

Abstract of the Dissertation presented by Almas Maksatovich Kalimoldayev in partial fulfillment of the requirements for the degree of Doctor of Philosophy (PhD) in the specialty «6D051800 – Project Management» entitled «Development of a project-based approach to managing distressed assets of banks lending to the real sector of the economy of the Republic of Kazakhstan»

General overview. The first chapter examines the theoretical and methodological foundations of distressed asset management. It provides an economic analysis of the nature and classification of distressed assets, identifies the key causes of distressed asset formation in lending to the real sector of the economy, and traces the evolution of global approaches to distressed loan management. Particular attention is given to the project-based approach as a tool for improving management efficiency, which serves as the methodological foundation of this study and supports the development of the author's proprietary distressed asset management model.

The second chapter analyzes the current state of lending to the real sector of the economy in the Republic of Kazakhstan and the dynamics of distressed assets in commercial banks. Existing models of problem loan management are evaluated, and institutional, organizational, and legal constraints that reduce management effectiveness are identified. The analysis substantiates the need to transition from traditional process-based models to a project-based approach in distressed asset management in order to ensure more flexible and effective control over loan portfolio quality.

The third chapter examines the impact of macroeconomic and social factors on the formation of distressed assets using regression analysis, time-series analysis, and structural equation modeling (PLS-SEM). Internal and external models were evaluated, hypotheses were tested, and key determinants of non-performing loans were identified, including GDP, inflation, interest rates, and currency fluctuations. The findings made it possible to identify systemic risks and formulate key mitigation strategies based on project-oriented asset management.

The fourth chapter is devoted to the development of a project-based approach to managing distressed assets of banks that lend to the real sector of the economy of Kazakhstan. A sample of targets subject to the project-based approach was selected according to industry affiliation and the stage of loan deterioration. A mathematical model of the banking system was developed, identifying key agents, including commercial banks with performing assets, a commercial "bad bank," the Central Bank (financial regulator), and the Fund of Distressed Loans. Possible scenarios for managing toxic assets were proposed, including restructuring, additional lending, the outright sale and repurchase of distressed assets. Expected taxpayer costs were calculated, and measures aimed at restoring the banking sector and preventing a credit crisis were assessed.

The conclusion presents a generalized analysis of the dissertation findings. Comprehensive research was conducted on the distressed assets of banks lending to enterprises in the real sector of the economy. A methodology for the project-based management of distressed assets was developed, taking into account macroeconomic determinants, the specific features of the real sector, and the characteristics of Kazakhstan's banking system.

Overall, the study demonstrated that transitioning to a project-based approach to distressed asset management is strategically justified, improves the quality and reliability of banks' loan portfolios, strengthens the stability of the banking system, and supports the real sector of the economy of the Republic of Kazakhstan.

Relevance of the research topic. In the context of an unstable macroeconomic environment and increasing credit risks, the issue of managing banks' distressed assets has become particularly important. While the banking sector of the Republic of Kazakhstan continues to actively finance the real sector of the economy, it simultaneously faces a growing share of non-performing loans, which negatively affects the financial stability of banks, the investment activity, and overall economic growth.

Recent experience has shown that the regulator's structural "clean-up" of the banking sector has improved the stability of the financial system, reduced the number of unreliable market participants, and strengthened customer confidence. At present, the market is dominated by banks that comply with international financial reporting standards and the requirements of the Agency for Regulation and Development of the Financial Market. Nevertheless, the challenges associated with increasing credit risks and the accumulation of distressed assets remain highly relevant, particularly in the context of geopolitical instability, digital transformation, and changing customer needs.

The relevance of this study is driven by the objective need to systematize and implement project-based methods for managing banks' distressed assets. A project-based approach makes it possible to structure distressed asset management processes, reduce the level of non-performing loans (NPLs), ensure effective planning and control of deadlines, resources, and outcomes, and improve the transparency and efficiency of managerial decision-making.

The significance of the topic is further reinforced by the insufficient development of methodological foundations for applying project-based approaches to distressed asset management in banks focused on lending to the real sector of the economy in the Republic of Kazakhstan. These circumstances necessitate both scientific justification and the development of practical recommendations for implementing project-based methods in this field.

Degree of Scientific Development of the Research Topic. The formation and development of project management systems across various industries have been widely addressed in the works of prominent international scholars, including G. Diethelm, R. Archibald, E. Jordan, E. Fern, O.I. Botkin, V.I. Golikov, G. Jafari, V.V.

Ilyin, D. Milosevic, V.I. Nekrasov, Yu.K. Persky, E.V. Popov, A.N. Pytkin, M.L. Razu, O.A. Romanova, A.I. Tatarkin, and others.

Certain aspects of troubled debt management in Kazakhstan's banking sector have been reflected in the works of domestic economists such as U.B. Baimuratov, A. Yessentugelov, N.K. Kuchukova, M.B. Kenzheguzin, G.T. Kaliyeva, and others.

Project management theory, which is still a relatively new field within Kazakhstan's economic science, has developed rapidly over the past decade. Significant contributions have been made by A.F. Tsekhova, T.S. Satkaliyeva, A.N. Sakhanova, K.S. Mukhtarova, O.S. Sabden, S.T. Kupeshova, S.B. Abdygapparova, A.B. Maidyrova, and others.

Despite significant achievements in the theory and practice of distressed asset management by both domestic and international scholars, many theoretical and applied aspects still remain insufficiently developed and continue to be the subject of academic debates. Moreover, although project-based methods are increasingly in demand for managing both distressed and standard bank debts, this area remains largely unexplored in domestic research and practice.

Issues related to lending to enterprises in the real sector and project-based management of distressed assets in lending banks have been studied only fragmentarily in Kazakhstan's academic literature, while some aspects have remained outside the scope of economic research altogether. The lack of comprehensive Kazakhstani studies devoted to building a distressed asset management system for second-tier banks participating in investment processes in the real sector determined the choice of this dissertation topic, as well as its relevance, purpose, and objectives.

The object of the study is the distressed assets of banks lending to the real sector of the economy of the Republic of Kazakhstan.

The subject of the study is the methodological and practical aspects of project-based distressed asset management, including asset classification, selection methods, organizational models, and restructuring scenarios.

The purpose of the study is to develop a methodologically substantiated project-based approach to managing distressed assets of banks lending to the real sector of the economy of the Republic of Kazakhstan, taking into account macroeconomic factors, characteristics of the banking system, and the specific features of the real sector.

The following objectives were established to achieve this goal:

- to study the economic nature and classification of banks' distressed assets;
- to identify the causes of distressed assets in lending to the real sector of the economy;
- to trace the evolution of global approaches to distressed asset management;
- to examine the project-based approach as a tool for improving distressed asset management efficiency;
- to analyze the state of lending to the real sector and the dynamics of banks' distressed assets in the Republic of Kazakhstan;

- to assess current distressed asset management models and identify systemic limitations;
- to study the influence of macroeconomic factors on the formation of distressed assets using structural modeling (PLS-SEM);
- to develop a mathematical and organizational model for project-based distressed asset management, identifying key agents and management scenarios;
- to formulate recommendations for implementing a project-based approach aimed at improving the effectiveness of restructuring and stabilizing the banking system.

Methodological basis of the research

The dissertation employs both general scientific and specialized research methods, including systems analysis, structural modeling (PLS-SEM), mathematical modeling, comparative analysis, scenario forecasting, and project management methods.

Regulatory and information base of the research

The information base of the study includes legislative and regulatory acts of the Republic of Kazakhstan, decrees of the President of the Republic of Kazakhstan, government resolutions, official reports of state and financial institutions, materials from the National Bank of the Republic of Kazakhstan, reports from rating agencies, international project management standards, and statistical data on enterprises operating in the real sector of the economy.

Scientific novelty of the research. The dissertation presents new scientific results, including the development and theoretical substantiation of a project-based approach to managing distressed assets of banks lending to the real sector of Kazakhstan's economy, as well as an implementation algorithm for this approach.

The scientific novelty of the dissertation is defined by the principal provisions submitted for defence.

The main results constituting the **scientific novelty** of the research are as follows:

- 1) A conceptual model for the project-based management of distressed bank assets has been developed, incorporating a methodology for classifying management objects by industry, stage of distress, and the borrower's economic viability. This approach ensures targeted monitoring and effective restructuring of non-performing loans (NPLs).
- 2) A methodology for integrating macroeconomic determinants (inflation, interest rates, GDP growth rates, and exchange rate fluctuations) into the assessment of distressed assets has been proposed. This methodology enables the forecasting of NPL dynamics and supports managerial decision-making based on quantitative data.
- 3) A mathematical model of the banking system of the Republic of Kazakhstan has been developed, identifying key agents, including banks with performing assets, "bad" banks, the Central Bank, and the Fund of

Distressed Assets. This enables analysis of alternative scenarios for managing distressed loans.

- 4) Scenarios for managing distressed assets have been developed, including restructuring, additional lending, sale and repurchase of toxic assets. These scenarios are aimed at minimizing losses for both banks and the state while increasing the effectiveness of the project-based management approach.
- 5) Practical recommendations for implementing a project-based approach to distressed asset management have been proposed. These recommendations are intended to enhance process transparency, reduce response times, and ensure the sustainability of lending to the real sector of the economy of the Republic of Kazakhstan.

Theoretical and practical significance of the study. The theoretical significance of the study lies in the development of a comprehensive concept for a project-based approach to managing distressed assets of banks lending to the real sector of the economy. The practical significance of the research lies in the feasibility of implementing the proposed project-based management model in commercial banks operating under conditions of limited financial and human resources.

Validation and publication of research results. The dissertation research was conducted at the Department of Management of the Higher School of Economics and Business of the Al-Farabi Kazakh National University. The research findings were presented and published at a number of international scientific conferences, including:

- the IX International Scientific Conference “Optimization and Applications” (OPTIMA-2018), with the report “Distressed Assets in a Normative Dynamic Model of the Kazakh Economy” (Petrovac, Montenegro, October 2018); “Book of abstracts” (Moscow, Dorodnicyn Computing Centre, FRC CSCRAS, 2018,
- the 11th International Scientific Symposium “Economics, Business & Finance” (Jurmala, Latvia), July 15-19, with the report “Impact of Macroeconomic Indicators on Non-Performing Loans (NPLs)”;
- the X International Scientific and Practical Conference “Membership in the WTO: Prospects for Scientific Research and the International Technology Market” (Ottawa, Canada, October 22–24, 2025), with the report “Analysis of International Project Management Standards in Economics.”

The results of the dissertation research were published in 20 scientific papers, including 5 articles published in journals recommended by the Committee for Quality Assurance in Science and Higher Education of the Ministry of Science and Higher Education of the Republic of Kazakhstan, and 6 articles indexed in the Scopus database.

In addition, a software copyright certificate for the invention entitled “Ranking of Borrowers by Creditworthiness Parameters Using an Analytical Method” (Certificate No. 26014 dated May 12, 2022) was registered in the State Register of the Republic of Kazakhstan.