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METHODOLOGICAL FOUNDATIONS FOR ANALYSIS AND PLANNING OF EFFICIENT INVESTMENT BANKING

МЕТОДОЛОГІЧНІ ЗАСАДИ АНАЛІЗУ ТА ПЛАНУВАННЯ ЕФЕКТИВНОЇ ІНВЕСТИЦІЙНОЇ ДІЯЛЬНОСТІ БАНКУ

Summary. Introduction. Banks serve as pivotal institutions within the financial system, channeling resources to the real economy. In times of economic instability, their ability to mitigate risks and improve the efficiency of investment banking (IB) operations becomes a key determinant of both institutional resilience and systemic stability. Effective IB enhances bank profitability, aligns with shareholder interests, and contributes to broader economic development. A critical factor in achieving this efficiency is the strategic formation and management of the bank's resource portfolio, which must be aligned with credit and investment activities, profitability goals, and the prevailing risk environment.

Purpose. This study aims to deepen theoretical foundations and develop methodological approaches to improving the effectiveness of investment banking. Particular attention is given to the influence of resource portfolio formation in the context of systemic instability within the banking sector.

Materials and Methods. The study draws on a wide range of sources, including legislative frameworks governing Ukrainian banking investment activity, as well as academic publications by domestic and international scholars. Empirical data, digital resources, and the author's own calculations are also utilized. The research employs general scientific methods like analysis, synthesis, induction, and deduction along with analogy and comparison, enabling a comprehensive investigation into both theoretical and practical aspects of IB efficiency.

Results. The findings confirm that the efficiency of investment banking is a multidimensional construct, encompassing financial, risk-related, and managerial dimensions. The study refines the definition of IB efficiency by integrating the interplay between credit and investment operations, emphasizing the need to achieve an optimal balance between profitability and risk. A central outcome of the research is the identification of the resource portfolio as a fundamental determinant of efficiency. Its structure must reflect the anticipated volumes of credit and investment transactions to ensure effective capital deployment. Moreover, the research introduces a framework for evaluating IB efficiency that incorporates:

1. Alignment between the structure of bank assets and operational objectives;
2. Standardized benchmarking of asset performance across risk-adjusted metrics; and
3. Mechanisms for substituting underperforming assets with more profitable alternatives.

Importantly, the study demonstrates that efficiency assessment must extend beyond asset profitability to include the costs associated with capital acquisition and borrowing, which exert a direct influence on a bank's financial stability. The research underscores the importance of resource rationalization strategies based on profitability-risk profiles, which not only reduce financial costs but also enhance return on assets and overall institutional performance. These findings collectively support a holistic, adaptive framework for managing investment activity in dynamically changing financial environments.

Discussion. Future research should prioritize quantitative modeling of the relative impact of financial, risk-based, and managerial components on IB efficiency. In particular, empirical analysis of the correlation between resource portfolio structure and bank profitability under conditions of volatility remains an underexplored but promising area. The development of dynamic efficiency assessment models accounting for market volatility, variations in capital costs, and strategic responsiveness to external shocks offers significant potential. Such models would facilitate real-time decision-making and contribute to more agile, risk-sensitive investment banking strategies. Advancing the theoretical and methodological basis for IB efficiency will ultimately support the formation of adaptive management practices, strengthen the competitiveness of financial institutions, and enhance systemic resilience across the banking sector.

Key words: efficiency, investment banking, investment assets, risk.

Анотація. Вступ. Банки є ключовими інститутами фінансової системи, які спрямовують ресурси до реального сектору економіки. У періоди економічної нестабільності їхня здатність до мінімізації ризиків та підвищення ефективності інвестиційної діяльності (ІД) стає визначальним чинником як інституційної стійкості, так і стабільності фінансової системи в цілому. Ефективна ІД сприяє зростанню прибутковості банку, узгоджується з інтересами акціонерів і водночас підтримує економічний розвиток. Вирішальним чинником досягнення цієї ефективності є стратегічне формування та управління ресурсним портфелем банку, який має бути узгодженим із кредитною та інвестиційною діяльністю, цілями прибутковості та поточним рівнем ризику.

Мета. Метою цього дослідження є поглиблення теоретичних засад і розробка методологічних підходів до підвищення ефективності інвестиційної діяльності банків, з особливим акцентом на формування ресурсного портфеля в умовах нестабільності банківської системи.

Матеріали і методи. Дослідження базується на широкому колі джерел, зокрема законодавчій базі, що регулює інвестиційну діяльність банків України, а також наукових працях вітчизняних і зарубіжних дослідників. Також використано емпіричні дані, цифрові ресурси та авторські розрахунки. У процесі дослідження застосовано загальнонаукові методи – аналіз, синтез, індукцію, дедукцію, а також аналогію та порівняння, що забезпечило всебічне розкриття як теоретичних, так і прикладних аспектів ефективності ІД.

Результати. Результати дослідження підтверджують, що ефективність інвестиційної діяльності є багатовимірною категорією, яка включає фінансовий, ризиковий та управлінський компоненти. У дослідженні уточнено визначення ефективності ІД шляхом інтеграції взаємозв'язку між кредитною та інвестиційною діяльністю банку, з акцентом на досягнення оптимального балансу між прибутковістю та ризиком. Основним результатом є визначення ресурсного портфеля як ключового чинника ефективності. Його структура має відповідати очікуваним обсягам кредитних та інвестиційних операцій з метою забезпечення ефективного розміщення капіталу. Крім того, запропоновано концептуальну модель оцінки ефективності ІД, яка включає:

1. Узгодженість структури банківських активів з операційними цілями;
2. Стандартизоване порівняння (бенчмаркінг) ефективності активів з урахуванням ризику;
3. Механізми заміщення малоприбуткових активів більш ефективними альтернативами.

Важливо, що в оцінці ефективності акцент зроблено не лише на прибутковості активів, а й на витратах, пов'язаних із залученням і обслуговуванням капіталу, які безпосередньо впливають на фінансову стабільність банку. Дослідження підкреслює важливість стратегій раціоналізації ресурсів на основі критеріїв прибутковості та ризику, які дозволяють не лише зменшити фінансові витрати, але й підвищити рентабельність активів та загальну ефективність діяльності банку. Отримані результати формують підґрунтя для створення адаптивної системи управління інвестиційною діяльністю банку в умовах мінливої фінансової кон'юнктури.

Перспективи. Подальші дослідження мають бути зосереджені на кількісному моделюванні впливу окремих складових ефективності інвестиційної діяльності банку – фінансової, ризик-орієнтованої та управлінської. Особливу увагу слід приділити емпіричному аналізу взаємозв'язку між структурою ресурсного портфеля та прибутковістю банку в умовах ринкової волатильності. Перспективним напрямом є розробка динамічних моделей оцінювання ефективності, що враховують коливання ринку, зміну вартості капіталу та стратегічну адаптивність до зовнішніх шоків. Такі моделі сприятимуть прийняттю обґрунтованих рішень у режимі реального часу, забезпечуючи гнучкість та чутливість інвестиційної стратегії до ризиків. Удосконалення теоретико-методологічної бази оцінювання ефективності ІД банку сприятиме формуванню адаптивних управлінських підходів, підвищенню конкурентоспроможності банків і зміцненню стійкості банківської системи в цілому.

Ключові слова: ефективність, інвестиційна діяльність, інвестиційні активи, ризик.

Introduction. Banks are central to the financial system, playing a crucial role in supplying the economy with financial resources. In periods of economic instability, they must focus on minimizing risks while enhancing the efficiency of investment banking (IB). Effective IB not only boosts profitability for banks and aligns with shareholder interests but also supports the growth of the real economy.

A key determinant of IB effectiveness is the strategic formation of the bank's resource portfolio. This requires coordinating credit and investment activities, allocating resources based on risk and profitability assessments, and adjusting the portfolio to meet specific goals. The resource portfolio structure should align with the total credit and investment portfolio to ensure optimal resource utilization and risk control.

Proper management of the resource portfolio reduces the bank's overall risks and enhances operational profitability.

Given IB's significance for both banking performance and economic development, advancing theoretical and methodological approaches to improving its efficiency has become increasingly critical.

Background and Literature Review. The issue of evaluating the effectiveness of investment banking has been widely explored in both domestic and international research. Foreign scholars such as I. Ansoff, M. Porter, D. Strickland, and M. Frost have thoroughly examined the theoretical aspects of managing the investment process. Meanwhile, practical aspects of IB have been addressed by researchers like E. Altman, Nicholas Apergis, A. Damodaran,

Arthur H. Gilbert, Estelle Brack, Ramona Jimborean, Fred H. Hays, H. Markowitz, and W. Sharpe [4; 5; 6; 7]. Domestic scholars, including A. Kuznetsova, Andriychuk V., A. Krykliy, N. Maslak, O. Pozhar, O. Bezrodna, O. Vovchak, O. Dzyblyuk, T. Maiorova [1; 2; 3], have contributed to the development of theoretical foundations for IB, provided practical recommendations for its effective implementation, and proposed strategies for managing investment risks. Despite the extensive body of work in this area, several issues remain unresolved, particularly the need for a deeper investigation into the theoretical and methodological foundations for improving IB effectiveness and refining its conceptual framework. The ongoing relevance of these issues has shaped the focus, objectives, and tasks of the current research.

Purpose. The aim of this study is to deepen theoretical foundations and develop methodological approaches to enhancing the effectiveness of investment banking, considering the factors influencing the formation of the resource portfolio in the context of banking system instability.

Materials and methods. The research's information basis includes legislative and regulatory acts that govern the investment activities of Ukraine's banking system, as well as monographs and scholarly publications by both domestic and international experts analyzing the efficiency of banks' investment activities in contemporary conditions. Additionally, periodicals, electronic Internet resources, and the author's own calculations are utilized to ensure a comprehensive assessment.

To achieve the goal and address the tasks set in the study, general scientific and specific methods of scientific inquiry were used, ensuring a comprehensive approach to the research. In particular: analysis and synthesis, induction and deduction — for refining the theoretical and methodological foundations of efficiency of investment banking; as well as analogy and comparison — for identifying the characteristics of Ukrainian banks' IB under conditions of instability.

Results. Despite extensive theoretical advancements in financial management, academic literature presents diverse definitions of “efficiency of banking”. A comprehensive analysis of English research indicates that scholars and practitioners employ multiple terminologies to describe this concept, significantly influencing methodologies for its assessment [1–7].

This study proposes a refined definition of efficiency of banking as the execution of credit and investment activities while maintaining minimal financial costs and ensuring an optimal balance between asset profitability and risk associated with the bank's generated credit and investment assets. This efficiency is determined by the volume of assets generated, while financial costs and losses due to risk factors constitute the expense component. The proposed definition offers a universal framework for evaluating investment efficiency across varying economic conditions, including

periods of financial instability and sustained economic growth.

This refined conceptualization incorporates profitability metrics and risk exposure, encompassing not only credit and investment risks but also those related to fundraising and borrowing. Furthermore, it establishes a strong link between banking efficiency and the structure of its credit and investment operations, necessitating methodological adaptations for accurate evaluation.

Building upon the concept of “efficiency of banking” and an analysis of “investment banking (IB)” [4; 5; 6], this study introduces the concept of “efficiency of investment banking”. This efficiency is defined as a comprehensive measure encompassing both quantitative and qualitative aspects of portfolio management. It reflects a bank's ability to structure its investment portfolio effectively, ensuring alignment, comparability, and substitutability of assets to optimize overall portfolio composition in accordance with prevailing market conditions.

An effective IB should fulfill two key criteria:

- 1) exhibit high flexibility and adaptability to fluctuating macroeconomic conditions, and
- 2) ensure profitability while reinforcing the bank's financial stability.

Investment activities should be strategically planned in parallel with credit operations rather than as secondary considerations. Prioritization should be determined by anticipated profitability and assessed relative to credit operations, with resource allocation decisions significantly influenced by the cost of capital and transaction yields.

Additionally, diversification benefits derived from incorporating investment assets within a bank's portfolio underscore the strategic importance of securities transactions. This diversification effect mitigates efficiency losses associated with lower-yielding assets, reinforcing their role in enhancing overall bank performance efficiency.

Efficient investment banking possesses distinct characteristics that necessitate differentiating its efficiency assessment from regular investment activity. A comprehensive evaluation of IB efficiency should incorporate operational costs, as these expenditures related to settlement, cash management, and clearing operations significantly influence operational efficiency. Consequently, in addition to resource allocation and risk management, operational efficiency emerges as a critical factor in assessing IB performance.

The efficiency of IB is fundamentally determined by two primary factors:

1. **Resource transformation efficiency**, which reflects qualitative and quantitative changes in cash flows, including maturity, volume, and cost; and
2. **Management efficiency**, which pertains to the effectiveness of risk distribution and operational profitability.

Furthermore, IB efficiency necessitates a refined assessment criterion that evaluates the management system's capability to structure and allocate resources effectively. This criterion is reflected in the following key analytical factors:

- **Alignment of credit and investment activities** to ensure strategic coherence;
- **Rational resource allocation** guided by risk-return trade-offs;
- **Transformation of the fund portfolio** in alignment with its strategic purpose.

The fund portfolio should be structured such that its maturity corresponds proportionally to the expected structure of the overall credit and investment portfolio. This alignment ensures that resources with specific maturities adequately support the generation of credit or investment assets.

A fundamental principle of efficient IB is the strategic utilization of funds for transformation into investment assets based on their relative efficiency compared to credit assets, rather than as a residual process. Additionally, maintaining IB efficiency requires rigorous risk management during resource portfolio formation. Given that each resource type carries an intrinsic risk level, the overall risk exposure of credit and investment operations must be carefully controlled. Consequently, resource types exhibiting excessive risk levels are deemed unsuitable for use under predefined risk constraints governing investment and credit activities.

We believe that the risk limit for executing an active operation can be determined using the following formula 1:

$$R_{overall} = R_{rb} + R_t + R_m + R_{ext} + R_{op} \quad (1)$$

where $R_{overall}$ — risk limit associated with active operation performance; R_{rb} — risk limit associated with borrowed and attracted funds, R_t — transformation risk; R_m — risk limit associated with inefficient management; R_{ext} — risk for external economic turbulence; R_{op} — risk associated with operational execution.

Each of these risk types has distinct characteristics and is influenced by the following factors:

- **Liquidity risk of the resource base**, characterized by threats such as premature resource withdrawals and low liquidity levels.
- **Volatility risk of resource pricing in the capital market**, arising from sharp fluctuations in the cost of attracting and borrowing funds.
- **Structural transformation risk of resources**, caused by discrepancies between liability and asset parameters into which the funds have been transformed (e.g., changes in amount and maturity).
- **Inefficient management risk**, stemming from irrational resource allocation and biased assessment of investment asset efficiency by bank managers.
- **External economic volatility risk**, influenced by market and political risks, as well as the risk of national default.

A crucial distinction in assessing investment banking efficiency compared to regular bank's investment activities lies in the alignment between the resource and investment portfolios. Effective portfolio structuring requires synchronization of resource availability and investment objectives.

Additionally, the transformation coefficient is a key metric differentiating IB efficiency assessment. It quantifies a bank's ability to reallocate assets in response to shifting market conditions and strategic priorities. This capacity includes converting credit assets into investment assets and vice versa, ensuring optimal portfolio composition. Furthermore, it extends to adjusting the resource portfolio structure to align with evolving active portfolio priorities.

The development of a bank's investment strategy serves as the primary framework for planning efficient investment banking and adapting it to dynamic market conditions. Consequently, the optimization of banking operations must be approached from a strategic perspective to ensure long-term effectiveness. The core objectives of such a strategy include profit maximization, the containment of investment risk at a minimal level, the implementation of government-directed programs with significant social value, and the provision of financial resources to the real sector to support its sustainable growth. Additionally, investment strategies are expected to address broader institutional aims aligned with shareholder interests. Given the distinctions among various banking activities, we propose a classification of key characteristics that define efficient investment banking (see Table 1), offering deeper insights into the operational specificity of its implementation.

Efficient investment banking is distinguished by the **principle of parallel and continuous implementation**, which asserts that credit and investment operations should be executed simultaneously and continuously, rather than according to a residual principle. Strategic coordination is essential, with preferences between credit and investment decisions determined through rigorous economic justification and quantitative performance metrics. The choice of executing credit, investment, or combined operations should be guided by their aggregate impact on the bank's operational efficiency.

A key feature of efficient investment banking lies in its **standardized framework for evaluating asset efficiency**, which facilitates comparative analysis between credit and investment assets and supports optimal portfolio substitution decisions. Additionally, **continuous monitoring of credit and investment markets** is vital to identifying high-performing assets and replacing underperforming ones to maintain portfolio effectiveness.

In contrast to traditional practices, efficient investment banking does **not differentiate funding sources** between credit and investment functions over the

Table 1

Differences in characteristics of Regular and Efficient IB operations

№	Features of efficient IB operations	Features of regular IB operations
1	Adherence to the principle of parallel and continuous IB	Preference is given to one type of activity (credit/investment), the other type is carried out on a residual basis
2	Investment operations should be carried out on the terms of “consistency” with attracted and borrowed resources	The maturity of investment assets significantly differs from the maturity of the portfolio of attracted and borrowed resources
3	Use of a standardized approach to assessing the effectiveness of both investment and credit assets	The effectiveness of credit and investment activities is assessed using different methods. The assessment of a credit asset is not comparable to the assessment of an investment asset
4	Application of the principle of asset interchangeability implies a high level of flexibility, adaptation, and optimization of the investment portfolio structure	Credit and investment portfolios aren't interchangeable. The structure of the portfolios is not adjusted according to market conditions on a continuous basis
5	Conducting investment and credit operations on equal terms within the available resource base	Preference is given to credit operations compared to investment operations
6	Assessment of the overall risk of the investment asset with the separation of the risk level of the bank's resource base formation	When assessing the risk of an investment asset, the risk of forming the bank's resource base is not separated but considered only in conjunction with other risk factors
7	Assessment of the correlation of the income of the investment asset in relation to the profitability of the total credit-investment portfolio	The level of profitability is calculated separately for the credit or investment portfolio. The level of profitability of a credit or investment asset is not compared with the total profitability of the two portfolios

Source: developed by the author

medium and long term. Instead, capital is deployed in accordance with strategic investment priorities and the efficiency either current or forecasted of available market assets.

Moreover, it is emphasized that **risk evaluation must account for investment duration**, as longer-term placements inherently carry greater risk. Accordingly, risk assessments should focus on the relationship between the asset's maturity and the bank's resource utilization structure, rather than applying a uniform metric across assets.

Finally, the **correlation of asset income** should be assessed in relation to the entire credit-investment portfolio, rather than restricted to individual asset classes. This approach ensures a more accurate evaluation of diversification and portfolio stability.

Collectively, these distinguishing characteristics highlight how efficient investment banking departs from standard investment activity. Central to this model is the requirement that all operations undergo a rigorous evaluation of their contribution to overall performance efficiency, ensuring that only the most effective financial decisions are implemented.

An effective investment strategy, in the context of its influence on investment banking activities must demonstrate a high degree of transferability defined as the seamless integration of its core principles into operational practice without compromising their fundamental integrity. This necessitates the development of a transmission mechanism to ensure alignment across all organizational tiers, from top management to frontline and, to a limited extent, back-office functions.

Senior managers within the financial analysis and risk management divisions, equipped with comprehensive insights into the bank's resource base and segmented market data, play a central role in identifying regions with elevated investment demand. Strategic optimization is pursued by aligning resource allocation with anticipated returns and region-specific risk levels, thereby enhancing investment efficiency.

A core tenet of efficient IB is the strict observance of predetermined operational limits. Market-driven adjustments must be executed in accordance with the guidance issued by supervisory bodies. While communication with the central office remains vital, operational flexibility is ensured by allowing regional branches to independently adjust key indicators within set boundaries thus avoiding excessive centralization and reducing response latency.

Developing an efficient IB strategy is a complex undertaking, with target benchmarks tailored to specific market segments and operationalized by the bank's regional branches. The core challenge lies in reconciling the competing objectives of profitability, liquidity, and reliability (risk mitigation), while upholding the bank's institutional responsibilities. The joint evaluation of liquidity and risk informs the bank's overall stability and its systemic risk profile.

A high level of investment efficiency signifies an optimal equilibrium between profitability and resilience, enabling the bank to perform its transformation function namely, the conversion of short-term liabilities into long-term assets. Consequently, profitability and financial stability are the key performance metrics under an efficient IB strategy.

To strengthen strategic effectiveness, several recommendations are proposed for shaping a credit-investment strategy:

- 1) define the optimal balance between credit and investment activities based on comparative returns;
- 2) incorporate diversification effects by applying appropriate weighting to investment instruments within the overall portfolio;
- 3) account for capital cost fluctuations stemming from changes in risk exposure; and
- 4) design a resource portfolio structure aligned with the maturity profiles of both credit and investment operations.

Considering these features, the classification of IB efficiency types according to specific criteria is warranted. This typological approach enhances the robustness of statistical analyses and facilitates benchmarking of a bank's investment efficiency against that of its peers. A detailed classification is provided in the corresponding table.

The time-based criterion assesses the duration during which investment banking efficiency is measured. The magnitude criterion quantifies the level of efficiency, providing insights into its adequacy and facilitating comparisons with market competitors. The volatility criterion tracks fluctuations in efficiency over different time periods.

Investment banking efficiency is categorized into elastic and inflexible types, reflecting the bank's ability to adjust its activities and modify efficiency within short timeframes. The replication capability measures the degree to which the efficiency of investment activities aligns with the bank's overall strategic success. A higher replication coefficient is achieved when investment efficiency closely mirrors the effectiveness of the bank's credit-investment strategy.

A strong correlation exists between the efficiency of a bank's investment activities and the success of its credit-investment strategy. The flexibility of the strategy, coupled with the ability to make adjustments during its execution, significantly impacts efficiency by allowing asset reallocation in line with the capital deployment risk profile.

Conclusion. The research identifies the efficiency of IB operations of a bank as a multidimensional concept, incorporating financial, risk, and management factors. The refined definition emphasizes the interrelationship between credit and investment activities, as well as the balance between profitability and risk, positioning investment activity efficiency as a critical factor for the stability and growth of the banking system.

A key element in enhancing IB efficiency is the bank's resource portfolio, which must align with the expected scale of credit and investment operations to optimize resource utilization. Efficient allocation based on risk and profitability reduces financial costs and improves overall bank performance.

The study introduces principles for evaluating investment activity efficiency, including asset alignment, standardized efficiency comparisons, and replacing underperforming assets with more profitable ones. Additionally, it highlights that assessing efficiency should consider not only asset profitability but also the costs of resource acquisition and borrowing, which impact financial stability.

The refined understanding of investment activity efficiency provides a comprehensive framework for evaluation and management. The findings can inform strategies aimed at improving investment efficiency in banks, especially during periods of economic instability, while supporting the sustainable development of the financial sector.

Table 2

Classification of Investment Banking Efficiency Types

Classification Feature	Type of efficiency of IB operations
1. By time criterion (calculation period)	– Up to 1 year period — current efficiency; – 1–3 years — short-term efficiency; – 3–5 years — medium-term efficiency; – Over 6 years — long-term efficiency
2. By scale	– Low; – Medium; – High
3. By variability criterion	– Variable; – Stable.
4. By elasticity criterion (ability to adjust)	– Flexible; – Inflexible.
5. Ability to replicate (compliance with credit-investment strategy)	Replication coefficient value: – 90–100% — identical; – 80–90% — high; – 60–80% — medium; – 40–60 — low; – < 40% — unable to replicate

Source: developed by the author

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