

# STATISTICAL METHODOLOGY AND SOFTWARE TO ASSESS THE CREDITWORTHINESS OF REAL SECTOR OF THE ECONOMY ON THE MICRO AND MACRO LEVELS

*V.I. Malugin, e-mail: Malugin@bsu.by, N.V. Hryn*

*Research Institute for Applied Problems of Mathematics and Informatics  
Belarusian State University, Minsk, Belarus*

This report presents the system of relative statistical credit ratings to assess the creditworthiness of non-financial companies. It is based on the methods of multivariate statistical analysis, as well as on a set of multivariate econometric models used to assess the creditworthiness on the macro level. On the basis of company's financial reports data it is developed a system of credit measures called "relative statistical credit ratings" (RSCR), which includes: company ratings (CCR), the branch of the economy ratings (BCR) and the integral indicator of creditworthiness of the national economy (ICI). The CCR indicator is used to evaluate the creditworthiness of companies on the micro level. BCR and ICI indicators can be used by the regulators on the macro level. The proposed methodology is applied to evaluate the creditworthiness of Belarusian companies. Using econometric modelling we examine the dependence of the credit measures BCR and ICI on the major macroeconomic factors of the Belarusian economy. We establish also the relations between the integral output indicators of the national economy and the proposed statistical creditworthiness measures. Economic analysis of the obtained statistical and econometric modelling results indicates the informativeness and the economic significance of the proposed indicators.

The software SSCR ("System of Statistical Credit Ratings") developed on the proposed statistical methodology has passed a preliminary approbation on an expanded database in the National Bank of the Republic of Belarus. The approbation results confirm the acceptable effectiveness of this approach in solving some problems the Central bank faces. They include the evaluation of the stability of the national economy as well as the assessment of the system risks of the banking sector.

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## **References**

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