Expert System - Adviser of the Financial Manager Commercial Bank

Vladimir N. Domrachev

Center of Physics and Technology Academy of Science of Ukraine (Kiev),
Kiev , Ukraine
e-mail: bel@dom.freenet.kiev.ua

Abstract

One of the main tasks of commercial bank is the effective financial management. In work the realization of expert system is considered which allows to make the financial analysis of a condition of commercial bank and on its basis to build the recommendations for management of the finance.

1. Introduction

The system consists of three blocks: the block of viewing data, block of viewing of financial results, block of the analysis of a condition of bank and development of the recommendations. The block of viewing of the data allows to look through the consolidated balance, basic units of the active accounts, units passive, results of work of bank (incomes and expenses), condition of credit and investment portofolioes, condition of debts. The consideration is conducted as in a cut national currency - $, and in a cut the residents – non-resident. The block of viewing of financial results allows to consider temporary aspect of financial parameters and to look after various kinds of percentage ratio.

The block of the analysis consists of next parts: the risk analysis and factor analysis equity of bank operations, and actually expert system. The recommendations are developed on the basis of search of an optimum way on a tree of acceptance of the decisions, in which the tops are weighed on risks, and edge on equity of bank operations. The basic idea laying during development of the recommendations by expert system is the comparison of control parameters of activity of given bank with average parameters on bank system and with parameters on group of "similar" banks.

_____

2. Determination of problems into commercial banks

A determination System and regulation of bank risks is interlinked with banks activity analysis. One of most well known there is a CAMEL system. CAMEL System great while uses in organs of bank supervision and for some time past experienced the considerable changes. These changes are associated with attempts to press into the service of CAMEL system for general banks rating. But a CAMEL system is developed as an expert system appointed for inspectors of bank supervision.

There are many banks rating establishment methods [1]. The Different methods are available for different economic systems. Now CAMEL system get development is in CAMELS system appearance. S is sensitiveness of financial bank state to any amount of factors, among which:

- Inflation, - Change of capital cost, - Change of exchange rates, - A risk is associated with trade activity, - Risk of international operations and bonds, etc.

Influence of these factors not fully takes into account in old CAMEL system and calls for separate research. The risks determination system in commercial banks represented by developing of problem determination expert system.

A risk calculation consists in that a performance indicator analysis of commercial bank takes not in point of beforehand fixed sense, but in point of middle value of indicators for system of commercial banks, which normal works. It is believed that middle value of indicators characterizes value of indicators, with taking account in current economic situation. A state Analysis of commercial bank takes being based on deviation of basic bank functioning indexes from middle senses into undesirable side.

These indexes deviations determine banks distribution, on following four categories: deviation is to 25%, from 25% to 50%, from 50% to 100%, above for 100%.

3. Some coefficients useful for analysis activity of commercial bank

There are many well-known coefficients useful for analysis activity of commercial bank [1]. Among other coefficients we use:

Ê1 = Middle (100*Problem active / capital),

Ê2 = Middle (100*Problem credits/ capital),

Ê3 = Middle (100*Problem active / Net assets),

Ê4 = Middle (100* Debtor / capital).

References

1. V.²vanov "Bank reliability Analysis ". - Ì .: Russian business literature, 1996. -320 p.