Formation of the company's investment policy taking into account the impact of environmental aspects of its activities

Sergei Beliakov[1,*], and *Shakhin* Shabanov[2]

[1]Moscow State University of Civil Engineering, 26 Yaroslavskoye Shosse, Moscow, 109377, Russia
[2]Sovtransteh LLC, 21-4 Locomotivniy proezd, Moscow, 119180, Russia

Abstract. The article is devoted to the consideration of theoretical issues and methodology for building an effective investment policy of an enterprise, taking into account that for enterprises operating in most fundamental sectors of the economy, including construction, oil and gas, transport, industrial production, etc., an important aspect that requires consideration in the development of investment policy is the impact on the environment. Environmental aspects impose restrictions on the choice of investment directions, applied methods and technical and economic indicators of projects and determine the potential competitive advantages of projects, including through the use of forms of state support. Environmental aspects of investment activity should be considered not only as basic constraints in the development of project solutions, but also as one of the factors of the enterprise's competitiveness, which significantly affects its investment potential in the medium and long term. The authors also present a system of key principles for the formation of an enterprise's investment policy taking into account environmental aspects and form a schematic diagram for the development of an enterprise's investment policy taking into account environmental aspects. The use of the proposed methodological tools will help to increase the stability and efficiency of both the internal environment of the enterprise and its external environment, that is, the socio-economic system in which it operates.

1 Introduction

As part of the enterprise 's investment planning, it is necessary to carry out a comprehensive analysis of possible investment options, which determines the direction of investment that will give maximum profit, make the enterprise more stable in economic terms or achieve other significant results. [1,2]

The efficiency of the investment activity of the enterprise is determined by the quality of a well-designed and developed investment policy. Directly, the investment policy process involves:

- selection of short-term and long-term targets;

* Corresponding author: serj-bel@yandex.ru

- selection of priority activities, development directions for the enterprise;
- analysis of projects, implementation of which will give maximum profit at permissible risk level;
- development of plans and forecasts: technological, financial, marketing.

In his works, Yendovitsky D.A. formulated the definition of investment policy of a commercial company as a general guide, according to which a program of further investments is built. According to this manual, the most promising projects are also selected and decisions in the field of finance are made. A company with such a leadership can expect to strengthen its competitive advantage in the long term and achieve its goals. The researcher also believes that investment policy should contribute to the implementation of the chosen strategy of work in practice. The provided statement can be considered the most exact if to say about what is represented by investment policy, about its contents in respect of the list, the list of measures, actions which realization will help the enterprise to achieve definite purposes. [3-5]

Numerous scientists and researchers offer a number of interpretations of the content of the investment policy of the enterprise. For all the diversity of views and positions, common points can be highlighted. In particular, it can be concluded that the specific objectives of the investor must be taken into account in the formulation of investment policies. In addition, the policy should indicate which ways, methods and methods of achieving the goal will produce the optimal result, will allow to get the maximum profit. It is equally important that policies allow for the analysis of the returns of each project, taking into account its inherent risks. [6,7]

In the theory of financial management, it is customary to distinguish three types of investment policy of an enterprise based on the criteria of investor's risk preferences: conservative, moderate, and aggressive.

Conservative investment policy is aimed at minimizing investment risk as a priority goal. When implementing this policy, the investor does not seek to maximize the amount of current income from investments, nor to maximize capital gains (and, accordingly, to maximize the market value of the enterprise), but primarily cares about the safety of capital investments.

A moderate investment policy is aimed at selecting investment objects that have the highest level of current returns, capital growth rates, and risk levels that are close to the average market. When implementing this policy, the company does not seek to maximize its investment income and avoids investing capital in high-risk investment objects, while rejecting low-yield investment projects and financial investment instruments.

Aggressive investment policy is aimed at maximizing current income from capital investments in the near future. In implementing this policy, the assessment and accounting of the level of investment risk and the possibility of increasing the market value of the enterprise in the long term is assigned a supporting role. Accordingly, with such an investment policy, the company avoids investing capital in real projects with a large investment cycle, in shares with a low level of dividends, in bonds with a long maturity period, and so on.

Selection of a particular type of investment policy of the enterprise in order to invest taking into account risk-preferences are based on the following main factors:

- financial philosophy of the company;
- type of corporate and financial strategy of the company;
- financial condition of the company.

On the basis of the above, it can be concluded that investment policy is a complex system aimed at managing the resources of the enterprise system. The main task of the investment policy is to allocate limited resources among the selected areas and projects, to form an investment portfolio, which will include projects selected for implementation.

In the temporary aspect, the investment policy is focused on achieving the medium-and long-term goals of investment activity and determines the main ways to achieve them. This is especially important in terms of the duration of the investment cycle, multi-factor and variability of the external environment.

2 Materials and methods

For enterprises operating in most fundamental sectors of the economy, including construction, oil and gas, transport, industrial production, etc., the impact on the environment is an essential aspect that requires consideration within the framework of investment policy development.

Environmental aspects, on the one hand, impose significant restrictions on the choice of investment directions, applied methods and technical and economic indicators of implemented investment projects and, on the other hand, determine potential competitive advantages of projects, including through the use of forms of state support. [8]

State activity in the field of environmental protection directly affects the investment activity of the enterprise. The provision of tax benefits, various benefits, subsidies, the system of state orders, legal regulation of business, the level of infrastructure development in the region-all these factors must be taken into account when developing the company's investment policy.

Thus, the environmental aspects of investment activities should be considered not only as basic constraints in the development of project solutions, but also as one of the factors of competitiveness of the enterprise, which significantly affects its investment potential in the medium and long term.

The methodology of developing and improving approaches and tools for strategic decisions within the business planning and, in particular, investment activities, taking into account synchronization mechanisms of state regulation of socio-economic development in the context of environmental security of territories involves the following basic aspects:

1. The need to develop methodological tools and, in particular, economic and mathematical methods for quantitative assessment (usually in monetary form) of the degree of influence of decisions on environmental protection and ensuring the environmental friendliness of products and production processes on the interim and final results of the company's investment activities, including those expressed in traditional indicators of investment efficiency (net present value, internal rate of return, payback period of investment, etc.).

2. The need to improve approaches to synchronizing investment planning at the state and private business level in the context of ensuring environmental safety in order to maximize the effectiveness of such activities, including by providing positive synergistic effects.

3. The importance of developing mechanisms, including the use of modern technologies for analyzing and processing Big Data information, evaluating and predicting the impact of environmental solutions and measures on consumer properties and market characteristics of enterprises final products, including forecasting their demand, level of competitiveness, etc.

In an integrated review, the development of an enterprise 's investment policy with environmental considerations implies several fundamental conditions:

- compliance with the requirements of legislation, including with regard to regulation of investment activities, as well as environmental requirements;
- taking into account possible interaction between projects selected for investment in case of several, taking into account the impact of this interaction on the enterprise system as a whole;

- consideration, analysis and evaluation of alternative solutions, including environmental considerations;
- if several projects involve almost equal conditions for the investor, the one that most closely corresponds to the enterprise 's investment policy in terms of risk (including environmental) and investment efficiency is selected for implementation;
- the expectations of the enterprise should be adjusted in the process of implementation of the selected project and the developed investment policy;
- risk minimization (including environmental) solutions should be developed and applied;
- when selecting sources of financing as the main criterion, compliance with the investment policy of the enterprise in terms of the ratio of the cost of financing to the reliability of the source should be considered;
- an important component of the investment policy of the enterprise is the condition of capital liquidity provision;
- it should be possible to adjust the provisions of the investment policy in the situation of changing the environment external to the enterprise. [9-14]

When making decisions in the framework of development and justification of investment policy in order to quantify the environmental effect criterion, the authors propose the use of the expected economic effect indicator (Formula 1).

$$E_{eco} = \sum_{t=1}^{T}((\Delta P_t + \Delta C_t) * N_t + Eq_t) + E_{inv} - I_0, \quad (1)$$

Where : E_{eco} – the effect caused by the application of environmental aspects of investment policy, in monetary terms;

T – planning time period;

ΔP_t – forecast of changes in the price per unit of production due to the use of environmental measures for the period;

ΔC_t – forecast of changes in the unit cost of production due to the use of environmental measures for the period;

N_t – forecast of output for the period;

Eq_t – predicted collateral effect of improving the quality of the product in monetary terms for the period;

E_{inv} – predicted collateral effect, expressed in the cost of capital raised, due to the use of environmental measures;

I_0 – the amount of initial investment due to the application of environmental measures.

Most often, problems in the implementation of investment projects arise precisely because of insufficient detail of investment policy, lack of clarity of its principles and performance criteria. If they are formulated, all levels of management interact as efficiently as possible both within the internal environment of the enterprise and in interaction with the external environment. [15]

Specific investment goals are set based on the overall corporate goal that the organization's top management focuses on. Goals are defined results and outcomes that need to be achieved within a specified time frame. There are mandatory requirements for goals: it must be specific, measurable, achievable, and compatible.

The system of key principles for the formation of an enterprise 's investment policy taking into account environmental aspects should include:

- systemacity;

The principle of systemicity implies a comprehensive consideration of external and internal factors that influence the activity of the enterprise, taking into account their mutual influence and possible synergistic effects.

- priority;

The principle of priority implies the allocation of certain projects for investment as the most effective ones. Among all possible activities, those that meet certain criteria as much as possible are selected.

- efficiency;

The principle of efficiency (effectiveness) assumes adoption of these or those management decisions on the basis of results of assessment of a ratio of the predicted results and the required resources for their achievement. At the same time, it is unacceptable to exclude from consideration results that are not directly economic, including environmental consequences.

- coherence;

The principle of coherence implies that investment policy provisions are directly linked to the chosen investment strategy and the factors affecting the system. At the same time, there should be no conflict with other strategies used by the enterprise.

- controllability.

The principle of controllability implies that the implementation of investment policies requires the constant application of measures to identify and eliminate deviations of actual parameters from their planned values. Adjustments to plans at different levels are also made if necessary. This principle can be considered one of the most significant in investment policy. Its observance can contribute to minimizing risks, possible crisis events, and achieving the stated goals.

A critical system condition for successful planning and implementation of an enterprise's investment policy is its coordination with financial, accounting, personnel, tax and depreciation policies.

3 Results

As a result of consideration of approaches and principles of strategic planning of enterprise management, the authors have formed a schematic diagram of the development of the company's investment policy taking into account environmental aspects (Figure 1). This scheme represents the key structural relationships in the implementation of the processes of developing and justifying strategic decisions, taking into account the consideration of environmental aspects of the activity based on the use of an environmental effect as a criterion indicator.

Investment policy can be considered a set of assumptions, prerequisites, conditions under which investments can be carried out. Therefore, the formation of an effective investment policy is only possible with a comprehensive consideration of the various functional directions and aspects of the enterprise 's activities, which are reflected in the strategic planning documents of its activities. Table 1 presents the main tasks to be carried out during the development of these documents.

The established investment policy should be followed not only by commercial enterprises and entrepreneurs, but also by State structures. In terms of the State, without taking into account environmental aspects in the formation of investment policy, there will be an incomplete general policy concerning the formation, development of the social sphere and the economy, and in fact one of the basic functions of the State - ensuring the preservation of the natural environment - will not be realized. When it comes to the formation of investment policies at the meso- or micro-level, it is important to take into account national priorities.

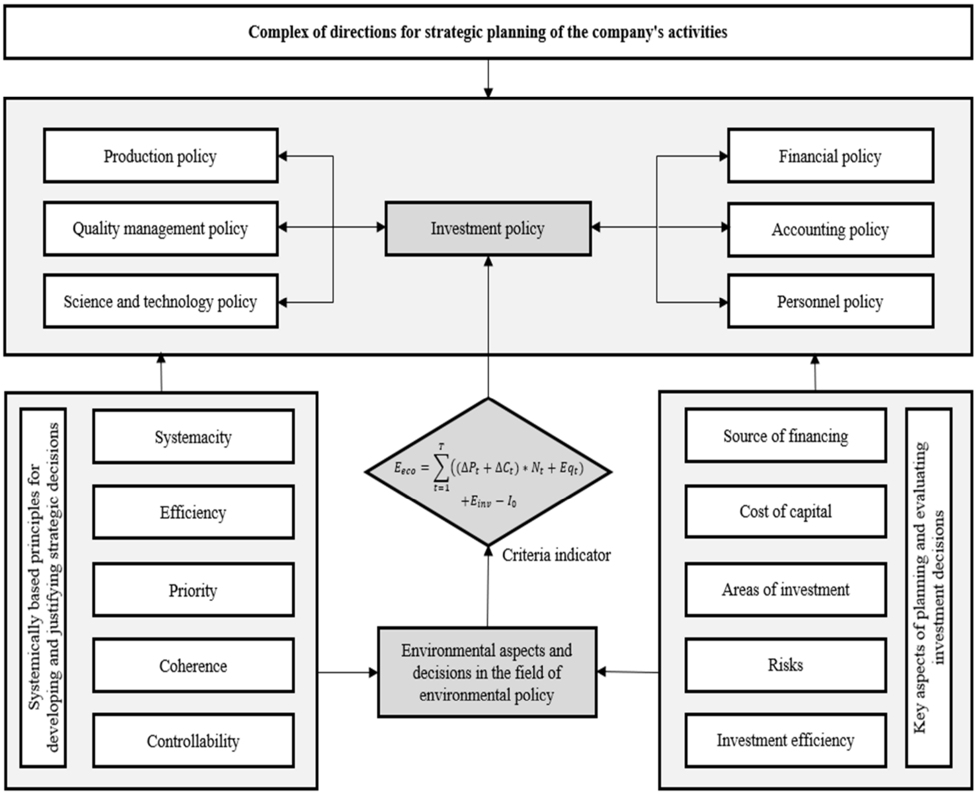

Fig. 1. Schematic diagram of the company's investment policy development taking into account environmental aspects.

4 Conclusions

As a result of consideration of the subject area, it was concluded that the company's investment policy should be considered as a set of programs, projects, and areas of work that are interconnected and form the company's investment portfolio.

The investment policy of an enterprise is a complex, interrelated and mutually dependent system of activities of the enterprise aimed at long-term development, profit and other positive effects as a result of investment investments. An effective investment policy of an enterprise should be considered and balanced in all areas of investment activity and adequate to changing business conditions.

At the same time, the main goals of the investment policy include increasing profits, finding new ways to develop the enterprise, and improving the socio-economic situation in the territory and region under consideration.

In this context, it is essential to consider the environmental aspects of activities that affect both the results of production and investment activities of the enterprise, and the conditions of the territorial environment.

The use of the proposed methodological tools for taking into account environmental aspects in the assessment and justification of strategic decisions in the framework of the formation of an enterprise's investment policy will help to increase the stability and efficiency of both the internal environment of the enterprise and its external environment, that is, the socio-economic system in which it operates.

References

1. G. Kharlamova, Proc. Econ. and Fin. **16**, 657-668 (2014)
2. M. Merkova, Proc. Econ. and Fin. **34**, 657-668 (2014)
3. J. Drabek, M. Merkova, Proc. Econ. and Fin. **34**, 187-193 (2015)
4. M. Sullivan, A. Zhang, JOEF **18**, 616-633 (2011)
5. D. De Clercq, M. Meuleman, M. Wright, IBR **21**, 117-2019 (2011)
6. M.G. Colombo, A. Croce, M. Guerini, RP **42**, 1605-1623 (2012)
7. A. Dibrova, Proc. Soc. and Beh. Scien. **207**, 280-289 (2015)
8. I. Cooper, R. Priestley, JFE **101**, 182-205 (2011)
9. E. Vasilyeva, A. Mottaeva , E3S Web of Conferences, **91**,08051, (2019) doi.org/10.1051/e3sconf /20199108051
10. W. Boudry, J. Kallberg, C. Liu, J. of. Cor. Fin. **23**, 23-38 (2013)
11. J. Liu, IRFA **29**, 189-201 (2013)
12. I. Voudouris, S. Lioukas, M. Iatrelli, Y. Caloghirou, Technovation **32** (2012)
13. L. Wang, GFJ **40**, 74-84 (2019)
14. B. Korutaro, N. Biekpe, RDF **3**, 41-50 (2013)
15. M. Junkes, A. Tereso, P. Afonso, Proc. Comp. Scien. **64**, 902-910 (2015)