

DEVELOPMENT OF OPTIMIZATION MODELS AND METHODS FOR THEIR SOLUTION FOR ASSET MANAGEMENT OF COMMERCIAL BANKS IN UZBEKISTAN

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ABSTRACT

Need to study system analysis of modern models of banking activity, including bank asset management, and determination of the most promising areas for the application of economic and mathematical methods of multi-criteria optimization based raising the level financial stability jar. The purpose of the article is to increase the efficiency of a commercial bank based on the development and testing of optimization models and methods for their solution for managing bank assets. The article explores mathematical model of the problem of multi-criteria optimization of the structure of assets of a commercial bank, considering the structure of liabilities as an exogenous factor according to criteria reflecting various aspects of the bank's stability, taking into account the restrictions of the Central Bank of the Republic of Uzbekistan, using an extended classification of assets by risk and liquidity to adequately model the state of the bank's balance sheet and a method for solving a multi criteria optimization problem based on the synthesis of concessions and Pareto optimal set methods by constructing an optimal set at each Pareto step, formulating the concession value according to less important criteria and transferring them to the category of restrictions. The method makes it possible to effectively synthesize the possibilities of machine optimization and take into account the knowledge that is difficult to formalize. The conducted research allows to significantly speed up the process of developing management decisions in the bank and increase their efficiency.

KEYWORDS: *System Analysis, Bank Asset Management, Development And Testing Of Optimization Models, Decision Maker, Method For Solving The Problem Of Multi Objective Optimization, The Role Of The Banking System*

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