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SCIENTIFIC APPROACHES TO DEFINING THE ESSENCE OF EFFICIENCY OF INVESTMENT BANKING

НАУКОВІ ПІДХОДИ ДО ВИЗНАЧЕННЯ СУТНОСТІ ЕФЕКТИВНОСТІ ІНВЕСТИЦІЙНОЇ ДІЯЛЬНОСТІ БАНКІВ

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Banks are considered to be key participants in the financial system, providing the economy with monetary resources. Amid economic challenges, they strive to minimize losses and enhance the efficiency of investment banking (IB), which is an important source of profit and stimulates economic growth at the same time. Deepening of theoretical and methodological approaches to increasing efficiency of IB should be one of the relevant and significant tasks. The aim of the study is to deepen theoretical and methodological foundations and develop methodological approaches to improving the efficiency of investment banking under conditions of banking system instability. The research is going to advance scientific approaches to increasing efficiency of investment banking under conditions of market turmoil. The new definition of this concept has been developed, and it was proved that IB priorities should be set up based on expected profitability ratio. It has been emphasized that resource portfolio is a key driver in defining basic acceptable risk rate and minimum asset profitability ratio.

Keywords: efficiency, investment banking, assets, volatility factor, risk.

Банки є ключовими учасниками фінансової системи, забезпечуючи економіку грошовими ресурсами. В умовах економічних викликів вони прагнуть мінімізувати втрати та підвищити ефективність інвестиційної діяльності (ІД). Ефективна ІД не лише забезпечує прибуток банкам, а й сприяє економічному розвитку. Удосконалення підходів до підвищення її ефективності є важливим завданням. Ефективна ІД є важливим джерелом прибутку банків, що відповідає інтересам їхніх акціонерів, а також сприяє зростанню виробничого сектору та загальному економічному розвитку. З огляду на значущість ІД для банківської діяльності та економіки країни в цілому, удосконалення теоретико-методологічних підходів до підвищення її ефективності є актуальним і важливим завданням. Метою дослідження є поглиблення теоретико-методологічних засад та розвиток методичних підходів до підвищення ефективності інвестиційної діяльності банків в умовах нестабільності функціонування банківської системи. Для досягнення мети та вирішення поставлених у роботі завдань використовувалися загальнонаукові та специфічні методи наукового пізнання, що забезпечили комплексність проведення дослідження, зокрема: аналізу і синтезу, індукції і дедукції – при уточненні теоретико-методологічних засад ефективності ІД банків та аналогії і порівняння – при визначенні особливостей ІД банків України в умовах нестабільності. У дослідженні проведено теоретичне узагальнення і запропоновано вирішення актуального наукового завдання, що полягає в поглибленні теоретико-методологічних засад щодо підвищення ефективності інвестиційної діяльності банків в умовах нестабільності функціонування банківської системи. Проаналізовано наукові підходи до визначення сутності дефініції «Ефективність інвестиційної діяльності банку» та обґрунтовано власне трактування даного поняття. Доведено, що пріоритети інвестиційної діяльності мають базуватися на очікуваних показниках дохідності транзакцій в порівнянні із здійсненням кредитної діяльності. Обґрунтовано, що основи інвестиційної діяльності закладаються під час формування ресурсного портфеля банків, що впливає на визначення мінімально допустимого рівня дохідності та базового рівня ризику активу. Визначено перелік факторів невизначеності, які мають вплив на інвестиційну діяльність банку та їх зв'язок із фактором нестабільності.

Ключові слова: ефективність, інвестиційна діяльність банку, активи банку, фактор нестабільності, ризик.

Research significance. Banks play a crucial role in the financial system of a country by providing monetary resources to support the economy. In light of the economic and social impact of the war in Ukraine, the financial sector strives to mitigate losses caused by fluctuations in the foreign exchange and capital markets. Concurrently, banks aim to enhance the efficiency of their investment banking (IB) by identifying key investment priorities during the planning and modeling stages. Effective IB serves as a primary source of profit for banks, aligning with the objectives of their investors. Additionally, the successful implementation of IB promotes the flow of financial resources into the economy and fosters growth in the production sector. Given the significance of IB for both bank shareholders and the broader national economy, advancing the theoretical and methodological frameworks, along with developing approaches to improve the efficiency of investment banking, is an essential research task.

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, B. Graham, A. Damodaran, H. Markowitz, D. Rosenbaum, P. Rose, J. Sinki, and W. Sharpe. Domestic scholars, including A. Kuznetsova, O. Vovchak, O. Dzyblyuk, T. Maiorova, A. Moroz, I. Parasii-Vergunenko, V. Mishchenko, and S. Naumenkova, 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.

Aim and Objectives. This study aims to advance the theoretical and methodological framework for improving the effectiveness of investment banking, particularly in the context of banking system instability.

To achieve this goal, the research sets out the following key objectives:

- Conduct a comprehensive analysis of existing scientific approaches to defining the concept of "Effectiveness of investment banking";
- Investigate the strategic priorities and essential components that contribute to the effective implementation of investment banking;
- Develop an improved interpretation of the term "Effectiveness of investment banking" to enhance conceptual clarity and practical application.

Presentation of the main research material. The challenging economic and political environment in Ukraine has exposed the inability of many domestic banks to effectively perform their core functions. Drawing on the experience of foreign banking practices, a key factor has been identified for selecting banks that can reliably serve the real sector of the economy and the population under conditions of economic instability. This factor is a qualitative indicator that should be assessed in terms of the bank's operational efficiency from a technological perspective.

An analysis of domestic and international research on banking efficiency assessment reveals notable inconsistencies in the application of mathematical tools, largely stemming from the ambiguous interpretation of the concept itself. These discrepancies highlight the need for further exploration of the concept of "Effectiveness of investment banking" to ensure a clearer and more comprehensive understanding.

The advancement of Ukraine's banking sector amid economic instability necessitates a well-defined set of long-term objectives for investment banking. Achieving this requires a comprehensive understanding of how investment banking outcomes influence the country's economic development. Consequently, refining the definition of "Investment banking" is crucial to enhancing its effectiveness.

Despite extensive research in financial management, scientific literature presents various interpretations of "banking efficiency." An in-depth review of English-language studies highlights that researchers and practitioners employ multiple terms to describe this concept, resulting in divergent methodologies for assessing banking and business structure efficiency.

The numerous definitions of "efficiency" raise questions about its precise meaning, particularly regarding banking institutions. The term encompasses various dimensions, including the relationship between outcomes and costs,

outcomes and objectives, outcomes and needs, or outcomes and values.

Banking efficiency extends beyond the results of loan and investment activities; it also includes effective management systems founded on scientifically grounded operational strategies.

A review of academic literature indicates no unified definition of "investment banking efficiency." Scholars typically focus on defining "banking efficiency" or the "efficiency of loan and investment banking." When examining "banking efficiency," researchers commonly address three key dimensions:

1. Bank loan activities;
2. Investment banking;
3. The operational (technological) aspect of banking.

The operational aspect encompasses factors such as IT systems and employee competencies. Since evaluating the efficiency of computer systems and personnel management is beyond the scope of this study, these elements will not be examined in detail.

To refine the concept of "investment banking efficiency," this study will expand and enhance the definitions of "banking efficiency" and "investment banking." Identifying the core characteristics of "banking efficiency" will help distinguish its meaning in banking from its application in other economic sectors.

To refine the concept of "banking efficiency," a content analysis was performed as a formal method for analyzing textual data, using a category system as the primary tool. Concepts were selected based on the depth of their interpretation. The analysis adhered to the principles of formalization and statistical significance, ensuring the reliable identification of key characteristics while minimizing low-frequency occurrences.

Drawing from both international and domestic economists' works, a sample of definitions for "banking efficiency" was compiled, along with a matrix reflecting the component structure of this concept. The analysis primarily focused on the financial performance aspect of banking efficiency, with fewer definitions addressing service quality and technical efficiency. This approach allowed for a comprehensive comparison of different interpretations of banking operations, leading to a deeper understanding of the concept.

In the literature, the interpretation of "banking efficiency" is also shaped by the bank's strategic goals in the market, which typically include maximizing profits, expanding the customer

base, and minimizing operational costs. As a result, scholars differentiate between profit efficiency, cost efficiency, and revenue efficiency.

Exploring "efficiency in loan and investment banking" further clarified the criteria used to define banking efficiency. Researchers emphasize factors such as the effectiveness of managerial decisions in strategy development and the efficiency of credit and investment operations, often measured using profitability, revenue, and return on investment indicators.

By examining various definitions of banking efficiency, the content analysis identified key characteristics based on their frequency of mention in scientific literature. Each component was ranked according to its frequency, resulting in a structured understanding of the concept's components (Figure 1).

A review of the sources used in the content analysis reveals that while key characteristics of credit and investment banking efficiency are identified, they are not sufficiently emphasized in the interpretation of the studied definition. To address this gap, a comprehensive analysis of these characteristics was conducted to expand the conceptual understanding of "banking efficiency."

Estelle Brek, in her study *"The Cost-Efficiency of French Banks"* [13], and Nicholas Apergis from the University of Piraeus [11] assert that bank efficiency is defined by the institution's ability to maximize output while minimizing costs. Both researchers highlight the importance of resource optimization as a critical factor in achieving efficiency.

Similarly, O. A. Krykliy and N. H. Maslak, in their monograph *"Banking Management: Issues of Theory and Practice"* [9], emphasize that the efficiency of credit and investment activities is closely tied to a bank's financial outcomes, profitability, and overall stability.

While acknowledging that financial performance indicators provide an objective measure of a bank's credit and investment efficiency, we contend that assigning equal significance to these indicators when assessing efficiency from both a commercial and socio-economic perspective is inappropriate.

Socially oriented activities and participation in public programs typically yield lower profitability since they prioritize meeting societal needs. Consequently, a portion of the bank's potential profit representing funds that could otherwise be invested for financial gain remains within households and the real economy to address their demands.

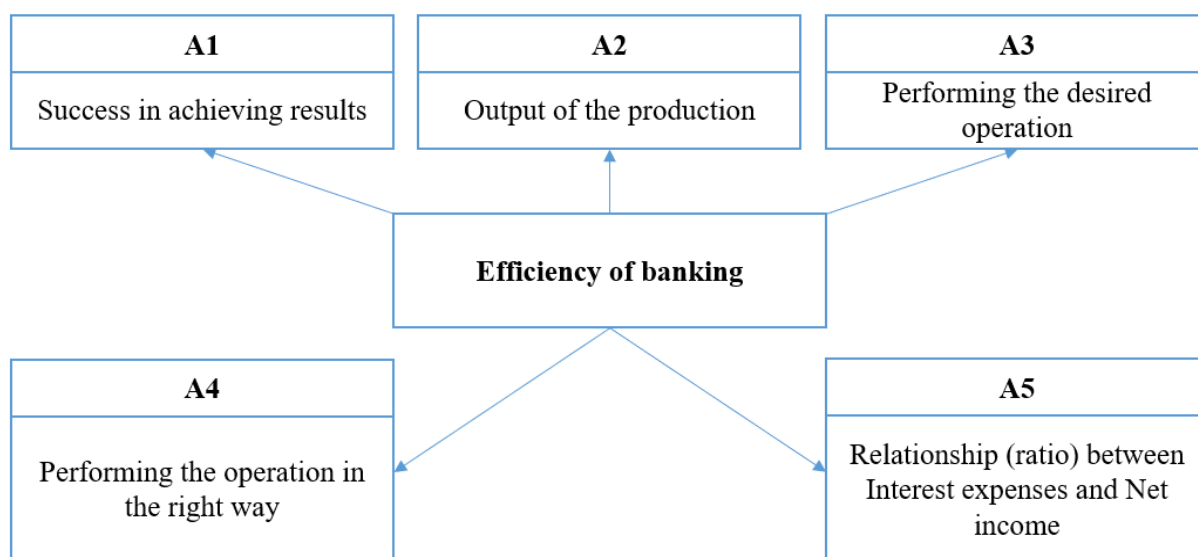


Figure 1. The component structure of the concept "Efficiency of banking"

Source: developed by the author [1–16]

Therefore, when evaluating a bank's social efficiency, applying identical weighting coefficients to economic efficiency indicators can distort findings and lead to inaccurate conclusions. Instead, appropriate differentiation of these indicators is necessary to ensure a balanced and comprehensive evaluation of banking efficiency.

Arthur Gilbert, a professor at the University of West Florida, and Fred Hayes, a professor at the University of Missouri, in their work, *"Efficiency Ratios and Community Bank Performance"* highlight a temporary decline in the efficiency of a bank's credit and investment activities resulting from the allocation of additional resources that have not yet generated revenue. The authors emphasize that cash flows designated for business expansion should be distributed gradually and proportionally rather than in a single transaction to avoid inefficiencies [12].

We support this viewpoint and propose that when a gradual allocation of funds is impractical due to the necessity of a one-time payment, banks should establish a reserve or deposit funds into a separate account in advance, ensuring proportional contributions over time. This strategy can help mitigate the adverse effects of sudden cash outflows.

Loretta Mester, Head of the Federal Reserve Bank of Cleveland, along with her colleagues, investigates technical and allocative efficiency as integral components of overall economic efficiency. Their assessment method involves benchmarking against a reference bank that

demonstrates 100% efficiency. This comparison highlights a bank's inefficiency, reflecting either unexploited potential or deficiencies in management practices.

Drawing on the findings from content analysis and a comprehensive review of scholarly research on key aspects of banking efficiency, we propose the following refined definition: "Banking efficiency is defined as the bank's ability to conduct credit and investment activities with minimal financial costs, while maintaining an optimal balance between asset profitability and the risk associated with generated credit and investment assets".

In this context, the volume of generated assets represents the resulting output, whereas financial costs and potential losses arising from risk exposure constitute the expense element of the asset generation process. This refined definition offers a versatile framework for evaluating the efficiency of a bank's investment activities under both unstable banking conditions and stable operational environments.

The refined interpretation of banking efficiency incorporates both profitability and risk acceptance, acknowledging that the accepted risk level extends beyond credit and investment risks to include risks associated with fundraising and borrowing. Notably, the methodology for assessing efficiency varies depending on the focus and type of the bank's credit and investment activities.

To achieve a comprehensive understanding of the term "investment banking efficiency," a

functional integration of the concepts of "banking efficiency" and "investment banking" is proposed. This refined definition will be developed following a detailed analysis of all relevant components.

Insights from both domestic and international researchers, alongside publications from organizations specializing in investment banking, have contributed to identifying the key characteristics of investment banking. As highlighted by Aswath Damodaran, a finance professor at New York University, together with O. S. Krykliy and other scholars, investment banking encompasses several fundamental components:

A. Hryshchuk [6, p. 192] defines investment banking as the practical implementation of various investment strategies by banking institutions aimed at generating income, achieving social impact, maintaining liquidity and solvency, or fulfilling other strategic objectives. The primary goals of commercial banks' investment activities include preserving capital, diversifying assets (i.e., distributing investments across multiple objects to mitigate potential capital losses or income reduction), generating profit, and maintaining liquidity.

The provided definition aligns with the core objectives of banking investment activities. Notably, investment operations involving securities generally exhibit higher liquidity than credit operations. A securities portfolio offers financial managers enhanced flexibility, as securities can be traded in the market or adjusted by replacing underperforming assets with more favorable alternatives.

Several factors motivate banks to engage in investment activities:

1. Expansion of the client base;
2. Increasing the proportion of high-yield assets;
3. Maximizing liquidity and solvency;
4. Mitigating risks associated with credit operations; and
5. Leveraging diversification to enhance resilience against unfavorable economic conditions.

B. Lutsiv [10] identifies two key aspects of investment banking:

1. Investment activities focused on increasing the bank's income.
2. Investment activities from an economic development perspective, ensuring the continuity

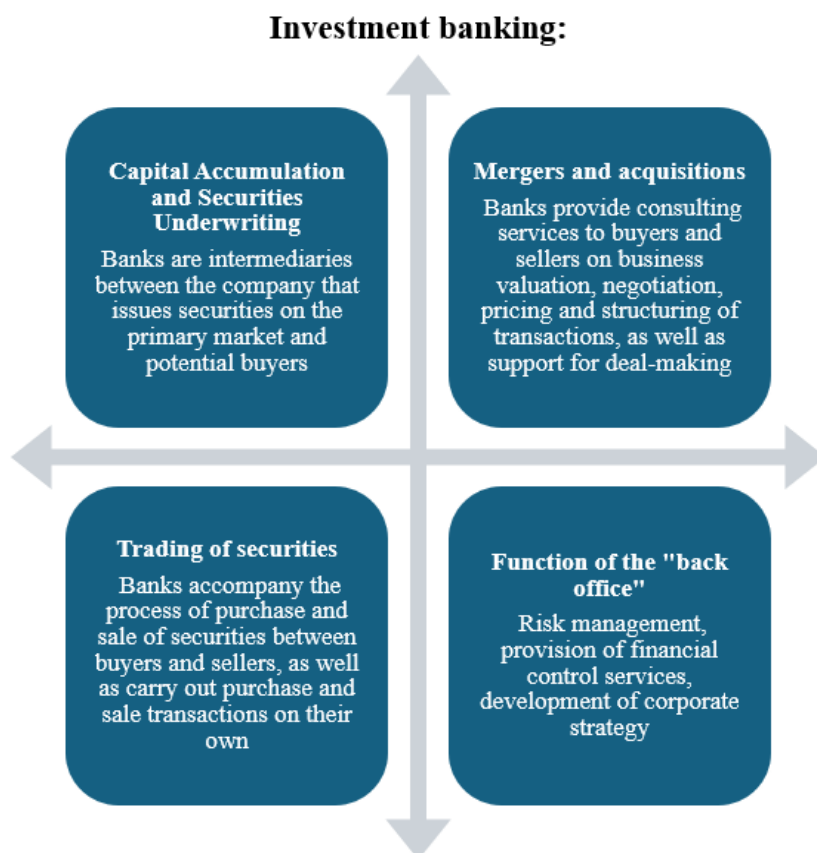


Figure 2. Components of Investment banking

Source: developed by the author [9; 16; 14; 10; 15]

of fixed asset reproduction and overall social reproduction.

We argue that this perspective should be broadened to highlight that investments aimed at supporting or implementing government programs tend to be less efficient and have lower liquidity, not aligning with the objectives of commercial investment activities.

Efficiency improvements through cost reduction can be achieved by acquiring undervalued securities and engaging in resale transactions. This approach enables the bank to increase the value of its initial capital and earn short-term interest income. It also applies to project financing, where the bank can resell shares, attract new investors, and quickly exit a project, provided an effective financial management system is in place. This system facilitates rapid growth in operational cash flows, ensuring prompt debt repayment. However, such mechanisms are less applicable to credit portfolios, where conditions are more fixed.

Our research indicates that many scholars focus on securities transactions when analyzing investment activities, given their prevalence and profitability. However, investment activities also encompass financing to expand the real economy's capacity. Securities transactions include not only trading to generate margin income but also investments to acquire company equity and provide financial resources to businesses for expansion. Additionally, targeted government bond purchases contribute to financing state programs with social impact goals.

To summarize, investment banking isn't limited to securities transactions and project financing but also includes providing evaluation and consulting services. Moreover, investment activities may aim to achieve social outcomes by financing projects and enterprises with state or public significance.

Thus, we believe that investment banking activity should be considered as the effective utilization of mechanisms to invest the bank's own, attracted and borrowed resources, considering the evolving dynamics of the banking system, in order to progressively achieve the objectives of the bank's credit-investment strategy.

Upon analyzing the subcategories of this concept, we provide a comprehensive interpretation. Based on the components of the definitions of "Efficiency of banking" and "Investment banking" we define the "Efficiency of investment banking" as a comprehensive indicator. This indicator incorporates both

quantitative and qualitative aspects of the bank's activities, particularly in relation to the formation and management of the investment portfolio. It includes the ability to integrate assets under conditions of consistency, standardized comparison, and the interchangeability of assets to optimize portfolio structure based on the current efficiency of marketable assets.

The principle of consistency dictates that preference for executing a credit operation over an investment operation should be based on sound economic justification and calculations of economic standards. This involves evaluating the impact of each operation on investment effectiveness and determining the resulting differences in effects.

The principle of profitability asserts that the expected return per unit of asset should not fall below the cost of attracting or borrowing that unit of currency on the market, along with the risk associated with the asset in monetary terms. Additionally, this principle necessitates investing resources in credit or investment assets based on their level of effectiveness, rather than on a residual basis.

The principle of standardized comparison involves assessing asset effectiveness in relation to its income and risk compared to its nominal value. This includes calculating income from securities, such as coupon income and nominal value changes per unit of the asset's price, as well as evaluating the risk level.

Finally, the principle of interchangeability refers to replacing the least effective asset in the investment portfolio with the most effective one available in the market at the time of replacement.

Conclusion. A review of both domestic and international scholarly work leads to the following conclusions:

1. An analysis of the approaches to defining the effectiveness of bank investment activities reveals that insufficient attention has been paid to the interrelationship between credit and investment activities. These activities are often treated as separate, which results in a lack of analysis regarding their fundamental differences.

2. It is determined that the effectiveness of a bank's investment activity should be viewed as a comprehensive indicator, integrating both quantitative and qualitative aspects of investment portfolio formation and management. Key principles to focus on include asset consistency, standardized effectiveness comparison, and the ability to replace less effective assets with more profitable ones.

3. Investment banking priorities should be based on the projected profitability of operations related to credit operations. The principles of effective investment activity are set during the initial stages of forming the bank's resource portfolio, which establishes the minimum acceptable profitability and risk levels for assets.

In conclusion, the refined interpretation of the effectiveness of bank investment activities encompasses essential decision-making aspects in investment asset management, offering a comprehensive understanding of effectiveness during both periods of instability and stable development in the banking system.

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