AUTOMATED REPORT ON THE BUSINESS PLAN OF THE INVESTMENT PROJECT

A. I. Zmitrovich¹, A. V. Krivko-Krasko², T. V. Lysenko³

¹Institute of IT and Business Administration  
²School of Business and Management of Technology, Belarusian State University  
³Belagroprombank  
Minsk, BELARUS

e-mail: ¹azmitrovich@iba.by, ²sbmt@mail.ru, ³t_poleschuk@tut.by

Abstract

The article is dedicated to the concepts and components of decision making support system for the possibility of providing credit support to enterprise for realization of investment project

1 Introduction

Currently in banks, consulting and financial companies are actual decision making support systems for the possibility of providing credit support to enterprises for realization of investment projects. Analysis of the conclusions of solving this problem infer that there is a possibility of building a computer system for automated building of conclusions on the business plan of the investment project. It seems that such a system should include the following components.

2 Information on the commercial organization

This section shall include: the abbreviated name of the organization (the project proponent); legal address; the current accounts and the name of the servicing bank; date of the last registration of the organization; the amount of the statutory fund; ownership; founder members; distribution of the statutory fund in shares; the average number of persons; industry affiliation; main activities; primary suppliers, consumers, competitors; position (market share) in the product market; special features of the technology used; main types of products; Purpose and main characteristics of the product.

3 Key performance indicators of the company

Further table is formed on the main indicators of the company for the last two years, with automatic calculation of the growth rate on the following parameters: the annual production capacity by product type; average number of persons; proceeds from realization of production; production and distribution costs; profit (loss) from sales of the products; net profit (loss); profitability of products sold; the share of non-cash payments in the revenue; the proportion of sales by markets: the domestic market,
neighboring countries, the far abroad. According to the formed table the system produces analytical conclusions on prefabricated frames in variable parts which fit values of the indicators and the conclusions: “more”, “above” or “less”, “better”, “worse”, “growth”, “loss”, etc.

Filled frame system might look like this. In 2015 the company produced 7.1 thousand tons of meat (including 3.7 thousand tons of beef and 3 thousand tons of pork), which is 7.8% more than in the previous year; 4 tons of sausage products (101.2% in 2014); 1.7 thousand tons of meat products (40.6% more than in 2014). The Group’s sales, excluding VAT was 8,474,600,000 rubles, the growth rate in 2014 — 114%. Net working capital — 492.7 million rubles.

4 Balance sheet structure of the organization

There follows a balance sheet structure of the organization for the last two years with also the indication of the proportion of this indicator in percentage to balance currency. Based on these data, the system calculates growth (+) or reduction (−) in absolute terms and growth rate in percent. The conclusions are based on these data and the corresponding frames.

For example, in the structure of circulating assets the largest share (49% on 1.1.2014 and 54% on 1.1.2015) took the receivables. The amount of buyers and customers debts to the company on 1.1.2015 is 3,212 million rubles, which 815 million rubles or 34% more than at the beginning of 2014. The growth of receivables is connected with an increase in the economic turnover of the enterprise: the turnover of receivables for the period from 1.1.2014 to 1.1.2015 decreased from 30 days to 24 days.

During the period under consideration the amount of inventories and costs decreased: from 5 010 million rubles to 4 631 million rubles. The reduction took place due to the reduction on 28% of the residues of production at the enterprise warehouses. The turnover of finished products decreased from 17 to 9 days.

It should be noted that the negative aspect in the analysis of calculation was the increase of the amount of receivables over the accounts payables more than 1.6 times, that indicates the use of bank loans as a source of free resources for the debtors.

5 Analysis of solvency ratios

<table>
<thead>
<tr>
<th>Name of the ratio</th>
<th>01.01.14</th>
<th>01.01.15</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current ratio</td>
<td>0.82</td>
<td>0.75</td>
<td>≥ 1.7</td>
</tr>
<tr>
<td>Ratio of own current assets</td>
<td>-0.30</td>
<td>-0.36</td>
<td>≥ 0.3</td>
</tr>
<tr>
<td>Production ratio of financial liabilities assets</td>
<td>0.58</td>
<td>0.55</td>
<td>&lt; 0.85</td>
</tr>
</tbody>
</table>

Current ratio characterizes the security of the enterprise’s own funds for business activities and timely repayment of urgent liabilities. During the analyzed period (as well as on 1.1.2015), the value of the current liquidity ratio was significantly lower than the standard.

Ratio of own working capital was also lower than the standard.
The value of the ratio of sufficiency of financial liabilities shows the independence of the enterprise from borrowed funds. Thus, the structure of the balance sheet “Enterprise” can be considered satisfactory, while the company is bankrupt.

6 Debt situation on credits and loans

Since January 2015, the company’s debts on loans increased on 7368.3 million rubles or 45.3%, including credits on the current activity, the debt increased on 48.4%, while the debt on investment loans increased by 33.0%.

7 Information about the investment project

In this section, the following characteristics of the investment project are indicated in tabular form: project goals and objectives; horizon of business plans calculation; discount rate; currency; specific measures for implementation of the project with an indication of their value, the alleged suppliers, contractors; total investment costs including investment in fixed assets; VAT (value-added tax) on the amount of investment in fixed assets; net working capital growth; duration of the project; terms of development of capital expenditures; a period of performance producing on the scope of its planned production capacity; sources of financing of investment expenses.

According to the formed table the system produces analytical conclusions, for example on the following criteria: the conformity of investment costs volume to sources of funding (investment expenses coverage ratio), the conformity of investments volumes to reminder of the specific activities, the degree of readiness of the project to the date.

When calculating the effectiveness of the investment project the following indicators are analyzed: net present value; internal rate of return; profitability index; discounted pay-back period.

For example. Net present value shows the absolute value of net income, given to the beginning of the project. During the period of the project (2008-2015) the amount of remaining at the enterprise’s disposal of the net present value will be 1716.8 million rubles.

Internal rate of return will be 13.9% for the under planned discount rate at a rate of 12.68%. Profitability index characterizes the impact of the project on the money invested in it. Effective are considered projects whose profitability index is greater than 1. For this project, the profitability index is 1.15.

Simple payback period is 4 years 11 months. Discounted pay-back Period is 6 years 3 months.

8 Planned indicators of financial-economic activity

The indicators are analyzed in two ways: without taking into account the implementation of the project and taking into account its implementation. It requires a comparison
of the main indicators on the options and the conclusion on the feasibility of the investment.

Sales revenue; sales revenues growth in relation to the base period,%; production and distribution costs, production and distribution costs in relation to the base period,%; semi-variable costs; growth of semi-variable costs in relation to the base period,%; fixed costs; the growth of fixed costs in relation to the base period,%; net profit; net income; debt service on credits and loans; cumulative balance (deficit) in cash; debt coverage ratio; break-even position; profitability of invested capital; profitability of production; profitability of sales; current ratio; size of working capital; a ratio of its own working capital; a ratio of financial obligations to assets; capital structure ratio; the share of short-term and long-term liabilities in the revenue; capital turnover period; current assets turnover term; finished goods turnover term; receivables turnover term; payables turnover term.

9 Updating the knowledge base and training decision making support system

In the process of working with the proposed system, there is a need to improve it by making changes and additions. This process involves the collection of requirements from the system user with further programmers realization for software changes. The form for submission of such a requirement is a production rule.

References