

The methodological aspects of assessing the attractiveness of investments made into financial assets and real projects

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Abstract. Activity of the modern industrial enterprises is determined by both external and internal factors. Accordingly, the sustainable development of economic entities depends on their ability to timely update and modernize their own activities in accordance with the disclosed transformations and changes in the external environment. Whereby, the renovation and modernization of the industrial and manufacturing enterprise activities require a significant amount of funding, which is not always possible to provide from their own sources and reserves. This in turn implies the need to attract investments into projects or securities issued by the organization to create the necessary financial resources. In turn, investors are willing to invest their temporarily available financial resources only into potentially profitable projects or assets; hence there is a justified need to study the investment attractiveness of the organization.

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Introduction

Investment plays a significant role in the functioning and development of industrial organizations operating in the high technology sector. As it was noted in his writings by Tkachenko I.Y. [1], investments are not only one of the most commonly used financial and economic concepts, but they also represent an important measure of the movement processes of financial resources within the world and national economies. But at the same time quite often in the scientific literature as well as in the business turnover the investments are identified with capital contributions.

In reality this is not the case, since it is well known that the investment can be both, real (representing contributions into tangible and intangible assets) and financial (in this case, contributions are made into the instruments traded in the financial market). It is obvious that investment is a systemic category reflecting the specifics of financial resources formation and redistribution processes of public authorities as well as industrial and business sector into those assets or instruments that (in the short or long term) can generate income [2]. But the ability to generate income is not the only feature not the only essential characteristic of the investment. Additionally, investments are characterized by [3]:

– the presence of risk, as a rule, the higher the level of investment risks is, the higher is their income level, respectively, the relationship between the risk and income earned from the investment is directly proportional;

– a certain term of investment resources contribution into the real (tangible or intangible) and financial assets. The term of investments contribution also determines the level of investment risk;

– the purposefulness of investment resources contribution, given the propensity of the investor himself to risk-taking;

– the presence of dialectical contradictions - the interests of a particular investor may not be coherent with the functioning and development objectives of the investment object.

Methodology

Methodologically this article is a study aimed at the generalization of existing techniques and methodological approaches to assessing the attractiveness of financial or real investment in the light of scientific experience. The paper describes the basic aspects of fundamental analysis of investment attractiveness of financial assets (securities and derivatives), as well as dynamic discount and alternative methods of estimating the attractiveness of real investment projects.

Main part

In general, for the industrial and production sector of the national economy and in particular for its high-tech segment, the investments can be regarded as a strategically important source of sustainable development. This is due to the fact that the renewal and modernization of the industrial and manufacturing organizations activities at the present

stage of economic development are a reasonable and objective necessity. In particular, the necessity of updating and modernizing for many Russian organizations is predetermined by a substantially depreciated state of the previously formed physical infrastructure (see Figure 1).

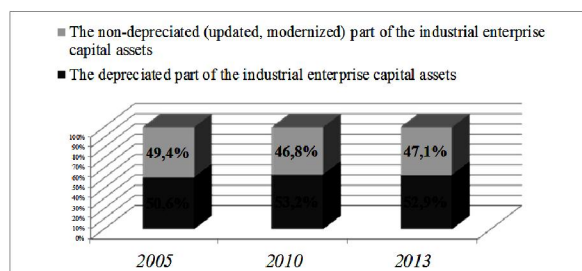


Figure 1. Dynamics of the depreciation level of the Russian industrial enterprise capital assets [4]

According to the Federal State Statistics Service, the depreciation of the capital assets among the Russian industrial enterprises in the year 2005 amounted to about 50.6%, having increased by the year 2010 up to 53.2%, currently (as of the year 2013) the depreciation of organization capital assets inside the industry is about 52.9%.

Thus, it is necessary to note that on the one hand, the volumes of investments into non-financial assets of the Russian economy are being increased steadily. But on the other hand, the investment process aims to update the depreciated capital assets, creation of intangible assets, as well as research and development of the real sector being invested in minimum amounts – no more than 1.3-1.8% of the total volume of contributions into non-financial assets (see Table 1).

Table 1. Dynamics of changes in non-financial investments of Russian enterprises [5]

Index	2005	2010	2013	2013 to 2005 (times)	2013 to 2010 (times)
Investments into capital assets	2893.2	6625.0	9499.3	3.3	1.4
Investments into intellectual property objects	24.4	23.6	34.1	2.2	2.3
Investments into other non-financial assets	19.4	36.7	38.1	3.0	1.6
R & D costs and technological works	8.7	26.8	48.5	5.6	1.8
Investment structure				(+,-)	(+,-)
Investments into capital assets	98.2	98.7	98.3	0.1	-0.4
Investments into intellectual property objects	0.8	0.4	0.6	-0.2	0.2
Investments into other non-financial assets	0.7	0.5	0.6	-0.1	0.1
R & D costs and technological works	0.3	0.4	0.5	0.2	0.1

With the continuing sufficiently high depreciation of capital assets, it is possible to talk about the fact that, along with a general increase within the investment activity, quite often the organizations themselves do not have adequate financial reserves to meet the needs of innovation and modernization processes. Accordingly, the ability of industrial and manufacturing organizations, including those conducting their activities in the high

technology sector, to the self-financing of investment requirements has reduced.

Updating and modernization of industry organization activities can be viewed in two key aspects [6]:

- firstly, from the operational-tactical point of view, when the upgrade process is aimed at the systematic (industrial and technological or organizational and administrative) improvement of certain functionalities of the internal environment;
- secondly, from the strategic point of view, when the upgrade process is aimed at the radical reformation of the business model used as the basis of functioning and development.

In both cases it is necessary either to seek the internal reserves for release and redistribution of financial resources, immobilized or accumulated in stocks, or to attract investment funds from outside investors (strategic or institutional). As an option, an organization can use investment resources of public authorities, distributed within the priority programs of renovation and modernization of the key sectors of the national economy.

Exploration of the internal reserves of financial and investment needs maintenance in practice is a search for opportunities to improve costs and expenses in the operating, self-investment or self-financing activities. Exploration of the nonproductive waste of financial resources and the exploitation of these reserves in turn also requires investments.

This is due to the fact that the overhead costs tend to appear at an unsustainable and inefficient organization of operation activities. Practically, this means that the high resource intensity is a result of using outdated technologies that do not allow organizations to create and implement a product on the market with a high added value [7].

Besides, functioning and development of the industrial and manufacturing companies are characterized by the capital-intensive innovation activity, when bringing to the market of a product with high added value is preceded by a long phase of discovery, development, testing, and implementation of innovative solutions. Therefore, the exploration and development of the reserves by reducing costs, which in the current period may be considered unproductive, do not always provide the necessary financial and economic effect.

Consequently, the organizations are forced to outsource the investment resources of private investors or investment resources belonging to public authorities. But there is also a number of interrelated issues. First of all, we should understand that the investor is interested in the return of invested capital, and in obtaining the required return on investment

under the acceptable level of risk. Consequently, the investor will be interested in investing temporarily available funds into those assets, projects or tools that are characterized by sufficient investment attractiveness.

Investment attractiveness of commercial entities, including those carrying out their activities in the field of high-tech industrial production, is a complex system category. On the one hand, within this category there is aggregately reflected the effectiveness of the organization functioning and development in retrospect, but on the other hand, the investment attractiveness should also reflect the vision of sustainable evolution of the organization, as an object of investment, at least for the period of the financial investment performed by the investor. It is axiomatic that the higher the investment attractiveness of the investment object is, the more resources required to the development provision will be provided by the investor [8].

The task of evaluating the investment attractiveness of various business entities or projects implemented by them is a consistent finding answers to the list of critical problems that are formulated on the basis of analytical data receiving on the following main aspects:

- the actual level of demand for the investment volumes in relation to the technical and economic conditions of the investment resources usage;
- integrated assessment of external and internal factors that constitute the framework conditions of the project realization with the outsourced investment resources usage;
- systematic assessment of all investment contributing risks, as well as the probability of risk events occurrence that may result in a decrease of the investment project effectiveness, or the impossibility of its realization in the light of the new, previously unrecorded circumstances;
- real ability of the project investment decisions in bringing potential revenue (under the accepted risk level) both, to the investors themselves and to the economic entities, which are the initiators of the investment project.

It is generally accepted to evaluate the investment attractiveness depending on the type of investment decisions, which in turn can be viewed as investments into the financial instruments and investments into the projects (which involve the creation of tangible or intangible assets, including the creation of a new business). Accordingly, in terms of methodology, we can talk about the financial and real investment.

Financial investments represent contributions of the investor's temporarily free funds

into the securities and serving them financial instruments. Securities and financial instruments that serve them are issued by business entities. Therefore, in this case, the assessment of investment attractiveness is a fundamental analysis, characterizing the operation and development of an economic entity, which is the issuer of the securities (and thus serving their financial instruments). Meanwhile, the fundamental analysis is complemented by technical analysis, i.e. trend analysis and analysis of financial market tendencies, which reflects the impact of macroeconomic and global trends.

Fundamental analysis is a systematic study of financial and economic activities of the organization for a number of periods. The totality of the analyzed parameters can vary.

In fact, fundamental analysis shows the financial status of the business entity, which is the issuer of the securities and derivative financial instruments, and allows you to judge the effectiveness of the organization management and stability of its strategic development within the prevailing environmental conditions.

Within the study of the investment decisions attractiveness, associated with the investing into real assets (projects), there is evaluated not only the financial condition of the commercial entity, being the initiator of the project or creator of a new business, but also the actual economic feasibility and potential effectiveness of the project. In the latter case, it is customary to use dynamic discount methods, including those recommended by UNIDO for the evaluation of investment projects and decisions. Within the frame of the dynamic discount methods usage, there are evaluated the following parameters:

- the net present value, which is the discounted free cash flow generated by the project (implemented by an investment decision);
- the internal rate of return, which is the interest bearing component of the discounted profitability index, at which the net present value is equal to zero;
- the discounted payback period of the project, which shows the period from the moment of investment resources contributing to the receipt of the first revenues from the project (decision), exceeding the incurred costs;
- the profitability index, which characterizes the excess level of the received during the project set of discounted revenues over the totality of the incurred discounted expenses.

Investments into the real projects or new business are considered appropriate and potentially effective, provided that the net present value is a

positive value, internal rate of return exceeds a certain cut-off rate (for example, capital cost, the required rate of return, discount rate), and payback period is below the period of its implementation.

In our opinion, the use of traditional dynamic discounted methods has one significant drawback, while these methods are based on the idea that the structure of the used capital both, for the support of business entity activity and for the project realization, remains conditionally unchanged throughout the investment period. In practice it is rather difficult to be implemented because:

– firstly, the investments are involved for implementation of strategically important decisions, but apart from the providing strategically important decisions, there is also required the support of the ongoing activities, therefore, the structure of the used capital can vary variably in different periods;

– secondly, the activity of an economic entity that implements the relevant investment project is characterized by the presence of positive and negative financial effects, which may either increase the cost and/or volumes of the capital or reduce these values.

Consequently, it is necessary to agree with those researchers indicating that for the real investment projects and decisions the optimal variant will be the usage of the adjusted present value within the evaluation process [9]. Adjusted present value of real investment is calculated as the discounted free cash flow generated by the project (decision), summed to the received financial effects that can change the balance of the investment income and expenses. To such financial effects, influencing the economic viability of real investment decisions in the course of their implementation, it is worth to attribute the following:

1) positive financial effects allowing to maximize the free discounted cash flow: tax shield, government grants or other donations, as well as state and/or institutional guarantees of project revenues [10];

2) negative financial effects, potentiating the reduction of the free discounted cash flow: emission costs, insurance and reinsurance investment risks, the potential financial difficulties of the investment producer and recipient.

Analytical procedures related to the evaluation of investment attractiveness of a particular object of investment, can be characterized both, by additivity and multiplicity of investment benefits received under a set of alternative or complementary decisions.

Additivity of the investment benefits should be understood as an integrable potential rate of return

of the investor, who has the ability to fund a number of real and/or financial investment decisions. Those decisions, complementing each other, form an investment portfolio, balanced in terms of risk and required return [11].

Multiplicity of the investment benefits should be understood as an alternative choice of the investor [12,13], based on the maximization of the profitability of one out of a set of real and/or financial investment decisions. In this case, the investor is able to finance any single decision, but the investment will be directed to the project (asset), characterized by the highest level of profitability (under the acceptable level of risk), among other potentially attractive projects (assets).

Thus, the attractiveness of financial or real investments represents the assessment of the decision feasibility taken by the investor [14], based on a comparison of the investment volumes and planned for receiving incomes (under the acceptable level of risk) through alternative or complementary comparison of a set of objects of potential investment.

Conclusion

In this article we have examined the key aspects of the investment attractiveness of the industrial and manufacturing companies, as one of the main areas of financial management. In our opinion the investment attractiveness of industrial organizations involves both, the aggregate index of management effectiveness, including financial management, and the integrated index characterizing the specificity of functioning and development of a single economic entity. Research methodology of the investment attractiveness of industrial organizations can be considered within an algorithmic process-projection as a series of steps that allow determining the quality of retrospective development of these business entities, as well as the prospective of investment contribution into the financial assets and real projects.

Summary

1) the investment attractiveness of industrial enterprises is a complex system category, collectively reflecting the quality of strategic management and the advisability of investing in the proposed financial assets (derivative instruments) or real projects;

2) the evaluation of investment attractiveness allows the investor to understand how potentially efficient and cost effective (under the accepted level of risk) will be the investment of temporarily available funds into individual alternative assets and projects, or into their totality;

3) from a methodological point of view, evaluation of investment attractiveness is a specific set of analytical approaches that not only provide a retrospective assessment of the organization-issuer of the securities (derivative financial instruments) or the organization-initiator of real investment projects, but also investigate prospective benefits of investing temporarily free financial resources;

4) to assess the investments attractiveness in the form of financial assets, there is traditionally used the fundamental and technical analysis. To assess the investments attractiveness in the form of real projects, there is accepted to use the totality of the dynamic discounted methods;

5) in our opinion, as the main discounted indicator of the real investment project attractiveness, the most optimal is the usage of the adjusted present value index, which allows taking into account the positive and/or negative financial effects of cash flows and capital structure, which may have a significant impact on the profitability and risks of the project.

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