Master's thesis: 115 p., 23 fig., 12 tabl., 2 appendix, 16 sources.

Today, according to the IMF, Ukraine's economy is in a downturn. Under the conditions of the Russian-Ukrainian war, the banking sector is affected by the depression of economic activity and the deterioration of the state of finance; As a result, the tension in the financial market and the reduction of confidence in the banking system and the national currency. Because of this, today the priority task of banking activity is to provide anti-crisis procedures, in particular to prevent bankruptcies of banks. Therefore, it is extremely important to study the problems of anti-crisis monitoring, prevent the development of crisis phenomena and identify the negative effects of crises. The analysis of bank risks and possible crisis situations of banks is necessary for the correct assessment and structuring of risks and crisis situations and their account in strategic and tactical issues of providing life to individual banks and the banking system as a whole.

Object of study: inhomogeneous credit portfolio.

Research Subject: Distribution features of portfolio with consideration to default risks

Purpose: development of the credit portfolio model based on Markov chain, which will give allow to analyze macroeconomic factors and threats affecting the credit portfolios, the implementation of a software product that demonstrates the operation of the model on test data.

Explanatory note consists of five sections. In the first section on the grounds of scientific literature the state of scientific problem is examined. In the second section we define the tools necessary for further research of models and also describe and analyze existing approaches to portfolio modeling, and propose a model for macroeconomic risks. The third section describes the usage of modes on an appropriate data and compares results. The fourth section describes the implementation of software product. In the fifth chapter we analyze a startup product management. Within the thesis we developed a computer program for the model. This system allows you to upload, graphically display data and results.

CREDIT RISK, RISK MODELING, CREDITRISK, HIDDEN MARKOV MODEL, THE CREDIT PORTFOLIO