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Ye. N. Nesipbekov¹, G.N.Appakova²

¹ Almaty Technological University, Almaty, Republic of Kazakhstan;

² Narxoz University, Almaty, Republic of Kazakhstan,

e-mail: nesipbekov@mail.ru ganek310@mail.ru

**THEORETICAL ASPECTS
OF THE ENTERPRISE INVESTMENT PORTFOLIO SET-UP**

Abstract. Present article is aimed to reveal the main theoretical aspects and practical methods for the enterprise portfolio set-up. General scientific principles constitute the methodological basis of the study; principle of the consciousness and activity unity; subjectivity principle; consistency principle; principle of development, as well as the main provisions of the investment portfolio set-up.

Three fundamental theories of the investment portfolio set-up are described in the study, including their significance and negative aspects, the method of investment portfolio set-up is analyzed as well as phased description. The article is focused on the ratio of such indicators as investment risks and investment returns, investment returns and investment liquidity. It is noted that the balance of these indicators makes fundamental principle for the investment portfolio set-up. At the end of the article, the authors concluded that existing paradigm of the stability investment portfolio analysis via the risk probabilities determination is not efficient enough and shall be supplemented with stability analysis even at low risks.

The main findings of the study may be used as methodological basis for the further deepening research on this matter.

Keywords: investment portfolio, investment strategy, models of the investment portfolios set-up, investment projects.

Introduction

Currently, significant changes are noted in the approaches to determine the risks and riskiness of various enterprises. The growing uncertainty of the external environment is noted in respect of enterprise, that complicates to predict possible negative events. In this condition, set-up of the investment portfolio for the enterprise becomes an opportunity to minimize the losses from the negative probabilities meanwhile keeping the ability to allocate capital in the promising projects that would enable the company's long-term plans implementation.

There are several reasons why the company seeks to optimize the process of investment portfolio set-up to the maximum:

First, the portfolio with synergistic properties improves the enterprise investment attractiveness for the third party investors. That brings the enterprise value increase. Second, investment portfolio becomes the tool to identify the hidden value of assets owned by the company. Third, investment portfolios are highly optional - that is, in fact, the effective tool for the management of uncertainties and risks associated, among other, to the external environment of enterprise.

In addition, the use of portfolio investment enables the company to enter the new markets, upload idle production facilities and redirect cash flows to the more productive direction.

Results and discussion

The enterprise investment portfolio set-up is one of the main stages in the company's long-term investment strategy formation. Meanwhile it is necessary to keep in mind a set of factors in this process: interests of shareholders, mutual influence and co-dependency of projects within the single portfolio, emergence of synergies, portfolio balance as a whole.

The enterprise investment portfolio is a combination of various investment projects. The investment project is the action plan related to capital investments, their investment and the subsequent generation of profits. Each investment project has its own aim and that shall help to achieve the goal of the investment portfolio the project belongs to. At the same time, projects may be linked both by the common process chain and potential synergistic effects [1].

Significant amount of theoretical works is devoted to the problems of the enterprise investment portfolio set-up. G. Markowitz was one of the first researchers engaged in the investment and expected returns, who developed the Markowitz theory of the investment portfolio set-up. This theory provides the enterprise motivation to form the least risky portfolio, and obtain the additional profit for additional risk. The model assumes the investor to be guided with two factors only while making decisions.

- 1) average and expected returns from the portfolio;
- 2) risk measured by standard deviation or variance [2].

The Markowitz model is one of the most significant one in the modern financial theory, but it has a number of drawbacks. First, the methods used for pricing the profitability and risks may bring significant inaccuracies or a range of probabilities, that embarrasses the decision making, and second, the model considers only risky assets.

Another common theory is the “capital asset pricing model”. A number of scientists including W. Sharp, G. Alexander, J. Bailey further developing the Markowitz theory segregated the risks in the investment portfolio into market (systematic) and own (non-systematic). An important contribution of the theory is that the portfolio diversification reduces its overall risk. This is due to decrease in the portfolio’s own risk, since fluctuations cycles of the risks and profitability in each project portfolio do not coincide. At the same time, the investor shall not take into account all the portfolio related risks now (according to Markowitz), but only his own risk, since he is not able to affect the market. However, this model also has a drawback – set-up of portfolio using the risk-free assets it poorly analyzed.

R. Ross additionally studied this matter. He proposed another theory called the arbitration pricing model (APM). Within this model, the concept of arbitration was introduced - a situation when enterprise may invest without risk and earn more than under risk-free rate. The main assumption of this model is that investors take the opportunity to make a profit on the price difference without taking any risk [3].

While portfolio set-up, any company pursues the main goal - to increase the business value keeping the investments reliability and profitability [4]. At the same time, operating activity shall not be affected by the investment activity of the enterprise - it is a matter of the funds liquidity. The main goal of the portfolio set-up includes the following subgoals:

1. Ensuring the capital growth rate via inclusion of real and financial investment, the value of which may increase in the investment portfolio.
2. High liquidity of the part of portfolio assets for quick reinvestment in case of market situation changes and other difficulties inside the company.
3. Ensuring the growth rate of investment income including the investments with high interest and dividends payable in the portfolio.
4. Ensuring the low level of investment risks via the portfolio leveling including the various unrelated projects.

These sub-goals of the company's investment portfolio set-up are closely intertwined.

In general, the following principles of the portfolio set-up can be distinguished:

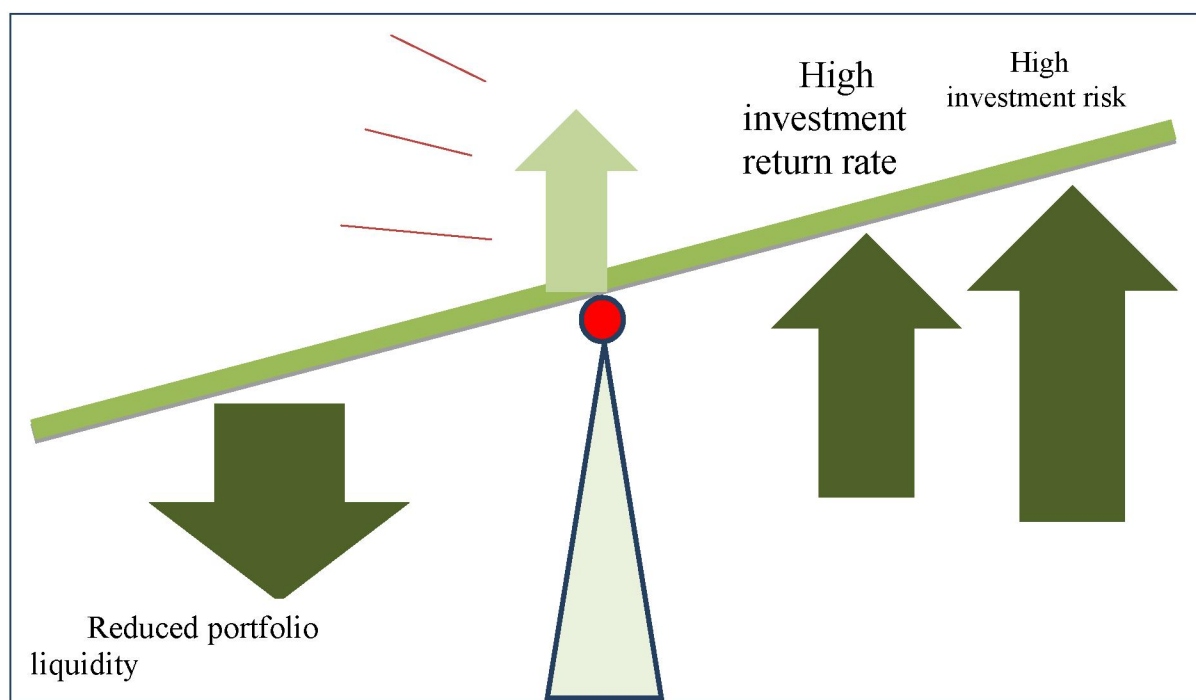
- portfolio compliance with the funds available for investment;
- implementation of the investment strategy;
- optimal ratio of profitability and liquidity;
- optimal ratio of profitability and risk;
- ongoing monitoring of the investment portfolio;
- portfolio manageability.

Compliance with the risk and return ratio is an important principle of the investment portfolio set-up. The risks of investment project are subject to unsuccessful marketing strategy and other internal factors, as

well as changes to legislation, restrictions related to the industry activities implementation and economic situation in the country. Therefore, each company shall periodically develop countermeasures to risk events and develop different event scenarios.

The matter of the optimal ratio of investment return and liquidity has always been relevant for the enterprises. Thus, in addition to high-risk projects, high-yield investments include real estate, equipment, etc., the market price of which may increase. However, investment in the fixed assets may reduce the enterprise liquidity - its ability to pay off operating expenses quickly.

For example, the increase in the securities rate of return entails the increase in investment risk. And real investments are quite high-yielding, but at the same time low-liquid. Therefore, while setting up the investment portfolio, enterprises shall monitor their balance of indicators (Fig. 1).



Note - compiled by the authors

Figure 1 – Status of the investment portfolio indicators

As for the practical methods of the enterprise investment portfolio set-up, there is an algorithm of the enterprise investment portfolio set-up, consisting of seven stages [5]:

1) Selection of the projects for investment portfolio - so-called formation of the bank of projects. At this stage, the most promising options are searched in terms of implementation. Business plan is made for each project as well as the main technological, environmental, social and economic parameters of the projects are calculated and checked for their compliance with the minimum requirements of the enterprise. Significant economic parameters are return on investments ROIC, return index (PI), Internal Rate of Return (IRR), Payback Period (PP), Discounted Payback Period (DPP) that is, relative indicators that determine the project efficiency, for which the enterprise, as a rule, sets threshold values. Next, the most suitable projects for the enterprise are selected from the bank (both from the economic point of view and image).

2) Assessment of the project implementation interaction separately and enterprise strategy; ranking projects depending on the impact to the strategic goals implementation. Finally, the projects are listed from the larger to the smaller one depending on their investment attractiveness.

3) Calculation of the project rating based on the second stage analysis. Depending on the project requirements, rating calculation complexity, necessary information, and time required for analysis may vary. The most common and universal estimation methods are given by the scientists M. Ehrhart and Y.

Brigham [6]. At this stage of the investment portfolio set-up, it is necessary to analyze not only the economic aspects of the investment project implementation, but image, social, environmental aspects as well. In addition, it is necessary to check the project adequacy to the rest entire project.

Herewith the formula for the rating calculation:

$$(1). R = \sqrt{\sum_{i=1}^n p_i (1 - \omega)^2}$$

where R – rating of the project investment attractiveness; ω – normalized i-value:

$$(2). \omega = 1 - \frac{x}{x_n}, \text{ – for standardized ratio,}$$

$$(3). \omega = 1 - \frac{x_n}{x}, \text{ – for indicators representing the opposite effect.}$$

x_n – target value;

ω – rated indicator value

p_i – i-score weight

The final rating of the investment attractiveness indicates the degree of the key indicators approximation to the target (ideal) value. The closer the rating to 1, the more attractive the project for investment.

4) Additional stage of selection, when preliminary plans of the investment portfolio set-up are considered subject to the projects selected upon the rating. It is necessary to correlate selected projects with existing ones in order to exclude duplicates, and those that do not meet the enterprise requirements in terms of its development stage adequacy at that point of time.

5) Feasibility verification of the projects from the point of resource intensity. The capital budget amount is the most frequent limitation of the project resource intensity. If there are several projects, then other criteria are added to the verification, i.e. the most resource-intensive project is not necessarily the most important, and vice versa — the least resource-intensive project is the least important.

6) At this stage, the interests of the shareholders or equity stakes of the company are assessed. It is necessary to keep in mind the holders' interests consistency factor, since even if there are high indicators of formal criteria at the early stages, the project inconsistent to the holders' interests is most likely ineffective.

The main categories of stakeholders are described in the article of Anikina I.D. [5]:

a) capable to impact directly to the decision of the investment project selection: shareholders, creditors, and other investors. The acceptance or rejection of the project depends on them.

б) capable to impact only indirectly: employees of the enterprise, members of their families, municipal and republican authorities, business partners of the enterprise. The effectiveness of the project implementation and its investment attractiveness depend on them.

The interests of such huge number of heterogeneous groups associated with the project may differ significantly, therefore, the nature of their decision regarding the project implementation may be different.

7) Assessment of the investment portfolio as a whole, as one single project, when investment projects make its integral parts. At this stage, the time factor is of the utmost importance - the timeliness of the portfolio goals achievement, optimization of the capital investments via timely redirection of free funds to the necessary projects, time matching the end of one project to the start of another one. Based on necessity to assess the portfolio, the entire calculation is made in two stages - first, the value of enterprise is calculated without the entire portfolio, and then including the portfolio, also entirely including the synergistic effects that arise, changes in risks and favorable probabilities. All this enables us to assess the portfolio as a whole, but not as the sum of incoming investment projects. Whereas the synergistic effects may occur in six different directions, such as innovations (gaining know-how from the excessive funding), operational (changing operating leverage due to changes in cost structure), marketing (entering new markets, increasing the share of the existing markets), financial (increase in financial flexibility and stability of the portfolio), competence (improvement of the management quality, optimization of the organizational chart) and speculative (investment in the projects with high potential cost growth) [7].

The above stages enable us to analyze all key aspects of the investment portfolio set up consistently, from the smallest to the largest, taking into account the most significant groups of factors in the enterprise

long-term strategy implementation. In addition, they provide a methodological basis for the analysis of similar investment projects making minor adjustments, that means they are not highly specialized and can be used by the enterprise in a number of similar tasks.

Conclusion

Modern theoretical models of the investment portfolios set-up devote most attention to the risk prediction, its probabilities, while even an unlikely risk under sufficiently enough consequences, if it occurs may destroy any long-term plan and bring the company to the losses or collapse. Consequently, while the investment portfolio set-up, more attention shall be devoted not to the probability of the event occurrence (keeping this aspect in mind), but to the consequences of this event and possibilities to decrease possible impact. This gives us qualitatively different approach for the investment portfolio set-up - not forecasting the probability of risks, but forecasting the enterprise sustainability with the worst possible outcome.

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Е. Н. Несіпбеков¹, Г.Н. Аппакова²

¹Алматы технологиялық университеті, Алматы, Қазақстан;

²Нархоз Университеті, Алматы, Қазақстан

КӘСІПОРЫННЫҢ ИНВЕСТИЦИЯЛЫҚ ПОРТФЕЛІН ҚАЛЫПТАСТЫРУДЫҢ ТЕОРИЯЛЫҚ АСПЕКТІЛЕРІ

Аннотация. Мақаланың мақсаты – кәсіпорынның инвестициялық қоржынын қалыптастырудың негізгі теориялық аспектілерін және тәжірибелік әдістерін қарастыру. Зерттеудің әдістемелік негізін танымның жалпы ғылыми қағидалары; сана мен қызметтің бірегейлігі қағидасы; субъективтілік, жүйелілік, даму қағидалары, сонымен қатар инвестициялық портфельді қалыптастырудың негізгі жайттары құрады.

Зерттеуде инвестициялық саясатты қалыптастырудың негізін қалаған үш теорияға сипаттама берілген, олардың маңыздылығы мен кемшіліктері көрсетілген. Мақалада инвестициялық тәуекелдер және инвестициялардың табыстылығы, инвестициялардың табыстылығы мен тез арада өтелуі сияқты көрсеткіштердің өзара байланыстылығына аса көңіл бөлінген. Мақаланың соңында авторлар келген ұйғарымға сәйкес, қолданыстағы тәуекелдер ықтималдығын анықтау арқылы инвестициялық қоржынынның тұрақтылығын талдау парадигмасының тиімділігі мардымсыз, сондықтан тәуекелдер деңгейі төмен болған жағдайда да тұрақтылықты талдаумен толықтырылуы тиіс.

Зерттеудің негізгі түйіндемелері осы мәселені әрі қарай зерттеу үшін әдістемелік негіз ретінде қолданылуы мүмкін.

Түйін сөздер: инвестициялық қоржын, инвестициялық стратегия, инвестициялық қоржынды қалыптастыру үлгілері, инвестициялық жобалар.

Е.Н. Несипбеков¹, Г.Н. Аппакова²

¹Алматинский технологический университет, Алматы, Республика Казахстан;

²Университет Нархоз, Алматы, Республика Казахстан,

ТЕОРЕТИЧЕСКИЕ АСПЕКТЫ ФОРМИРОВАНИЯ ИНВЕСТИЦИОННОГО ПОРТФЕЛЯ ПРЕДПРИЯТИЯ

Аннотация. Цель статьи – раскрытие основных теоретических аспектов и практических методов формирования инвестиционного портфеля предприятия. Методологическую основу исследования составили общенаучные принципы познания; принцип единства сознания и деятельности; принцип субъектности; принцип системности; принцип развития, а также основные положения формирования инвестиционного портфеля.

В исследовании дано описание трём основополагающим теориям формирования инвестиционного портфеля, показаны их значимость и отрицательные стороны, проанализирован метод формирования инвестиционного портфеля с поэтапным описанием. В статье особое внимание уделено взаимосвязи таких показателей, как инвестиционные риски и доходность инвестиций, доходность инвестиций и ликвидность вложений. Отмечено, что соблюдение баланса между этими показателями является основополагающим принципом формирования инвестиционного портфеля. В конце статьи авторы приходят к выводу, что существующая парадигма анализа устойчивости инвестиционного портфеля через определение вероятностей рисков недостаточна эффективна и должна быть дополнена анализом устойчивости даже при низких рисках.

Основные выводы исследования могут быть использованы в качестве методической основы для дальнейшего углубления исследований по данной проблеме.

Ключевые слова: инвестиционный портфель, инвестиционная стратегия, модели формирования инвестиционных портфелей, инвестиционные проекты.

Information about authors:

Nesipbekov E.N. - Almaty Technological University, associate professor, nesipbekov @ mail;

Appakova G.N. - University Narhoz, professor, ruganek310@mail.ru