in the external environment. Such a system supported the maintenance of enterprise economic sustainability and the formation of a rational cost structure (Beusch *et al.*, 2022). Thus, the proposed step-by-step strategy created a logical and adaptive cost management system that combined economic methods with digital technologies. It not only ensured control over expenses but also developed enterprises' ability to flexibly adapt to inflation, exchange

rate fluctuations, and other economic challenges, which was an important condition for financial stability and enhanced competitiveness of Kyrgyz companies. For the purpose of systematising the key areas of cost management, a summary Table 2 was developed, reflecting the relationship between the main types of expenses characteristic of Kyrgyz enterprises, the associated risks, and effective methods for their mitigation. The presented data made it possible to clearly identify, which instruments were applicable depending on the nature of costs and the external factors influencing their dynamics.

Table 2. Types of costs, risks, and management methods

Type of cost	Key risks	Management methods
Imported procurement	Exchange rate appreciation	Fixed-price contracts, hedging
Energy resources	Inflation, tariff increases	Energy efficiency measures, alternative energy sources
Wages	Inflationary pressure	Indexation, performance-based bonuses
Logistics and transport	Rising fuel prices	Route optimisation, localisation of supplies
Production materials	Market price fluctuations	Reserve formation, long-term contracts

Source: based on N. Luo *et al.* (2023)

The analysis of the presented data showed that the key areas of cost management under conditions of economic instability were the minimisation of currency, inflationary, and market risks. The greatest vulnerability for Kyrgyz enterprises lies in imported procurement and energy resources, as their costs directly depended on exchange rate fluctuations and rising tariffs. To reduce the negative impact of these factors, it was advisable to use long-term contracts with fixed prices, hedging instruments, and measures aimed at improving energy efficiency. At the same time, the management of labour costs required a systematic approach to indexation and productivity incentives, which helped to maintain employee motivation amid rising inflation. In the field of logistics and transport expenses, effective measures

included route optimisation and the development of local supply chains, while in the management of material resources the priority was the creation of reserves and the conclusion of long-term agreements. Thus, the comprehensive application of these methods ensured enterprise resilience to external shocks and contributed to the formation of a balanced cost structure. The practical application of a cost management strategy under conditions of inflation and currency risks was examined using the example of four Kyrgyz companies representing different sectors of the economy. These cases demonstrated how the combination of management accounting, digital tools, and strategic planning enables companies to maintain resilience and competitiveness even in an unstable macroeconomic environment (Table 3).

Table 3. Impact of cost management methods on the financial performance of Kyrgyz companies (2023-2024)

Company	Applied method	Cost reduction, %	Increase in profitability, %	Reduction in warehouse inventories, %	Improvement in process efficiency, %
Technodom (Bishkek)	Fixed-price contracts, BI system	6.5	4.8	-	5.2
Limited Liability Company "Stroy Invest Service" (Osh)	Scenario planning, local sourcing	8.0	12.0	-	7.5
"Kant Sut" LLC (Kara-Balta)	Rolling forecast, ERP system	5.2	3.6	10.0	6.0
Asia Transit Logistic Company (Bishkek)	Route optimisation, supplier diversification	7.0	5.0	-	15.0

Source: based on Technodom (n.d.), Limited Liability Company "Stroy Invest Service" (n.d.), "Kant Sut" LLC (n.d.), Asia Transit Logistic Company (n.d.)

The trading company Technodom (n.d.) (Bishkek) specialised in the import of household appliances and electronics, which made its operations highly sensitive to exchange rate fluctuations. In response to the appreciation of the US dollar and rising logistics costs,

the company implemented a set of measures aimed at stabilising production costs and strengthening financial sustainability. The main instruments included the conclusion of long-term contracts with fixed prices and deferred payment terms, as well as the introduction

of the Power BI system to analyse currency risks and monitor financial flows. As a result of these measures, production costs were reduced by 6.5%, profitability increased by 4.8%, and business process efficiency improved by 5.2%, enabling the company to maintain price stability and expand its market share.

Limited Liability Company "Stroy Invest Service" (n.d.) (Osh) operated in the field of residential and infrastructure construction, where a significant share of expenses was associated with the procurement of cement and metal. Under conditions of rising prices for raw materials and construction inputs, the company implemented budget scenario planning, which made it possible to model the effects of changing market conditions and to adapt its procurement strategy in a timely manner. In addition, partnerships were established with local producers ("YugStroySnab", "Kant Metallurgical Plant"), reducing dependence on foreign currency. The diversification of supplies and the creation of a reserve fund resulted in an 8% reduction in costs, a 12% increase in profitability, and a 7.5% improvement in project management efficiency, allowing the company to strengthen its market position and win a number of government tenders.

"Kant Sut" LLC (n.d.) (Kara-Balta) was one of the leading dairy producers in Kyrgyzstan. To enhance resilience to exchange rate fluctuations, the company introduced a rolling forecast system that provided monthly budget updates based on current data on procurement price dynamics and exchange rates. At the same time, the management accounting system was modernised through the implementation of the 1C ERP system, which increased transparency and the speed of managerial decision-making. In addition, approximately 70% of packaging and additive procurement was shifted to local suppliers, significantly reducing currency risks. As a result, costs were optimised: production costs decreased by 5.2%, margins increased by 3.6%, warehouse inventories were reduced by 10%, and overall production process efficiency rose by 6%.

Asia Transit Logistic Company (n.d.) (Bishkek) operated in the field of interregional transportation and faces a high dependence on fuel prices. In response to rising fuel and lubricant costs, the company implemented a route and fuel consumption monitoring system based on the Global Positioning System (GPS), which made it possible to optimise fleet utilisation and eliminate inefficient journeys. In addition, fuel suppliers were diversified, including cooperation with regional companies that were less exposed to currency fluctuations. These measures resulted in a 7% reduction in fuel costs, a 5% increase in profitability, and a 15% improvement in fleet efficiency, thereby strengthening the company's competitive position in the transport services market.

Thus, the analysis showed that the adaptation of international management accounting tools – such as scenario planning, rolling forecasts, value engineering and digital analytics – enabled Kyrgyz enterprises to

successfully respond to external economic challenges, control costs and improve financial stability. The recommendations were aimed at increasing the resilience of Kyrgyz enterprises in the face of inflation and exchange rate fluctuations and were based on an analysis of the practical experience of companies in various industries. To increase the adaptability of the cost management system, budgets should be regularly reviewed, plans adjusted and changes in the macroeconomic environment responded to promptly, thereby reducing the impact of exchange rate fluctuations and inflation on financial performance. Digital management tools, including ERP systems, BI platforms and interactive dashboards, should be implemented to automate management accounting, operational analysis of financial data and visualisation of key performance indicators. The use of digital technologies improved the accuracy of forecasting and speeded up management decision-making.

It was recommended to develop localisation and diversification of supplies to reduce dependence on imported goods and services. Cooperation with local and regional suppliers, as well as the creation of backup supply channels, ensured the sustainability of logistics processes and the stability of production costs. Scenario planning should be used to model various macroeconomic scenarios – baseline, stress and optimistic – with the development of corrective measures. This approach increased the predictability of financial results and reduced uncertainty. The controlling system should include regular monitoring of deviations of actual indicators from planned ones, setting expenditure limits and preparing internal reports, ensuring the integration of control with elements of strategic cost management. Financial literacy and staff involvement were improved through training in the principles of rational resource use and the integration of performance indicators into the motivation system, which ensured that the actions of departments were consistent with cost management objectives. Long-term sustainable development programmes, including energy efficiency improvements, technological independence and innovation, help reduced the sensitivity of enterprises to inflation and currency risks and increase their competitiveness in the market.

Discussion

During the study, cost management methods at Kyrgyz enterprises were systematised, taking into account inflation and currency fluctuations. The analysis showed that the introduction of ABC costing and standard costing allowed enterprises to identify the most resource-intensive processes and control deviations from standard costs, which contributed to the objective allocation of resources and reduction of excess costs. The use of these methods created a basis for more accurate financial planning and increased economic efficiency, especially in organisations with a complex structure and multiple cost centres. This issue was also investigated by

O. Stopka *et al.* (2021), whose results confirmed that the ABC costing method allowed for a more accurate allocation of indirect costs based on specific actions and processes, which increased the transparency of production costs. This helped to identify inefficient operations and optimise production and management processes. As a result, companies were able to make informed decisions to reduce costs and increase profitability. Research by E.F. Iziduh *et al.* (2021) also showed that standard costing sets standards for material, labour and overhead costs, creating a basis for analysing deviations. Comparing actual costs with established standards allowed for the prompt identification of deviations and the implementation of corrective measures. This approach strengthened cost control and encourages more rational use of enterprise resources. It was worth noting that combining ABC and standard costing can have a synergistic effect, ensuring both accurate cost allocation and strict control over deviations. At the same time, it was necessary to take into account the complexity of implementing these methods and the need to regularly update data to keep it relevant. Despite this, companies that actively used both approaches demonstrate more transparent cost management and increased financial discipline.

Further analysis of the results showed that dynamic management methods, including rolling forecasts and value engineering, ensured budgeting adaptability and optimisation of production costs. The use of rolling forecasting allowed companies to adjust their budgets on a monthly basis, taking into account current changes in exchange rates, raw material prices and inflation levels, while cost analysis helped to identify excess costs and implement energy-saving and technological solutions without compromising product quality. N.I. Okeke *et al.* (2024) concluded that rolling forecasting allowed for regular updates to budget indicators based on current information about sales, expenses, and market conditions. This approach provided flexibility in planning and allowed for a rapid response to economic fluctuations and external risks. As a result, companies were able to allocate resources more accurately and minimise financial losses. A study by S.O. Ongbali *et al.* (2024) found that value engineering focuses on the systematic analysis of product functions with the aim of reducing costs without reducing consumer value. This method encouraged the introduction of innovative solutions, materials and technologies that increased production efficiency. The application of Value Engineering allowed companies to simultaneously reduce costs and maintain high product quality. These results confirmed the study, as rolling forecasts demonstrated high adaptability to changes in the external environment and allowed budgets to remain relevant in an unstable economy. The use of rolling forecasts contributed to a more accurate allocation of resources and a reduction in financial risks. This confirmed that regularly updating forecasts was a key tool for strategic planning and enterprise management.

Scenario planning demonstrated high effectiveness in modelling the consequences of macroeconomic changes. The development of baseline, stress, and optimistic scenarios enabled enterprises to assess potential financial risks in advance, forecast working capital requirements, and design corrective measures. This ensured greater predictability of financial results and minimised the negative impact of sudden exchange rate fluctuations and inflation. Particular attention should be paid to the work of R.H. Al-hadrawi *et al.* (2024), which showed that scenario planning made it possible to model different economic conditions and assess their potential impact on a company's revenues, costs, and profits. This approach helped to identify vulnerable areas in financial strategy and to prepare measures for risk mitigation. As a result, enterprises gain the ability to make more informed managerial decisions under conditions of uncertainty. In turn, I.A. Badhan *et al.* (2024) concluded that the analysis of response strategies included the assessment of hedging instruments, adjustments to pricing policies, and cost optimisation in order to reduce the negative effects of exchange rate volatility and inflation. The application of such measures helped to maintain financial stability and protect company margins. An effective response strategy contributes to preserving competitiveness and business stability in an economically unstable environment. These findings were consistent with the conclusions presented in this study, as scenario planning confirmed the importance of preparing for various economic scenarios in order to reduce financial risks. Modelling possible fluctuations in macroeconomic indicators allowed companies to develop adaptive strategies in advance and maintain profit stability. Thus, the integration of scenario analysis into the management process improved the quality of strategic decisions and reduced business vulnerability to external shocks.

The practical testing of the applicability of these methods in four Kyrgyz companies showed that a comprehensive approach to cost management made it possible to achieve a tangible economic effect. In the trading company Technodom, reductions in production costs and increases in profitability were achieved through the conclusion of long-term contracts and the implementation of BI systems, while the construction company Limited Liability Company "Stroy Invest Service" improved procurement efficiency and profitability through scenario planning and localisation of supplies. Similar positive results were observed at "Kant Sut" LLC and Asia Transit Logistic Company, which confirmed the universal applicability of the proposed instruments. D.A. Nani & V.A.D. Safitri (2021) also conducted a study, whose results confirmed that enterprises use a combination of methods such as ABC costing, standard costing, and Value Engineering to optimise costs and increase profitability. The introduction of digital tools and the automation of accounting processes helped to reduce administrative costs and improved the

accuracy of resource allocation. The implementation of such strategies contributed to enhanced competitiveness and business resilience in dynamic market conditions. D.A. Nani & V.A.D. Safitri (2021) also found that formal management control systems ensured structured planning, monitoring, and performance evaluation, which directly affected organisational efficiency. Research showed that the presence of clear control mechanisms stimulated innovation and increased enterprise adaptability. At the same time, maintaining a balance between strict control and freedom for creative decision-making was a key factor in successful development and competitive advantage. A comparison of the results obtained indicated that the practical implementation of cost management strategies had a direct impact on the financial sustainability and operational efficiency of enterprises. The effective application of accounting and optimisation methods not only reduced costs but also improved the quality of managerial decision-making. This confirmed the importance of integrating theoretical approaches with practical tools in everyday business management.

The digitisation of cost management, including the implementation of ERP systems and BI platforms, had proven to be critical for timely analysis and management decision-making. The use of dashboards with key performance indicators (KPIs) and early warning systems had enabled management to track deviations in real time, ensuring transparency of financial processes and prompt budget adjustments in an unstable macroeconomic environment. S.G. Mobarra *et al.* (2025) concluded that the implementation of ERP and BI systems allowed data from different departments to be integrated, providing a single source of information for financial accounting and cost analysis. Digitalisation increased the transparency of processes, minimised errors and speeded up management decision-making. As a result, companies were able to control costs more accurately and optimise the use of resources. G. Nicotra *et al.* (2025) found that dashboards and early warning systems allowed real-time monitoring of financial and operational indicators, identifying deviations from planned values in a timely manner. This facilitated prompt strategy adjustments and prevents negative consequences for the business. This approach improved the manageability of the enterprise and speeded up the response to internal and external risks. Analysis of the research results showed that the implementation of ERP and BI systems significantly increased the transparency of financial accounting and the effectiveness of cost management. Automating data collection and analysis allowed management to respond more quickly to changes in expenses and identify areas of inefficiency. This confirmed that digitalisation was a key factor in improving management accuracy and strategic adaptability of an enterprise. Based on the results obtained, recommendations were developed to increase the sustainability of Kyrgyz

enterprises. The main areas included budgeting adaptability, localisation and diversification of supplies, digitalisation of processes, systematic controlling and the use of scenario planning. The implementation of these measures will enable enterprises to reduce financial risks, maintain profitability and increase the efficiency of resource use even in conditions of inflation and exchange rate fluctuations.

Conclusions

The study found that effective cost management under conditions of inflation and exchange rate fluctuations was a key factor in ensuring the financial sustainability of Kyrgyz enterprises. An analysis of the theoretical foundations showed that management accounting tools such as ABC costing and standard costing allowed costs to be accurately allocated across divisions and products, while rolling forecasting and scenario planning provide flexibility in budgeting in an unstable macroeconomic environment. Value Engineering demonstrated its effectiveness in reducing production costs without compromising product quality, and the combination of these methods with digital tools, including ERP systems and BI platforms, ensured transparency, responsiveness, and automation of management processes.

A practical analysis of enterprises from different sectors confirmed the effectiveness of a comprehensive approach to cost management. The trading company Technodom was able to reduce production costs by 6.5% and increase profitability by 4.8% through the conclusion of long-term contracts and the implementation of a BI system to monitor currency risks. In the construction company Limited Liability Company "Stroy Invest Service", the use of budget scenario planning, localisation of procurement, and the creation of a reserve fund made it possible to reduce costs by 8%, increase profitability by 12%, and improve project management efficiency by 7.5%. The manufacturing enterprise "Kant Sut" LLC demonstrated the advantages of rolling forecasting and an ERP system, which resulted in a 5.2% reduction in costs, a 3.6% increase in margins, a 10% reduction in warehouse inventories, and a 6% improvement in overall efficiency. In the logistics company Asia Transit Logistic Company, route optimisation and diversification of fuel suppliers reduced costs by 7% and increased fleet efficiency by 15%.

The results of the study confirmed that the combination of strategic tools, scenario planning, digital support, and a controlling system enables enterprises to respond promptly to currency fluctuations and inflation, reduce financial risks, and enhance competitiveness. The introduction of adaptive budgeting methods and automated control contributed to more accurate forecasting and more efficient allocation of resources. Study showed that a comprehensive cost management strategy incorporating adaptability, digitalisation, localisation, diversification, and transparent controlling was

an effective instrument for strengthening the financial sustainability of Kyrgyz enterprises in an unstable economic environment. These approaches ensured long-term stability and contributed to the reinforcement of companies' market positions. A limitation of the study was that the analysis was based on data from a limited number of enterprises in Kyrgyzstan, which may reduce the generalisability of the findings to other industries or countries with different economic environments. Further research should analyse the impact of external economic shocks and fluctuations in global commodity

prices on the effectiveness of cost management strategies of Kyrgyz enterprises.

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Conflict of Interest

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Стратегія управління витратами в умовах інфляції та валютних ризиків на киргизьких підприємствах

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Аспірант

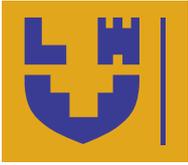
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Анотація. Мета дослідження полягала у виявленні ефективних методів управління витратами в умовах інфляції та валютних ризиків для підвищення стійкості та конкурентоспроможності киргизьких підприємств. У дослідженні застосовувалися методи теоретичного аналізу та кейс-аналізу з метою оцінки ефективності інструментів управління витратами та розробки практичних рекомендацій щодо підвищення фінансової стійкості підприємств. В результаті проведеного дослідження було виявлено ключові фактори, що впливають на структуру витрат киргизьких підприємств в умовах інфляції та коливань валютного курсу. Аналіз показав, що найбільш вразливими статтями видатків стали імпорتنі закупівлі, енергоресурси, логістика та заробітна плата співробітників. Дослідження показало, що застосування сучасних методів управлінського обліку, таких як облік витрат за видами діяльності, стандартний облік витрат, ковзний прогноз та вартісний аналіз, дозволяє точно контролювати витрати та розподіляти ресурси. Сценарне планування та цифровізація процесів із використанням систем планування ресурсів підприємства та аналітичних бізнес-інструментів забезпечують своєчасне реагування на зміни валютного курсу та рівня інфляції. Аналіз практичних прикладів киргизьких підприємств показав успішне використання різних методів управління витратами, таких як локалізація закупівель, страхування валютних ризиків, оптимізація запасів та укладання довгострокових контрактів. «ТехноДом» знизив витрати на 6,5 %, рентабельність зросла на 4,8 %, ефективність процесів – на 5,2 %. «ОсОО СтройІнвест» досяг зниження витрат на 8,0 %, зростання рентабельності на 12,0 % і підвищення ефективності процесів на 7,5 %. «Kant Sut» знизила витрати на 5,2 %, рентабельність збільшилася на 3,6 %, складські запаси скоротилися на 10,0 %, ефективність процесів – на 6,0 %. «Азія Транс Логістик» знизила витрати на 7,0 %, рентабельність зросла на 5,0 %, ефективність процесів – на 15,0 %. Впровадження системи управлінського контролю та регулярний аналіз відхилень сприяли підвищенню ефективності управління витратами. У результаті дослідження підтвердило, що комплексна стратегія управління витратами, що застосовується в таких компаніях, значно підвищує стійкість підприємств до зовнішніх економічних ризиків та забезпечує стабільний розвиток бізнесу

Ключові слова: рентабельність; локалізація; цифровізація; контролінг; сценарне планування; оптимізація



Financial technology and the performance of deposit money banks in Nigeria

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Abstract. This research aimed to explore how the adoption of financial technology has influenced the performance of Nigerian Deposit Money Banks. Quarterly time series data from 2014 to 2023 were analysed using the Autoregressive Distributed Lag model. The FinTech channels assessed included Point of Sale terminals, Automated Teller Machines, mobile banking, and internet banking. The long-run results revealed that mobile banking (coefficient = 9.5212, $p = 0.0314$) and internet banking (coefficient = 11.8512, $p = 0.0365$) significantly enhanced the Net Interest Margin, indicating that the adoption of these digital platforms improved banks' ability to generate interest income from lending activities. In contrast, Point of Sale transactions (coefficient = -37.0647 , $p = 0.0114$) and Automated Teller Machines transactions (coefficient = -30.1525 , $p = 0.1153$) negatively impacted the Net Interest Margin, suggesting that reliance on traditional payment infrastructure reduced banks' interest-based profitability. Inflation (coefficient = 1.7993, $p = 0.0154$) had a significant positive effect on the Net Interest Margin, implying that higher inflation raised lending rates, thereby benefiting banks' interest margins. For Return on Equity FinTech channels exhibited weak and statistically insignificant effects, suggesting that factors such as capital structure, shareholder equity, and non-interest income played a more dominant role in determining profitability than digital banking technologies. The short-run analysis showed that Automated Teller Machine transactions had a marginally negative effect on the Net Interest Margin (coefficient = -12.2540 , $p = 0.0579$), while mobile banking, Point of Sale, and inflation did not show significant effects on either Return on Equity or Net Interest Margin in the short term. The study recommended that banks increase investment in mobile and internet banking platforms, while reassessing the cost-effectiveness of Point of Sale and Automated Teller Machines infrastructure. This research offered valuable insights for banks and policymakers, underscoring the need to prioritise digital banking innovations to enhance profitability and overall financial performance in Nigeria

Keywords: FinTech adoption; Net Interest Margin; Return on Equity; banking performance; mobile banking

Introduction

The global financial environment has been transforming rapidly due to the rise of electronic payments and continuous technological innovation. Technology is the backbone of finance, driving a major shift in how banking and

financial solutions are delivered. To stay competitive, banks must keep up with emerging trends and leverage these innovations for sustainable growth. According to J. Kagan (2025), FinTech utilises digital technology

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to streamline and automate financial services, making them more efficient and accessible. It replaces traditional methods with faster and more effective solutions, transforming the way financial institutions operate. According to T. Philippon (2016), technological innovation brought about by FinTech was believed to have a potential effect on key performance indicators for banks. The integration of FinTech innovations can lead to significant improvements in operational efficiency and a reduction in transaction costs. S. Claessens *et al.* (2018) identified that the development and deployment of user-friendly digital platforms and personalised financial products enhance customer acquisition and satisfaction, ultimately driving revenue growth and improved profitability.

C.C. Okoro *et al.* (2024) investigated the influence of electronic banking on the performance of financial institutions using evidence from Nigerian banks. Data were collected from the Central Bank of Nigeria (CBN) statistical bulletin for the period 2010-2022, and the Ordinary Least Squares (OLS) regression method was used. The results indicated that Automated Teller Machines (ATM) and Point of Sale (POS) transactions exerted a positive but insignificant effect on total savings (TS), while internet banking showed a negative but insignificant influence on the efficiency of commercial banks in Nigeria. The study stated that continued heavy investment in financial technology services may be unjustified, given their limited impact on bank performance. B.M. Ilo *et al.* (2024) examined how digital technology adoption affected Nigerian Deposit Money Banks' (DMBs) financial performance. Monthly data were obtained from the CBN and the Nigeria Inter-Bank Settlement System (NIBSS) for the period 2012-2019. The authors found that financial technology had a significant positive impact on the efficiency of Nigerian DMBs. M.A. Gbanador (2023) used monthly time-series data spanning 2019-2021 to examine the effects of the digital banking system on Nigerian DMBs' efficiency. The CBN's statistical bulletin provided the data, and the Fully Modified Ordinary Least Squares method was applied. The findings indicated that digital banking had no discernible impact on bank performance in the short term. However, mobile banking demonstrated a positive and substantial influence on bank efficiency, whereas ATM and POS services had favourable, but negligible effects.

C.M. Barbu *et al.* (2021) examined the factors that enhanced customer satisfaction within the FinTech sector, with a particular focus on technological advances, personalisation, and round-the-clock access to financial services. The authors utilised the Stimulus-Organism-Response model and Partial Least Squares Structural Equation Modelling to analyse customer experience in digital financial services. The researchers found that advances in technology significantly contributed to customer satisfaction. M.A. Nangin *et al.* (2020) explored the role of innovation in FinTech service delivery, particularly focusing on the factors that influenced trust in FinTech services.

The researchers' findings revealed that perceived ease of use and promotional activities had a significant positive effect on trust, while security did not have a direct impact as expected. C.I. Osakwe & C.N. Ezeaku (2022) investigated how digital banking affected Nigerian DMBs' operational effectiveness. The findings revealed that ATM transactions had a significant effect on operational efficiency, but POS and mobile banking transactions exerted a negative and insignificant influence. O. Ashiru *et al.* (2023) also explored the relationship between financial innovation and performance among Nigerian DMBs. The authors noted that Automated Teller Machines, credit and debit cards, mobile banking, online banking, and agent banking had both short- and long-run effects on DMBs, while National Electronic Funds Transfer and the Inter-Bank Settlement System instant payment had a negative effect. Overall, the studies analysed relied on indicators such as total savings, Return on Assets (ROA), Return on Equity (ROE), and Earnings per Share (EPS) to measure profitability. Previous studies in Nigeria had not used Net Interest Margin (NIM) as an indicator to assess bank performance, as it focuses specifically on profit generated from interest-related activities, which is the primary revenue source for banks. This contrasted with Return on Equity and Return on Assets, which reflect managerial decisions such as asset valuation. This study aimed to examine how FinTech affects the performance of DMBs, emphasising how it had improved banking performance in Nigeria.

Literature Review

The official website of the Central Bank of Nigeria (n.d.) stated that FinTech adoption has been driven by the Central Bank's cashless policy, which promotes digital technologies such as ATMs, POS systems, mobile and web banking, and other electronic funds transfers. These developments have shifted banking from branch-based to digital-first services. FinTech integrates advanced technology into financial services, transforming transaction methods. According to E. Abad-Segura *et al.* (2020), both start-ups and traditional institutions use digital platforms innovatively. FinTech promotes financial inclusion by expanding access to underserved populations. N. Nurlaela *et al.* (2020) found that FinTech adoption, including e-money and digital transactions, expanded customer bases and boosted performance, while A.K. Zaghlol *et al.* (2021) demonstrated that technology integration improves efficiency, customer experience, and cost savings. This framework is highly relevant to the present study, explaining why Nigerian DMBs have adopted technologies such as mobile banking, internet banking, ATMs, and POS systems in response to regulations, inefficiencies, and shifting customer needs.

E.J. Ighoroje & E.E. Okoroyibo (2020) assessed the cashless policy and the performance of Nigerian DMBs over the period 2009-2018. Quarterly data collected from the CBN statistical bulletin were utilised, and the

data were analysed using the Autoregressive Distributed Lag (ARDL) approach. Their results showed that ATMs and web banking exerted positive and significant effects on bank performance; however, mobile banking had a significant negative effect. POS transactions were found to have a positive but insignificant influence on ROE (Return on Equity). The study concluded that the digital payment policy has generally enhanced the efficiency of Nigerian DMBs. H.W. Akani & R.L.T. Obiosa (2020) assessed digital innovation over the period 2009-2017 using panel data. The authors' findings revealed negative and insignificant effects of ATMs and electronic fund transfers on ROE, while mobile and online banking and information and communications technology investment had positive but insignificant impacts. J.U. Madugba *et al.* (2021) investigated digital banking and the financial efficiency of DMBs in Nigeria. The Ordinary Least Squares regression technique was used to analyse the data. The findings showed that ATMs had a positive and significant influence on both ROA and EPS. POS transactions and electronic fund transfers were found to significantly affect ROA, with POS having a positive impact and electronic fund transfers a negative one. Web banking, however, exhibited a positive but insignificant effect on EPS and ROA. K.O. Chukwu & S.R. Molokwu (2022) investigated electronic banking and the efficiency of Nigerian banks from 2010 to 2019. The results showed that digital banking exerted a positive but statistically insignificant influence on the performance of these banks. The study concluded that digital banking may not yet be a major determinant of commercial bank performance within the Nigerian context. The authors A. Nasserinia *et al.* (2014) pointed out that NIM is a crucial indicator for assessing a bank's intermediation efficiency and performance within the industry. Similarly, M. Umar *et al.* (2014) noted that inflation also influences banking operations by affecting interest rates and loan performance, and provided a comprehensive analysis of how macroeconomic conditions shape the effect of FinTech adoption on bank performance. Researchers such as M.S.N. Islam *et al.* (2022) explored the effects of digital innovation on the delivery of financial services by DMBs in Nigeria. They relied on secondary data drawn from the annual reports and accounts of banks covering a ten-year period (2012-2021). The results revealed that internet banking, mobile banking, and POS transactions all had a significant positive impact on the delivery of financial services. Based on these findings, the study concluded that the use of financial technologies has enhanced bank performance, particularly by improving operational efficiency and reducing costs.

Materials and Methods

In this study, an ex post facto research design was adopted, analysing quarterly time-series data from 2014 to 2023 obtained from the CBN (values of Automated Teller Machine operations, mobile banking trans-

actions, POS transactions, internet banking operations, and inflation rate) and the Nigeria Deposit Insurance Corporation (Return on Equity and Net Interest Margin) (Central Bank of Nigeria, n.d.c; Nigeria Deposit Insurance Corporation, n.d.). The study focused on all DMBs licensed and supervised by the CBN as of 31 December 2024. This amounted to a total of 36 banks, forming the study population. The choice of the banking sector was justified by its critical role in the economy as a financial intermediary, facilitating the flow of funds from surplus households to those in need, thereby supporting economic activity and growth. The study adopted the model of H.W. Akani & R.L.T. Obiosa (2020), replacing Electronic Funds Transfers with POS transactions and including inflation as a macroeconomic control variable. Two models were specified:

$$ROEt = \alpha_0 + \beta_1 ATMt + \beta_2 POST + \beta_3 MOBt + \beta_4 IBt + \lambda INFt + \epsilon_t; \quad (1)$$

$$NIM = \alpha_0 + \beta_1 ATMt + \beta_2 POST + \beta_3 MOBt + \beta_4 IBt + \lambda INFt + \epsilon_t; \quad (2)$$

where *ROE* – the Return on Equity; *NIM* – the Net Interest Margin; *ATM* – the Automated Teller Machine; *POS* – the Point of Sale; *MOB* – the mobile banking; *IB* – the internet banking operations; *INF* – the inflation rate; α_0 – the intercept; $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ – the coefficients of the FinTech variables; λ – the coefficients capturing the effect of inflation and its interaction with FinTech variables; ϵ_t – the error term.

Variables represented transaction values (billion NGN) or percentages, and *INF* denoted the annual inflation rate. This study adopted the ARDL model due to its ability to handle variables with varying degrees of integration, *I*(1) and *I*(0). Unlike conventional cointegration techniques that required uniform integration, the ARDL bounds testing approach accommodated both stationary and non-stationary variables, making it suitable for time-series data in Nigeria's banking sector. It also produced efficient estimates with small samples and simultaneously captures short-run and long-run dynamics, providing a comprehensive view of how FinTech adoption affected banking performance. An Error Correction Model was derived from the ARDL results to analyse short-run adjustments. The error correction term (*CointEq*(-1)) reflected the rate at which short-run deviations in banking performance return to long-run equilibrium after FinTech-related shocks. A significant and negative coefficient indicated the existence of long-run cointegration. To ensure the model's reliability, various diagnostic tests were applied. The Breusch-Godfrey test checked for serial correlation, while the Breusch-Pagan-Godfrey test was applied to assess whether heteroskedasticity (non-constant variance of residuals) was present in the models. The Ramsey RESET test verified the correctness of the model specification. For each variable

under investigation, the stationarity of the time-series data was examined using the Augmented Dickey-Fuller (ADF) unit root test. The null hypothesis that there was a unit root in the data was tested using the ADF test, which showed non-stationarity. For variables that were found to be non-stationary at the level, the first difference was taken to achieve stationarity. The test results were used to guide the selection of the appropriate econometric model. The short-run analysis was designed to record the immediate consequences of altering the independent variables (such as ATM, mobile, POS, internet banking usage, and inflation) on the dependent variables (NIM and ROE). It examined the instantaneous effect of changes in the independent variables before the system had fully adjusted to a new equilibrium, while the long-run analysis examined the effects of changes in the

independent variables on NIM and ROE once the system had reached a new equilibrium.

Results and Discussion

To understand the impact of financial technology on the performance of DMBs, a range of quantitative analyses was employed to explore key financial metrics such as NIM and ROE. The analysis investigated how various FinTech channels, including mobile banking, internet banking, POS, and ATM transactions, influenced these performance indicators. The role of inflation was also considered to assess its interaction with digital banking adoption (Krylovskiy, 2024). Descriptive statistics and correlation analysis were also presented, along with unit root tests. Table 1 presented insights into the distribution of the variables in the study.

Table 1. Descriptive statistics

	NIM	ROE	LNVATM	LNVMOB	LNVPOS	LNIB	INF
Mean	2.791282	10.38231	14.71110	14.04894	13.74486	13.89477	14.75077
Median	1.440000	5.710000	14.29974	13.50965	13.38535	11.66357	13.71000
Maximum	14.79000	49.13000	17.13639	18.04181	17.37315	19.69071	28.92000
Minimum	0.410000	-1.050000	13.57223	11.10285	11.11941	9.556280	7.800000
Standard deviation	2.763750	12.41121	0.891595	2.284075	1.938023	4.119577	5.180710
Skewness	2.397119	2.108252	0.722094	0.417682	0.429671	0.410702	0.766004
Kurtosis	10.15384	6.456124	2.530935	1.714156	1.913379	1.273622	3.181818
Observations	39	39	39	39	39	39	39

Note: NIM – Net Interest Margin; ROE – Return on Equity; LNVATM – Log of Value of Automated Teller Machine transactions; LNVMOB – Log of Value of Mobile Banking; LNVPOS – Log of Value of Point of Sale transactions; LNIB – Log of Value of Internet Banking transactions; INF – Inflation rate

Source: Central Bank of Nigeria (n.d.b), Nigeria Deposit Insurance Corporation (n.d.)

The mean for NIM was 2.791282, with a standard deviation of 2.763750, indicating comparatively low average margins but moderate variation across the banks. This suggested that while most banks had similar performance in terms of interest income, a few performed significantly better. The ROE, with a high standard deviation of 12.41121 and a mean of 10.38231, indicated that bank profitability varied significantly. This variability implied that some banks were highly profitable, while others were not, reflecting a diverse range of performance outcomes. For the digital financial service variables, ATM transactions (LNVATM) showed high consistency, with a low standard deviation of 0.891595. In contrast, mobile banking (LNVMOB) and POS transactions

(LNVPOS) displayed moderate variability, with corresponding standard deviations of 2.284075 and 1.938023, reflecting some differences in adoption and usage across banks. Internet banking (LNIB) had a higher standard deviation of 4.119577, indicating a wider spread in its usage, which may be due to disparities in technological infrastructure or customer adoption rates. The INF, with a standard deviation of 5.180710 and a mean of 14.75077, showed noticeable fluctuations from 2014 to 2023, which could influence banking performance, particularly in terms of interest rates and margins. These results highlighted significant variations in both bank performance and digital banking adoption. Table 2 presented the correlation analysis.

Table 2. Correlation analysis

Variables	NIM	ROE	LNVATM	LNVMOB	LNVPOS	LNIB	INF
NIM	1.000						
ROE	0.413	1.000					
LNVATM	-0.189	0.283	1.000				
LNVMOB	-0.104	0.453	0.504	1.000			
LNVPOS	-0.113	0.462	0.523	0.585	1.000		

Table 2, Continued

Variables	NIM	ROE	LNVATM	LNVMOB	LNVPOS	LNIB	INF
LNIB	-0.169	0.295	0.542	0.548	0.524	1.000	
INF	-0.078	0.461	0.666	0.567	0.591	0.672	1.000

Note: NIM – Net Interest Margin; ROE – Return on Equity; LNVATM – Log of Value of Automated Teller Machine transactions; LNVMOB – Log of Value of Mobile Banking; LNVPOS – Log of Value of Point of Sale transactions; LNIB – Log of Value of Internet Banking transactions; INF – Inflation rate

Source: Central Bank of Nigeria (n.d.b), Nigeria Deposit Insurance Corporation (n.d.)

The correlation matrix indicated moderate associations among several independent variables, suggesting some potential for multicollinearity. Specifically, INF showed a moderately strong correlation with LNVATM ($r = 0.666$) and LNIB ($r = 0.672$). Meanwhile, the relationship between LNVMOB and INF decreased to 0.567, slightly reducing the risk. Among the digital variables, LNVMOB and LNVPOS had a moderate correlation of 0.585,

while LNVMOB and LNIB were correlated at 0.548, and LNVPOS and LNIB at 0.524. These values were moderate and did not indicate severe multicollinearity problems. Overall, no correlation exceeded the critical 0.80 threshold, meaning that serious multicollinearity was absent. Table 3 presented the unit root test results to determine whether the variables were stationary at level $I(0)$ or at first difference $I(1)$ before applying the ARDL model.

Table 3. ADF unit root test

Variable	t-statistic	p-value	Stationary level
NIM	-4.232887	0.0019	Level $I(0)$
ROE	-8.084775	0.0000	First difference $I(1)$
LNVATM	-9.911033	0.0000	Level $I(0)$
LNVMOB	-8.471941	0.0000	First difference $I(1)$
LNPOS	-8.187939	0.0000	First difference $I(1)$
LNIB	-6.648748	0.0000	First difference $I(1)$
INF	-3.917627	0.0211	First difference $I(1)$

Note: NIM – Net Interest Margin; ROE – Return on Equity; LNVATM – Log of Value of Automated Teller Machine transactions; LNVMOB – Log of Value of Mobile Banking; LNVPOS – Log of Value of Point of Sale transactions; LNIB – Log of Value of Internet Banking transactions; INF – Inflation rate

Source: Central Bank of Nigeria (n.d.b), Nigeria Deposit Insurance Corporation (n.d.)

NIM and LNVATM were stationary at level $I(0)$, with significant test statistics and p-values. The other variables – ROE, LNVMOB, LNVPOS, LNIB, and INF – were only stationary after first differencing $I(1)$, as shown by their significant ADF test results. The test confirmed that the data were suitable for ARDL bounds testing and long-run relationship analysis because the integration order was mixed, between $I(0)$ and $I(1)$. Table 4 presented the ARDL bounds test results to examine the existence of a long-run relationship between the dependent variables and their regressors. The original model with NIM as the dependent

variable showed that the F-statistic (20.42051) exceeded the upper bound critical value at the 1% significance level, confirming a strong long-run relationship. Similarly, for the robustness check with ROE as the dependent variable, the F-statistic (5.078673) was above the upper bound at the 5% level, suggesting a moderate long-run relationship. These results provided evidence that both models exhibited statistically significant long-run associations with their explanatory variables. Table 5 presented the short-run effects of changes in one variable on another before the system fully adjusts to a new equilibrium.

Table 4. ARDL bounds test results

Dependent variable	F-statistic	K	Significance level, %	$I(0)$ bound	$I(1)$ bound	Decision
NIM	20.42051	5	10	2.75	3.79	Long-run relationship exists
			5	3.12	4.25	
			2.5	3.49	4.67	
			1	3.93	5.23	
ROE	5.078673	5	10	2.75	3.79	Long-run relationship exists
			5	3.12	4.25	
			2.5	3.49	4.67	
			1	3.93	5.23	

Note: NIM – Net Interest Margin; ROE – Return on Equity; K – number of lags

Source: Central Bank of Nigeria (n.d.b), Nigeria Deposit Insurance Corporation (n.d.)

Table 5. Short-run results

Variable	ROE coefficient	ROE p-value	NIM coefficient	NIM p-value
D(LNVATM)	7.0578	0.4198	-12.2540	0.0579
D(LNVMOB)	-6.0934	0.7197	12.8958	0.1239
D(LNVPOS)	9.5212	0.3123	-7.7276	0.2307
D(LNIB)	-6.7471	0.0157	2.2305	0.0560
D(INF)	1.1228	0.3996	-0.8915	0.2145
CointEq (-1)	-0.6470	0.0114	-1.0957	0.0038

Note: D(LNVATM) – Change in the Log of Value of Automated Teller Machine transactions; D(LNVMOB) – Change in the Log of Value of Mobile Banking; D(LNVPOS) – Change in the Log of Value of Point of Sale transactions; D(LNIB) – Change in the Log of Value of Internet Banking transactions; D(INF) – Change in Inflation rate; C – Constant

Source: Central Bank of Nigeria (n.d.b), Nigeria Deposit Insurance Corporation (n.d.)

In the short run, ATM operations had no statistically significant impact on ROE (coefficient = 7.0578, $p = 0.4198$) but exerted a marginally significant negative impact on NIM, the core dependent variable (coefficient = -12.2540, $p = 0.0579$), suggesting that increased ATM usage may slightly reduce banks' net interest margins. Mobile transactions did not show significant effects on either ROE (coefficient = -6.0934, $p = 0.7197$) or NIM (coefficient = 12.8958, $p = 0.1239$) in the short run. POS transactions also had no significant impact on ROE (coefficient = 9.5212, $p = 0.3123$) or NIM (coefficient = -7.7276, $p = 0.2307$). In contrast, IB transactions had a statistically significant negative effect on ROE (coefficient = -6.7471, $p = 0.0157$) and a marginally

positive effect on NIM (coefficient = 2.2305, $p = 0.0560$), indicating their potential to enhance interest margins while possibly reducing equity-based returns. Inflation did not have a significant short-run influence on either ROE (coefficient = 1.1228, $p = 0.3996$) or NIM (coefficient = -0.8915, $p = 0.2145$). Lastly, the error correction terms (CointEq(-1)) were statistically significant for both models – ROE (coefficient = -0.6470, $p = 0.0114$) and NIM (coefficient = -1.0957, $p = 0.0038$) – confirming the existence of a stable short-run adjustment mechanism towards long-run equilibrium in both the robustness and core models. Table 6 presented the long-run effects of one variable on another after all short-term adjustments had occurred and the system had reached equilibrium.

Table 6. Long-run analysis results

Variable	NIM coefficient	NIM standard error	NIM p-value	ROE coefficient	ROE standard error	ROE p-value
LNVATM	-30.1525	15.0317	0.1153	-47.2165	30.5725	0.1448
LNVMOB	9.5054	5.3699	0.0314	-34.6419	19.1726	0.0923
LNVPOS	-37.0647	8.7829	0.0135	-14.7167	17.6676	0.4188
LNIB	11.8512	3.8313	0.0365	28.1131	13.6872	0.0591
INF	1.7993	0.4436	0.0154	0.5777	1.2863	0.6602
C	596.7181	233.4955	0.0629	944.0505	535.3490	0.0996

Note: NIM – Net Interest Margin; ROE – Return on Equity; LNVATM – Log of Value of Automated Teller Machine transactions; LNVMOB – Log of Value of Mobile Banking; LNVPOS – Log of Value of Point of Sale transactions; LNIB – Log of Value of Internet Banking transactions; INF – Inflation rate; C – Constant

Source: Central Bank of Nigeria (n.d.b), Nigeria Deposit Insurance Corporation (n.d.)

In the long run, ATM usage (LNVATM) had a negative effect on both NIM and ROE, with coefficients of -30.1525 and -47.2165, respectively; however, these effects were statistically insignificant, indicating that ATM transactions may not substantially influence bank profitability over time. Mobile banking transactions (LNVMOB) significantly improved NIM, with a coefficient of 9.5054 and a p-value of 0.0314, suggesting that increased mobile usage enhanced banks' interest-based profitability. Conversely, their effect on ROE was negative (-34.6419) and marginally significant ($p = 0.0923$), implying that, while mobile transactions boosted NIM, they may not necessarily translate into higher ROE. POS transactions (LNVPOS) had a significantly negative impact on NIM

(-37.0647, $p = 0.0135$), indicating that greater reliance on POS channels may reduce banks' interest margins. However, the effect on ROE was negative (-14.7167) but not significant, suggesting no clear long-term influence on overall profitability. Internet-based transactions (LNIB) positively and significantly affected both NIM (11.8512, $p = 0.0365$) and ROE (28.1131, $p = 0.0591$), suggesting that online platforms were a strong driver of long-term profitability. INF also showed a significant positive impact on NIM (1.7993, $p = 0.0154$), indicating that higher inflation may benefit banks' interest margins, while its effect on ROE (0.5777, $p = 0.6602$) was positive but not significant. Table 7 presented whether the model passed basic statistical checks.

Table 7. Diagnostic test results for NIM and ROE models

Test	NIM test statistic	NIM p-value	ROE test statistic	ROE p-value
Serial correlation (Breusch-Godfrey)	F=0.376	0.7268	F=1.102	0.3421
Heteroskedasticity (Breusch-Pagan-Godfrey)	F=1.937	0.2755	F=2.481	0.1392
Heteroskedasticity (Obs*R ²)	Chi ² =28.719	0.3240	Chi ² =19.876	0.4115
Ramsey RESET test	F=0.733	0.4548	F=1.204	0.2876

Note: NIM – Net Interest Margin; ROE – Return on Equity; F – F-test statistic; Chi² – Chi-squared test statistic

Source: Central Bank of Nigeria (n.d.b), Nigeria Deposit Insurance Corporation (n.d.)

The diagnostic tests indicated that both the NIM and ROE models were generally well specified. There was no evidence of heteroskedasticity (NIM: $p = 0.2755, 0.3240$; ROE: $p = 0.1392, 0.4115$), and the Ramsey RESET tests confirmed a correct functional form (NIM: $p = 0.4548$; ROE: $p = 0.2876$). The Breusch-Godfrey serial correlation tests also showed no significant serial correlation (NIM: $p = 0.7268$; ROE: $p = 0.3421$), suggesting that the residuals were not autocorrelated and that the models were appropriately specified in terms of their dynamic structures. The findings indicated that mobile and Internet banking transactions had a positive and significant long-run impact on NIM. This implies that mobile and internet banking enhanced banks' ability to earn interest income from their core lending activities. POS and ATM transactions had negative effects – significant for POS and insignificant for ATM – on NIM, while INF had a positive and significant effect. Rising inflation may increase lending rates, thereby boosting interest income and benefiting NIM. FinTech usage had mixed and mostly insignificant effects on ROE. ROE was positively and marginally affected by internet banking, negatively but weakly by mobile banking, and adversely by POS and ATM transactions. Overall, FinTech adoption had little effect on ROE, possibly because ROE also depended on broader factors such as shareholder equity, capital structure, and non-interest income, rather than solely on digital transaction values.

The official website of the Central Bank of Nigeria (n.d.a) stated that in Nigeria, the adoption of financial technology has grown significantly, with both businesses and individuals shifting away from conventional banking methods in favour of digital solutions. This shift was largely driven by the CBN of Nigeria's financial digitalisation policies, which introduced a wave of technological advancements in banking, including POS, ATMs, mobile and Internet banking, as well as electronic fund transfer systems such as the Nigeria Interbank Settlement System Electronic Funds Transfer and the Nigeria Interbank Settlement System Instant Payments. The Nigerian Inter-Bank Settlement System (n.d.) reported that the use of digital payment channels such as ATMs, POS machines, mobile banking, and internet banking rose sharply in Nigeria during the first half of 2023. The total value of transactions through these epayment platforms reached 256.4 trillion NGN – an impressive 20.24% increase from the 204.5 trillion NGN recorded during the same period in 2022. By the end of 2023, this figure had

risen to 600 trillion NGN compared with 387 trillion NGN in 2022, representing an increase of about 55%. This significant growth reflected the increasing adoption of digital payment methods by individuals and businesses across Nigeria.

It was found that innovations enhanced service delivery, expanded financial inclusion, increased operational efficiency, improved cost-effectiveness, and broadened revenue sources. W.L. Silber (1983) emphasised that innovation was essential in financially constrained environments. G. Suseendran *et al.* (2019) observed a growing technological impact on FinTech services. According to J.I. Ali *et al.* (2016), DMBs aimed to generate profit by collecting deposits and issuing loans or credit at specified interest rates, with profitability serving as a primary indicator of performance. N.O. Awendo & S. Mwanzia (2022) viewed performance as the successful attainment of goals, measured in terms of accuracy, completeness, cost-effectiveness, and speed of execution. The Constraint-Induced Financial Innovation Theory, developed by W.L. Silber (1983), posited that financial institutions engaged in innovation mainly to overcome constraints such as regulations, inefficiencies, and market competition. When limitations threatened profitability or growth, firms devised new instruments, services, and processes to circumvent these barriers. This positioned financial innovation as a deliberate survival strategy rather than a by-product of technology, with institutions proactively adopting innovations to remain competitive and improve performance. J. Lerner (2006) noted that heavily regulated banks often turn to technology to cut costs and boost efficiency, making innovation essential for sustainability. S. Johnson & J. Kwak (2012) added that banks resisting innovation risk failure in a digital, competitive environment. In practice, pressures from consumer expectations, regulations, and FinTech competition have driven the adoption of digital banking, mobile payments, and automated services to enhance efficiency and profitability.

Conclusions

The performance of Nigerian Deposit Money Banks was examined in relation to the implementation of financial technology, focusing on Net Interest Margin and Return on Equity. The results from the longrun analysis provided valuable insights into how various FinTech channels influenced banking performance. Specifically, it was

discovered that Internet and mobile banking significantly improved Net Interest Margin, with coefficients of 9.5212 ($p = 0.0314$) and 11.8512 ($p = 0.0365$), respectively. These findings suggested that the adoption of digital banking platforms enhanced banks' profitability by improving their interest-based margins. In contrast, the usage of Point of Sale and Automated Teller Machines negatively impacted Net Interest Margin. Point of Sale transactions had a significant negative effect on Net Interest Margin (coefficient = -37.0647 , $p = 0.0114$), while Automated Teller Machine transactions showed a negative, but statistically insignificant impact (coefficient = -30.1525 , $p = 0.1153$). These results indicated that traditional physical infrastructure may not be as beneficial as digital platforms in improving banks' financial performance. Inflation had a significant positive effect on Net Interest Margin (coefficient = 1.7993 , $p = 0.0154$), suggesting that higher inflation may increase lending rates, thereby benefiting banks' interest margins. However, the impact of FinTech adoption on Return on Equity was found to be weak and statistically insignificant. This suggested that factors other than digital banking, such as capital structure, shareholder equity, and non-interest

revenue, were likely to have a more significant effect on banks' overall performance. The diagnostic tests confirmed the robustness of the models, with no evidence of heteroskedasticity or serial correlation, indicating that the models were well specified and reliable. Based on these results, it was recommended that banks in Nigeria invest more in mobile and internet banking, while reassessing the cost-effectiveness of Point of Sale and Automated Teller Machine infrastructure. Additionally, policymakers should aim to stabilise inflation to sustain the performance gains driven by FinTech adoption. Further research could explore the long-term impact of FinTech adoption on banks' overall financial stability and its interaction with regulatory frameworks in emerging markets.

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Conflict of Interest

None.

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Фінансові технології та результати діяльності депозитних банків у Нігерії

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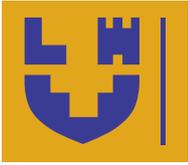
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Анотація. Це дослідження мало на меті з'ясувати, як впровадження фінансових технологій вплинуло на діяльність депозитних банків Нігерії. Було проаналізовано квартальні часові ряди за 2014-2023 роки з використанням моделі авторегресивного розширеного лагу. Оцінювані канали фінтеху включали POS-термінали, банкомати, мобільний та інтернет-банкінг. Довгострокові результати показали, що мобільний банкінг (коефіцієнт = 9,5212, $p = 0,0314$) та інтернет-банкінг (коефіцієнт = 11,8512, $p = 0,0365$) істотно підвищували чисту процентну маржу, що свідчило про покращення здатності банків генерувати процентні доходи від кредитних операцій завдяки використанню цифрових платформ. Натомість операції через POS-термінали (коефіцієнт = -37,0647, $p = 0,0114$) та банкомати (коефіцієнт = -30,1525, $p = 0,1153$) негативно впливали на чисту процентну маржу, що означало, що залежність від традиційної платіжної інфраструктури знижувала прибутковість банків, засновану на відсотках. Інфляція (коефіцієнт = 1,7993, $p = 0,0154$) мала значущий позитивний вплив на чисту процентну маржу, що вказувало на те, що зростання інфляції підвищувало кредитні ставки та сприяло збільшенню процентного доходу банків. Щодо рентабельності власного капіталу, канали фінтеху продемонстрували слабкі та статистично незначущі ефекти. Це свідчило про те, що такі фактори, як структура капіталу, власний капітал акціонерів та непроцентні доходи відігравали важливішу роль у формуванні прибутковості, ніж цифрові банківські технології. Короткостроковий аналіз показав, що операції через банкомати мали незначний негативний вплив на чисту процентну маржу (коефіцієнт = -12,2540, $p = 0,0579$), тоді як мобільний банкінг, POS-операції та інфляція не продемонстрували суттєвого впливу ні на рентабельність власного капіталу, ні на чисту процентну маржу в короткостроковому періоді. Дослідження рекомендувало банкам активніше інвестувати у мобільний та інтернет-банкінг, а також переоцінити ефективність використання інфраструктури POS-терміналів і банкоматів. Робота надала цінну інформацію для банків та регуляторів, підкреслюючи необхідність пріоритетного розвитку цифрових банківських інновацій для підвищення прибутковості та загальної фінансової ефективності в Нігерії

Ключові слова: впровадження фінтеху; чиста процентна маржа; рентабельність власного капіталу; ефективність банків; мобільний банкінг



Capital market implications of IFRS adoption in Azerbaijan: Evidence from the energy and banking sectors

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Abstract. The study aimed to assess the peculiarities of adopting International Financial Reporting Standards into the energy and banking sectors of the Republic of Azerbaijan. The goal was accomplished through the mixed methods research study involving the archival and policy document analysis and secondary data analysis of firm-level, market, and macroeconomic trends observed in 2015-2024. The study of evidence suggested that the Azerbaijan's transition to the International Financial Reporting Standards was a transformative process that started in 1991, involved six milestones, and had not been completely accomplished by the year 2025. The secondary data analysis revealed that transition to the universally accepted standards was associated with improvements in the national banking and energy segments taking the form of a 104% rise in Return on Assets, a 37% increase in Return on Equity, and a 78% growth in Earnings per Share. The mentioned accomplishments were contributed to the growing investors' confidence preconditioned by increased accuracy and transparency of the financial reporting processes. It was found that adoption of the International Financial Reporting Standards caused resistance, especially from small and medium-sized enterprises. It was suggested to mitigate the resistance and support the transformative processes through institutionalised continuous professional training, centralised digital compliance monitoring, strengthened audit quality and independence, and linking reporting standards compliance with capital market incentives. The findings can be used to enhance competitiveness of the Azerbaijani energy and banking segments and their further integration into the global trade

Keywords: reporting transparency; accounting standards; investor confidence; compliance; emerging economies

Introduction

Globalisation and an increased volume of the world trade have opened up opportunities for economic growth of countries, including the Republic of Azerbaijan. Azerbaijan strives for full adoption of International Financial Reporting Standards (IFRS) as a way of integrating into the global trade community, attracting investors, and supporting sustainable economic development. Since energy and banking were the key segments of the Azerbaijani economy, the adoption of IFRS into them was a relevant research topic. The lessons learned from Azerbaijan can be further scaled to ensure economic sustainability of the post-Soviet countries. Z. Abbas

& J.I.B. Al Mamouri (2022) asserted that the process of adopting IFRS started in 1973 with the formation of the International Accounting Standards Committee, which included professional accounting bodies from Australia, France, Canada, Germany, Japan, Mexico, the Netherlands, the United Kingdom, and the United States. The cross-national cooperation resulted in the international accounting standards adopted to enhance transparency and accountability of financial transactions and to gain investor confidence. S. Potharla (2025) distinguished between six reasons for adopting IFRS: globalised capital markets, intention to attract foreign investors and

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lower the cost of capital, pressure from international regulators like the International Organisation for Securities Commissions and the World Bank, growing investor demand for enhanced comparability and transparency, regional economic integration efforts, and commitment to modernising internal accounting systems.

Upon examining the Indian context, A. Johri (2024) asserted that the adoption of IFRS had a statistically significant positive impact on the reporting quality of multinational companies. The data obtained from 512 participants confirmed that unlike multinational companies that ignored IFRS, multinational companies, which had adopted universally accepted standards reported better quality financial reporting manifested through higher relevance, accuracy, understandability, comparability, and timeliness. I. Dutchak *et al.* (2024) emphasised the relevance of IFRS for small businesses striving competitiveness in the international context. As explained by researchers, increased competitiveness was preconditioned by enhanced financial transparency and improved comparability at the global scale. D. Taylor *et al.* (2024) pointed out that adoption of IFRS facilitated financial inclusion, which was significant for both developed and emerging economies striving to integrate into the global trade. Upon conducting research at micro and macroeconomic levels, the authors concluded that adherence to IFRS enhanced trust in the financial system and reduced perceived corruption. O. Alhato (2023) suggested the benefits of adopting IFRS were evident in the emerging economy of Jordan. The case of Jordan suggested that compliance with IFRS supported emerging economies by encouraging their adherence to quality standards that attract investors. Similar conclusions were made by M.A. Ibrahim & A.D. Gbadebo (2024), who examined the adoption of IFRS in the Nigerian context. The mentioned experts argued that the benefits of IFRS were associated with the increased financial, mainly institutional, investment.

Application of the IFRS in the Azerbaijani context was examined in previous research studies, including V. Mehdiyev (2024). Researcher stressed that the Republic of Azerbaijan was in the process of transition, which meant it will take some time to ensure full compliance of the national accounting policy with the IFRS. L. Guliyeva (2024) pointed out that the transition process was overseen by the National Accounting Council, which formulated national accounting policies and ensured their alignment with international requirements. Scientist further stressed that such alignment was expected in key aspects of financial reporting – revenue recognition, asset valuation, and disclosure requirements. E. Jafarov & N. Babayev (2024) examined an alignment with international reporting standards in the context of small and medium-sized enterprises in Azerbaijan. Based on the analysis of data collected in 2018-2023, the authors concluded that such alignment was associated with the quality of information as articulated in the Conceptual Framework for Financial Reporting (International

Accounting Standards Board, 2018). So, cited studies suggested that although IFRS adoption in the Azerbaijani economic context was a relatively research topic, little was known about market implications of such adoption in individual segments of economy. Considering the detected gap, the aim of the research was to study the market implications of IFRS adoption in the market and energy segment of Azerbaijan. The study involved such objectives as to examine the benefits and challenges of integrating IFRS into banking and energy segments and to suggest strategies to ensure further compliance of the national reporting standards with the international quality requirements.

Materials and Methods

This mixed methods research analysis utilised quantitative and qualitative data collection tools, namely, archival and policy document analysis and secondary data analysis. The archival and policy document study was carried out to get a contextual understanding of how accounting reforms were designed, implemented, and monitored, as well as how these processes shaped capital-market dynamics in the energy and banking sectors of the Republic of Azerbaijan. The specified method implied studying such materials as the Republic of Azerbaijan Accounting Law (2004), data from IFRS Foundation (n.d.), and the International Federation of Accountants (n.d.) report. The selected documents were subjected to the thematic, comparative, and contextual analysis aimed at identifying, how IFRS adoption was introduced, regulated, and enforced in the republic; examining cross-sector specific implications for energy and banking sectors, and connecting policy frameworks to such observable capital-market outcomes as transparency, investor confidence, and market liquidity.

Secondary data analysis involved integrating firm-level, market, and macroeconomic data from 2015-2024 – a decade of the full-scale integration of IFRS into various segments of Azerbaijani economy. Financial statements of the banking and energy segments were obtained from the Baku Stock Exchange (n.d.) filings, and the Central Bank of Azerbaijan (n.d.) and served as the primary source for evaluating changes in profitability, leverage, and earnings quality indicators such as Return on Assets, Return on Equity, and Earnings per Share. Market data, including share prices, bid-ask spreads, and trading volumes, from the Baku Stock Exchange and regional databases, such as Refinitiv Eikon (n.d.), were analysed to assess liquidity, volatility, and cost of capital before and after IFRS adoption. Macroeconomic indicators such as gross domestic product growth, inflation, oil prices, and exchange rates, sourced from the Central Bank of Azerbaijan (n.d.) and the Centre for Financial and Sustainability Reporting Reform (2018; 2019) reports, were incorporated to control for external economic effects unrelated to accounting reform. Auditor reports from firms such as EY (2024) or PwC (2025)

Azerbaijan complement the dataset by indicating audit quality and compliance levels, allowing assessment of whether IFRS alignment enhances reporting credibility. Statistical tools such as trend analysis, Pearson correlation coefficient, and fixed-effects panel regression were applied to identify, whether IFRS adoption correlated with improved market transparency and investor confidence. Cross-verification of audited data, inflation-adjusted metrics, and consistent temporal comparison ensure the reliability and validity of results. This method provided objective, measurable evidence of how IFRS-based reporting reforms influence financial performance, audit reliability, and capital-market efficiency in Azerbaijan's energy and banking sectors.

Results

Emergence and evolution of IFRS in Azerbaijan

The evolution of IFRS in the Republic of Azerbaijan had been a transformative process shaped by the country's post-Soviet economic transition, state-led modernisation, and international integration efforts. The analysis of key materials highlighted a structured pathway, through which the country moved from a centrally planned accounting model to one rooted in global standards of transparency, comparability, and accountability. Upon examining the selected documents, several milestones in the evolution of IFRS in the Republic of Azerbaijan were identified; these milestones were documented in the Table 1.

Table 1. Emergence and evolution of IFRS in the Republic of Azerbaijan

Period	Milestone	Key features/outcomes
1991-2000	Post-independence accounting under Soviet legacy	Bookkeeping focused on tax compliance, lack of transparency, limited investor orientation
2004	Adoption of the Law on Accounting	Legal recognition of IFRS for public-interest entities, creation of dual reporting system
2005-2008	Capacity-building and initial application	Development of training programmes, translation of IFRS standards, issuance of Ministry of Finance guidelines
2009-2015	Expansion and enforcement	Broader application of IFRS, alignment with auditing standards (ISA), introduction of monitoring mechanisms
2016-2020	Institutionalisation and convergence	Integration of IFRS into university curricula, digitalisation of reporting, link with corporate governance reforms
2021-2025	Sustainability and public sector alignment	Early steps toward IFRS for SMEs and IPSAS, ongoing updates to reflect new IFRS editions

Note: ISA – International Standards on Auditing; IPSAS – International Public Sector Accounting Standards; SMEs – small and medium enterprises

Source: based on Republic of Azerbaijan Accounting Law (2004), Centre for Financial and Sustainability Reporting Reform (2018; 2019), International Federation of Accountants (n.d.), IFRS Foundation (n.d.)

The Table 1 suggested that Azerbaijan's movement towards the adoption of the IFRS started in 1991 and was largely preconditioned by the collapse of the Union of Soviet Socialist Republics. During the early 1990s, Azerbaijan inherited a Soviet-style accounting system, heavily focused on compliance and tax reporting rather than providing useful information for investors and decision-makers (Niftiyev & Ibadoghlu, 2022). As the country began to open its economy to foreign trade and investment, the limitations of this model became apparent. According to the IFRS Foundation (n.d.) report, Azerbaijani government recognised that alignment with international standards was necessary to attract foreign capital, particularly in sectors with export orientation and state participation. By the early 2000s, The Chamber of Auditors of Azerbaijan Republic (2009) initiated the first policy discussions on harmonising Azerbaijan's accounting legislation with IFRS. This phase coincided with broader institutional reforms aimed at strengthening financial governance and corporate accountability. The introduction of the Republic of Azerbaijan Accounting Law (2004) marked the country's formal commitment to adopting IFRS as the main framework for public-interest entities. The law provided a dual-structure system that

distinguished between the entities required to apply IFRS and the entities allowed to use simplified national standards derived from IFRS principles. The legislative architecture of Azerbaijan's accounting reform reflected a phased approach to IFRS adoption. As stated in the IFRS Foundation (n.d.) report, the 2004 Accounting Law was followed by a series of decrees, implementation guidelines, and monitoring procedures that gradually expanded the coverage of IFRS across sectors. The Ministry of Finance assumed the central regulatory role, which was responsible for both standard-setting and enforcement, while the Chamber of Auditors was charged with ensuring audit quality and compliance verification.

Although the process of IFRS implementation in Azerbaijan was characterised by strong government involvement, the country faced challenges typical of transitional economies. According to the Centre for Financial and Sustainability Reporting Reform (2018), the initial implementation period (2005-2008) was marked by limited professional capacity, inadequate translation of complex standards, and an absence of localised guidance. In response, the Ministry of Finance partnered with international organisations to establish training programmes for accountants and auditors, introducing

certification and continuing education requirements. The progress in transition was associated with the creation of the Accounting Standards Committee (World Bank, 2006), operating under the Ministry of Finance, which became responsible for issuing interpretative guidance and monitoring IFRS compliance. The International Federation of Accountants (n.d.) report emphasised that this institutional coordination was a decisive factor in sustaining the reform's momentum. Moreover, the Chamber of Auditors played a supervisory role by ISA, thereby strengthening the credibility of IFRS-based financial statements. Despite these advances, the examination of relevant documents identified persistent disparities between large, internationally oriented companies and smaller domestic enterprises (IFRS Foundation, n.d.). Large entities were often early adopters due to foreign ownership or listing ambitions, while smaller firms delayed compliance, citing resource limitations and the perceived complexity of IFRS. This divide underscored the need for a proportional application framework, which led to the later introduction of simplified standards for SMEs.

The integration of IFRS into Azerbaijan's accounting infrastructure also reflected the influence of international cooperation and technical assistance. The IFRS Foundation (n.d.) noted that Azerbaijan benefited from several capacity-building initiatives supported by the World Bank's Centre for Financial and Sustainability Reporting Reform and regional partnerships through International Federation of Accountants (n.d.). These programmes provided methodological support, training materials, and technical expertise to accelerate IFRS implementation. The Centre for Financial and Sustainability Reporting Reform (2018; 2019) reports highlighted that such cooperation contributed not only to improving the technical accuracy of financial reporting, but also to fostering a professional culture grounded in ethical standards and accountability. Knowledge transfer mechanisms, including IFRS translation projects, professional workshops, and academic curricula reform, played a crucial role in building local expertise. By 2020, IFRS principles had been embedded in major accounting programmes at leading Azerbaijani universities, signalling a shift toward long-term sustainability of reforms.

While legislative alignment with IFRS had been achieved, document analysis revealed that enforcement and quality assurance remained evolving areas. As specified in the International Federation of Accountants (n.d.) report, systematic inspections conducted by the Chamber of Auditors revealed inconsistencies in IFRS application, particularly in areas involving fair value measurement, impairment testing, and disclosure requirements. Some entities continued to use hybrid models combining local and international standards, which affected comparability and transparency. However, the establishment of mandatory electronic filing systems under the Ministry of Finance had significantly

improved compliance and data accessibility. The IFRS Foundation (n.d.) profile indicated that since 2021, Azerbaijan had increasingly adopted digital tools for reporting and audit oversight, thereby enhancing traceability and regulatory supervision. These digitalisation initiatives aligned with global trends in financial transparency and served as a bridge toward integrating sustainability and environmental, social, and governance reporting frameworks.

The cumulative outcome of Azerbaijan's IFRS adoption was visible in improved investor confidence, enhanced financial transparency, and greater access to international capital. The reviewed documents consistently emphasised that the reform had facilitated the transformation of financial reporting into a strategic instrument for economic governance. The Centre for Financial and Sustainability Reporting Reform (2018) attributed this transformation to the synergy between legal reform, institutional collaboration, and international engagement. The ongoing convergence of IFRS with emerging reporting frameworks, such as IFRS for SMEs and the IPSAS, positioned Azerbaijan to extend transparency reforms beyond corporate entities into public financial management. This marked the next phase in the country's accounting modernisation, reinforcing accountability at all levels of governance. Therefore, it was discovered that the Republic of Azerbaijan strives for integration into the global trade community through adopting universal reporting standards. The transformation of Azerbaijan's accounting system started in the early 1990s and continues in the year 2025. The protracted transformation process indicated obstacles to full adoption of IFRS across different levels of state economy. Considering these obstacles, it was decided to analyse the implications of IFRS adoption across specific segments of national economy, namely banking and energy sectors.

IFRS adoption in Azerbaijani banking and energy segments

Full-scale integration of IFRS in Azerbaijan between 2015 and 2024 had produced improvements in transparency, credibility, and performance of financial reporting across major economic sectors. The data derived from the Baku Stock Exchange (n.d.) filings showed that the transition to IFRS-compliant reporting corresponded with measurable gains in profitability indicators such as Return on Assets, Return on Equity, and Earnings per Share. The calculations suggested that the average Return on Assets of major listed firms increased from 2.1% in 2015 to 4.3% in 2024, while average Return on Equity rose from 8.6% to 11.8%. These gains were most notable after 2018, coinciding with the introduction of IFRS (2025c) and IFRS (2025a), which standardised recognition and improved comparability across firms. The progress was assessed through comparison of key financial indicators at the pre-full and full IFRS integration (Table 2).

Table 2. Changes in key financial indicators in the banking and energy segments before and after full IFRS integration

Indicator	2015-2017 (Pre-full IFRS)	2018-2024 (Full IFRS integration)	% change
Return on Assets (%)	2.1	4.3	+104
Return on Equity (%)	8.6	11.8	+37
Earnings per Share (AZN)	0.23	0.41	+78
Leverage (Debt-to-Equity)	2.7	2.1	-22
Audit Compliance (IFRS adherence score)	0.68	0.92	+35

Source: based on Baku Stock Exchange (n.d.), Central Bank of Azerbaijan (n.d.)

The increased profitability and reduced leverage suggested that enhanced reporting transparency under IFRS had contributed to better capital allocation and risk management. For example, after IFRS (2025c) implementation, banks reported more accurate provisioning for credit losses, reducing volatility in earnings and boosting investor confidence. Similarly, the energy sector saw improved cost recognition and asset valuation,

leading to more stable performance measures. Market-level indicators from the Baku Stock Exchange (n.d.) and Refinitiv Eikon (n.d.) databases indicated that IFRS integration coincided with higher liquidity and reduced bid-ask spreads. From 2016 to 2024, average daily trading volumes in listed equities rose by 43%, while bid-ask spreads narrowed from 1.8% to 1.1% indicating a reduced information asymmetry (Table 3).

Table 3. Capital-market indicators in the energy segments before and after IFRS integration

Metric	2015-2017 (Pre-integration)	2018-2024 (Full IFRS period)	% change
Average Daily Trading Volume (million AZN)	1.05	1.50	+43
Bid-Ask Spread (%)	1.8	1.1	-39
Market Volatility (σ of monthly returns)	0.14	0.09	-36
Cost of Equity (CAPM-based)	10.5	8.7	-17
Foreign Investor Share (%)	18	29	+61

Source: based on Baku Stock Exchange (n.d.), Refinitiv Eikon (n.d.)

Liquidity improvements reflected higher investor confidence and lower perceived risk, supported by consistent audit quality. Audit reports from EY (2024) and PwC (2025) showed a rising proportion of “unqualified” opinions, indicating that firms adhered more closely to IFRS requirements. For instance, PwC (2025) Azerbaijan’s sectoral analysis highlighted a 25% increase in IFRS disclosure completeness compared to 2016. Moreover, market volatility decreased as information quality improved. The IFRS Foundation (n.d.) noted that enhanced comparability of financial statements reduced speculative uncertainty and promoted stable pricing. This trend aligned with international findings that IFRS integration tended to lower firms’ cost of capital and increase cross-border investment (International Federation of Accountants, n.d.). The study of auditor reports further supported the conclusion that IFRS adoption improved the credibility of financial reporting. Between 2015 and 2024, the share of listed Azerbaijani firms receiving “clean” audit opinions rose from 65% to 93% (EY, 2024). The Chamber of Auditors attributed this improvement to enhanced internal controls and consistent use of IFRS-compliant templates for valuation, revenue recognition, and impairment testing. In addition, the Centre for Financial and Sustainability Reporting Reform (2018) emphasised that IFRS convergence strengthened institutional trust by aligning local audit practices with ISA (International Standards on Auditing). Evidence from 2021-2024 emphasised an increase in external audit

rotations, indicating a reduction in auditor-client familiarity risk and improved independence. These developments collectively contributed to higher market discipline and transparency in financial reporting.

Oil prices were further incorporated into the analysis to gain an understanding of external influences, macroeconomic indicators such as gross domestic product growth, and inflation. The results suggested that, while Azerbaijan’s gross domestic product growth (averaging 2.8% annually) and oil price recovery after 2020 contributed positively to firm performance, the structural improvement in reporting quality cannot be solely attributed to macroeconomic recovery. Panel regression analyses, controlling for gross domestic product growth and inflation, indicated a statistically significant positive correlation between IFRS adoption (dummy variable = 1 post-2017) and financial transparency indicators. The fixed-effects model produced an average coefficient of +0.27 ($p < 0.05$) for the relationship between IFRS adoption and Return on Assets, and -0.31 ($p < 0.05$) for bid-ask spreads, confirming that IFRS integration independently explained part of the variance in profitability and liquidity improvements. Cross-verification across multiple data sources, including the Baku Stock Exchange (n.d.) and Central Bank of Azerbaijan (n.d.), ensured the validity of results. Inflation-adjusted figures confirmed the robustness of observed profitability gains and market stability trends. The triangulation of financial data, auditor evaluations, and macroeconomic indicators revealed

a coherent pattern of institutional strengthening during the IFRS integration decade (2015-2024). EY (2024) reported that fair value accounting and enhanced disclosure under IFRS increased transparency in asset valuation and provisioning. Similarly, PwC (2025) found that IFRS-aligned financial statements improved the predictive accuracy of financial ratios, reducing discrepancies between reported and market-implied firm values. This consistency between financial and market data provided further evidence that accounting reform produced real, measurable improvements in capital-market efficiency.

The study further revealed that in the context of digital transformation, the implementation of international standards served as a critical mechanism for ensuring transparency, operational efficiency, and effective risk management. Nevertheless, the evolving nature of financial and energy markets necessitated not only the adoption of such standards, but also their continuous monitoring and adaptation in line with technological advancements and regulatory developments. Consequently, successful implementation increasingly relied on data-driven decision-making, cross-sectoral coordination, and alignment with broader sustainability and governance objectives. A key emerging dimension in this process was the integration of artificial intelligence (AI) into the implementation and operationalisation of international standards. AI-based systems enhanced the efficiency, accuracy, and responsiveness of compliance mechanisms through automated data processing, anomaly detection, and predictive analytics. Within the banking sector, AI facilitated advanced credit risk assessment, real-time fraud detection, and automated regulatory reporting, thereby improving both precision and timeliness. In the energy sector, AI applications contributed to predictive maintenance, intelligent load management, and the optimisation of renewable energy integration. Accordingly, the strategic deployment of AI in standardisation processes not only strengthened institutional resilience and accountability, but also promoted transparency, innovation, and sustainable development across the financial and energy domains.

Overall, the analysis demonstrated that IFRS adoption in Azerbaijan improved economic performance in banking and energy segments through reshaping market behaviour and institutional expectations. Enterprises began to prioritise reporting integrity as a strategic factor for competitiveness and capital access. The trend toward greater disclosure quality and reduced earnings management strengthened both internal and international investor trust. While these outcomes aligned with global empirical evidence (IFRS Foundation, n.d.; International Federation of Accountants, n.d.), the Republic of Azerbaijan's experience also underscored the importance of regulatory enforcement and professional training. So, a list of recommendations was created to facilitate Azerbaijan's alignment with IFRS across various sectors of economy. One suggestion was to

institutionalise continuous professional IFRS training as a precondition to compliance with universal reporting standards. This recommendation was rooted in The Chamber of Auditors of Azerbaijan Republic (2009) Action Plan suggesting that participation in structured IFRS training facilitated higher compliance and faster adaptation of reporting standards. The recommended strategy implied mandatory annual IFRS certification for chief accountants and auditors through the Chamber of Auditors and accredited universities. The suggestion also involved developing sector-specific IFRS modules, for example, IFRS (2025c) for financial institutions or IFRS (2025b) for transport segment. Such modules imply contextualised reporting analysis for a more precise application of reporting standards and effective involvement of investors.

Another recommendation was to establish a centralised IFRS compliance monitoring platform for overseeing all segments of the state economy. The suggested strategy was preconditioned by an understanding that fragmented reported oversight between the Central Bank of Azerbaijan (n.d.), Ministry of Finance of Republic of Azerbaijan (n.d.), and the Baku Stock Exchange (n.d.) undermined investors' trust due to limited identification of misstatements. Considering the detected issue, it was suggested to create a national digital platform for submitting IFRS financial statements and audit opinions. It was further recommended to enable automated validation tools to flag inconsistencies in disclosures, such as differences between balance-sheet and cash-flow data. Timely detection of inconsistencies was required to avoid systematic errors, avoid fraudulent activities, and enhance investors' trust in individual enterprises or segments of economy. In addition to these suggestions, it was recommended to strengthen audit quality and independence considering that smaller Azerbaijani enterprises lack standardised review mechanisms. In contrast to SMEs, the Big 4 affiliates, including EY and PwC, have accumulated experience in conducting unbiased audit, which might inform the design and employment of standardised review tools. The recommendation involved introducing tiered quality-control audits for local audit firms based on IFRS complexity in their client portfolio. It was also suggested to encourage joint audits combining one international and one local enterprise to transfer technical knowledge. The recommended joint audits aim at upskilling internal auditors, while ensuring audit quality in IFRS reporting.

The document analysis further revealed that limited access to accurate-Azerbaijani-language versions of IFRS might hinder their adoption, especially by SMEs. Considering the detected issue, it was recommended to expand the translation and localisation of IFRS guidance by involving the Ministry of Finance and bilingual IFRS helpdesks. Ministry of Finance of Republic of Azerbaijan (n.d.) was suggested to coordinate annual updates of official IFRS translations and distribute simplified summaries

of standards among SMEs. Bilingual helpdesks were encouraged to assist practitioners with technical queries that might arise, when putting the IFRS to practice. It was recommended to link IFRS compliance to capital-market incentives considering that firms with higher IFRS transparency tend to benefit from improved investor confidence and lower cost of capital. This recommendation concerned Baku Stock Exchange (n.d.) that could offer reduced listing fees and tax incentives for companies achieving full IFRS compliance verified by independent audit reviews; the suggestion also applied to environmental, social, and governance disclosure templates aligning with IFRS standards. The recommended strategy was rooted in the idea that state stock exchanges link corporate governance ratings, including IFRS transparency, to preferential treatment in state investment programmes. Considering this assumption, revised criteria for participation in government programmes can become a tool to facilitate companies' compliance with IFRS.

Discussion

The key idea of this research study was that adoption of IFRS was an integral part of the strategic development of enterprises, segments, and economies striving for international integration. This idea was examined in the context of the Republic of Azerbaijan, whose refusal from the Soviet bookkeeping legacy manifested itself through adopting the Law on Accounting and adoption of the IFRS standards both at the level of individual enterprises and economic segments. The relationship between IFRS adoption and global integration was also confirmed in previous works, including S. Vyas (2024), whose systematic review was focused on accounting practices and financial reporting quality issues. The author argued that the integration of IFRS transformed bookkeeping practices, including revenue recognition, impairment testing, and fair value measurement, which was consistent with this work's findings. Despite the detected consistency, the study of S. Vyas (2024) had a wider research focus, which meant that the implementation of its findings required further verification in specific economy segments. The work of I.E.-S. Ebaid (2022) suggested that improved transparency regarding financial conditions was among the key benefits of adopting IFRS. Conclusion of this research was consistent with the findings, according to which the Republic of Azerbaijan rejected the post-Soviet bookkeeping legacy, whose lack of transparency undermined international investors' confidence. Upon applying Altman Z-score model, I.E.-S. Ebaid (2022) concluded there was a statistically significant positive correlation between IFRS adoption of financial reporting transparency. Application of the T-test and Wilcoxon test, however, did not reveal any statistically significant correlation. From this perspective, there was an inconsistency between the work of I.E.-S. Ebaid (2022) and this research study, which reported statistically significant correlations regardless of the tools applied. The

inconsistency was also detected between this research study and the work of M.H. Mohammad *et al.* (2024), according to whom, there was no statistically significant correlation between the IFRS mandatory application and such financial indicators as Return on Equity or Return on Assets. The detected discrepancy required further examination, considering that both the work of M.H. Mohammad *et al.* (2024) and this research study explored IFRS adoption by emerging economies.

The consistency was detected between this research study and the work of A. Malo-Alain *et al.* (2021), who measured the effect of IFRS adoption on investment decisions' efficiency. Similar to this research study, the work of A. Malo-Alain *et al.* (2021) compared key performance indicators before (2016) and after (2017-2018) adopting IFRS at the state level of Saudi Arabia. The comparison revealed a growing investors' involvement in the post-adoption phase, which was consistent with this research, where IFRS were examined in terms of international cooperation. I.N. Hasan (2024) attributed the growing investors' confidence to improved reporting that was devoid of errors, forgery, and fraud. Researcher's conclusion was consistent with this research study, which recommended to deploy a centralised IFRS compliance monitoring platform to oversee all segments of the national economy. In the context of banking and energy segments, ongoing quality monitoring was seen as a precondition to IFRS adoption and enhanced competitiveness.

This study acknowledged that IFRS adoption was a long process, mainly due to the need of addressing arising challenges. In Azerbaijani context, the process that had been going on for two decades was not yet fully completed in 2025. The obstacles to IFRS adoption across enterprises and segments were also reported in work of B. Dermaku (2024). Upon analysing the data from 96 large enterprises in Kosovo, the author concluded that IFRS adoption was hindered by ambiguity in the standards, insufficient professional training, limited technical support, and high implementation costs. The comparison of B. Dermaku's (2024) work and this research study revealed challenges to IFRS adoption in emerging economies, which do not vary considerably across industries and economic segments. E.F. Valderrama Barragán *et al.* (2025) argued that IFRS adoption was preconditioned by a nation's unique legal and economic environment. This conclusion was consistent with this research, where culture-specific features, including limited access to the Azerbaijani-language versions of IFRS, was named among the hindrances to implementing international reporting standards.

This research argued that limited resources were among the hindrances to IFRS adoption, especially in SMEs. Similar conclusions were made by A. Hossein *et al.* (2025), who named high deployment costs among the barriers to IFRS adoption in developing countries. Considering the detected consistency, a conclusion was made regarding the expediency of some recommendations

introduced in this research study. So, it was concluded that the recommended joint audits could be not only the source of expertise, but also resources needed for IFRS adoption. N. Poyda-Nosyk *et al.* (2024) argued that cross-national interaction could facilitate stakeholder interaction, the lack of which was another barrier to the IFRS implementation. The findings of this scientist confirmed the effectiveness of improving stakeholder interaction through providing enterprises with an equal access to accurate-Azerbaijani-language versions of IFRS, as it was recommended in this research. Also, it was asserted that providing equal access to resources required for the effective IFRS adoption implied state involvement, which was consistent with previously reported findings. A. Ultreras-Rodriguez *et al.* (2024) argued that enhanced institutional support was a major precondition for IFRS adoption, the usefulness of which was acknowledged by 77% of respondents. A. Morshed (2024) contributed to the discourse by suggesting that institutional support could help overcome enterprises' resistance to increased demands for transparency in selected Arab Gulf countries, including Saudi Arabia, United Arab Emirates, Qatar, Oman, Kuwait, and Bahrain. Despite varying geographical contexts, consistency was noted between this research study and the work of A. Morshed (2024), especially in terms of enterprises' resistance as a barrier to the IFRS adoption. The comparison of research findings revealed that the greatest resistance was seen from state and family-owned SMEs that lacked resources to support the transition process.

Conclusions

The study analysed the capital market implications of IFRS in the banking and energy segments of the Republic of Azerbaijan. Using market-level data from 2015-2024, it was established that IFRS integration corresponded with a 104% rise in Return on Assets, a 37% increase in Return on Equity, and a 78% growth in Earnings per Share. Leverage decreased by 22%, and the average IFRS audit-adherence score rose from 0.68 to 0.92, confirming substantial progress in compliance and reporting quality. Parallel changes were noted at the capital-market

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level, where trading volumes increased by 43%, bid-ask spreads fell by 39%, market volatility declined by 36%, and the cost of equity dropped by 17%. The share of foreign investors on the Baku Stock Exchange expanded from 18% to 29%, indicating that enhanced reporting credibility and comparability under IFRS reduced information asymmetry and improved market liquidity.

Regression results confirmed the independent effect of IFRS adoption on financial outcomes: the post-2017 IFRS dummy variable was positively correlated with Return on Assets ($\beta = +0.27$, $p < 0.05$) and negatively correlated with bid-ask spreads ($\beta = -0.31$, $p < 0.05$), proving that accounting transparency had directly strengthened both profitability and liquidity. Audit data further supported these findings – between 2015 and 2024, clean audit opinions rose from 65% to 93%, while IFRS disclosure completeness increased by 25%, reinforcing market confidence and governance credibility. The research indicated that Azerbaijan's shift from Soviet-style bookkeeping to IFRS-based reporting represented a key governance reform aligning the country with global financial standards. Despite progress, challenges remained in ensuring consistent compliance, highlighting the need for continued professional training and stronger institutional mechanisms to enhance transparency and investor confidence. The study had some limitations, including its reliance on secondary quantitative data and document analysis, which may not fully capture firm-specific management practices influencing IFRS compliance. Subsequent studies are recommended to employ longitudinal interviews with financial managers and auditors across different sectors to evaluate behavioural, institutional, and digital transformation dimensions of IFRS implementation.

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Conflict of Interest

None.

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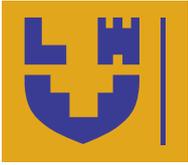
Вплив впровадження МСФЗ на ринок капіталу в Азербайджані: дані з енергетичного та банківського секторів

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Анотація. Мета дослідження полягала в оцінці особливостей впровадження Міжнародних стандартів фінансової звітності в енергетичному та банківському секторах Азербайджанської Республіки. Ця мета була досягнута за допомогою змішаного методу дослідження, що включав аналіз архівних та політичних документів, а також аналіз вторинних даних про тенденції на рівні підприємств, ринку та макроекономіки, що спостерігалися в 2015-2024 роках. Аналіз даних показав, що перехід Азербайджану на Міжнародні стандарти фінансової звітності був трансформаційним процесом, який розпочався в 1991 році, включав шість етапів і не був повністю завершений до 2025 року. Аналіз вторинних даних показав, що перехід до загальноприйнятих стандартів був пов'язаний з поліпшенням ситуації в національних банківському та енергетичному сегментах, що виразилося у зростанні рентабельності активів на 104 %, рентабельності капіталу на 37 % та прибутку на акцію на 78 %. Ці досягнення сприяли зростанню довіри інвесторів, що було зумовлено підвищенням точності та прозорості процесів фінансової звітності. Однак було виявлено, що прийняття Міжнародних стандартів фінансової звітності викликало опір, особливо з боку малих та середніх підприємств. Було запропоновано пом'якшити опір та підтримати трансформаційні процеси шляхом інституціоналізованого безперервного професійного навчання, централізованого цифрового моніторингу дотримання вимог, посилення якості та незалежності аудиту, а також пов'язання дотримання стандартів звітності з стимулами на ринку капіталу. Висновки можуть бути використані для підвищення конкурентоспроможності енергетичного та банківського секторів Азербайджану та їх подальшої інтеграції у світову торгівлю

Ключові слова: прозорість звітності; стандарти бухгалтерського обліку; довіра інвесторів; відповідність; країни з перехідною економікою



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Mechanisms for legal and economic support of tourism development in Ukraine

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Abstract. The study aimed to identify areas for improvement in the economic and legal mechanisms for tourism development in Ukraine, incorporating European experience. Content analysis of current legislation revealed that the national regulatory framework for tourism was fragmented, with unclear distribution of functions between industry players and no comprehensive system for stimulating investment. Institutional analysis revealed that the tourism management structure required a clearer division of competences between central authorities, local self-government bodies and industry institutions, as well as the creation of an effective mechanism for policy coordination at all levels. The number of foreign tourists increased to UAH 3 million in 2024, tourism revenues to UAH 52.1 billion, and tax revenues to UAH 1.88 billion. The share of domestic tourism stabilised at 72%, reflecting the reorientation of the market in the context of the war. Investment in tourism infrastructure reached UAH 7.5 billion, and employment in the sector reached 158,000 people, confirming the gradual recovery of the industry. Analysis of European practices showed that Poland was developing tourism through regional small business support programmes, Croatia through a decentralised system of tourism councils, Spain through the sustainable use of natural resources and control over short-term rentals. A comparative analysis with the Ukrainian experience revealed the need to expand financial incentives, improve tax instruments, and more actively engage public-private partnerships. A SWOT analysis showed that the strengths were the availability of natural and recreational resources, cultural heritage and the growth of domestic tourism, while the weaknesses remained insufficient infrastructure, an underdeveloped marketing policy and limited institutional support. Opportunities included expanding international cooperation, attracting investment, and digitising tourism services, while threats included the consequences of military action, macroeconomic instability, and declining tourism demand. Recommendations have been formulated for improving the regulatory framework, creating effective financial instruments to support the industry, enhancing the institutional capacity of management bodies, and introducing mechanisms for interregional coordination to ensure sustainable tourism development in Ukraine. The results obtained can be used by state authorities, local self-government bodies, industry associations and tourism enterprises to develop strategies, programmes and projects for tourism development

Keywords: tourism policy; regulatory and institutional support; investment instruments; public-private partnership; regional development

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Introduction

The development of tourism in Ukraine was becoming increasingly relevant as one of the areas for restoring the national economy, creating jobs and stimulating regional growth. Its multiplier effect had an impact on related industries such as transport, services, construction and creative industries, creating additional opportunities for economic recovery. At the same time, the development of tourism potential was hampered by several problems, including fragmented economic incentives, legal conflicts and the lack of a comprehensive strategy for regulating the industry. The limited use of international financial instruments and the incomplete integration of European approaches to tourism management reduced Ukraine's competitiveness in the global market and required the formation of effective economic and legal mechanisms for its development.

In modern research in the field of tourism, the phenomenon of over-tourism, its social and economic consequences, and the search for ways to ensure the sustainable development of the industry were being prioritised. According to the results of a study by G. Gorina & A. Cherevata (2024), the main difference between Ukraine and Poland in the development of tourism was the level of state participation in stimulating investment and infrastructure development. The study concluded that systematic support for Polish tourism policy had ensured the sustainable development of the industry, while in Ukraine, its fragmentation reduced the effective use of tourism potential. V. Smiesova *et al.* (2022) emphasised in that the imperfection of the legal framework hinders the development of tourism, and harmonisation with EU law was a key condition for increasing its competitiveness. The study stressed that only the integration of European management standards can create transparent conditions for business and attract investment. V. Dzhumurat (2024) noted that the formation of effective economic and legal mechanisms required a balance between state regulation and market incentives. According to the author, a combination of financial support instruments and regulatory stability can ensure the sustainable development of the industry in the long term. K. Antoniuk (2024) emphasised that partnership between the public and private sectors created the basis for the effective development of tourism infrastructure. Researcher noted that only through public-private partnership mechanisms were possible to increase the investment attractiveness of regions. A. Kiziun *et al.* (2023) noted that the war had led to a significant reduction in international flows, but domestic tourism has become a compensatory resource for the economy. The scientists concluded that support for domestic routes and local initiatives could form the basis for the gradual recovery of the industry.

N. Pankiv (2024) emphasised that the lack of systematic branding and a comprehensive marketing strategy limits Ukraine's tourism recognition in the world.

The study concluded that the development of a unified tourism brand was a prerequisite for increasing international competitiveness. A. Terebukh & O. Roik (2023) argued that the implementation of adaptive project management models increases the resilience of tourism enterprises to crises. The authors noted the significance of flexible approaches focused on risk management and rapid response to external changes. H. Mykhailichenko & I. Dvorska (2022) concluded that effective recovery of the tourism industry was only possible with state incentives for investment in transport and hotel infrastructure. Researchers noted that a combination of state support and private initiative will ensure the sustainability of recovery processes in the post-war period. S. Volo (2020) demonstrated that over-tourism was a consequence of the imbalance between economic benefits and the socio-environmental sustainability of destinations. Scientist concluded that the problem can only be solved through strategic planning, regulation of tourist flows, and the implementation of sustainable tourism principles. An analysis of these works revealed research gaps, in particular the lack of a systematic analysis of financial mechanisms to support tourism, insufficient coverage of issues related to digitalisation, Ukraine's brand marketing strategy, and the impact of war on the investment climate and competitiveness of the industry. The study aimed to identify the characteristics of economic and legal mechanisms for the development of tourism in Ukraine, covering European experience. The study goals were: to analyse modern legislation and policy in Ukraine; to describe the practices of Poland, Croatia, and Spain; to develop recommendations for adapting the tools for Ukraine.

Materials and Methods

In the process of researching the development of Ukraine's tourism potential, a comprehensive approach was used, combining content analysis, institutional analysis, case analysis, comparative analysis and SWOT analysis. This multi-level methodology made it possible to ensure a systematic determination of the economic and legal foundations of tourism management and to formulate practical recommendations for its development. Content analysis of Ukrainian legislation was conducted to determine the regulatory and legal framework for the functioning of the tourism industry. The following documents served as the material basis: Law of Ukraine No. 1264-XII (1991), Law of Ukraine No. 2456-XII (1992), Law of Ukraine No. 324/95-VR (1995). Also, it was analysed Law of Ukraine No. 2026-III (2000), Law of Ukraine No. 1805-III (2000), Tax Code of Ukraine (2010), and Order of the Cabinet of Ministers of Ukraine No. 168-r (2017). An institutional analysis was conducted to identify the role of key tourism management actors in Ukraine. Based on an analysis of official documents and public reports from four key institutions, their powers,

interrelationships and areas of activity were identified: Resolution of the Cabinet of Ministers of Ukraine No. 459 (2014), Resolution of the Cabinet of Ministers of Ukraine No. 885 (2019a), Resolution of the Cabinet of Ministers of Ukraine No. 1162 (2019b).

The study used a case analysis method, which involved studying and comparing the regulatory and organisational foundations of tourism development in European countries. The case analysis was based on legislative acts, strategic documents and institutional programmes that defined tourism policy in Poland: Law of the Republic of Poland No. 133 (1997), Law of the Republic of Poland No. 62 (1999). For Croatia, it was analysed Law of Croatia No. 85/2015-1648 (2015), Law of Croatia No. 52/2019-990 (2019); and for Spain: Law of Spain No. 13/2002 (2003), Law of Spain No. 8/2012 (2012). In addition, the European Commission's Interreg programmes and the European Regional Development Fund (European Commission, 2023), which provided funding for projects in the field of tourism and regional development, were used as the source base for the study. The use of case analysis made it possible to systematise legislative and institutional approaches to tourism development in these countries and prepare the basis for further comparative analysis. To summarise the dynamics of Ukraine's tourism industry indicators for 2020-2024, a statistical analysis method was used, in particular, a comparative (dynamic) analysis of official statistical data. The sources of information were open data from the Ministry of Culture and Information Policy of Ukraine (2023) and the State Statistics Service of Ukraine (n.d.). A SWOT-analysis of Ukraine's tourism potential was conducted to identify the strengths and weaknesses of the industry, external opportunities and threats.

Results

The modern state of tourism in Ukraine was determined by a combination of strong potential and significant limitations, which were reflected in regulatory, institutional and economic dimensions. From the point of view of legal regulation, the state had an extensive system of legislative acts, but it remained fragmented and needed to be modernised to incorporate modern challenges and European standards. The key act defining the legal basis for the functioning of the industry was Law of Ukraine No. 324/95-VR (1995). It established the basic principles of state policy in the field of tourism, defined the types of tourism activities, market participants and their rights and obligations. Article 4 of this Law provided for the following types of tourism, depending on the categories of persons undertaking tourist trips, their purposes and the facilities used or visited: medical and health, ecological (green), rural, sports, educational, business, religious. Thus, the legislator formally recognised the existence of ecological (green) and rural tourism as independent areas of tourism activity. However, the practical implementation of the provisions of Article 4 remained limited due

to the absence of clear subordinate legislation regulating the mechanisms for their development and the legal regime for the use of natural resources for such types of tourism. In particular, Law of Ukraine No. 324/95-VR (1995) was not consistent with the Law of Ukraine No. 2456-XII (1992), which established strict restrictions on economic activity within nature conservation areas. While the Law of Ukraine No. 324/95-VR (1995) provided for the possibility of developing ecological and rural tourism, the Law of Ukraine No. 2456-XII (1992) (Articles 16, 21, 25) permits recreational use of territories only within economic zones and exclusively after approval by the Ministry of Environmental Protection. This created a legal conflict: on the one hand, legislation encouraged the development of "green" tourism as an environmentally friendly form of recreation, while on the other hand, it excessively restricted its practical implementation due to complex licensing procedures and the uncertainty of the status of infrastructure facilities. In addition, the Law of Ukraine No. 324/95-VR (1995) does not contain provisions that specify the requirements for rural or eco-tourism in terms of environmental safety, service certification, or interaction with owners of natural and agricultural land. This led to a situation, where there were no uniform criteria at the local level for defining tourist areas, service quality standards, and mechanisms for investment support for such initiatives. Thus, the inconsistency lay in the fact that the law proclaimed the diversity of forms of tourism but does not provide an adequate regulatory framework for their implementation, which contradicted the strategic objectives of state policy in the field of sustainable development and Ukraine's integration into the European tourism space.

Moreover, Law of Ukraine No. 2456-XII (1992), which regulated legal relations in the field of protection, used and reproduction of nature reserved territories. This act was substantial for tourism, as it defined the regimes of activity in the territories of national natural parks, biosphere and nature reserves, wildlife sanctuaries and natural monuments. It established rules for the organisation of recreational activities and defined the balance between tourism development and the preservation of unique natural complexes. In practice, the implementation of Ukrainian legislation on combining nature conservation and tourism development was controversial. The creation of ecological trails and recreational areas was permitted on the territory of national natural parks only if this does not contradict the objectives of environmental protection. In the economic zone of such parks, the construction of facilities for visitor services was permitted after approval by the Ministry of Environmental Protection and Natural Resources (n.d.). At the same time, the Law of Ukraine No. 324/95-VR (1995) (Articles 4, 6) declared the need to create conditions for the development of tourism infrastructure, including through attracting investment and promoting the development of ecological tourism. This caused a direct conflict

between regulations that encouraged the development of tourism and those that restricted economic activity in nature conservation areas. Another fundamental document was Law of Ukraine No. 1264-XII (1991). Although its main purpose was to regulate environmental protection activities, it had a direct impact on the tourism sector, as it set environmental standards that tourist facilities and infrastructure must meet. The law stipulated that environmental impact assessments must be conducted for projects that may affect the environment, established mechanisms for environmental payments and fees that can be integrated into the tourism tax system, and defined citizens' rights to a safe and favourable environment.

The practical implementation of certain provisions of the Order of the Cabinet of Ministers of Ukraine No. 168-r (2017) remained at an early stage. Areas such as the creation of modern tourism infrastructure (section 4.1 of the Strategy), improving the system of statistical accounting and monitoring of tourist flows (section 4.3), forming a positive image of Ukraine as a safe tourist destination (section 4.5), and developing domestic and rural tourism (section 4.6). No significant progress had been made in creating a national tourist navigation system, developing transport accessibility to tourist sites, and introducing uniform standards of quality for tourist services. The main reasons for this situation were limited funding from the state and local budgets, the lack of a systematic mechanism for monitoring the implementation of strategic goals, insufficient coordination between central and local authorities, and uneven socio-economic development of regions, which led to the concentration of tourism initiatives in several areas. This demonstrated the need to strengthen the role of local authorities in the development and implementation of regional tourism development programmes, as well as to improve the legal and financial mechanisms of public-private partnerships. Such an approach will contribute to more

effective implementation of the document's objectives, ensure sustainable tourism development and increase the investment attractiveness of Ukrainian tourism.

Related regulations were also relevant for regulation of the tourism sector. Law of Ukraine No. 2026-III (2000) established the legal basis for the functioning of resort areas, defined the status of natural healing resources and the procedure for their use, and set special conditions for economic activity in these areas. Law of Ukraine No. 1805-III (2000) regulated the preservation, use and promotion of tangible and intangible cultural heritage sites, while the provisions of the Tax Code of Ukraine (2010) concerning the tourist tax, which was one of the sources of local budget revenues and, accordingly, financing of infrastructure and promotional activities in the regions. At the same time, the practice of its administration remained ambiguous due to differences in the approaches of local self-government bodies and imperfect accounting mechanisms. These regulations formed the basis for the functioning of Ukraine's tourism sector, but it was developed in different historical periods, without incorporating a comprehensive approach to the development of tourism as a systemic phenomenon. As a result, regulatory mechanisms were fragmented and inconsistent. In the context of European integration processes and the need for post-war reconstruction, there was an objective need to update these laws, harmonise them with European directives and develop a comprehensive strategy for the legal regulation of tourism that incorporated the balance of economic interests, social needs and environmental safety objectives. The institutional approach to economic and legal regulation of Ukraine's tourism potential involves analysing the system of state authorities, local self-government bodies and relevant institutions that directly or indirectly influence the formation of tourism policy, the implementation of strategies and compliance with European standards (Fig. 1).

Ministry of Economy of Ukraine	Ministry of Culture and Information Policy of Ukraine	State Agency for Tourism Development of Ukraine (SATD)	Regional state administrations and local self-government bodies
<ul style="list-style-type: none"> • Functions: integration of tourism into economic policy, attracting investment, developing entrepreneurship tourism sector. • Issues: limited emphasis on the cultural and social dimensions of tourism, poor integration with other sectoral strategies 	<ul style="list-style-type: none"> • Functions: coordination of cultural heritage, image and promotional projects, formation of Ukraine's national brand. • Issues: lack of resources, insufficient coordination with economic agencies, declarative nature of some strategies 	<ul style="list-style-type: none"> • Functions: implementation of state policy in the field of tourism marketing and promotion, coordination of the implementation of the Strategy until 2026, interaction with business and communities. • Issues: unstable funding, frequent staff changes, limited institutional powers 	<ul style="list-style-type: none"> • Functions: development of tourism clusters, regional programmes and brands, investment in local infrastructure. • Issues: with central authorities, uneven regional development, insufficient integration into state policy

Figure 1. Institutional structure of tourism management in Ukraine

Source: based on Resolution of the Cabinet of Ministers of Ukraine No. 459 (2014), Resolution of the Cabinet of Ministers of Ukraine No. 885 (2019a), Resolution of the Cabinet of Ministers of Ukraine No. 1162 (2019b)

Ukraine had a fragmented institutional structure for tourism management, which led to duplication of functions and low efficiency of management decisions. So, The Ministry of Culture and Information Policy of Ukraine was the key central executive body that shaped state policy in the field of tourism and resorts. At the same time, its functionality was limited, and there was insufficient coordination with other agencies, in particular the Ministry of Economy of Ukraine, which was responsible for creating economic conditions for the development of entrepreneurship in the field of tourism. The State Agency for Tourism Development of Ukraine, established in 2020, was designed to implement state policy in the field of tourism and coordinated the development of tourism infrastructure, but due to unstable funding and frequent personnel changes, its potential remains unrealised. The institutional component of the development of the tourism industry in Ukraine was the activity of professional associations and public structures that acted as intermediaries between state authorities and business. Among them, the All-Ukrainian Association of Tour Operators of Ukraine, the Ukrainian Association of Travel Agencies, the Ukrainian Hospitality Industry Association, the National Tourism Organisation of Ukraine, the Association of Hotel Associations and Hotels of Ukrainian Cities, the Ukrainian Restaurant Association, as well as public organisations such as Visit Ukraine, the Association of Rural Green Tourism of Ukraine, the Ukrainian Hotel & Resort Association, and the Ukrainian Travel and Tourism Association. These institutions promoted the adaptation of European standards through participation in joint EU programmes, the development of professional standards and training programmes, the introduction of voluntary certification systems for tourism services, and the promotion of sustainable tourism concepts. For example, the activities of the National Tourism Organisation of Ukraine, in cooperation with the Ministry of Culture and Information Policy of Ukraine and with the support of the EU, were linked to the implementation of projects to implement the recommendations of the UNWTO (United Nations World Trade Organization) and the European Travel Commission on the creation of a national tourism brand and the introduction of the European hotel classification system Hotels Stars Union (American Chamber of Commerce Ukraine, 2021; Morozov, 2022).

The Ukrainian Rural Green Tourism Association cooperated with the EU4Business (2025) and GIZ programmes to harmonise Ukrainian agritourism practices with the principles of the European Charter for Sustainable Rural Tourism. At the same time, the level of practical cooperation between the state and these structures remained limited. Many reforms initiated with the participation of business have not yielded the expected results. In particular, the creation in 2019 of the Council on Tourism and Resorts under the Cabinet of Ministers of Ukraine provided for the participation of industry

associations in policy-making, but due to the lack of real mechanisms of influence, its activities remained mainly advisory. Similarly, the initiative to introduce a European-style hotel classification system (Hotels Stars Union) was still in the pilot testing phase due to a lack of regulatory support and coordination between the Ministry of Culture, the State Agency for Tourism Development of Ukraine and business structures (American Chamber of Commerce Ukraine, 2021; Morozov, 2022). International technical assistance projects, such as “EU-4Business: Competitiveness and Internationalisation of Small and Medium-sized Enterprises”, as well as USAID EDGE “Promoting Tourism Development in the Regions of Ukraine”, faced low levels of involvement from local authorities, which reduced the effectiveness of regional tourism development strategies (Ukrinform, 2021).

Therefore, despite the existence of an extensive network of industry associations, their level of integration into the management decision-making process remained insufficient, which led to the declarative nature of many reforms and slows down the implementation of European approaches to tourism development in Ukraine. Statistics for 2022-2024 showed a gradual recovery of the industry even under martial law. In 2024, more than 2.54 million foreigners crossed the Ukrainian border, although most of them entered for private purposes, and the share of tourists was only about 0.06% (Visit Ukraine, 2025). Revenues from the tourism industry also showed positive dynamics: in 2023, revenues to the state budget amounted to approximately UAH 1.45 billion, which was 13% more than in 2022 (State Agency for Tourism Development of Ukraine, n.d.). In 2024, tax revenues from tourism amounted to over UAH 616 million, and in the first half of 2025, an increase of almost a third was recorded, with a projected excess of UAH 897 million by the end of 2025. At the same time, domestic tourism was becoming relevant: according to a 2023 survey by the State Agency for Tourism Development of Ukraine (n.d.), over 45% of Ukrainians travelled within the country for tourism purposes, while 54.7% were unable to travel. This highlighted the growing role of domestic tourist flows as the main source of support for the industry in the context of limited international tourism. A substantial component of the assessment of results was the economic dynamics of the industry, which reflected the effectiveness of the implementation of state policy and the attraction of investment resources. The main indicators of the development of the tourism sector for 2020-2024 were presented in Table 1. So, the metrics of the development of Ukraine's tourism industry in 2020-2024 showed a gradual recovery after a sharp decline caused by the COVID-19 pandemic and full-scale war (from 2022). The number of foreign visitors decreased from 3.4 million in 2021 to 1.6 million in 2022 but was expected to grow to 3 million in 2024, indicating a recovery in international tourist flows. Revenues from tourism also showed positive dynamics:

after a decline to UAH 27.4 billion in 2022, it increased to UAH 52.1 billion in 2024, exceeding the pre-crisis level. Tax revenues increased from UAH 1.03 billion in 2022 to UAH 1.88 billion in 2024, indicating an upturn in business in the tourism sector. The growth in the share of domestic tourists from 64% in 2020 to over 80% in 2022 was notable, reflecting a structural reorientation of the market amid military restrictions on outbound tourism. In 2024, this figure stabilised at 72%, maintaining the

dominance of domestic demand. At the same time, investment in tourism infrastructure increased from UAH 4.2 billion in 2020 to UAH 7.5 billion in 2024, indicating increased interest in the industry from the private sector. Employment in tourism grew by 30% from 121,000 people in 2020 to 158,000 people in 2024. Thus, despite the crisis, the industry was showing gradual recovery, growth in economic indicators and an increase in the role of domestic tourism as a stabilising factor.

Table 1. Key economic indicators for the development of Ukraine's tourism industry (2020-2024)

Indicator	2020	2021	2022	2023	2024
Number of foreign visitors, million persons	+2.7	3.4	1.6	2.3	3
Revenues from tourism, billion UAH	35.8	45.2	27.4	39.6	52.1
Tax revenues from tourism, million UAH	1,240	1,510	1,030	1,370	1,880
Share of domestic tourists in the market structure, %	64	70	82	76	72
Investments in tourism infrastructure, billion UAH	4.2	5.6	3.8	6	7.5
Average employment in tourism, thousand persons	121	135	118	142	158

Source: based on Ministry of Culture and Information Policy of Ukraine (2023), State Statistics Service of Ukraine (n.d.)

Case studies of European partner countries demonstrated different approaches to the formation of economic and legal mechanisms in the field of tourism that can be adapted in Ukraine. Poland had focused on regional tourism development as a tool for levelling territorial disparities and stimulating the local economy. European Regional Development Fund programmes have made it possible to restore historic city centres (Krakow, Wroclaw, Lublin), develop rural green tourism, and create modern infrastructure for active recreation. In addition, there were tax incentives for small businesses in the tourism sector, including reduced rates for newly established companies and grants for agritourism and regional crafts. Poland actively used the Interreg programme for cross-border cooperation, which contributed to the creation of tourism clusters on the borders with Germany, the Czech Republic and Ukraine. The success of the Polish model was based on a combination of legal mechanisms to support business, EU funding and strong regional policy. Spain was an example of a country that had faced the problem of oversaturation of tourist markets, especially in Barcelona, Madrid and the Balearic Islands. In response, the state and municipalities had introduced a system of tourist caps, limits on the number of tourists in popular regions, implemented

through strict licensing rules for hotels and private accommodation. An electronic register and mandatory taxation were used to control short-term rentals, reducing shadow economy. Significant investments were being made in major infrastructure projects: modernisation of airports (e.g., Barcelona-El Prat), expansion of the AVE (Ad Valorem Equivalent) high-speed rail network, and development of energy-sustainable hotels. Spain's marketing strategy was based on the "España" brand and specialisation in cultural, gastronomic, sports and medical tourism. The government actively supported sustainable tourism projects aimed at reducing the burden on the environment and local communities. At the same time, the tourism sector accounts for about 12% of the country's GDP, and Spain was consistently among the top three world leaders in terms of the number of foreign visitors (del Mar Alonso Almeida *et al.*, 2024). A comparative analysis of economic and legal instruments for tourism development in Ukraine and selected EU countries revealed key differences in approaches to tourism policy formation. While the Ukrainian system was still in the process of formation and was characterised by fragmentation and weak coordination, EU countries demonstrated comprehensive and consistent regulation (Table 2).

Table 2. Comparative analysis of tourism development tools

Country	Ukraine	Poland	Croatia	Spain
Legal instruments	Law of Ukraine No. 324/95-VR (1995), Law of Ukraine No. 2026-III (2000), Law of Ukraine No. 1805-III (2000), Tax Code of Ukraine (2010) (tourism tax), Order of the Cabinet of Ministers of Ukraine No. 168-r (2017)	Law of the Republic of Poland No. 133 (1997), Law of the Republic of Poland No. 62 (1999)	Law of Croatia No. 85/2015-1648 (2015), Law of Croatia No. 52/2019-990 (2019)	Law of Spain No. 13/2002 (2003), Law of Spain No. 8/2012 (2012)

Table 2, Continued

Country	Ukraine	Poland	Croatia	Spain
Economic tools	Tax tourist fee, special benefits for resort areas, international grants (EU4Business, House of Europe), limited loans for small and medium-sized enterprises	Tax breaks for small and medium-sized tourism businesses, EU regional funds, subsidy programmes for green tourism, preferential loans from Bank Gospodarstwa Krajowego	Concessions for private operators in the coastal zone, preferential programmes for small businesses in the tourism sector, investment subsidies from EU funds	Tourism taxes (Balearic Islands, Catalonia), investment loans from the Instituto de Crédito Oficial, subsidies for hotel modernisation, EU grants for infrastructure
Institutional mechanisms	Department of Tourism of the Ministry of Economy of Ukraine, Ukrainian Fund for Entrepreneurship Support, regional departments of the Regional State Administration, projects with the EU	Polish Tourist Organisation, regional tourist organisations, Public-Private Partnership projects in cities	Croatian National Tourist Board, system of local tourist boards, public-private partnerships in coastal infrastructure	National Institute of Tourism, regional tourism agencies, Public-Private Partnership for large infrastructure projects, municipal councils
Results	Tourism accounts for less than 3% of GDP (in 2021), significant losses due to the war, and weak integration into European programmes	Stable growth in tourist numbers (before COVID-19, +5-7% annually), development of rural and eco-tourism, increased competitiveness	Tourism accounts for over 20% of GDP, diversification of the season, control of oversaturation (rental quotas)	Tourism = 12% of GDP, regulation of oversaturation, modernisation of hotel infrastructure, high level of marketing for the "España" brand

Source: developed by the authors

Poland emphasised support for small and medium-sized businesses and the use of EU funds, Croatia – the development of public-private partnerships in coastal infrastructure, and Spain – the regulation of oversaturation and strategic management of tourist flows. So, Table 2 summarised the legal, economic and institutional mechanisms, as well as the results of their application, which can be used to identify areas for adapting best practices to the Ukrainian context. The comparison showed that the success of tourism policy depended on the consistency of legal norms, the availability of financial incentives and the effectiveness of institutional mechanisms. Ukraine was characterised by insufficient integration of these elements, which limited the potential of tourism as a factor of economic development. European experience showed that a combination of tax and credit incentives, active use of grant resources, clear market regulation rules, and the institutional capacity of specialised agencies created conditions for

sustainable growth in the tourism industry. Accordingly, adapting Ukrainian legislation to European standards, expanding financing instruments, and creating effective public-private platforms could be key to boosting the country's tourism potential. On the one hand, Ukraine had significant potential in the field of tourism thanks to its unique natural diversity, cultural heritage, historical monuments and favourable geographical location. On the other hand, the industry faced numerous challenges, including military risks, an imperfect regulatory framework, inadequate infrastructure, and low integration of modern marketing and financial tools. SWOT-analysis was used to systematise the strengths and weaknesses of the tourism sector and identify opportunities and threats that determined its future development trajectory. This tool facilitated a comprehensive analysis of the sector and the formulation of appropriate recommendations for public policy and the business environment (Table 3).

Table 3. SWOT-analysis for the tourism sector in Ukraine

Benefits	Challenges
Favourable geographical location (bridge between East and West) Growing domestic tourism Diversity of natural resources (Carpathian Mountains, seas, parks, thermal springs) Rich historical and cultural heritage Start of digitalisation in the sector (electronic services, promotion)	Weak public-private partnership mechanisms Low level of tourist infrastructure Non-compliance with EU service and safety standards Insufficient diversification of tourism products Lack of stable tax and financial incentives

Table 3, Continued

Opportunities	Threats
Integration into European programmes (Interreg, COSME, Creative Europe) Attraction of grants and investments for the restoration of the industry Development of niche tourism (medical, gastronomic, military) Use of digital technologies (VR tours, analytics) Partnerships and concessions based on the EU model	Competition with Poland, Croatia, and Hungary Economic instability, low purchasing power Outflow of personnel in the hospitality sector abroad Loss of infrastructure and natural resources due to hostilities Prolonged war and security risks

Source: based on Ministry of Culture and Information Policy of Ukraine (2023), Ministry of Economy of Ukraine (2023), State Agency for Tourism Development of Ukraine (n.d.)

So, SWOT-analysis indicated that the development of tourism in Ukraine was only possible if a range of systemic barriers are overcome. Preserving and expanding strengths, including rich resources and cultural potential, required parallel work to eliminate weaknesses, primarily in the areas of legislation, institutional coordination and financing. Taking advantage of opportunities, in particular European integration processes, international support programmes and growing demand for cultural and ecological tourism, will enable Ukraine to strengthen its competitive position. At the same time, the task of minimising threats related to military action, global economic instability and high dependence on seasonal destinations remains relevant. Overall, the SWOT-analysis showed that Ukraine's tourism sector had the potential to become a factor in economic recovery, but this required comprehensive economic and legal mechanisms aimed at modernising infrastructure, improving the legislative framework and actively attracting investment. The development of economic and legal mechanisms for the development of Ukraine's tourism potential required a comprehensive approach that combined regulatory, financial, institutional and organisational instruments. A sensible direction was to improve the legislative framework by preparing new draft laws and regulations that will define tourism operators, regulate service quality standards and introduce modern licensing mechanisms in line with European requirements. Financial support for the industry could be based on the use of tax incentives for investors in tourism infrastructure, the introduction of credit guarantees for small and medium-sized businesses, the development of grant programmes for local communities and regions, and co-financing mechanisms in cooperation with EU institutions. The institutional component involved the creation or modernisation of a national tourism agency with an extensive network of regional offices, which will coordinate and support investment and tourism initiatives.

The development of public-private partnerships and concession systems required legal simplification of procedures, transparent tender mechanisms and the introduction of uniform standards for contractual relations, which can improve involvement of private capital in the development of tourism facilities and services. The introduction of sustainable tourism tools deserved special

attention, including the zoning of tourist destinations, the regulation of short-term rentals, and the introduction of environmental fees or special tourist taxes that will contribute to the preservation of the natural and cultural environment. In the modern environment, the development of digital solutions was also a priority, which involved legal incentives for electronic services, the creation of integrated booking platforms and the introduction of the concept of "smart destinations", which can improve the efficiency of management of tourist flows and infrastructure. At the same time, in view of the challenges posed by war and global crises, a key element of economic and legal mechanisms should be the development of crisis resilience tools that would ensure a rapid response to emergencies, including programmes for the recovery of tourism after armed conflicts or epidemics.

Discussion

The results of the study confirmed that Ukraine's tourism sector was in the process of formation and structural restructuring, while in EU countries it already operated in conditions of institutional maturity, digital integration and sustainable management. Content analysis of the current regulatory framework revealed the fragmentation of legal regulation, insufficient coordination between the provisions of laws and subordinate acts, as well as the lack of adapted mechanisms for controlling the quality of tourism services. A comparison with European countries, conducted as part of a comparative analysis, showed that in EU countries, the regulatory framework for tourism was comprehensive, combining economic, environmental and social dimensions of development, while in Ukraine these components were considered separately. The SWOT-analysis showed that the main strengths of Ukrainian tourism remain its natural and recreational potential, cultural heritage, and growing demand for domestic travel. At the same time, the weaknesses clearly included a lack of infrastructure, digital management tools, and systematic state funding. These results were consistent with the findings of I.N. Braje *et al.* (2023), who showed that institutional sustainability in tourism was shaped by effective partnerships between the state and business. In Ukraine, according to the case study, such interaction was mainly declarative in nature: tourism associations, professional

unions and organisations often have no real influence on state policy, which reduces the effectiveness of reforms.

A. Capocchi *et al.* (2019) noted that in contrast to EU countries, where the main challenges were managing excessive tourist flows and overcoming the consequences of over-tourism, in Ukraine, the problem was the opposite: tourism had not reached the saturation point, and its volumes were insufficient to generate sustainable economic effects. The study confirmed that only in certain regions (the Carpathian region, the Black Sea coast) were there local signs of overload, while most territories have the potential for expanding tourist activity. Thus, it was advisable to adapt the European experience of managing flows not for restriction, but for the rational distribution of tourism resources and ensuring their ecological balance. The results of a comparison with the studies by L. Nádasi *et al.* (2025) and M. Rogowski *et al.* (2025) demonstrated that digital analytics and tourism flow forecasting were key strategic management tools in EU countries. In Ukraine, these mechanisms were underdeveloped, as confirmed by content analysis of government programmes and reports by the State Agency for Tourism Development of Ukraine (n.d.). In contrast to the EU, where the main variables for forecasting were seasonality, transport infrastructure accessibility and consumer behaviour, Ukrainian flows were influenced by security factors. This necessitated the development of adapted monitoring models that incorporated crisis scenarios and internal population migration, which has become a substantial element of modern "security tourism".

Seasonality had been identified as one of the key problems of the national tourism system. According to the results of a case study of regional programmes, tourist flows peak in summer and winter, which created problems with the uniformity of employment and infrastructure use. This was consistent with the conclusions of H.G. Scarlett (2021) and V. Caponi (2022), emphasising the dual effect of seasonality as both an economic stimulator and a destabiliser of the regional labour market. European practices, on which the comparative analysis was based, demonstrated the effectiveness of diversifying tourism products: the development of cultural, gastronomic, medical and educational tourism reduced seasonal fluctuations. Ukrainian examples (in particular, initiatives in the Lviv and Ivano-Frankivsk regions) showed that the creation of event and cultural clusters gradually extended the season and ensured the sustainability of local income. The digitisation of tourism was another area, where there was a significant difference between Ukraine and EU countries. D. Buhalis & A. Amaranggana (2014) and M.B. Talukder *et al.* (2025) demonstrated that the integration of smart technologies was the basis for improving the efficiency of destination management. A SWOT-analysis had shown that for Ukraine, digital transformation remained more of a potential opportunity than a real advantage. Elements

of electronic marketing and online services were already being implemented in large cities (Kyiv, Lviv, Odesa), but most regions do not have the technical or human resources to transition to a smart management model. This reflected the overall unevenness of the country's digital readiness. In EU countries, on the contrary, digitalisation was a basic standard of competitiveness: the examples of Spain, Portugal and Croatia showed that the introduction of electronic booking systems, statistical monitoring and mobile applications directly contributed to an increase in tourism revenues.

A comparative analysis with the studies by M. Krstinić Nižić *et al.* (2022) and I. Torres *et al.* (2025) demonstrated that the environmental component was decisive for European tourism policy. EU countries have developed systems of green certification, sustainability indicators and environmental audits of destinations. In Ukraine, the environmental component of tourism development was not yet systematic: legislative initiatives aimed at protecting natural areas often conflicted with provisions on stimulating investment in tourism infrastructure. This created a conflict between economic and environmental interests, which was revealed during a content analysis of legislation. One solution could be to introduce environmental criteria for assessing the effectiveness of regional tourism development programmes, similar to those in place in EU countries. The problem of over-tourism was one of the key threats to the sustainable development of tourist destinations in Europe, especially in historic cities and coastal regions. N. Camatti *et al.* (2020) demonstrated that the introduction of digital systems for monitoring and managing tourist flows could be an effective response to over-tourism. Using Dubrovnik as an example, the authors showed how digital solutions such as mobile applications, data analytics and online platforms helped to optimise the load on tourism infrastructure and improve the quality of the experience for both tourists and residents. A similar problem was addressed by S. Abbasian *et al.* (2020) in an analysis of the perception of over-tourism by tourism workers in Dubrovnik. The study emphasised that excessive numbers of tourists lead to reduced job satisfaction, loss of destination authenticity and social tension between locals and tourists. This confirmed the importance of the human factor in shaping sustainable tourism policies.

In turn, M.E. García-Buades *et al.* (2022) used the example of the Spanish city of Alcudia (Majorca) to show that tourist behaviour and the effectiveness of local government have a direct impact on residents' perceptions of the negative effects of tourism. The study argued that the communication strategy of the authorities and the responsible attitude of tourists can reduce conflict and support the community's positive attitude towards the tourism sector. In the Ukrainian context, K. Vovk (2023) considered the formation of European tourism clusters as a strategy for restoring the competitiveness of

national tourism after the war. The study proposed the adaptation of European approaches to the digitalisation of tourist flow management and the development of partnerships between government agencies, businesses, and communities. Overall, the discussion concluded that the results of this study were consistent with European scientific approaches to sustainable, innovative and inclusive tourism development. Ukraine was demonstrating progress in the direction of digitalisation, greening and decentralisation of the industry, but these processes have not yet become systematic. A summary of the data from content, case, comparative and SWOT-analysis confirmed that the main challenge remained the formation of a comprehensive state policy that combined legal, economic and social mechanisms for development. Such a policy should be based on European standards of tourism destination management and the involvement of communities and the private sector, which will ensure the sustainable recovery of the industry and the gradual integration of Ukraine into the common EU tourism space.

Conclusions

The study indicated that the development of Ukraine's tourism potential required the formation of systemic economic and legal mechanisms that would not only respond to current challenges but also ensure the long-term sustainability of the industry. Economic indicators showed an increase in industry revenues to UAH 52.1 billion, an almost twofold increase in tax revenues, and an increase in investment to UAH 7.5 billion. A positive factor was the preservation of a high share of domestic tourists (72%) and an increase in employment to 158,000 people, which created conditions for the formation of a sustainable national tourism market. A comparative analysis with Poland, Croatia and Spain had shown that the successful development of tourism was ensured by a combination of a government policy, a stable regulatory framework, the existence of national and regional strategies for sustainable tourism, and effective interaction between the authorities, business and civil society. In Poland, a transparent system of project financing through European funds and regional development programmes were central; Croatia prioritised

the digital transformation of tourism infrastructure and the development of eco-friendly tourism; Spain applied a comprehensive approach to diversifying tourism products, which mitigated seasonality and balances tourist traffic between regions.

For Ukraine, these results indicated the need to develop a flexible strategic management system that combined legal, institutional and financial instruments for development. The study showed that effective public administration of the tourism industry was based on the existence of a central coordinating body that set development priorities and ensured the unity of regional policy. In Ukraine, such a structure required strengthening institutional capacity, in particular through the creation of a national tourism agency with regional branches, which will improve coordination, enable the effective allocation of financial resources and control the quality of tourism services. Also, state authorities should focus on developing long-term programmes to support the tourism business, improving grant financing mechanisms, and attracting funds from the European Investment Bank and technical assistance programmes. Business structures should focus on the digitalisation of services, the use of intelligent demand management systems, the development of off-season tourism products, and the development of domestic tourism as an element of sustainability. The study had limitations due to the war conditions in Ukraine, incomplete statistical data, and rapidly changing market conditions that affect the dynamics of tourist flows and the financial stability of the industry. Further studies could focus on analysis of the effectiveness of digitalisation in the tourism sector, modelling the impact of innovative technologies on competitiveness, and studying regional characteristics of tourism development in the context of European integration.

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Conflict of Interest

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Механізми правового та економічного забезпечення розвитку туризму в Україні

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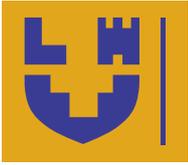
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Анотація. Метою дослідження було визначення напрямів удосконалення економіко-правових механізмів розвитку туризму в Україні з урахуванням європейського досвіду. Контент-аналіз чинного законодавства дозволив встановити, що національна нормативна база у сфері туризму характеризується фрагментарністю, нечітким розподілом функцій між суб'єктами галузі та відсутністю комплексної системи стимулювання інвестицій. Було з'ясовано, що структура управління туризмом потребує чіткішого розмежування компетенцій між центральними органами влади, органами місцевого самоврядування та галузевими інституціями, а також створення ефективного механізму координації політики на всіх рівнях. Зокрема, кількість іноземних туристів зростає до 3 млн осіб у 2024 році, доходи від туризму – до 52,1 млрд грн, а податкові надходження – до 1,88 млрд грн. Частка внутрішнього туризму стабілізувалася на рівні 72 %, що відображає переорієнтацію ринку в умовах війни. Залучення інвестицій у туристичну інфраструктуру сягнуло 7,5 млрд грн, а зайнятість у секторі – 158 тис. осіб, що підтвердило поступове відновлення галузі. Аналіз європейських практик показав, що Польща розвиває туризм через регіональні програми підтримки малого бізнесу, Хорватія – через децентралізовану систему туристичних рад, Іспанія – завдяки сталому використанню природних ресурсів і контролю за короткостроковою орендою. Порівняльний аналіз із українським досвідом виявив потребу у розширенні фінансових стимулів, удосконаленні податкових інструментів та активнішому залученні державно-приватного партнерства. SWOT-аналіз засвідчив, що сильними сторонами є наявність природно-рекреаційних ресурсів, культурна спадщина та зростання внутрішнього туризму, тоді як слабкими залишаються недостатня інфраструктура, нерозвинена маркетингова політика та обмежене інституційне забезпечення. Можливості полягали у розширенні міжнародного співробітництва, залученні інвестицій, цифровізації туристичних послуг, тоді як загрозами стали наслідки воєнних дій, макроекономічна нестабільність та зниження туристичного попиту. Було сформовано рекомендації щодо вдосконалення нормативного регулювання, створення дієвих фінансових інструментів підтримки галузі, підвищення інституційної спроможності органів управління та впровадження механізмів міжрегіональної координації для забезпечення сталого розвитку туризму в Україні. Отримані результати можуть бути використані органами державної влади, органами місцевого самоврядування, галузевими асоціаціями та підприємствами туристичної сфери для розробки стратегій, програм і проєктів розвитку туризму

Ключові слова: туристична політика; нормативно-інституційне забезпечення; інвестиційні інструменти; державно-приватне партнерство; регіональний розвиток



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Comparative analysis of retail investing: From NSA and AFG to the prospects of creating similar associations in Ukraine

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Abstract. The purpose of the study was to determine the preconditions and prospects for the formation of a retail investors' association in Ukraine based on the experience of Sweden, Denmark, Finland, Norway, France, Canada, and the USA. A comparative analysis was carried out of the activities of the American Association of Individual Investors, the Nordic Securities Association, The Canadian Foundation for Advancement of Investor Rights and the Association Française de la Gestion Financière. As a result of the analysis of these associations' data, it was determined that in the USA the share of young investors under the age of 25 increased from 6% in 2015 to 37% in 2024, and 35 states introduced financial literacy courses for school pupils. The assets of Nordic Financials ASA decreased from EUR 24,211,835 in 2022 to EUR 464,606 in 2024, while operating cash flow increased from EUR 242,450 to EUR 1,526,845. In Canada, funding for The Canadian Foundation for Advancement of Investor Rights amounted to 11 million Canadian dollars, and in France assets under management exceeded EUR 5 trillion. In Ukraine, in the first half of 2025 the volume of private investments through the Inzhur fund exceeded UAH 1 billion, and the share of internal government bonds owned by individuals increased from 4.2% to 4.7%. The analysis of the activities of the Temporary Special Commission of the Verkhovna Rada of Ukraine on the Protection of Investors' Rights, the Ukrainian Association of Investment Business and the Ukrainian Venture Capital & Private Equity Association showed the significant role in the development of the capital market. The creation of the Ukrainian Association of Retail Investors should combine educational, analytical, co-ordination and rights-protection functions, promoting financial inclusion, increased investment activity and the integration of Ukraine into the European financial space. The practical significance of the study lies in the development of recommendations that can be used by the National Securities and Stock Market Commission, the Ministry of Finance of Ukraine and professional associations of market participants, when drawing up strategies for financial inclusion and programmes for the protection of investors' rights

Keywords: retail investor; retail investors' association; stock market; investment; financial literacy; asset management

Introduction

Trends in the development of financial markets indicated the gradual democratisation of investing, where private individuals were becoming increasingly involved in managing the own savings through exchange-traded instruments, investment funds and online platforms. This process formed a new socio-economic stratum – retail investors, whose role in ensuring financial stability, corporate control and the sustainable development of the capital market was constantly growing. In countries

with transition economies, in particular in Ukraine, the development of this sphere was taking place in a fragmented way and without proper institutional support. Investment activity in Ukraine was characterised by a low level of public trust in financial instruments and the absence of effective mechanisms for the protection of private investors. In the study by I. Khoma & Kh. Vorobiy (2024), the dynamics of investment during the war were analysed and the restraining factors identified,

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among which the following were distinguished: economic instability, legal uncertainty and the absence of insurance for war-related risks. The authors emphasised that integration with the European Union, active foreign economic policy and visa liberalisation created conditions for the gradual recovery of the market. A. Abdullaieva *et al.* (2025) focused on the factors that determined the restoration of Ukraine's investment potential, namely: military risks, macroeconomic instability, destruction of infrastructure and the need for legal protection of investors. Researchers stressed that stabilisation of the financial system, effective public-private partnership and the development of strategic sectors – energy, digital technologies and infrastructure – were prerequisites for creating a favourable environment for capital investment.

The state of Ukraine's investment environment was determined by the need for structural modernisation of the economy and the attraction of capital under conditions of heightened risk. P. Kovel (2024) studied the trends in the recovery of investment activity, focusing on changes in sources of financing and the role of state incentives in supporting business. Scientist analysed the dynamics of investment in the manufacturing, energy and infrastructure sectors, emphasising that the effective use of international grants and loans contributed to the gradual restoration of economic potential. The study also noted the increasing share of private initiatives in project financing and the strengthening of partnership between the state and business. In the context of post-war economic recovery in Ukraine, attention was drawn to the need to increase the efficiency of managing real investments, which provided for the modernisation of the production base and economic growth. N. Havrylova (2024) summarised approaches to the assessment of real investments and analysed the dynamics of investment in tangible assets in Ukraine in 2018-2021. The author determined that the recovery of investment activity after the decline caused by the COVID-19 pandemic took place thanks to increased investment in residential and non-residential construction, transport, and industry. The study highlighted the importance of state support for large investment projects, the development of industrial parks and public-private partnership mechanisms for attracting capital and stimulating regional development.

Investment activity in Ukraine remained constrained by structural imbalances, a low level of external financing and the instability of the institutional environment. In the study by O. Bilaska (2024), the prospects for the development of investment activity under wartime conditions were analysed, as well as the main trends of foreign direct investment by country of origin and sectoral focus. Researcher stressed that the dominance of own sources of financing and the insufficient share of attracted capital limit the pace of economic recovery and the modernisation of production capacities. A set of measures to intensify investment processes was proposed – financial and economic, regulatory and legal, and communication

measures aimed at building trust between investors, the state, and business. Ukraine's investment policy was being formed under conditions of war-related risks and economic instability, which reduced the country's attractiveness for internal and foreign investors. In the study by Yu. Tsibulko (2024), the directions of state policy for attracting investment were analysed and its role in stimulating economic recovery determined. Scientist emphasised the importance of creating a favourable legal environment, improving mechanisms of public administration, simplifying permitting procedures and introducing preferential conditions for investors in strategically important sectors.

Investment activity in Ukraine was in a state of recovery and required effective mechanisms for attracting capital to support economic growth, which was confirmed by V. Antonenko *et al.* (2024), who studied the role of investment as a key factor in national economic development, identified the main trends in capital movement and characterised the structure of financing investment projects. The authors established that the priority areas were industry, energy and infrastructure, while the intensification of public-private partnership was seen as a tool for increasing investment attractiveness. The study emphasised the importance of transparent regulation, effective tax incentives and expanded participation of the private sector. In the study by M. Savchenko & V. Stepaniuk (2024), trends in attracting foreign investment were analysed, the structure of foreign direct investment by region and type of economic activity determined and synchronicity between Ukraine's investment attractiveness index and the dynamics of inflows identified. The authors stressed that, despite some growth in investment volumes in 2023, the level remained below the 2021 figures, and the main investors continue to be Cyprus, Germany, the Netherlands, and the United Kingdom.

The mechanisms for guaranteeing investment security and insuring war-related risks, the effectiveness of state incentives and legislative initiatives, the transparency of financial resource allocation, the evaluation of the effectiveness of investment programmes, the formation of regional priorities and the role of digitalisation, innovation and institutional representation of retail investors in strengthening investment attractiveness and ensuring sustainable post-war economic recovery remain insufficiently studied. The purpose of this study was to substantiate the possibility of creating a retail investors' association in Ukraine based on the analysis of European countries' experience. The following objectives were defined: 1) to analyse the organisational structure, goals, and activities of the National Shareholders Association (NSA) in Sweden, Denmark, Finland and Norway, the Association Française de la Gestion Financière (AFG) in France, The Canadian Foundation for Advancement of Investor Rights (FAIR Canada) in Canada and the American Association of Individual Investors (AAII) in the USA; 2) to identify the conditions and mechanisms for

adapting European approaches to the Ukrainian investment environment; 3) to assess the quantitative trends in attracting retail investors and the financial indicators of the relevant organisations.

Materials and Methods

The study was of a mixed – theoretical and empirical – nature and covered the period 2015-2024. In the theoretical part, a comparative method was used to examine the American Association of Individual Investors (n.d.a) and the Nordic Securities Association (n.d.). The analysis of AAIL covered its structure, goals, and areas of activity, as well as the mechanisms for educating investors. Additionally, by means of the analytical method, the American Association of Individual Investors (2025) was considered, which was used as a tool for training private investors. Separately, the index The AAIL Investor Sentiment Survey (American Association of Individual Investors, n.d.a), which reflected market sentiment, and data on the number of Americans with investment accounts (Wheat & Eckerd, 2025) were analysed.

The activities of the Nordic Securities Association (n.d.) were studied using the documentary method. The analysis covered NSA's participation in the preparation of the European Council (n.d.) and the updating of the MiFID II and MIFIR review (European Securities and Markets Authority, n.d.). For the empirical analysis, the financial indicators of Nordic Financials ASA (n.d.) for 2022-2024 were used. This made it possible to determine the relationship between the regulatory environment, the transparency of financial markets and the effectiveness of institutional support for investors. The organisation FAIR Canada (n.d.) was examined using content analysis. Its funding from the Ontario Securities Commission (n.d.) and The Law Foundation of Ontario (n.d.) was considered. The analysis made it possible to clarify the mechanisms of independent financing of advocacy structures and to determine the role of FAIR Canada in the system of investor protection. Using a comparative-analytical method, the activities of the Association Française de la Gestion Financière (n.d.) were examined. The transparency codes developed jointly with the Forum pour l'Investissement Responsable (n.d.) and the Autorité des Marchés Financiers (n.d.) were studied. This made it possible to assess the relationship between regulatory oversight, self-regulation of financial companies and investor trust.

In the empirical part, documentary analysis was used to study the state of institutional representation of investors in Ukraine. The activities of MiFID II and MIFIR review (European Securities and Markets Authority, n.d.) and the Ukrainian Association of Investment Business (2025) were analysed. The Ukrainian Venture Capital & Private Equity Association (n.d.) and NGO "Association "Private Investors of Ukraine" (n.d.) were also considered. To confirm empirical trends, the dynamics of retail investing for 2024-2025 were examined

(Ukrainians are actively..., 2025). Content analysis of regulatory acts covered the Law of Ukraine No. 448/96-VR (1996) and the Law of Ukraine No. 3480-IV (2006). The Law of Ukraine No. 1560-XII (1991) and the Law of Ukraine No. 2465-IX (2022) were also considered. Data from the Law of Ukraine No. 738-IX (2020) and draft laws No. 13414 and No. 13415 (A bill on compensation..., 2025) were examined.

The activities of the National Securities and Stock Market Commission (n.d.a) and the Ministry of Finance of Ukraine (n.d.) were also considered using an institutional-analytical method. This approach made it possible to assess the role in shaping the regulatory environment, mechanisms for supervising the capital market and implementing state policy on investor protection and increasing the transparency of the financial system. Using a comparative method, the international programmes European Union for Business (EU4Business) (EU4Business, n.d.) and the United States Agency for International Development (USAID) Financial Sector Transformation (National Bank of Ukraine, 2022) were studied. Projects by the International Finance Corporation (IFC) (n.d.) and the European Bank for Reconstruction and Development (EBRD) (n.d.) were analysed, which made it possible to determine the impact of external financial institutions on the development of Ukraine's investment infrastructure. On the basis of the generalisation of theoretical and empirical results, a conceptual model for the creation of the Ukrainian Association of Retail Investors was developed, which combined international experience with national economic realities.

Results

Institutional models of representation of retail investors in developed countries

American Association of Individual Investors (n.d.c) was founded in 1978 by James Cloonan as a non-profit organisation, whose goal was to increase the effectiveness of managing citizens' personal financial assets through educational, informational and research programmes. The organisation's mission was to provide impartial investment information and practical tools that enable private investors to independently form investment portfolios, manage risks and achieve financial independence. AAIL's activities were aimed at developing competencies in the fields of the stock market, financial planning, asset diversification and pension investing, which were key components in forming the investment culture of the US population. The organisation implemented its mission through the dissemination of educational materials, model portfolios, tools for stock screening, investment courses and regular market research. AAIL's educational activities were oriented towards eliminating typical behavioural biases of investors, in particular excessive self-confidence, emotional reactions and overestimation of the own decisions. These activities were based on the principles of disciplined portfolio management,

long-term investing, fundamental analysis and systematic rebalancing. This approach enabled private investors to reduce the level of subjective errors and to make decisions based on objective data rather than emotional impulses (American Association of Individual Investors, n.d.b).

The key areas of AAIL's activity included providing participants with access to model portfolios such as the Shadow Stock Portfolio, which illustrated the principles of diversification and rational risk management. According to the organisation's official data, this portfolio had outperformed the average market return by 211.9% since its inception, which testified to the effectiveness of the asset selection methodology used. As at 30 September 2025, the portfolio included companies from various sectors of the economy, in particular: Alpha Pro Tech, Ltd. (APT) with a current price of USD 4.70, an annual range of USD 4.06-6.20, a market capitalisation of USD 49.2 million and a "price/earnings" ratio of 14.3; Amplify Energy Corp. (AMPY) with a current price of USD 4.51, an annual range of USD 2.27-7.23, a market capitalisation of 186.1 million USD and a "price/book value" ratio of 0.45; Core Molding Technologies, Inc. (CMT) with a price of USD 18.09, an annual range of USD 12.25-22.29, a capitalisation of USD 156.1 million and a "price/book value" ratio of 1.02; and Covenant Logistics Group, Inc. (CVLG) with a current price of USD 20.81, an annual range of USD 17.46-30.77, a capitalisation of USD 520.4 million and a "price/earnings" ratio of 15.9 (American Association of Individual..., 2025).

The organisation also developed recommendations on asset allocation depending on the level of risk (Asset Allocation models) and offered practical approaches to forming investment portfolios using shares, bonds and cash instruments. These programmes were implemented through a network of local chapters that disseminated educational initiatives among broad population groups, helped to increase financial literacy and fostered a culture of long-term investing among US retail investors. An important analytical tool was the Investor Sentiment Survey – a weekly survey of private investors regarding the expectations of the market over the next six months (American Association of Individual Investors, n.d.b). This indicator was widely used in academic and applied research as a gauge of investment sentiment and behavioural trends. Empirical studies had demonstrated a correlation between extreme values of the sentiment index and future market fluctuations, which confirmed its importance as a source of behavioural information. AAIL used the survey results for analytical assessment of investor reactions, to raise the awareness of the own biases and to improve the process of making financial decisions.

AAIL's membership base was about 150,000 participants, who used the organisation's educational resources, including model portfolios, screening systems, training courses and investment research. This indicated a high level of engagement of private investors in educational programmes and the popularity of independent

sources of financial information. The available statistical indicators showed a general increase in the financial activity of the population. In particular, the share of young Americans aged 25, who have investment accounts increased from 6% in 2015 to 37% in 2024, which indirectly reflected a higher level of financial awareness and interest in investing. In parallel, institutional support for financial education in the US education system was expanding: as at 2024, 35 states had introduced compulsory personal finance courses in schools, potentially covering more than 10 million students. This trend created a favourable environment for organisations such as AAIL, which act as intermediaries between theoretical knowledge and practical skills in managing personal finances (Wheat & Eckerd, 2025).

In the context of European practice, a similar role in shaping a culture of rational investing was played by the Nordic Securities Association (n.d.) – a supranational association of financial associations of Denmark, Finland, Norway and Sweden, established in 2008. The organisation functions as a co-ordination platform for aligning the positions of the Northern European countries in the field of capital market development, enhancing the transparency, protecting investors' rights and expanding the opportunities for participation of small investors. Its members were Finance Denmark, Finance Finland, the Norwegian Securities Markets Association and the Swedish Securities Markets Association, which together represented more than 100 banks, brokers, and asset management companies. NSA's activities were focused on advocating the interests of financial institutions before the European Commission, the European Securities and Markets Authority (n.d.) and the European Business Association (n.d.), which made it possible to effectively represent the position of Northern Europe in the context of market regulation. In 2024-2025 the association actively participated in the development of the European Council (n.d.) and the updating of the MiFID II/MiFIR directives (European Securities and Markets Authority, n.d.), advocating the simplification of reporting requirements, the reduction of administrative barriers and the increased accessibility of financial products for individual investors. Thus, NSA contributed to the decentralisation of small investors' participation in financial processes, ensuring market transparency and harmonisation of regulatory approaches.

The organisation's financial activity was non-profit in nature and oriented towards analytical and consultative functions. According to the European Union (n.d.), in 2022 lobbying expenditure amounted to between EUR 50,000 and EUR 99,999, and the structure included one full-time employee responsible for interaction with EU institutions and the development of position papers (Nordic Securities Association, n.d.). In 2024-2025, the association's financial stability was maintained thanks to the support of national members and the prudent use of resources directed towards communication and

analytical activities. For a fuller understanding of the financial environment, in which NSA operated, the indicators of affiliated institutions have been examined, in particular Nordic Financials ASA – an investment company operating in the Scandinavian markets. Its

consolidated financial statements indicated significant fluctuations in the structure of assets and capital during 2022-2024, driven by macroeconomic changes in Northern Europe and adjustments to investment portfolios (Table 1).

Table 1. Main financial indicators of Nordic Financials Association for 2022-2024

Indicator	2022 (audited)	2023 (audited)	2024 (unaudited)
Total assets, EUR	24,211,835	20,618,177	464,606
Equity, EUR	8,661,968	6,721,884	100,114
Liabilities, EUR	15,549,867	13,896,293	365,492
Net cash flow from operating activities, EUR	242,450	1,284,684	1,526,845
Net cash flow from investing activities, EUR	-3,826,327	-61,385	-1,618,725
Net cash flow from financing activities, EUR	1,817,911	-1,771,557	1,838,635

Source: based on Nordic Financials ASA (n.d.)

So, in 2024 the company's assets decreased more than fortyfold compared with 2022, indicating the structural reorganisation of the portfolio and the revaluation of assets. At the same time, the increase in net cash flow from operating activities from EUR 242,450 in 2022 to EUR 1,526,845 in 2024 points to enhanced efficiency in current capital management. The persistence of negative values in investing activities demonstrated the company's caution in allocating funds during a period of market volatility, which was typical of the Northern financial model. Thus, the financial stability of Nordic Financials ASA and its cautious investment strategy reflected the general features of the Northern financial ecosystem, within which the Nordic Securities Association operated. This example underlined the importance of balancing risk and liquidity, which was a fundamental principle for designing similar structures in countries seeking to strengthen the participation of retail investors in financial markets.

The participation of retail investors in financial markets depended on the presence of institutions that ensured the representation of the interests, raise the level of legal awareness and create mechanisms for protection against financial risks. Among the most effective models of this type were FAIR Canada (n.d.) in Canada (North America) and the Association Française de la Gestion Financière (n.d.) in France, which combined advocacy, analytical and regulatory tools to ensure equal rights of access to financial resources and to raise market integrity standards. FAIR Canada was an independent non-profit organisation established to strengthen investors' rights and enhance the level of protection. Its activities focused on three key areas: participation in government consultations on regulatory changes; preparation of analytical and legal opinions; and promotion of financial education programmes for broad population groups.

In 2024, the Ontario Securities Commission (n.d.) continued six-year funding for FAIR Canada (with a total amount of up to CAD 11 million, or about CAD 1.8 million annually), which allowed the organisation to conduct systematic advocacy at the national level. FAIR Canada was a permanent participant in consultations

with the Canadian Securities Administrators (n.d.) and initiates changes in the field of dispute resolution between investors and financial intermediaries (Gonzales, 2024). Thus, in 2025, the organisation submitted a position paper to the consultation CSA Notice 25-314, calling for the introduction of mandatory jurisdiction of the Ombudsman for Banking Services and Investments (OBSI) (Law Central Alberta, n.d.), which would guarantee legal protection for investors in cases, where investors incur financial losses. A separate area of FAIR Canada's work was the study of socially sensitive aspects of investing, in particular the protection of older persons from financial abuse. On the basis of funding from The Law Foundation of Ontario (n.d.), the organisation was developing response protocols and recommendations for regulators on mechanisms to monitor the financial decisions of vulnerable population groups. Thus, FAIR Canada acted as an institutional mediator between state regulators, investment companies and investors, combining the functions of advocacy, educational activity and independent public oversight.

The European counterpart of FAIR Canada – the Association Française de la Gestion Financière (2025) – represented France's asset management industry and protected investors' interests through advocacy and consultation mechanisms at both national and supranational levels. Established in 1961, the association brought together more than 670 asset management companies which collectively represented over EUR 5 trillion of assets under management (EDHEC Climate Institute, n.d.). AFG was an active participant in European financial regulation processes, primarily in the context of the Retail Investment Strategy and MiFID II/MiFIR reforms. In 2025, the organisation submitted a position paper to the European Securities and Markets Authority (ESMA) on ways to increase retail investors' trust, stressing the need to simplify the structure of financial products, increase the transparency of fees and ensure the comprehensibility of information for non-professional investors.

An important instrument for investor protection was the transparency codes of investment funds developed

by AFG together with the Forum pour l'Investissement Responsable (n.d.). These codes defined standards for disclosing information on the objectives, policies, and risks of investment products. At the same time, AFG monitors the implementation of transparency principles by appealing to the regulator – the Autorité des Marchés Financiers (n.d.) – with demanded to strengthen control over the timely updating of public data. In addition, AFG participated in the ESMA Stakeholder Group, where, through its representatives, it influenced the shaping of EU regulatory policy in the field of retail investment (Autorité des Marchés Financiers, 2015). Thus, both FAIR Canada and AFG demonstrated effective models of advocacy activities aimed at ensuring equal access to financial instruments, enhancing the population's financial literacy and establishing a system of preventive protection of investors' rights. The experience confirmed that independent non-governmental institutions can act as a significant factor in increasing institutional trust in financial markets, and the practices should be considered when creating similar structures in Ukraine. Therefore, AAIL, NSA, FAIR Canada and AFG formed effective models for supporting retail investors, combining educational, analytical and advocacy tools. The activities helped to increase financial literacy, strengthen trust in markets and ensure the protection of investors' rights. The successful experience of these institutions showed that systematic support of individual investors was an important condition for the development of a stable financial environment. Such approaches can be adapted in Ukraine to create its own retail investment associations.

Prospects for forming a retail investors' association in Ukraine

In 2023-2025 Ukraine has been witnessing the intensification of the institutionalisation of the capital market and the growing role of organisations representing the interests of individual and retail investors. At the present stage there are a number of structures that carry out official representation of investors at the level of state institutions, professional associations and civic initiatives. Among the key actors in this process were the Temporary Special Commission of the Verkhovna Rada of Ukraine on the Protection of Investors' Rights (n.d.), the Ukrainian Association of Investment Business (2025) and the Ukrainian Venture Capital & Private Equity Association (n.d.). In addition, NGO "Association "Private Investors of Ukraine" (n.d.) participated in this process, providing advocacy for the interests of retail investors and promoting financial literacy among the population. These institutions created a legal, analytical and consultative base for citizens' participation in financial markets and developed mechanisms for collective representation and advocacy.

The Ukrainian Association of Investment Business (2025), as one of the oldest and most influential institutions, focused its activities on protecting the rights

of capital market participants, promoting legislative initiatives and increasing the transparency of investment activities. In 2023-2025 the association actively participated in the development of amendments to the Law of Ukraine No. 5080-VI (2012), which simplified retail investors' access to mutual funds, and conducted educational courses and webinars on asset management, compliance and internal audit. In parallel, the Ukrainian Association of Investment Business carried out advocacy activities in co-operation with the National Securities and Stock Market Commission (n.d.a), focusing on improving the regulatory framework and developing the collective investment market. A similar function was performed by the Ukrainian Venture Capital & Private Equity Association, which developed the venture and private equity market, facilitated the integration of Ukrainian companies into the global investment space and formed a positive investment image of the country (Ukrainian Association of Investment Business, 2025).

So, an increase in retail investing in Ukraine had been observed. Despite fragmented statistics, there had been an increase in the number of clients of brokerage companies, investment funds and banking institutions offering investment products. For example, the Inzhur fund attracted more than UAH 1 billion of private funds in the first half of 2025, 2.2 times more than in the same period of 2024, and its total transaction volume increased by 89% (Ukrainians are actively..., 2025). The activity of individuals had grown primarily in the segment of internal government bonds (OVDP), whose share owned by retail investors increased from 4.2% in 2022 to 4.7% in 2024 of the total volume. Despite the low proportion of exchange contracts with securities in gross internal product (about 6.7% in 2023), the overall trend indicated a gradual expansion of individuals' participation in financial markets (Investments of Ukrainian..., 2025). The legal preconditions for the development of institutional representation of investors in Ukraine are defined by a number of basic laws, including the Law of Ukraine No. 448/96-VR (1996), Law of Ukraine No. 3480-IV (2006), and the Law of Ukraine No. 5080-VI (2012). In addition, the Law of Ukraine No. 2465-IX (2022) and the Law of Ukraine No. 1560-XII (1991) were of great importance. These acts established investors' rights, mechanisms for information disclosure and requirements for asset management, and created conditions for forming associations and unions that represent collective interests. The Law of Ukraine No. 738-IX (2020) promoted the introduction of new financial instruments and expanded opportunities for collective investors to participate in market processes. Investors have gained the right to participate in public consultations, regulatory discussions and advisory bodies at the National Securities and Stock Market Commission, which brought the Ukrainian capital market governance system closer to European standards.

At the same time, the development of the investment environment was constrained by structural

barriers, among which informational, tax, regulatory and reputational factors dominate. The low level of financial literacy, the complexity of legislation and the instability of tax rules reduced the activity of small investors. In addition, the limited number of financial instruments, the absence of a Real Estate Investment Trust (REIT) fund market and a lack of trust in financial intermediaries slow the formation of a fully-fledged investment culture (Belik, 2025). To overcome these barriers and renew the capital market infrastructure, draft laws No. 13414 and No. 13415 (A bill on compensation..., 2025) were registered in the Verkhovna Rada in 2023-2025, providing for the introduction of tax incentives for investors, simplified access to financing and the development of mechanisms for compensating investment costs. The National Securities and Stock Market Commission (n.d.b) and the Ministry of Finance of Ukraine (n.d.) were involved in this process, co-ordinating initiatives to improve the regulatory framework, stimulate investment activity and create a favourable environment for investor associations.

Significant support for the development of institutional representation of investors in Ukraine was provided by international programmes, in particular EU4Business (n.d.), USAID Financial Sector Transformation (National Bank of Ukraine, 2022), the International Finance Corporation (n.d.) and the European Bank for Reconstruction (n.d.). These initiatives were aimed at increasing financial inclusion, strengthening market infrastructure and enhancing the protection of investors' rights through the development of associations, educational platforms and digital tools. The combined action of national and international institutions created the prerequisites for forming a transparent investment environment, increasing the population's trust in financial markets and developing modern mechanisms of institutional representation that gradually brought Ukraine closer to EU standards in the field of investor protection. The development of a culture of retail investing in Ukraine required the creation of institutions capable of combining educational, analytical, advocacy and regulatory functions. In this context, the experience of AAIL, NSA, AFG and FAIR Canada was a valuable benchmark for forming a national model of collective investor representation. The activities demonstrated that the successful development of the investment environment was possible only if independent structures existed that increase the level of financial literacy, provided legal protection for investors and fostered trust in the financial system.

AAIL was an example of an educational-analytical model oriented towards the development of the

population's financial literacy. The organisation successfully implemented training programmes, model portfolios and research into behavioural aspects of investing, which contributed to improving the competence of individual investors. For Ukraine, adapting this practice would involve creating a single educational portal for retail investors, which could operate under the auspices of the National Securities and Stock Market Commission jointly with the Ukrainian Association of Investment Business. This portal would need to provide access to training courses, model portfolios, analytical reports and regular surveys of investment sentiment, similar to the Investor Sentiment Survey conducted by AAIL. NSA demonstrated the effectiveness of a co-ordination model aimed at uniting national investor associations to align the positions on capital market regulation at EU level. For Ukraine, it would be advisable to create a National Council on Investors' Issues, which would act as a communication platform between parliament, regulators, and capital market institutions. This body could co-ordinate the positions of Ukrainian associations, when participating in international consultations and adapting European norms, in particular the Retail Investment Strategy.

The experience of FAIR Canada underlined the importance of independent advocacy institutions that provided legal protection for investors and enhance the population's financial literacy. For Ukraine, it would be possible to create an Office of the Financial Ombudsman, which would perform the functions of mediating disputes between investors and financial intermediaries, as well as preparing proposals for improving legislation on investor protection. In addition, it would be appropriate to integrate socially vulnerable groups (older persons, veterans, internally displaced persons) into the financial ecosystem through special financial education programmes. AFG, in turn, demonstrated a professional-regulatory model based on partnership between asset managers' associations and state regulators. For Ukraine this meant the need to establish an Association of Asset Managers and Retail Investors, which would participate in drafting regulatory acts, monitoring market transparency and implementing corporate governance standards. It could also act as a member of working groups at the National Securities and Stock Market Commission and take part in consultations with the ESMA within the process of harmonising regulation with EU rules. On the basis of summarising these practices, a conceptual model of the Ukrainian Association of Retail Investors (UARI) has been developed, which may become the central element of the institutional system of investor representation (Table 2).

Table 2. Conceptual model for creating UARI: objectives, structure, functions and expected results

Model element	Characteristic/benchmark	Expected result
Purpose of activity	Protection of individual investors' rights, development of financial literacy, increasing trust in financial institutions	Formation of a stable investment culture and a transparent market

Table 2, Continued

Model element	Characteristic/benchmark	Expected result
Organisational structure	Association Council, educational centre, analytical department, ombudsman's office	Ensuring systematic management and multi-level representation
Main functions	Educational (based on AAll's experience), advocacy (FAIR Canada), co-ordination (NSA), professional (AFG)	Raising investors' competence and improving dialogue with the state
Sources of funding	Membership fees, grants from international programmes (EU4Business, USAID, IFC, EBRD)	Ensuring financial independence and operational stability
Instruments of influence	Analytical reports, investor sentiment index, consultation papers, participation in parliamentary hearings	Improving the quality of capital market regulation
Expected effects	Increase in the number of retail investors, development of the stock market, growth of Ukraine's investment attractiveness	Strengthening financial stability and institutional trust

Source: developed by the author

The introduction of UARI was of strategic importance for Ukraine, as it will make it possible to create a permanent communication channel between the state, the capital market and citizens. Its activities should be based on the principles of transparency, inclusiveness and financial independence. Taking into account Ukraine's economic, institutional and regulatory specifics, the association could operate in a public-private partnership format, using the support of international donors and at the same time involving national business in co-financing educational and analytical programmes. Adapting foreign models made it possible to create an institution that combines the best features of the American educational system, the Scandinavian co-ordination model, the Canadian rights-protection structure and the French professional advocacy. Such an association will contribute to increasing the efficiency of the capital market, attracting private investment into the national economy and ensuring Ukraine's long-term financial resilience in the context of post-war recovery.

Discussion

In global financial practice, interest in the role of retail investors as an important factor in increasing the dynamism of the capital market had been strengthening. Changes in the ownership structure, the spread of digital platforms and the growing accessibility of financial instruments had resulted in the behaviour of individual investors beginning to influence not only the profitability of individual assets, but also market stability as a whole. In this study, as in J. Cui *et al.* (2025), it was emphasised that the combination of behavioural and institutional factors determined market efficiency and the stability of financial results. Both approaches indicated that emotionality and insufficient financial literacy among retail investors increased volatility and reduced returns. While J. Cui *et al.* (2025) statistically confirmed these interrelations, this study considered these interrelations in the context of practical solutions – through the development of investor associations, financial education and systems of collective representation designed to reduce the impact of irrational actions on the market. A similar logic was observed in the comparison

with S. Nazir *et al.* (2021), where the role of investor sentiment in shaping market volatility was highlighted. Both studies recognised that emotional decisions by retail investors caused irrational price fluctuations, whereas the participation of institutional players stabilised the situation. However, the analysed focused mainly on short-term effects, using macroeconomic indicators and sentiment indices, while this study concentrated on long-term patterns and mechanisms for forming a sustainable investment culture.

In comparison with the work of Z. Zhou *et al.* (2024), a common idea emerged: the development of financial markets was impossible without trust, transparency and financial education. Scientist demonstrated the influence of digital platforms and educational programmes on the behaviour of Chinese investors, and this study adapted that experience to the Ukrainian context, emphasising the need for institutional support and the protection of investors' rights. Both works stressed that an educated and well-informed investor formed a stable market, although Z. Zhou *et al.* (2024) focused on behavioural models, whereas here the emphasis was placed on the structural mechanisms of the implementation. A logical continuation of this conclusion was the comparison with L. Wang *et al.* (2025), where it was emphasised that financial literacy and digital integration determined trust in the market. Researcher analysed the influence of technological tools on investment decisions, while in this study, digitalisation was considered as part of an institutional reform that supported citizens' participation in the financial system. A similar emphasis on information transparency was observed in T. Buz & G. de Melo (2024), where it was noted that high-quality reporting and Environmental, Social, and Governance (ESG) factors reduced information asymmetry. This study developed this idea, showing that systematic disclosure of information should be accompanied by the creation of institutions capable of providing oversight and increasing investors' trust.

Consideration of the analysis by U. Sukhani (2025) deepened the comparison in the field of behavioural aspects. The author showed that cognitive biases – herding, overconfidence, emotionality – reduced the

quality of investment decisions. This study proposed a counterbalance to these trends in the form of collective representation and financial education, which formed a mature community of investors. The parallel with C. Brooks & L. Williams (2023) made it possible to highlight another dimension – the role of knowledge and experience. In C. Brooks & L. Williams (2023), individual competence determined risk tolerance, whereas this work showed that institutional tools – associations, educational programmes, support systems – could compensate for a lack of experience, creating the basis for a mature investment culture. This study and V. Manjunath & B. Bankar (2021) coincided in the conclusion that the behaviour of retail investors largely depended on socio-demographic factors, in particular income, age and the level of financial awareness. In both approaches, it was emphasised that increased knowledge and access to information raised investors' willingness to make risky decisions. In V. Manjunath & B. Bankar (2021) this was empirically confirmed – income and age significantly influenced the choice between risky and risk-free assets. This study expanded this approach by considering not only behavioural, but also institutional conditions for involving investors – the creation of associations, advocacy structures and educational initiatives. Despite the shared conclusion on the decisive role of financial literacy in rational investing, the focus of the two works differed: V. Manjunath & B. Bankar (2021) examined individual characteristics of investors, whereas this study analysed institutional mechanisms of support and collective awareness.

The present study and M. Rohleder *et al.* (2024) converged in the conclusion that institutional stability, financial literacy and regulatory transparency were key conditions for the development of retail investing. In both approaches, the importance of trust and educational support for increasing market participation was emphasised. In M. Rohleder *et al.* (2024) this was demonstrated through an analysis of the impact of EU regulatory reforms on investor behaviour, while this study focused on the practical adaptation of foreign models of investor associations to the Ukrainian context. What was common was the view that institutional mechanisms reduced information asymmetry and behavioural risks, whereas the difference lay in the focus: the analysed author applied quantitative analysis of market reactions, while this work concentrated on institutional strategies for shaping an investment culture. At the centre of both this study and the work of F.C. Simonn (2025) lay the idea that the development of financial culture was a precondition for stimulating retail investing. Both approaches showed that a combination of educational, communication and analytical tools strengthened trust in the market. While F.C. Simonn (2025) focused on how digital platforms and behavioural factors influenced investment decision-making, in this study the emphasis shifted to the institutional sphere – the creation of

associations and representative bodies capable of performing educational and advocacy functions. Common to both approaches remained the conviction that financial literacy and transparent communication between market participants formed the basis of stability, although in F.C. Simonn (2025) the analysis concentrated on individual investor behaviour, whereas in this work it focused on building systemic mechanisms to support retail investing in the national environment.

The behavioural aspect of investing was also revealed in the study by Y. Sonjaya (2024), with which this work shared a common foundation. Both approaches stressed that emotions, herding effects and low awareness reduced the rationality of decisions, whereas financial education and access to reliable data reduced the impact of cognitive distortions. While this scientist proved these relationships on the basis of an empirical analysis of investors' behavioural patterns, this study sought structural ways to overcome the risks – through the creation of associations, mechanisms of collective representation and targeted educational programmes. The idea of transparency as the basis of trust was continued in the comparison with T. Bourveau *et al.* (2025). Both approaches started from the assumption that the quality of financial information directly influenced the activity of retail investors. However, while T. Bourveau *et al.* (2025) analysed corporate reporting and data disclosure models, this study focused on institutional mechanisms – organisations that promoted financial education, reduce information asymmetry and shape a culture of openness. As a result, the difference between the approaches lay in the focus: T. Bourveau *et al.* (2025) studied corporate behaviour, whereas this work examined the creation of a system that unites investors and companies into a common financial ecosystem.

The theme of financial resilience and strategic management was observed in the comparison with S. Johnson (2025). Both works emphasised that the success of investment activity was based on transparent management, efficient use of resources and risk control. However, while S. Johnson (2025) demonstrated this through the analysis of Costco using financial models such as Discounted Cash Flow (DCF), Strengths, Weaknesses, Opportunities, Threats (SWOT) and Porter's Five Forces, this study placed emphasis on creating institutional conditions for protecting retail investors and providing regulatory support for the participation in the market. A common foundation was also traceable in the comparison with S. Chang *et al.* (2023). In both that study and this one, the emphasis was placed on the need to balance profit, risk, and the structure of market interaction. S. Chang *et al.* (2023) explored this through game-theoretic models of investment choice in supply chains, whereas this study explained similar patterns through institutional mechanisms of collective participation, financial education and adaptation of international experience to the Ukrainian market. In both cases the goal was to

increase the rationality of investment decisions, although the scales of analysis differed: S. Chang *et al.* (2023) focused on the micro level, while this work examined the macro-institutional system. The discussion on increasing investment efficiency was further developed in the comparison with D. Pavlović *et al.* (2025). Both approaches sought ways to combine profitability and stability. D. Pavlović *et al.* (2025) analysed dual momentum strategies for sectoral Exchange-Traded Funds (ETFs), using the Sharpe, Sortino and Treynor ratios to assess performance, whereas this study considered a broader framework – the development of an institutional environment that helped reduce risks and increase citizens' participation in the market through education and advocacy.

The behavioural dimension again came to the fore in the comparison with J. Harene & R.L. Julie (2024). The authors examined the impact of emotional biases – loss aversion, herding, overconfidence – on investors' decisions during Initial Public Offerings. In this study, behavioural factors were considered in a broader context: not only as individual deviations, but as a social phenomenon that could be mitigated through the creation of associations and the introduction of educational programmes. Both approaches recognised the need for a system of training and consultancy to minimise irrational behaviour, but J. Harene & R.L. Julie (2024) focused on individual investors, whereas this work concentrated on building a macro-level environment for rational investing. The study by A. Gardner *et al.* (2024) resonated most closely with this work in terms of the institutional approach. In both cases it was emphasised that the involvement of retail investors depended on financial literacy, market transparency and trust in regulatory structures. A. Gardner *et al.* (2024) focused on macroeconomic factors and the policies of developed countries, while this study developed a model for adapting foreign experience (AAIL, NSA, FAIR Canada, AFG) to Ukrainian realities. Both approaches were united by a common vision – the formation of a mature institutional environment, in which the retail investor acts confidently, securely and consciously. Summarising the results of the comparative analysis, it may be noted that the future of retail investing was determined by the ability of financial systems to combine educational, behavioural and institutional approaches. The successful development of this segment was possible only under conditions of transparency of the information environment, trust in regulatory authorities and the accessibility of financial knowledge for a wide range of citizens. Institutional initiatives such as the creation of retail investor associations, the introduction of digital platforms and financial education programmes form the basis for increasing the involvement of the population in investment activity.

Conclusions

The development of institutional representation of retail investors was a key factor in strengthening Ukraine's

financial stability. The analysis of AAIL, NSA, FAIR Canada, and AFG showed that the combination of educational, analytical, advocacy, and regulatory mechanisms increased trust in the financial system and financial literacy. Empirical data confirmed that private investors' participation in markets grows in proportion to the effectiveness of such structures. In the US, the share of investors under 25 with investment accounts increased from 6% in 2015 to 37% in 2024, and mandatory financial literacy courses were introduced for over 10 million students in 35 states.

In the Northern European countries – Denmark, Finland, Norway, and Sweden – effective representation of retail investors' interests at European Union level had been achieved through the NSA's activities. Data from Nordic Financials ASA showed a cautious risk and liquidity management policy, with assets declining from EUR 24,211,835 in 2022 to EUR 464,606 in 2024. However, operating cash flow increased from EUR 242,450 in 2022 to EUR 1,526,845 in 2024, reflecting a stable financial model focused on transparency. The Canadian FAIR Canada model demonstrated the success of independent financing, with the Ontario Securities Commission supporting up to CAD 11 million over six years, enabling advocacy and consultations with Canadian Securities Administrators. The French AFG, representing over 670 companies with assets over EUR 5 trillion, integrated regulatory oversight, self-regulation, and ethical investment standards. In Ukraine, investment activity was gradually recovering: the Inzhur fund attracted over UAH 1 billion in private funds in the first half of 2025, 2.2 times more than in 2024, and the share of domestic government bonds held by individuals rose from 4.2% to 4.7%. Legislative initiatives were also increasing, supported by international programmes such as EU4Business, USAID, IFC, and EBRD, which boosted financial inclusion and market infrastructure.

The creation of UARI on the basis of the experience of AAIL, NSA, FAIR Canada and AFG was a logical stage in the development of the capital market. Its introduction will make it possible to combine educational, analytical, co-ordinating and human-rights functions, ensuring dialogue between the state, business, and citizens. Expected outcomes included an increase in financial literacy, a rise in the number of retail investors, the development of the stock market and the strengthening of trust, which will contribute to Ukraine's post-war recovery and integration into the European financial space. A limitation of the study was that it relied on qualitative analysis without quantitative surveys of investors. Prospects for further research lie in creating a model for assessing the impact of institutional representation on the financial activity of the population and in testing the effectiveness of UARI.

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Порівняльний аналіз роздрібногo інвестування: від NSA та AFG до перспектив створення аналогічних асоціацій в Україні

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Анотація. Метою дослідження було визначити передумови та перспективи формування в Україні асоціації роздрібних інвесторів на основі досвіду Швеції, Данії, Фінляндії, Норвегії, Франції, Канади та США. Проведено порівняльний аналіз діяльності American Association of Individual Investors, Nordic Securities Association, The Canadian Foundation for Advancement of Investor Rights та Association Française de la Gestion Financière. У результаті аналізу даних асоціацій було визначено, що в США частка молодих інвесторів віком до 25 років зросла з 6 % у 2015 році до 37 % у 2024 році, а у 35 штатах запроваджено курси фінансової грамотності для школярів. Активи Nordic Financials ASA зменшилися з 24 211 835 євро у 2022 році до 464 606 євро у 2024 році, тоді як операційний грошовий потік зріс із 242 450 євро до 1 526 845 євро. У Канаді фінансування The Canadian Foundation for Advancement of Investor Rights становило 11 мільйонів канадських доларів, а у Франції активи під управлінням перевищили 5 трильйонів євро. В Україні у першому півріччі 2025 року обсяг приватних інвестицій через фонд Inzhur перевищив 1 мільярд гривень, а частка облігацій внутрішньої державної позики, що належали фізичним особам, зросла з 4,2 % до 4,7 %. Аналіз діяльності Тимчасової спеціальної комісії Верховної Ради України з питань захисту прав інвесторів, Української асоціації інвестиційного бізнесу та Української асоціації венчурного й приватного капіталу показав їхню роль у розвитку ринку капіталу. Створення Української асоціації роздрібних інвесторів мало об'єднати освітні, аналітичні, координаційні та правозахисні функції, сприяючи фінансовій інклюзії, підвищенню інвестиційної активності й інтеграції України до європейського фінансового простору. Практичне значення дослідження полягає у формуванні рекомендацій, які можуть бути використані Національною комісією з цінних паперів та фондового ринку, Міністерством фінансів України та професійними асоціаціями учасників ринку під час розробки стратегій фінансової інклюзії й програм захисту прав інвесторів

Ключові слова: роздрібний інвестор; асоціація роздрібних інвесторів; фондовий ринок; інвестиції; фінансова грамотність; управління активами

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