

*Abstract:*

*The main theme of the work is the study of credit risks in commercial banks as a random process and the application to him the methods of mathematical and cognitive modeling. The aim is to develop a methodology for credit risk management to ensure sustainable operation of the bank. The object of research is the process of credit in the bank. The result of the research is to develop a set-theoretic model of credit process, which expands the capability to predict the credit risk.*

Keywords: commercial bank, credit risk, complex systems, modeling, cognitive approach.