THE CONTRASTIVE ANALYSIS OF THE BORROWER'S CREDIT STATUS SCORING TECHNIQUES

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In this article the author considers the models and techniques of credit status estimation. The weaknesses of the existing techniques are defined. The features of their application in Russia are considered.

The problem of the borrower's credit status scoring has been known since the beginning of the banking history and now it became particularly urgent in connection with the financial crisis, the macroeconomic instability in our country, and the large number of the financially insolvent national economy subjects.

At the present stage there are various approaches to the classification of the credit scoring techniques. They are divided into quantitative and qualitative ones, multi-criterion and based on integrated (consolidated) activities ones.

The Vishnyakov's classification contains the following data:

1. The classification models which includes rating models and models of forecasting bankruptcies.

2. Models of complex analysis.

There is the more detailed classification in the article, including the rating models, the bankruptcy prediction models and the qualitative analysis models. Also, statistical and mathematical database description and the formal construction mechanism of each model are given. The peculiarities of the application of the models in Russia are revealed in the article.

Unlike Vishnyakov's classification, our classification is more detailed and is supplemented by the following models: matrix, PAS, binary and A-models.

Models of complex analysis are replaced by models of qualitative analysis. Complex analysis means cumulative analysis of quantitative and qualitative characteristics of the client. Thus the overwhelming majority of complex analysis models display only qualitative part of the studied process.

The main point of the rating techniques is the calculation of the synthesized activity - the rating (in points), subject to which the borrowers are divided into credit status categories.

General view of a rating estimation:

$$K_0 = \sum_{i=1}^{n} A_i \cdot K_i,$$

where K_0 is an an integrated indicator (rating); A_i is the relative density of ith indicator; K_i is the value of ith indicator; n is the number of indicators.

The rating estimation of the enterprise-borrower is a generalized conclusion of the analysis of credit status.

The predictive techniques are realized by the means of statistical methods and are used for the prospective borrower's quality rating. They are based on statistical methods the most spread of which is the multiple discriminant analysis (MDA).

General view of discriminant function:

$$Z = a_0 + \sum_{i=1}^{n} a_i \cdot f_i,$$

where a_0 and a_i are some parameters (regress factors), and f_i is the factors characterizing the financial condition of the borrower (financial factors).

The techniques of the qualitative analysis are based on the aggregate quantitative and qualitative characteristics of the borrower. The majority of the models are based on non-formalized criteria - the characteristics, reflecting the financial condition of the enterprise, having no quantitative measurement.

In practice of banking the subjectivism of the borrower's credit status scoring, the lack of the statistical information, and the quantitative branch-wise characteristics prevail.

The conductive contrastive analysis of the current techniques revealed the following characteristics and tendencies:

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1. Due to simplicity, clarity and adaptibility to the specific bank, the rating techniques are rather widely applied in various banks of commerce; the bank itself establishes the structure of the financial ratios and the credit scoring technique, meanwhile the recommended values of the financial ratios are taken into account. But the application of the same standard values to different branches of production presents difficulties for the verified data accessing. The level of the bank subjectivism in the choice and interpretation of the financial ratios is high.

2. Prediction techniques are used to extend the information about the borrower's potential. The accuracy of the enterprise bankruptcy prediction, but for the near-term outlook, is high. The difficulty consists in the lack of the database on the issue, in the uncertainty of the enterprise bankruptcy condition both from the normative and statistical point of view.

3. Qualitative techniques in common are of foreign origin, therefore their application in Russia requires serious additional work. As the majority of these techniques are based on the qualitative analysis of the borrower the experts' subjective opinion prevails.

At the present stage of the banking system development, carrying out any complex analysis is an expensive procedure, and the skilled specialists and analysts are needed.

One bank often cannot establish and make use of such technique, as the considerable scientific resources, modern IT, developed normative legislative base, adequate bankruptcy statistics, modern management and control system are needed for its realization.

Each technique has its weaknesses. Thereupon the development of a complex technique appears to be sufficient, taking into account the quality of the above mentioned models together with the scientific ground of choosing any activities subject to the enterprise industry practices.

Vishnjakov I. V. Method and model of an estimation of credit status of borrowers: the Manual. SPb., 1998.

Savitsky G. V. Analiz of economic activities of the enterprises of agrarian and industrial complex: the manual. Minsk, 2006.