

FORECASTING VALUES FINANCIAL FACTORS IN ANTI-CRISIS OPERATION OF BUSINESS

In this article is examined the forecasting method of values of financial factors for the enterprise's financial analysis in anti-crisis management.

In this article the method of forecasting of values of financial factors for the financial analysis of the enterprise in anti-crisis management is considered {examined}.

Essence of the problem

The basic purpose of the financial analysis is the reception of a small number of the key (most informative) parameters, giving the objective and exact picture of the financial condition of the enterprise, its profit, and the loss, the changes in the structure of actives and passives, in calculations with debtors and creditors.

The major purpose of the anti-crisis program is the stability of the enterprise work what is shown not only in achievement of demanded parameters of solvency and profitableness, but also in the maintenance of their level preventing the repeated crisis.

Danger of the crisis always exists and it is necessary to expecting.

Ways of the solving

For the solving of the given problem it is offered to introduce the program module of automatic calculation of financial factors on the basis of existing control system of a database by the results of which the estimation of the financial condition of the enterprise is carried out.

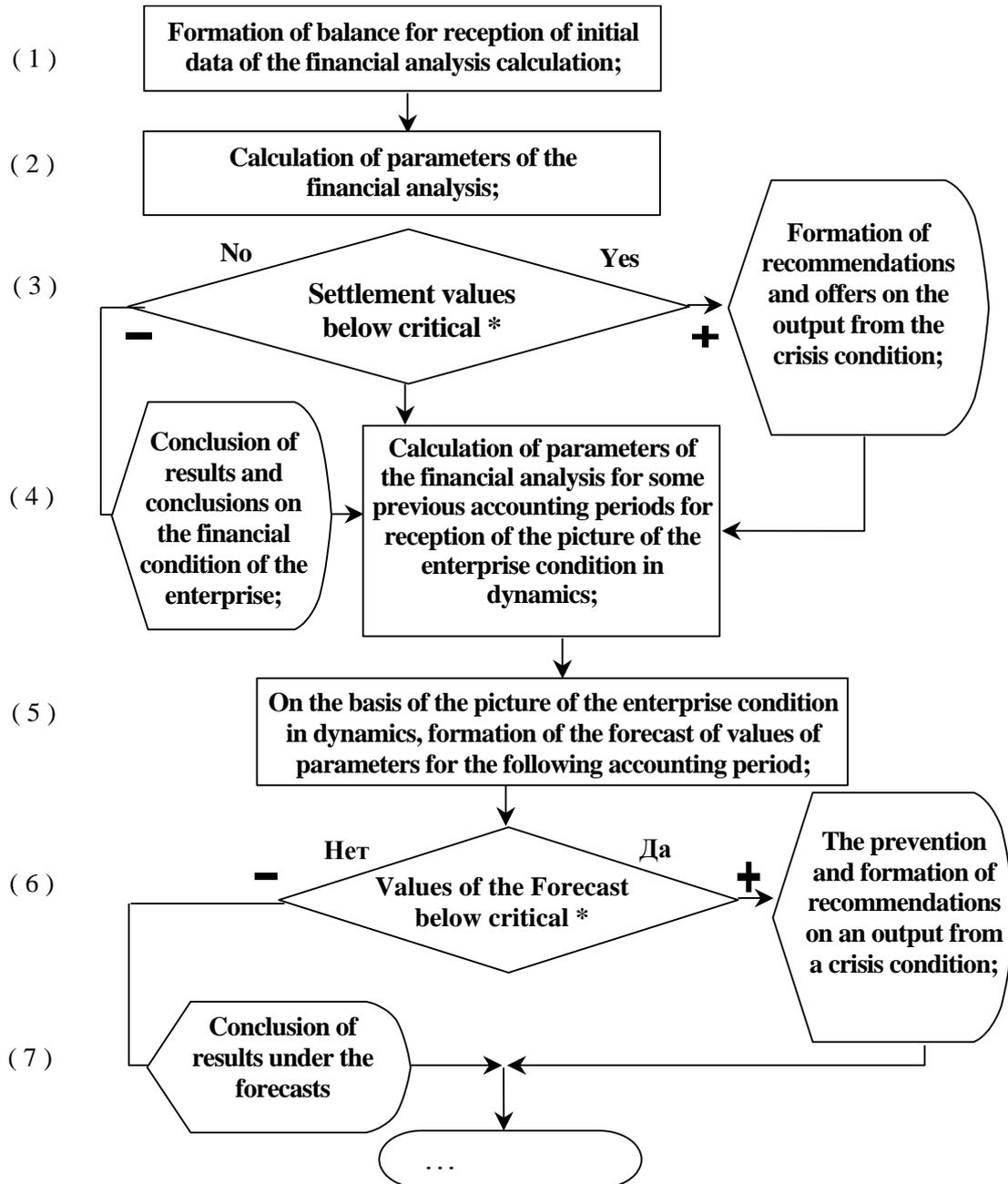
According to the received data it is possible to calculate forecasting values of financial factors for some consistently following accounting periods.

On the basis of the base algorithm of the anti-crisis module it is possible to consider the following chain of actions:

At the fifth (5) stage of the base algorithm it is necessary to calculate forecasting values of financial factors according to some periods.

For the realization of this problem we shall consider the mechanism of calculation of the inertial forecast of financial factors values. On the basis of the idea of such forecasting the property of inertness of any process is used. For example, if the

of autonomy factor in current of three accounting periods decreased, so with the certain share of probability it is possible to assume that in the fourth accounting period it will continue to decrease. Our task: is to determine the speed of the decrease of the value (considering the possible accelerations or delays), and knowing value of speed it is already possible to calculate the forecasting value of the autonomy factor.



* Downturn of values below critical means deterioration of a financial condition of the enterprise

That is, having received values of financial factors for some accounting periods, it is possible to find out the tendency or the speed of change of values of factors between first two accounting periods.

$$\Delta T1 = F2 - F1, \tag{1}$$

Where

$\Delta T1$ – the tendency of change of the factor value;

$F2, F1$ – values of factors for the second and first quarters accordingly;

Then we receive the second tendency of change:

$$\Delta T2 = F3 - F2, \quad (2)$$

Where

$\Delta T2$ – the tendency of change of the factor value;

$F3, F2$ – values of factors for the third and second quarters accordingly;

The following step is the reception of average value of tendencies:

$$\Delta Tsr = (\Delta T1 + T2) / 2, \quad (3)$$

Where

ΔTsr – the average tendency of change of the factor value;

$\Delta T1, \Delta T2$ – tendencies of changes of values of factors for the previous accounting periods;

Having received the average value of the tendency it is possible to receive forecasting value of the financial factor:

$$F4 = F3 + Tsr, \quad (4)$$

Where

ΔTsr – the average tendency of change of the factor value;

$F3$ – value of factor for the third quarter;

$F4$ – forecasting value of factor for the fourth quarter;

After carrying out of forecasting values of factors calculations according to data of the real enterprise of "VVS", the results (see below Table 1) show, that the direction of change of values of factors are justified with probability approximately 91 %, that is, whether value will go down or raise in the following accounting period, it is possible to predict approximately with a mistake one to ten. It is enough high percent of probability.

Let's consider resulted the table 1 below in detail. For example, factor of an autonomy. According to the formula (1) $\Delta T1 = 0,67 - 0,68 = -0,01$. According to the formula (2) $\Delta T2 = 0,63 - 0,67 = -0,04$. Further according to the formula (3) $\Delta Tsr = (-0,01 + (-0,04)) / 2 = -0,025$. And according to the formula (4) we shall receive forecast $F4 = 0,63 + (-0,025) = 0,605$ 0,61 less than 0,68 (value for 1/1/2001), and actually at us we have the real value 0,65 which is below the initial 0,68 too. Thus, the direction of change of the factor value of an autonomy is calculated precisely. And the forecast for 1/1/2002 in accuracy coincides with the real value 0,64.

Table 1. Parameters of financial stability of Open Society " Air Forces " for the period from 01.01.01 for 01.01.02

Parameters	01.01.2001	01.04.2001	01.07.2001	01.10.2001	Forecast 01.10.2001	01.01.2002	Forecast 01.01.2002
Factor of an autonomy	0,68	0,67	0,63	0,65	0,61	0,64	0,64
Factor of a maneuverability	0,13	0,13	0,06	0,06	0,03	0,08	0,03
Factor of finance owning	0,21	0,21	0,09	0,11	0,03	0,13	0,06
Factor of sources owning	1,48	1,51	0,64	0,69	0,22	0,92	0,28
Factor of a parity of extra and own finance	0,47	0,5	0,59	0,54	0,65	0,55	0,56
Factor of ong-term investments owning	0,87	0,87	0,94	0,93	0,98	0,92	0,96
Immobilization factor	1,47	1,38	1,46	1,55	1,46	1,44	1,64
Altman's factor	—	1,27	1,08	1,12	—	1,14	1,05

For convenience in the program it is possible to create functions of diagrams construction of factors values:

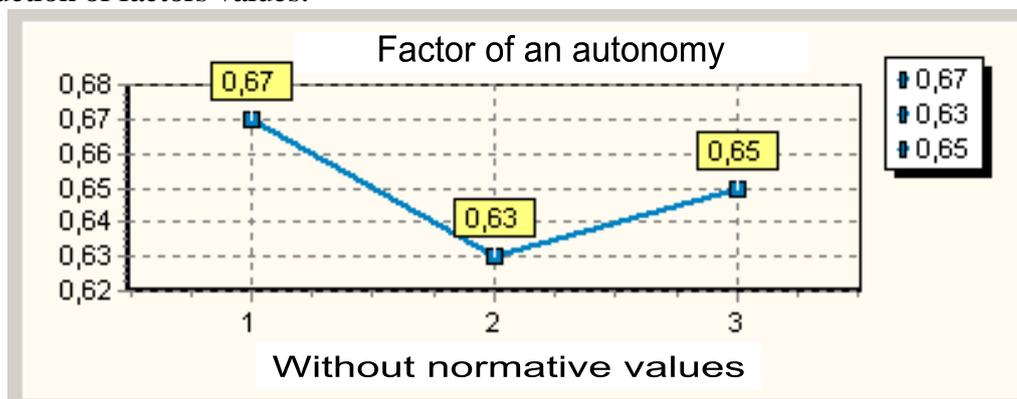


Fig. 1. The factor values of an autonomy for three quarters

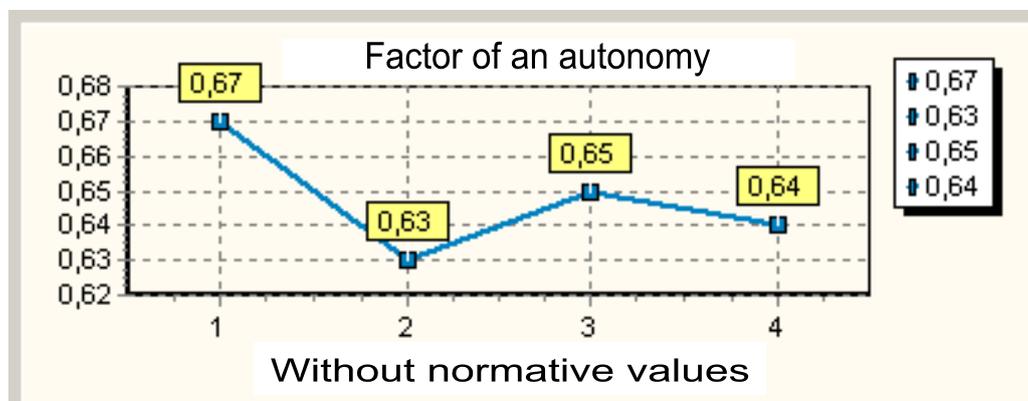


Fig. 2. The factor values of an autonomy for three quarters and forecasting value for the following accounting period (the fourth quarter).

The conclusion

The analysis of existing software products and literatures on the researched theme leads to a conclusion about novelty of the given direction of development and enables to consider such program module as the new automated complex tool of the anti-crisis business operation, capable warn about the approaching crisis in advance to and to offer the possible measures on exit from the crisis situation.

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