technological development, with a good state of relations in the market and a favorable situation in the political environment. On the way of its development logistics has its own difficulties:
- Difficult situation in the economy;
- The backlog of our economy on the level of the global economy;
- Worn transport infrastructure;
- Insufficient development of industrial and technological base;
- The complexity of the development of the industry in certain sectors (production of packaging, filling and so on.

Thus, the concept of innovative logistics is the use of innovation in logistics in the form of the achievements of scientific and technological progress in relation to the improvement and modernization of the means of transport, storage and handling machinery, packing and filling equipment, new types of packaging materials. Due to the difficult economic situation, the lack of competitiveness of many enterprises, the lack of strategic planning the role of innovative logistics can only grow.

REFERENCES

1. Миротина, Л.Б. Эффективность логистического управления : учеб. для вузов / под общ. ред. проф. Л.Б. Миротина. – М. : Экзамен, 2004. – 421 с. – (Учебник для вуза).
2. Курбатов, О.Н. Условия использования инновационной логистики в различных сферах общественной деятельности / О.Н. Курбатов // РИСК. – 2007. – № 4. – С. 56–60.
3. Особенности инновационной логистики [Электронный ресурс]. – Режим доступа: http://old.creativeconomy.ru/articles/3490/. – Дата доступа: 3.01.2016.
4. Инновационная деятельность в развитых странах [Электронный ресурс]. – Режим доступа: http://economics.wideworld.ru/economic_theory/organization_innovations/2/innovations/. – Дата доступа: 5.01.2016.
5. Кизим, А.А. Инновации как ключевой вектор развития логистических процессов [Электронный ресурс] / А.А. Кизим, О.А. Сивушкина // Теория и практика общественного развития : электрон. журн. – 2013. – Режим доступа: http://teoria- practica.ru/rus/files/arhiv_zhurnala/2013/1/ekonomika/kizim-sivushkina.pdf. – Дата доступа: 7.01.2016.

# THE DEVELOPMENT OF METHODS OF ANALYSIS OF INDICATORS FOR INFORMATIONAL SUPPORT AND CONTROL OF FINANCIAL INDEPENDENCE OF COMMERCIAL ORGANIZATIONS

*VOLHA SUSHKO, INA SAPEHA*
**Polotsk State University, Belarus**

*The economic downturn of the global economy, the consequences of financial crisis and geopolitical conflicts certainly affect the economy of commercial organizations. Therefore, the stabilization of financial condition after the negative effects of the crisis is one of the most important purposes of the management of any commercial organization. In our opinion, it is necessary to find possible ways to manage financial independence of commercial organizations.*

One of the most difficult and important problems in the management of commercial organization is the evaluation of the situation, condition, changes and trends. The evaluation is usually the determination of the availability and degree of expression of different characteristics of management. The indicator is one of the means of evaluation. Accounting and analysis are based on the methods of evaluation. The development and acceptance of management decisions generally and including enhancement of management of financial independence of commercial organizations are impossible without the evaluation of occurring events.

Financial independence is the *ability of organization in conditions of risks to develop the complex of measures, which guarantee constant solvency, opportunity to cover any expenses of commercial organization in accounting period, which in its turn determines stability of commercial organization and level of protection of creditors' interest* [1].

Thus, the authors have considered financial independence of commercial organization in the following way:
- theoretical bases of formation of financial independence of commercial organizations;
- definition of additional income for financial independence of commercial organizations;
- predictive analysis of additional income for financial independence of commercial organizations;
- accounting of additional income for financial independence of commercial organizations;
- traditional analysis of additional income for financial independence of commercial organizations.

In the interest of this article, the authors offer to consider the general methodology of analysis of indicators for informational support and control of financial independence of commercial organizations.

One of the directions of analysis is predictive analysis of additional income for financial independence of commercial organizations. The purpose of such analysis is the evaluation of possible additional income in conditions of risks. The elements of predictive analysis are showed below (Fig. 1)



Predictive analysis
- the evaluation of risks;
- the evaluation of attractiveness of investment project;
- the evaluation of payback period;
- the evaluation of additional income;
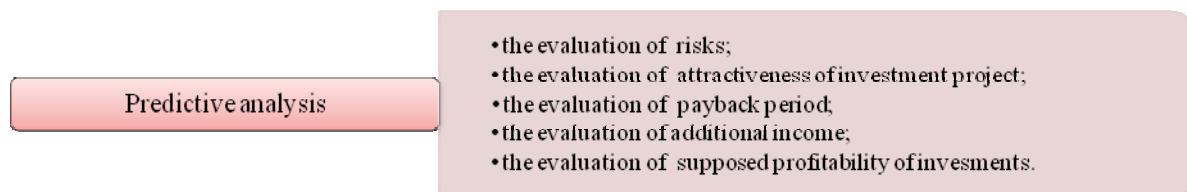- the evaluation of supposed profitability of invesments.

Fig.1 The elements of predictive analysis

This predictive analysis enables us to evaluate risks, level of possible future cash flow.

After the evaluation of all possible ways to get additional income commercial organization will be able to make the right decision on the most profitable investment for strengthening financial independence.

After studying the regulations of the Republic of Belarus, different opinions of economists, the authors have developed the method of predictive analysis of additional income from financial investments for financial independence, which is presented in Table 1.

Table 1 – The method of predictive analysis from financial investments

| Stages of analysis | Indicators | Calculation of indicators, calculation of factors' influence | Characteristic of indicator |
|---|---|---|---|
| 1. The evaluation of risks | Risk of shortfall/ loss of income | $R = \dfrac{In_{\min}}{I}$, $In_{\min}$ – possible minimal income from investments; $I$ – sum of investments | It shows risk of shortfall/ loss of income, in a part loss of capital (partially or fully) |
|  | Risk in a part of lost profit | $R = \dfrac{In_{av}}{I}$, $In_{av}$ – sum of possible income, which is equal to investments; $I$ – sum of investments | It shows risk of not getting profit and losses |
| 2. The evaluation of attractiveness of investment project | Investment attractiveness | $IP = (IC, P_1, P_2, P_3,\ldots, P_n, n, r)$, $IC$ – investments cost; $P$ – income in n-period; $n$ – number of periods; $r$ – accrual rate, at which the elements of the cash flow will be reduced to a single point in time | The totality of objective and subjective characteristics of investment object |
| 3. The evaluation of payback period | Payback period | $Pb = \dfrac{I}{S}$, $I$ – sum of investments; $S$ – sum of average income from investments | It shows a period of time, when all investment costs will be payed back |
| 4. The evaluation of additional income | Net present value (NPV) | $NPV = \sum\limits_{i=1}^{n} \dfrac{I}{(1+r)^i} - \sum\limits_{i=1}^{n} \dfrac{IC}{(1+r)^i}$, $I$ – income in i-period; $IC$ – investment costs; $r$ – discount rate (rate of return); $i$ – duration of investments. | The difference between the sum of the discounted cash flows and the sum of the costs connected with the investment project. $NVP > 0$, project is profitable; $NVP = 0$, project is profitable and not unprofitable; $NVP < 0$, project is unprofitable. |
| 5. The evaluation of supposed profitability of invesments | Supposed profitability of investments | $R = \dfrac{P}{I}$, $P$ – expected sun of income; $I$ – sum of investments. | It shows profitability of investment project. |

Source: own elaboration based on regulations, special economic literature and analytical materials.

This predictive analysis will contribute to the right decision about choosing more suitable sources of additional income for financial independence.

Traditional analysis is very important for determination of efficiency of investments and evaluation of financial independence of commercial organization generally after getting additional income at the end of the reporting period.

Among the elements of traditional analysis for financial independence of commercial organization there are following.
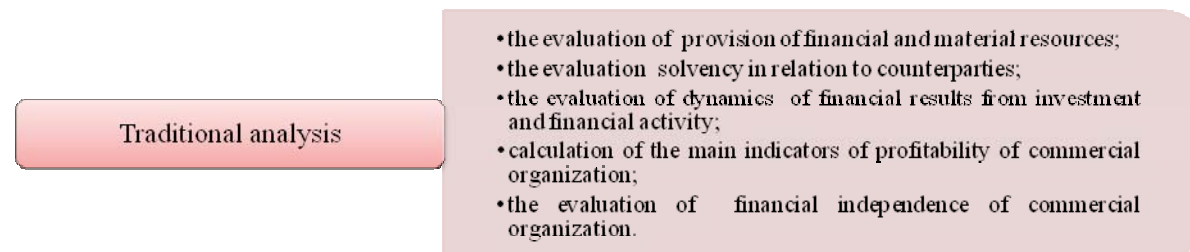


Fig.2 The elements of traditional analysis

In modern practice there are many different methods of traditional analysis, but they do not give a complete picture of the state of entity.

Therefore, studying the legal acts of the Republic of Belarus, the economists' opinions, the authors have developed a complex of methods for the traditional analysis of financial independence of commercial organization, which is presented in Table 2.

Table 2 – Method of traditional analysis for financial independence

| Stages of analysis | Indicators | Calculation of indicators, calculation of factors' influence | Characteristic of indicator |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 1. The evaluation of provision of material resources | Need for material resources | $Mi = \Sigma Mij + MIi$, $Mij$ – need for $i$-sort of material to $j$-kind of activity; $MIi$ – inventories of $i$-sort of material at end of period | The need for material resources for each type of material, used in the implementation of both main and secondary activities of commercial organization |
| | Planned and actual coefficient of needs' ensuring | $Cpl$ = ((Internal sources of covering) + (Signed contracts)) / (Need for material resources); $Cact$ = ((Internal sources of covering) + (Received from suppliers)) / (Need for material resources) [2] | The closer the value of these indicators, the higher the level of availability of material resources |
| | Coefficient of material costs | $Cmc = \dfrac{MCact}{MCpl \cdot Ivp}$  [3] | It shows how thriftily materials are used in manufacturing process, are there any overruns |
| 2. The evaluation of solvency in relation to counterparties [4] | The current liquidity ratio | $K_1 = \dfrac{SA}{SO}$, $SA$ – short-term assets; $SO$ – short-term obligations | The ratio of result for Section II to result for Section V of balance sheet. |
| | The coefficient of availability of current assets | $K_2 = \dfrac{SE + LO - LA}{SA}$, $SE$ – shareholders' equity; $LO$ – long-term obligations; $LA$ – long-term assets; $SA$ – short-term assets | The ratio of sum of result for Section III and result for Section IV of balance sheet after deduction result for Section I to result for Section II of balance sheet. |
| | The coefficient of availability of financial liabilities with assets | $K_3 = \dfrac{SO + LO}{RB}$, $SO$ – short-term obligations; $LO$ – long-term obligations; $RB$ – result of balance sheet | The ratio of sum of results for Section IV and Section V to result for balance sheet. |
| | The absolute liquidity ratio | $K_{abs} = \dfrac{FI_s + CE}{SO}$, $FI_s$ – short-term financial investments; $CE$ – cash and cash equivalents; $SO$ – short-term obligations. | The ratio of sum of short-term financial investments cash and cash equivalents to short-term obligations. |

Table 2 Conclusion

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| 3. The evaluation of dynamics of financial results from investment and financial activity | Dynamics of profit (loss) from investments, financing activities | $\Delta P = \Delta I_I - \Delta C_I + \Delta I_F - \Delta C_F$, <br> $I_I$ – income from investment activity; <br> $C_I$ – expenses from investment activity; <br> $I_F$ – income from financial activity; <br> $C_F$ – expenses from financial activity. | It shows changes of profit due to changes in factors |
| 4. Calculation of the main indicators of profitability of commercial organization | Profitability of investments | $R = \dfrac{P}{I}$, <br> $P$ – sum of income; $I$ – sum of investments | It shows actual ratio of received unit of income and unit of investment costs |
| 5. The evaluation of financial independence of commercial organization | Coefficient of autonomy | $C_{fi} = \dfrac{E}{TC}$, $E$ – equity; $TC$ – total capital | The greater the proportion of equity in total capital of organization, the more stable its financial condition |
| | Leverage ratio | $R_L = \dfrac{BC}{TC}$, $BC$ – borrowed capital; $TC$ – total capital | The higher the proportion of borrowed capital, the greater the dependence of company from external funding |
| | The capitalization ratio | $R_{cap} = \dfrac{BC}{E}$, $BC$ – borrowed capital; $E$ – equity | It shows how many funds are borrowed for the ruble of company's one |
| | Coefficient of maneuverability of equity | $C_{man} = \dfrac{Oca}{LA} = E - \dfrac{LA}{E}$, $Oca$ – own current assets; $LA$ – long-term assets | It shows the ratio of own current assets |

Source: own elaboration based on regulations, special economic literature and analytical materials.

In the end, in order to estimate the condition of organization and determine the level of additional income for financial independence, as well as to identify factors that influenced it, the authors offer the following calculation formula:

$$AI = I_{i.p} + I_{a.c} + I_{f.l} + I_{v.i} + I_s + I_{cap} + I_{c.e} + I_{dep} + I_{restr} + I_{adv} + I_v \tag{1}$$

$AI$ – Additional income; $I_{i.p}$ – Income from investment property; $I_{a.c}$ – Income from participation in the authorized capital; $I_{f.l}$ – Income from finance lease (leasing); $I_{v.i}$ – Income from venture investments; $I_s$ – Income from investments in securities; $I_{cap}$ – Income on copyright; $I_{c.e}$ – Income from investments in cash equivalents; $I_{dep}$ – Income from investments in bank deposits; $I_{restr}$ – Income from restructuring of inefficiently used assets; $I_{adv}$ – Income from placement of advertising on the Internet; $I_v$ – Income from investments in long-term values.

According to this formula, the authors offer to analyze, using the method of absolute differences, or any of the methods of elimination:

$$\Delta AI_{I_{i.p}} = \Delta I_{i.p} + I_{a.c_0} + I_{f.l_0} + I_{v.i_0} + I_{s_0} + I_{cap_0} + I_{c.e_0} + I_{dep_0} + I_{restr_0} + I_{adv_0} + I_{v_0} \tag{2}$$

$$\Delta AI_{I_{a.c}} = I_{i.p_1} + \Delta I_{a.c} + I_{f.l_0} + I_{v.i_0} + I_{s_0} + I_{cap_0} + I_{c.e_0} + I_{dep_0} + I_{restr_0} + I_{adv_0} + I_{v_0} \tag{3}$$

$$\Delta AI_{I_{f.l}} = I_{i.p_1} + I_{a.c_1} + \Delta I_{f.l} + I_{v.i_0} + I_{s_0} + I_{cap_0} + I_{c.e_0} + I_{dep_0} + I_{restr_0} + I_{adv_0} + I_{v_0} \tag{4}$$

$$\Delta AI_{I_{v.i}} = I_{i.p_1} + I_{a.c_1} + I_{f.l_1} + \Delta I_{v.i} + I_{s_0} + I_{cap_0} + I_{c.e_0} + I_{dep_0} + I_{restr_0} + I_{adv_0} + I_{v_0} \tag{5}$$

$$\Delta AI_{I_s} = I_{i.p_1} + I_{a.c_1} + I_{f.l_1} + I_{v.i_1} + \Delta I_s + I_{cap_0} + I_{c.e_0} + I_{dep_0} + I_{restr_0} + I_{adv_0} + I_{v_0} \tag{6}$$

$$\Delta AI_{I_{cap}} = I_{i.p_1} + I_{a.c_1} + I_{f.l_1} + I_{v.i_1} + I_{s_1} + \Delta I_{cap} + I_{c.e_0} + I_{dep_0} + I_{restr_0} + I_{adv_0} + I_{v_0} \tag{7}$$

$$\Delta AI_{I_{c.e}} = I_{i.p_1} + I_{a.c_1} + I_{f.l_1} + I_{v.i_1} + I_{s_1} + I_{cap_1} + \Delta I_{c.e} + I_{dep_0} + I_{restr_0} + I_{adv_0} + I_{v_0} \tag{8}$$

$$\Delta AI_{I_{dep}} = I_{i.p_1} + I_{a.c_1} + I_{f.l_1} + I_{v.i_1} + I_{s_1} + I_{cap_1} + I_{c.e_1} + \Delta I_{dep} + I_{restr_0} + I_{adv_0} + I_{v_0} \tag{9}$$

Economics

$$\Delta AI_{I_{restr}} = I_{i.p_1} + I_{a.c_1} + I_{f.l_1} + I_{v.i_1} + I_{s_1} + I_{cap_1} + I_{c.e_1} + I_{dep_1} + \Delta I_{restr} + I_{adv_0} + I_{v_0} \quad (10)$$

$$\Delta AI_{I_{adv}} = I_{i.p_1} + I_{a.c_1} + I_{f.l_1} + I_{v.i_1} + I_{s_1} + I_{cap_1} + I_{c.e_1} + I_{dep_1} + I_{restr_1} + \Delta I_{adv} + I_{v_0} \quad (11)$$

$$\Delta AI_{I_v} = I_{i.p_1} + I_{a.c_1} + I_{f.l_1} + I_{v.i_1} + I_{s_1} + I_{cap_1} + I_{c.e_1} + I_{dep_1} + I_{restr_1} + I_{adv_1} + \Delta I_v \quad (12)$$

This factor analysis allows us to evaluate the efficiency of allocation of organization's funds, to make conclusions about the expediency of investment funds, as well as to predict the optimal structure of the allocation of funds, and to provide commercial organizations with financial independence.

The proposed methodology of traditional analysis can serve as a source of information for management decisions. This analysis will not only evaluate provision of financial and material resources, level of solvency in relation to counterparties, calculate the indicators of profitability, but also assess financial independence in general.

## REFERENCES

1. Сушко О.А., Сапего И.И. Сущность и классификация понятия «финансовая независимость» // О.А.Сушко, И.И. Сапего / Экономическая наука в XXI веке: проблемы, перспективы, информационное обеспечение. КубГАУ. - 2013. – Ч. I. – С. 288.
2. Красовская, С.И. Анализ хозяйственной деятельности : конспект лекций / С.И. Красовская. – С. 79.
3. Савицкая, Г.В. Анализ хозяйственной деятельности : учеб. / Г.В. Савицкая. – 2-е изд., испр. и доп. – Минск : РИГТО, 2012. – С. 348–353.
4. Инструкция о порядке расчета коэффициентов платежеспособности и проведения анализа финансового состояния и платежеспособности субъектов хозяйствования : утв. постановлением М-ва финансов Респ. Беларусь и М-ва экономики Респ. Беларусь от 27 декабря 2011 г. № 140/206.

UC 338.2

## INNOVATION INFRASTRUCTURE DEVELOPMENT TRENDS
## OF THE RUSSIAN FEDERATION

*IRINA UDAKHINA, ALEXEY KURLOV*
**St. Petersburg University of Management and Economics, Russia**

*The role of innovations in formation of the effective infrastructure is unfolded in the article. The theoretical aspects of a concept disclosure, an input of foreign and domestic scientists are considered. System elements of the infrastructure environment are analysed.*

Today, innovations play considerable and even defining role in economic development of the region, branch and country. Reasonable and strategic introduction of innovations is a priority in growth and in formation of scientific and breakthrough power of the Russian Federation.

Market economy activity is impossible without formation and development of institutes of financial infrastructure. Thus the financial infrastructure in transformational economy significantly differs from similar infrastructure in the countries with the advanced economy. Besides, character and regularities of its formation are essentially other than similar processes in the countries of initially capitalist orientation where they were evolutionary, in process of need accumulation for certain forms activity implementation. In transformational economy with a change of ownership forms, ways of managing and structural transformations for the purpose of ensuring harmonization between subjects of the market, the infrastructure has to be created during rather short period of time.

The analysis of a number of foreign and domestic publications shows that in the modern period a basis of the leading corporations of the developed countries high competitiveness is not only realization of rational marketing strategy, but also continuous work over increasing of infrastructure institutes efficiency. It confirms about increasing of infrastructure role in competitiveness of producers.

The necessity of development of institutes effective system of infrastructure in Russia appropriate to market economy, and development of its formation mechanism defines the theoretical and practical importance of this paper.