Mechanisms of commercial bank financial management

Abstract. The article examines the main financial management mechanisms of a commercial bank, as well as the prospect of creating a modern financial mechanism. The article analyzes the approach to the definition of the term “finance” and the focus of management on the allocation of financial resources to obtain income. Particular attention is paid to the importance of productive financial relations between the bank and its clients through financial management. The role of elements of planning, operational management and controlling in the creation of modern financial management methods is also considered. The stability of the banking sector largely determines the stability of the economy in general and its successful development. Thus, the primary task of state bodies at the macro level and the management of credit organizations at the micro level should be to ensure such stability through the implementation of a rational monetary policy; assessment and monitoring of the state of the real and financial sectors of the economy; the fall of all types of risks and the acquisition of income, which multiply total costs. All this will contribute to the modernization and improvement of the quality of banking services provided to individuals and legal entities. An unreasonable and hasty policy in the field of banking business will not only lead to a decline in the financial stability of credit organizations, but will also affect the economy as a whole. The article reviews the features of the financial management of foreign banking organizations, as a result of which the authors come to the conclusion that the most important indicators in the development of a bank’s financial strategy are the value of a financial organization, the level of bank capital, a certain number of active innovative projects, an increase in the range of products and services provided by banks, an improvement of management of external and internal risks, as well as development of an effective investment policy. As a result of the study, the relationship between effective financial management and a high level of liquidity management of the bank and the adequacy of its capital is determined. The theoretical recommendations made by the authors can be used by bank managers while developing tactical measures aimed at increasing the financial stability of their credit organizations, and also while changing banks’ development strategies in the phases of economic growth and downturn for the benefit of owners and other economic actors that enter into financial relations with banks.

Key words: financial management, financial stability, financial strategy, bank capital, risk management.

JEL Classification: G21

Formulas: 0, fig.: 4, tables: 0, bibl.: 12.
Introduction. The successful development of market economy in Ukraine is associated with investment activity and its liberalization in all directions and sectors of the national economy. Under any model of investment in the country’s economy, the banking system plays a central role in the financial mechanism. This is due to the fact that before being invested in the economy, most of the funds end up in banks. After decisions are made by the management, the funds are invested in particular assets. Consequently, the state of the national economy depends on how promptly and accurately the banking system operates. The relevance of the research topic is determined by the necessity to study a set of issues related to solving problems in the field of financial management development and ensuring the reliability of commercial banks under current conditions, which will contribute to increasing the competitiveness of the Ukrainian banking system in general.

Analysis of recent research and publications. The theoretical aspects and practical provisions on ensuring the financial reliability of commercial banks are studies in the works of such scholars as Yu. Bychko, R. Halikeev, L. Igonina, A. Kozlovsky, L. Krolivetska, T. Larina, V. Novikova, N. Pronka, I. Rykova at different levels. A. Godin, V. Ivanov, I. Nikonova, S. Shevchenko, and M. Yagovkin studied the issues related to the application of existing bank financial stability assessment methods, as well as the benefits and drawbacks. The possibilities of increasing the reliability of banks are presented to some extent in the scientific works of N. Bagautdinova, I. Vazhenina, O. Godin, A. Kanayev, B. Leontiev, M. Lomakina, O. Nesterenko, O. Omelchenko, O. Rodina, L. Tytova, Yu. Shevtsova, E. Yakupova. In their works, these authors provide general recommendations, handle approved regulations, but they do not do modelling for the possible options of ensuring bank financial stability in case of changing the environment of their operation.

The purpose of the article is to provide theoretical background for the main financial management mechanisms used by commercial banks, and also outline the prospects for creating a modern financial mechanism under conditions of changing operation environment.

Research results. The author's study of the works of national and foreign scholars on the management of financial resources in banks revealed the existence of different points of view, primarily in the interpretation of the concept of “finance”.

In foreign economic science, finance is defined as “an increase in the amount of capital operating in an economic system, an increase in the supply of productive resources carried out by people” [2, p. 12]. According to Oxford Dictionary, the concept of finance is interpreted as capital involved in some project, especially capital that must be obtained to start a new business.

In the English and American studies, the term “banking finance” is viewed as “financial investments, namely transactions of investing money and attracting financial resources to a capital market” [3, p. 85]. This approach is globally applied in the field of theory and practice of financial management, but in some economically developed countries, such as Germany, other approaches exist. A.M. Birman gave a more comprehensive definition of finance. He defined finance as “an amount of money or a set of funds of money”.

Thus, the definitions provided differ and there is no unified one of financial management of a commercial bank. It should be noted that financial management in commercial banks is aimed at profit generation and relies on both bank internal restrictions and regulations of the governing bodies.

Having considered the concept of finance from different points of view and understanding the essence of the finances of a commercial bank, it is necessary to understand its financial mechanism.

It should be clear that financial management involves the creation of effective financial relations between the bank and its counterparties, with the help of managing the bank’s financial mechanism. The financial mechanism of a commercial bank includes approaches to managing the bank’s finances, its assets and liabilities, which can be divided into 2 groups (Fig. 1).

The first approach to financial management of a commercial bank includes two key directions:
– control of the balance between certain groups of assets/liabilities within the established regulatory limits. The above standards may be established both by the National Bank of Ukraine and by the internal bodies of a particular bank in accordance with the management decisions;
– adjusting future balance sheet indicators to the bank’s long-term goals. In other words, financial management in this case is all about changing the bank’s current balance sheet to the planned future one.
Financial mechanism of a commercial bank

Balance sheet management
- Management of balance between assets and liabilities
  - Asset management
  - Liability management
  - Compliance with regulations

Transformation of current balance sheet

Financial flow management
- Method of pooling sources of funds
- Method of dividing sources of funds
- Balanced fund management
- Method of scientific management

Source: compiled by the author

So, let us analyze the first direction. Asset management refers to the ways and procedure of allocating one’s own resources and the resources borrowed which is complicated by the following factors:

– a commercial bank, being one of the most regulated industries, must accommodate its funds in the most efficient way and in accordance with the NBU restrictions;
– since customer relations in the bank are commercialized, operations with the loan and investment portfolio aimed at generating large incomes are likely to be accompanied by higher risk;
– since bank shareholders often have a rate of return on shares that is higher than the average market rate, the risk of a violation of the bank’s liquidity increases, and, therefore, managers have to maintain the ratio of profitability/liquidity.

There are three main methods of asset management in banking (Fig. 2):

Method of conversion of funds (distribution of assets)

Method of pooled fund of funds

Method of scientific management

Methods of asset management

Source: compiled by the author

Fig. 1. Financial mechanism of a commercial bank.

Fig. 2. Main methods of bank asset management
The method of pooled funds assumes that all available resources (demand deposits, time deposits, issued securities, passive interbank loans and the bank’s own capital) are aggregated into a common pool of funds and then transferred to certain categories of assets by the goals of the commercial bank and principles of its liquidity. Primary reserves (14%) are classified as highly liquid assets and can be used to pay deposits and approve current loan applications. Secondary reserves (10%) are intended to replenish primary reserves if necessary: issued loans make up 51–56%, fixed capital – 15–20%, investments – 5%.

The disadvantage of this method is that it does not take into account the terms and sources of the receipt of funds, therefore, the effective operation of the bank depends entirely on the management qualification. It is mostly used by small banks in a stable market situation. The main disadvantage of this method is the lack of accounting for the sources and terms of receipt of funds, and therefore, the effectiveness of the bank’s activities depends on the qualifications of the bank’s management. Therefore, this method is used only in a stable market situation, mainly by small banks.

Next, and no less important, is the method of conversion of funds or distribution of assets, which eliminates the shortcomings of the first method. The essence of this method is that the sources of funds, depending on the terms, are transferred to some particular divisions of the bank and only these divisions can allocate them to the relevant assets. So, there is a fund allocation based on demand, term deposits, etc., e.g. deposits on demand can be allocated only to primary reserves, secondary reserves and loans.

The main advantage of this method is profit obtaining efficiency based on maintaining liquidity, and this method can be used by any bank in any market conditions.

The disadvantage of this method is the emphasis on liquidity and the ability to withdraw deposits, paying less attention to the need for satisfying the loan application.

The last method of managing the bank’s assets is the method of scientific management, which involves the use of complex models and modern mathematical apparatus to analyze the relationship between various balance sheet items. The main method used in asset management is the method of linear programming, i.e., the construction and maximization of the objective function (profit) taking into account certain restrictions imposed on banking activity.

So, having considered the approach of managing the balance sheet through assets, let’s move on to the essence of managing the commercial bank liabilities. In a broad sense, liability management is a bank’s activity related to attracting funds and forming the optimal structure of its resources. While managing liabilities, the bank solves 3 issues:

1) minimization of expenses for the payment of the funds involved. For this purpose, resources are divided into 2 groups: a) sensitive to percentage rates (term deposits, one’s own debt securities, interbank loans, etc.) and b) resources insensitive to the percentage rate (all accounts on demand);

2) a will to react against the regulated norms of the NBU;

3) the bank’s desire to meet their customer’s needs.

At the same time, the main tools of the bank for managing liabilities are as follows:
– variations in interest rates and terms for deposits;
– introduction of additional deposits or services;
– obtaining an interbank loan;
– issuance of debt obligations;
– liquidity balancing.

In addition, the National Bank of Ukraine establishes standards that all credit organizations must comply with. In case of non-compliance with the regulations, the NBU has the right to impose sanctions on organizations in the form of penalties, fines and bans on carrying out certain types of banking operations, such as, for example, operations on the deposits of individuals and legal
entities, the introduction of a temporary administration, etc. In some cases, the NBU may decide to revoke a license.

Now, let us consider in more detail the second direction of the financial mechanism of a commercial bank shown in Fig. 1. Supporters of financial flow management use 4 main methods:

– method of combining sources of funds;
– method of distribution of sources of funds;
– balanced fund management;
– method of scientific management.

The method of combining sources of funds presupposes a reasonable allocation of funds between various assets when managing the finances of a commercial bank.

The method of distribution of sources of funds involves maintaining liquidity by establishing strict compliance with the terms of attraction and placement of funds.

The balanced fund management involves managing the bank’s finances based on a combination of the first two methods.

The method of scientific management involves the use of the method of linear programming in the distribution of financial resources between different categories of assets.

The effectiveness of financial flow management methods directly depends on the bank’s financial management process, which includes financial planning, operational management and financial control.

Financial planning includes determining the direction of capital investment; comparison of future costs and available resources, etc. Operational management analyzes the implementation of plans, finds information about the state of the market and counteragents, and creates analytical centers to process the received information. It is especially important for the successful financial management of commercial banks to identify the reasons for the deviation of the actual indicators from the planned ones. And, finally, financial control (or financial controlling) includes internal economic and audit control of the bank.

The stage of financial controlling is worth considering in more detail, because this is where the most significant shortcomings in the management of a commercial bank are revealed. The financial control of the credit organization is mostly aimed at evaluating the efficiency of management decisions and identifying reserves for the growth of its resources. Financial controlling is most often used in the banking sector.

The financial controlling system of a commercial bank is an integrating concept of managing its finances, a coordinating and functional type of financial management, with methodological, methodical and technical basis.

A modern methodological system of financial controlling of a commercial bank should consist of two blocks:

1) block of information and service support (financial management accounting, financial management reporting, financial analysis).
2) block of financial management (financial planning, budgeting, audit).

There is also a need for financial controlling tools in order to support the functions of control and coordination of various aspects of managing the bank’s business processes.

The tools of financial controlling include:

– methods of displaying, grouping and using primary and free accounting and management information by types, places of formation, centers of responsibility, areas and types of activities;
– forms and methods of compiling financial (accounting and management) reporting and calculating its indicators, methods and indicators of financial analysis, methods of measuring and evaluating resources, income, expenses and profit;
– forms and methods, tools of financial planning, forecasting and budgeting, coordination, stimulation, motivation, control and audit, ways of making financial decisions and monitoring their implementation.
The goals of the financial controlling of a commercial bank are to develop the concept of managing its finances, to provide information and services for the adopted managerial financial decisions, to coordinate the functional systems of financial planning, financial stimulation and control, and to provide methodological and instrumental support for the process of managing the business and finances of the bank [5, p. 71].

Applying the financial controlling system to a commercial bank, the following functions can be distinguished:
– information and service function;
– coordinating and integrating function;
– the function of orientation towards the achievement of the bank’s goals (moderating function);
– the function of active assisting with making effective financial decisions.

Having considered the financial mechanism and methods of financial management of a commercial bank, let us move on to an equally important component of financial management in the bank, namely strategic management.

Strategic financial management of the bank is part of its strategic financial policy. The purpose of the bank’s financial policy is to determine the main principles and tasks of the financial management system. The implementation of the bank’s financial management principles and tasks determined by the policy is intended to maintain the stability and efficient operation of the bank, to maintain a perfect balance between the acceptable level of risk taken by the bank and the profit obtained from the implemented banking activities, the interests of customers, counteragents, business partners, shareholders. It also intends to ensure its successful operation at the market of banking services according to the efficiency and scale of the bank’s activities.

In order to deliver financial policy tasks, banks can employ the following strategies:
1) improvement of the financial management system using the best world practices and requirements/recommendations of large commercial banks, taking into account the specifics of operations and target client segments of the bank.
2) development of the methods of analysis and assessment of the financial management effectiveness.
3) development of the system of control and reporting of the bank’s current financial state.
4) development and improvement of approaches to the bank’s financial management aimed at updating the bank management system and shaping the bank’s competitive position on the market.
5) increasing the technology of processes and the level of automation of the analysis, assessment and management of the finances of a commercial bank.
6) optimization of the processes of interaction between divisions, improvement of the business process monitoring system.
7) development of the personnel motivation system taking into account the level of accepted risk and opportunities of each employee’s to influence the final financial result.
8) development of the business planning system in terms of comprehensive use of information about planned risks and their level.

Despite the fact that the strategies mentioned above are intended to effectively implement the tasks of the bank’s financial policy and thereby contribute to increasing the efficiency of the bank’s financial management, it should also be taken into account that the current process of changing the financial sector is characterized by the strengthening of the process of globalization and increasing the impact of global imbalances on the activities of financial institutions on the capital market, in particular. At the same time, significant changes are taking place in the long-term policy of the largest financial market players, the purpose of which is to obtain competitive advantages. In this regard, there is an increasing need for maintaining stable financial position of banks and increasing the opportunities for businesses to grow.
The search for the most suitable development model and the model for ensuring a long-term and sustainable increase in financial results requires special tools and methods of strategic management, which make it possible to create a unified and effective system for achieving the necessary indicators of financial position in a highly competitive environment, incomplete information, bounded rationality, etc.

In the current conditions, when implementing strategic financial management, commercial banks should take into account such factors as insufficient or incomplete information, the impact of financial and economic changes in foreign and domestic economies. In this regard, issues of strategic financial management of a commercial bank require improvement of management algorithms and conceptions on a long-term basis.

Most studies of scientific methods and approaches to strategic management make it possible to say that in the relevant scientific literature related to the strategic management of the bank, there is no unambiguous approach to defining the basic component of strategic management, namely a strategy. Arthur A. Thompson and A. J. Strickland assume that the strategic management system should include corporate strategy, operational strategy, functional strategy and business strategy [4, p. 64].

Kenneth G. Andrews proposed the broadest interpretation of strategy and defined the corporate strategy as “a pattern of decision-making that determines and reveals the tasks and goals of a company, sets its core policies and business areas in which the main activity of the company is concentrated, the type of economic and human organization that is followed or to which this company tend, as well as the nature of economic and non-economic achievements it intends to offer to the shareholders, employees, customers and society in general” [5, p. 78].

The analysis of scientific approaches to defining the essence of strategy makes it possible to single out several main approaches to strategic management: practical, conceptual, directive-intuitive, systemic, institutional and integrated [6, p. 14].

When it comes to the practical approach, it should be noted that its main idea lies in determining the correct strategic methods and models in view of goals, resources and assessment of results and operational activities regarding the implementation of strategic plans. The application of this approach in the process of strategic financial management of a commercial bank focuses attention on ready-made algorithms for making the right strategic decisions, taking into account the study of the bank’s resource base [8, p. 82].

Based on the conceptual approach, strategic management is considered as a vector of certain long-term development, as well as a targeted and orientating activity. Strategic financial management of a commercial bank within the framework of this approach can be considered as the determination of the most important financial indicators to be achieved in the mid-term and long-term perspective.

Equally interesting in the current conditions is the institutional approach, which allows to take into account both formal and informal features of the development of the banking sector, as well as the insufficiency and uncertainty of information, as factors affecting the efficiency of strategic management of bank finances.

The directive-intuitive approach follows from its main points, according to which strategic management is the art of management and prediction, certainly based on the professional qualifications of the top management of a commercial bank. It should not be ignored that managers’ professional and personal qualities significantly affect strategic decisions making and their implementation. However, in the current conditions of financial management of a commercial bank, there is a need for a more rational approach to determining key financial indicators.

By systematizing the categories of strategic management according to the characteristics of various elements of financial management of commercial banks, this process can be defined in two main dimensions [10, p. 10]: strategic management of bank finances is an integral theory consisting of clear norms, principles and procedures regarding the three main processes of implementing the
bank’s financial strategy, namely planning, implementation and control; strategic management of bank finances is a process that involves defining goals, developing and choosing strategies, planning and allocating the necessary resource base and proper interaction with the external environment to achieve long-term and planned financial results.

The analysis of the strategic financial management system of the largest commercial banks allows us to conclude that the most important strategic financial indicators are the value of the financial organization, the level of bank capitalization, the need to develop and apply innovative projects, expand the range of banking products, increase the effectiveness of the risk management system in the bank, as well as the implementation of investment policy in areas significant for the organization.

The most obvious and relevant is the Chinese experience of strategic management of bank finances. In the system of strategic financial management, financial organizations in China prefer the capitalization and value indicators, increasing financial assets, financial risk system, as well as managing mandatory standards, in particular capital adequacy standards A good example is one of China’s largest commercial banks specializing in the industrial sector, namely China Construction Bank Corporation. It increased its assets by 9% in 2019 compared to 2018. In absolute terms, the increase in assets was 16,744,130 billion yuan. In addition, during that period, the bank significantly increased its profit; in absolute terms, the pre-tax profit was 299.1 billion yuan, the profit after tax was 228.2 billion yuan, in relative terms the increase was 6.89% and 6.1%, respectively, compared to the previous year [8].

Another example of a commercial bank that, along with indicators of capitalization, liquidity and value, also uses the system of maintaining capital adequacy indicators as the main element of financial strategy is another Chinese bank, namely Industrial & Commercial Bank of China [9]. Leading analysts of this bank focus on capital adequacy indicators as the main indicator reflecting the correctness of financial decision-making. Based on the data presented on the bank’s website, in 2019, its operating income increased by 9.1% compared to 2018, the capital adequacy ratio k1 increased by 1.35%, and the k2 ratio increased by 1.41%.

Ukrainian banks has been recently applying this practice of Chinese banks. The analysis of the Ukrainian banking sector and the reports of the National Bank of Ukraine, available in public access, allow us to come to the conclusion that for quite a long time, since Basel III was introduced, commercial banks have been emphasizing such key financial indicators as liquidity and capital adequacy ratios.

However, the official data of the analytical reports provided by the National Bank of Ukraine indicate a decrease in the financial results of commercial banks (Fig. 3).

![Fig. 3. The share of profitable banks in the financial system of Ukraine, %.
Source: [10]](image-url)
The trend of decreasing financial results of commercial banks indicates the need for changing their financial strategies.

In order for the bank’s management to properly ensure the financial development of the bank in the long term, there should be developed a system of effective strategic management of the bank with several stages (Fig. 4).

Fig. 4. Algorithm for strategic management of bank finances.

Source: compiled by the author

At the first stage, there should be collected the information on the target financial indicators of the strategy. Depending on the type of information about the bank (external or internal), an analysis of the current state of the financial management system and external trends, as well as an assessment of the need to adjust the bank’s financial strategy should be carried out.

At the next stage, according to the results of the analysis, the bank’s finance management bodies should decide whether the current strategy of financial management is feasible or whether certain changes are necessary. If the analysis of the quality of management shows that the current strategy is ineffective, then the levels of financial indicators necessary to achieve the bank’s strategic goals should be determined. Then, it is necessary to develop measures to achieve the required level of financial indicators and evaluate the effectiveness of the measures taken. In case of a sufficient level of efficiency, the strategy is approved and taken into action.

Conclusion. The analysis of the conducted research gives a clear understanding that the strategic approach to the development of the bank is one of the main components of economic growth, which means focusing on the most important indices and indicators that reflect the actual financial position of the bank, the positive or negative level of financial security, as well as potential opportunities for development of the bank.

It should be noted that in a competitive environment, the prior task of the bank is to ensure a stable financial position and focus on growth, which is characterized by a positive trend in the development of the bank’s financial system as a result of management decisions; the ability to forecast the ways of the bank’s development and possible management risks; controllability itself.

However, it should be clear that this option can take place only in the absence of any external and internal influences, as well as in the presence of a perfect management system in the bank.
Список використаної літератури

1. Зверук Л.А., Босва С. К. Концептуальні засади дослідження управління фінансовою стійкістю банківських установ. Бізнес Інформ. 2019. № 3. С. 288–293.
6. Фінансовий менеджмент: банківські ресурси та управління ними. URL: https://osvita.ua/vnz/reports/bank/19684/ (дата звернення: 05.04.2023)

References


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МЕХАНІЗМИ
УПРАВЛІННЯ ФІНАНСАМИ КОМЕРЦІЙНОГО БАНКУ

Анотація. У статті розглядаються основні механізми управління фінансами комерційного банку, а також перспектива створення сучасного фінансового механізму. В статті аналізується підхід до визначення терміна «фінанси» та спрямованість управління на розміщення фінансових ресурсів для отримання прибутку. Ставиться акцент на важливості продуктивних фінансових відносин між банком і клієнтами за допомогою фінансового менеджменту. Також розглядається роль елементів планування, оперативного управління та контролю в створенні сучасних методів управління фінансами. Стабільність банківського сектора багато в чому зумовлює стабільність економики загалом та її успішний розвиток. Тому першочерговим завданням державних органів на макрорівні та менеджменту кредитних організацій на мікрорівні повинно бути забезпечення такої стабільності завдяки проведення раціональної грошово-кредитної політики; оцінювання та моніторингу стану реального та фінансового секторів економіки; падіння всіх видів ризиків і набуття доходів, що примножували сукупні витрати. Все це сприятиме модернізації та підвищенню якості банківських послуг, які надаються фізичним і юридичним особам. Нерозумна і поспішна політика у сфері банківського бізнесу не тільки призведе до спаду фінансової стійкості кредитних організацій, але вплине на економіку в цілому. В статті проаналізовано фінансовий менеджмент іноземних банківських організацій, в результаті якого автор дійшов висновку, що найважливішими індикаторами в розробці фінансової стратегії банку є вартість фінансової організації, рівень банківського капіталу, певна кількість активних інноваційних проектів, збільшення лінійки продуктів та послуг, які надають банки, підвищення управління зовнішніми та внутрішніми ризиками, а також розробка ефективної інвестиційної політики. У результаті дослідження було виявлено взаємозв’язок між ефективним фінансовим менеджментом та високим рівнем управління ліквідністю банку та достатністю його капіталу. Зроблені автором теоретичні рекомендації можуть бути використані менеджерами банків під час розроблення тактичних заходів, спрямованих на підвищення фінансової стійкості кредитної організації, а також під час уточнення стратегії розвитку банку у фазах економічного піднесення і спаду в інтересах власників та інших економічних суб’єктів, які вступають у фінансові відносини з банками.

Ключові слова: управління фінансами, фінансова стійкість, фінансовий менеджмент, фінансова стратегія, банківський капітал, управління ризиками.

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