

**NATIONAL UNIVERSITY OF LIFE AND
ENVIRONMENTAL SCIENCES OF UKRAINE**

FACULTY OF AGRARIAN MANAGEMENT

**PRODUCTION AND INVESTMENT MANAGEMENT
DEPARTMENT**

INVESTMENT MANAGEMENT

for the students of the specialization 073 “Management”
educational program “Management of investment activity and
international projects”

KYIV - 2023

UDC 005:330.322=111(072)

*Recommended for publication by the Academic Council
of the National University of Life and Environmental Sciences of Ukraine
(protocol №3 dated 26.10.2022)*

Reviewers:

M.O. Kravchenko, doctor of economic sciences, professor, dean of the Faculty of management and marketing, National Technical University of Ukraine “Ihor Sikorsky Kyiv Polytechnic Institute”

S.F. Smerichevskiy, doctor of economic sciences, professor, dean of the Faculty of economy and business administration, National Aviation University

V.V. Baidala, doctor of economic sciences, professor, head of the Department of Economics, NULES of Ukraine

S.M. Amelina, doctor of pedagogy, professor, head of the Department of foreign philology and translation

Investment management: study guide for students of the specialty 073 “Management”. L.V. Shynkaruk, M.M. Dielini, T.O. Vlasenko, A.V. Dergach. Kyiv: NULES, 2023. 336 p.

ISBN 978-617-8351-01-4

The study guide was developed for the study of the discipline “Investment management”. The manual contains lecture material, a guide for studying and mastering topics, questions for self-control, practical tasks and tasks for independent work, tests and recommended literature for consolidating the received material.

Intended for bachelor and master students, postgraduates, teachers of NULES of Ukraine and all interested persons studying investment activity and management. Educational edition for students of specialty 073 “Management” educational program “Management of investment activity and international projects”.

ISBN 978-617-8351-01-4

UDC 005:330.322=111(072)

© Shynkaruk L.V., Dielini M.M.,
Vlasenko T.O., Dergach A.V., 2023

© NULES Ukraine

INFORMATION ABOUT AUTHORS



Shynkaruk Lidiia V.

Doctor in Economics, professor, associate member of the National academy of sciences of Ukraine, professor of the department of production and investment activity of National University of Life and Environmental Sciences of Ukraine.

Conducts disciplines: “Operational management”, “Investment management” etc.

Scientific interests: economic growth and structural changes in economy, macroeconomic modeling, models

of total and partial equilibrium, interior sectoral balance, macroeconomic predicting, investment climate, structural policy, foreign economic activities, analysis of integral connections, sectoral perspectives of the national economy modernization, strategic planning, international projects management.

The author has more than 200 scientific works, where are 39 monographs, 8 scientific works in SCOPUS and Web of Science reference databases, 7 textbooks, 3 author's certificates, etc.

E-mail: lidia_shyn@ukr.net



Dielini Maryna M.

Doctor of economic sciences, professor, acting head of the department of production and investment management of the National University of Bioresources and Nature Management of Ukraine.

Conducts disciplines: “Investment management”, Business game “Project capital management”, etc.

Scientific interests: social protection of the population, social and economic responsibility of entrepreneurship, social investments, EU economy, environmental management, sustainable development.

The author has more than 100 scientific works, including 7 monographs, 11 scientific works in SCOPUS and Web

of Science reference databases, 3 study guides, etc.

E-mail: maryna_dielini@nubip.edu.ua



Vlasenko Tetiana O.

PhD in Economics, associate professor, associate professor of the department of production and investment activity of National University of Life and Environmental Sciences of Ukraine.

Conducts disciplines: “Operational management”, “Self-management”, etc.

Research interest: effectiveness of the enterprises’ activities.

The author has 62 scientific works, including 4 scientific works in the reference databases SCOPUS and Web of Science, 7 educational manuals.

E-mail: tanyaskyba@ukr.net



Dergach Anna V.

PhD in Public Administration, associate professor of the department of production and investment activity of National University of Life and Environmental Sciences of Ukraine.

Conducts disciplines: “Basics of social projecting”, “Crisis management”, etc.

Research interests: public administration, economic policy analysis, mechanisms of economic regulating, in particular in the area of population and capital migration.

The author has 50 scientific works, including 1 monograph, 3 scientific works in the reference databases SCOPUS and Web of Science, 1 study guide.

E-mail: dergach@nubip.edu.ua

CONTENT

INTRODUCTION	8
TOPIC 1. THE ESSENCE, PURPOSE AND FUNCTIONS OF INVESTMENT MANAGEMENT	11
1.1 Concept of investments and investment activity of the enterprise	11
1.2 Classification of investments	16
1.3 Purpose, tasks, functions and principles of investment management	23
1.4 Objects and subjects of investment management	26
1.5 Investment strategy and its formation	28
1.6 Investment portfolios	33
<i>Questions for self-control</i>	36
TOPIC 2. INVESTMENT STRATEGY OF THE ENTERPRISE	38
2.1 The concept and structure of an enterprise's investment strategy	38
2.2 Principles of investment strategy formation	40
2.3 Factors affecting the formation of the enterprise's investment strategy	43
2.4 Formation of the enterprise's investment strategy	46
2.5 Formation of an investment strategy in the context of the development of the organization	50
<i>Questions for self-control</i>	57
TOPIC 3. METHODOLOGICAL PRINCIPLES AND METHODOLOGICAL TOOLS OF INVESTMENT MANAGEMENT	59
3.1 Concept of time value of money	59
3.2 Inflation and its influence on the results of investment activity	64
3.3 Concept of investment risks	67
3.4 The concept of investment liquidity	71
<i>Questions for self-control</i>	74
TOPIC 4. ASSESSMENT AND FORECASTING OF INVESTMENT MARKET DEVELOPMENT	77
4.1 The concept of the investment market	77
4.2 Methods of analysing the investment market situation	84
4.3 Assessment of the country's investment attractiveness	95
4.4 Assessment of the investment attractiveness of economic sectors	106
<i>Questions for self-control</i>	110

TOPIC 5. INVESTMENT RESOURCES OF THE ENTERPRISE	113
5.1 The essence of the enterprise's investment resources, their characteristics	113
5.2 Sources of formation of investment resources	115
5.3 Principles of formation of investment resources	121
5.4 Assessment of the cost of investment resources	123
<i>Questions for self-control</i>	128
TOPIC 6. MANAGEMENT OF REAL INVESTMENT OF THE ENTERPRISE	130
6.1 The economic essence of real investments	130
6.2 Investment project, its content and development procedure	137
6.3 Evaluation of the effectiveness of investment projects	142
<i>Questions for self-control</i>	156
TOPIC 7. FORMATION OF THE PROGRAM OF REAL INVESTMENTS OF THE ENTERPRISES	159
7.1 The concept of a real investment program and the principles of its formation	159
7.2 The main stages of the formation of the real investment program of the enterprise	162
7.3 Formation of an investment project	172
<i>Questions for self-control</i>	181
TOPIC 8. MANAGEMENT OF IMPLEMENTATION AND RISKS OF INVESTMENT PROJECTS	184
8.1 Development of a calendar plan for the implementation of the investment project	184
8.2 Development of the investment project implementation budget	194
8.3 Ensuring the neutralization of project risks	199
<i>Questions for self-control</i>	210
TOPIC 9. FEATURES OF INNOVATIVE INVESTMENT MANAGEMENT OF THE ENTERPRISE	214
9.1 Innovative investments of the enterprise	214
9.2 Features of innovation financing. Search for optimal sources of financing	218
9.3 The role of the state in financing and stimulating innovative investment	226
<i>Questions for self-control</i>	227

TOPIC 10. FINANCIAL INVESTMENT MANAGEMENT OF THE ENTERPRISE	229
10.1 Financial investments: essence and types	229
10.2 Securities market	238
10.3 Assessment of investment qualities of financial instruments of investment	248
<i>Questions for self-control</i>	257
<i>METHODICAL RECOMMENDATIONS FOR PRACTICAL TASK AND INDEPENDENT WORK PREPARATION</i>	260
<i>TEST TASKS AND OPEN QUESTIONS</i>	278
<i>GLOSSARY</i>	314
<i>RECOMMENDED LITERATURE</i>	332

INTRODUCTION

The modern development of Ukraine is impossible without an inflow of investments, which becomes especially relevant in the conditions of martial law. The history of the formation of our sovereign state has different trends in the development of investments: upswings during economic and political stability and declines in the conditions of the global economic crisis, political changes in the country, etc. Investment activity is influenced by many factors, but is also important for the development of various spheres. Recently, a large number of investments, including and foreign was directed to agriculture. But in the conditions of war, it is difficult to predict the future growth rates of investment inflows.

Important for attracting investments is not only political and economic stability, but also the ability to effectively manage them, choose the best option for investments, calculate their effectiveness, manage risk, inflation, etc. It is for this purpose that we introduced the study of investment management for the formation of highly qualified specialists in the field of investment management.

The purpose of the discipline “Investment management” is to master theoretical knowledge and practical skills in

investment management, students' knowledge and skills in developing investment strategy of the enterprise, analysis of investment attractiveness of projects, methods of assessing their effectiveness, risks, liquidity, investment financial portfolio and real investment programs, which provides for the management of capital investment in all its forms in various objects using the most effective tools of economic activity in order to make a profit, as well as to achieve a social effect, increase the value of assets and equity. Investment management studies the direction of investment in terms of time, risk and liquidity. Renewal of production and attraction of foreign investors require better control over the choice of investment object in the rapidly changing environment and limited resources of the organization.

The task of studying the discipline is the theoretical and practical training of students to understand the essence, methodology and techniques of investment management in terms of: planning and implementation of the investment project; selection of sources of investment activity, project; substantiation of directions of investment; ensuring maximum return on investment; formulation and implementation of

investment strategy, providing the company with investment resources.

This study guide was developed by a team of authors according to their qualification and sphere of scientific interests, namely: Shynkaruk L.V. – introduction, topic 1, topic 2, topic 3, Dielini M.M. – topic 4, topic 6, topic 10 tasks for practical and independent work, Vlasenko T.O. – topic 5, topic 8, Dergach A.V. – topic 7, topic 9. All other parts of the manual are joint work of the authors.

TOPIC 1. THE ESSENCE, PURPOSE AND FUNCTIONS OF INVESTMENT MANAGEMENT

1.1 Concept of investments and investment activity of the enterprise

1.2 Classification of investments

1.3 Purpose, tasks, functions and principles of investment management

1.4 Objects and subjects of investment management

1.5 Investment strategy and its formation

1.6 Investment portfolios

1.1 Concept of investments and investment activity of the enterprise

The term “investment” (lat. invest - to invest) means the investment of capital in various spheres and branches of the national economy within the country and abroad with the aim of obtaining profit or other results (for example, social effect). Investing capital and making a profit - take place in a certain current time, namely: there can be a sequential investment of capital, and then making a profit; parallel investment of capital and profit; interval investment of capital, and after some time - making a profit. In the first case, the profit will be received immediately after the investment is completed fully, in the second case, profit is possible before the investment

process is fully completed, in the third case, a certain time passes between the investment period and the receipt of profit, the duration of which depends on the form of investment and the specifics of the investment project.

Some economists equate investments with capital investments. Investments are also often equated with long-term investment of money in the purchase of consumer goods, which does not lead to an increase in profits (if there is no resale). Typical mistakes in the understanding of investments are their comparison with financial funds.

Table 1 presents various definitions of the term “investment”.

In the Law of Ukraine “On Investment Activity”, investments are understood as all types of property and intellectual values that are invested in objects of business and other types of activity, as a result of which profit is generated or a social effect is achieved. Such values can be cash, targeted bank deposits, shares, shares and other securities, movable and immovable property, property rights arising from copyright, “know-how”, rights to use land, water, resources, structures, etc.

Table 2 provides a definition of the economic essence of the concept “investment activity”.

Table 1. Interpretation of the concept of "investment"

Author	Investment is...
Balabanov I.T.	all types of property and intellectual values invested in objects of business activity for the purpose of obtaining profit
Bierman G., Schmidt S.	expenditure of resources with the hope of receiving income in the future, after a sufficiently long period of time
Blank I.A.	investment of capital in all its forms in various objects (tools) its economic activity with the aim of obtaining profit, as well as achieving other economic and non-economic effects, the implementation of which is based on market principles and is connected with factors of time, risk and liquidity
Bodie E., Kane A., Marcus A.J.	spending available resources at a certain moment in anticipation of receiving a larger amount of them in the future
Hitman L.J., Johnk M.D.	the method of capital placement, which should ensure the preservation or growth of the capital value and/or bring a positive value income
Denisenko M.P.	what is invested for tomorrow. At the same time, from the point of view of finance, investments are all types of assets (funds) that are invested in economic activity for the purpose of obtaining income, and from the point of view of the economy - these are expenses for creation, expansion and technical rearmament of capital
Dolan E.J., Lindsay D.E.	increasing the amount of capital operating in the economic system, increasing the supply of productive resources, which is carried out by people
Keynes J.	the current increase in the value of capital property as a result production activity of a certain period, which is that part of the income during this period, which was not used for consumption
Sharp V., Alexander H., Bailey V.	note that in the broadest sense, the word "investment" means: "to part with money today to get more of it amount in the future"

Table 2. Economic essence of the concept of “investment activity”

Author	Investment activity is...
Denisenko M.P.	a set of measures and actions of individuals and legal entities that invest their resources (material, financial or other property form) for the purpose of obtaining profit
the Law of Ukraine “On Investment Activity”	a set of practical actions of citizens, legal entities and the state regarding the implementation of investments
Zagorodnii O.H., Voznyuk G.L., Smovzhenko T.S.	acquisition and realization by the company of those non-current assets, as well as those financial investments that are not a component cash equivalents – short-term highly liquid financial investments that are freely convertible into certain amounts of cash and are characterized by insignificant the risk of changing their value
Kovtun N.V.	a set of measures and consistent practical actions on the part of investment entities related to the implementation of investment intentions for the purpose of obtaining income
Udalikh O.O.	the set of practical actions of its subjects (investors and participants) for the implementation of investments
Fedorenko V.G.	a set of measures and actions of individuals and legal entities that invest their own funds (in material financial or other property form) for the purpose of obtaining profit

Investment activity is mainly understood as a set of measures for effective placement of investments aimed at achieving a positive financial result.

Gross and net investments are distinguished.

Gross investment (GI) is the total amount of investment in a certain period, which is aimed at new construction, the purchase of labor and goods and material resources.

Net investment (CI) is the amount of gross investment excluding the amount accrued for a certain period of depreciation A .

The dynamics of the net investment indicator reflects the nature of the country's economic development at one or another stage, because net investment is the investment of funds in newly created production funds and updated production apparatus. At the same time, the following macroeconomic proportions may occur:

a) $CI < 0$ or $A > GI$, which leads to a decrease in production potential, decrease in the volume of products and services, deterioration of the economy;

b) $CI = 0$ or $GI = A$, which proves the absence of economic growth;

c) $CI > 0$ or $GI > A$, which ensures expanded reproduction, economic growth at the expense of income growth, the rate of which exceeds the rate of growth of the volume of net investment.

Investments are vital for today society as for ordinary people, as well for companies. Reasons to start investing are presented on the figure 1.

1. To Keep Money Safe

2. To Help Money Grow

3. To Earn a Steady Stream of Income

4. To Minimize the Burden of Tax

5. To Save up for Retirement

6. To Meet your Financial Goals

Figure 1. Reasons to start investing

1.2 Classification of investments

Investments regards to entrepreneurial activity are classified according to certain characteristics.

1. According to the objects of investment, investments are distinguished:

- real - this is the investment of funds (property) in real assets - tangible or intangible. Tangible assets (fixed capital – movable and immovable property and working capital – inventories and monetary assets). Intangible assets (innovative assets – investments in innovations related to the implementation of NTP achievements; intellectual assets – objects of intellectual property resulting from copyright, invention and patent rights, industrial design rights;

property rights; land use rights , water, resources; a set of technical, technological, commercial and other knowledge, designed in the form of technical documentation, etc.);

- financial - this is the investment of funds in financial assets (securities, bank deposits, deposits, shares, etc.), among which securities prevail.

Difference between real and financial assets is presented on the figure 2.



Financial Assets are highly liquid assets that are either in cash or can be fast converted to cash.



Real Assets are value-driven physical assets that a company owns.

Figure 2. Difference between real and financial asset

2. According to the investment period, investments are distinguished:

- short-term (up to 1 year);
- medium-term (from 1 to 3 years);
- long-term (more than 3 years).

3. According to the nature of participation in investing, the following are distinguished:

- direct - carried out in two ways: directly into production for the purpose of manufacturing goods and their sale and obtaining profit and investments that ensure the ownership of a controlling block of shares, and therefore control over the enterprise;

- indirect - this is the investment of capital in securities that do not give the investor the right to real control over the investment object. Portfolio investments are divided into investments in equity securities, debt securities, bonds, promissory notes, promissory notes, money market instruments (treasury bills, certificates of deposit, bank acceptances, etc.), financial derivatives (options, futures, warrants, swaps).

4. According to the nature of use, the following are distinguished:

- primary - which are carried out during the establishment or purchase of the enterprise;

- extensive - which are aimed at expanding production potential;

- reinvestment, that is, the use of income received through the implementation of investment projects for the purchase of new means of production.

5. By forms of ownership:

- private - investments made by individuals or legal entities with a private form of ownership;

- collective - investments of joint-stock companies, cooperatives and other organizations;

- state - investments made by the state. Such investments are directed, for the most part, to basic low-profit sectors and branches of the national economy;

- foreign – can be made by foreign state, private investors or companies;

- joint and mixed represent different combinations: joint (Ukrainian and foreign), mixed (state, private and collective) and their modifications.

6. Investments in the country and abroad are distinguished by regional characteristics.

7. According to sources of financing, the following are distinguished:

- internal - carried out at the expense of depreciation deductions, retained earnings, insurance sums for indemnification of losses caused by property loss, income from the sale of assets, reduction of working capital and receivables, previously made long-term financial investments, the maturity date of which comes in the current period;

- external - are divided into borrowed and involved. Borrowed - in the form of loans from banks and other credit institutions, income from placement of bonds, loans against debt obligations, leasing, targeted state credit, tax investment credit. Involved - in the form of contributions from third-party domestic and foreign investors (grants,

non-refundable financial assistance, etc.), income from the issue of company shares.

8. According to the degree of obligation of implementation, the following are distinguished:

- mandatory, the absence of which can stop the entire operational activity of the enterprise or industry;

- optional, which may not be carried out, as they are not decisive factors of development for economic entities.

9. According to the type of strategy, investments are divided into:

- active, which ensure an increase in the firm's competitiveness and its profitability compared to the previously achieved level due to the introduction of new technology, the organization of the release of goods that are in demand, the capture of new markets or the absorption of competing firms;

- passive, which ensure, in the best case, that the indicators of profitability of investments in the operations of this company do not deteriorate due to the replacement of outdated equipment, training of new personnel to replace those employees who have resigned, etc.

10. According to the degree of liquidity of investments (their potential ability to transform into cash in a short period of time and without significant financial losses):

- urgently liquidated - up to 7 days;

- quick liquid - 8-30 days;

- medium liquid - 1-3 months;

- weakly liquid - more than three months.

There are other classifications in scientific sources.

Recently, in the economic literature, new forms of investments have been identified, which are part of real investments - innovative investments and intellectual investments.

Innovative investments are investments in innovations. In general, with a stable economy, all investments should be innovations at the same time. Under the conditions of the crisis, investments are possible to support existing technically backward production facilities.

Intellectual investments are investments in objects of intellectual property arising from copyright, invention and patent rights, the right to industrial designs and utility models.

United classification of investment are presented on the fig. 3.

On the fig. 4 we present main types of investments.

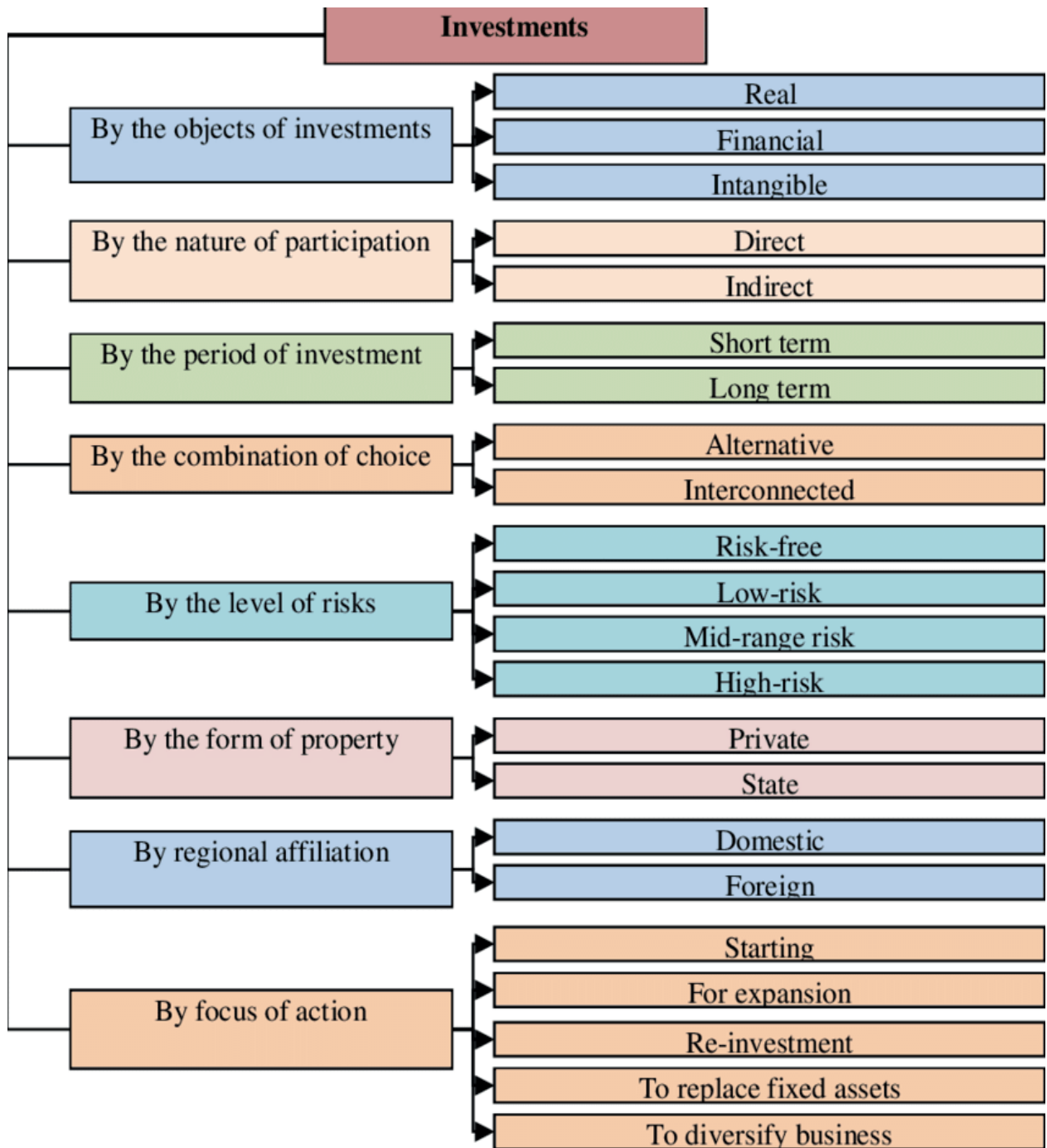


Figure 3. Classification of investments

1. Stocks: This includes shares of ownership of any company and helps you earn dividends in return

2. Bonds: Wondering what is Investment in terms of bonds? It means lending your money to an institution or government, for which you receive fixed interest at regular intervals and also the face value upon maturity

3. Mutual Funds: In this, funds are collected from different investors and put in a company's bonds or shares, which are managed by fund managers. On understanding what is Investment, you may choose equity funds or debt funds, depending on your risk capacity

4. ULIP: ULIPs or Unit Linked Insurance Plans are a type of Investment that provides both investment and life insurance benefits.

5. Public Provident Fund (PPF): Understanding PPF is simple. It is a government offered saving scheme that invests your funds for a specific period and helps you earn returns on the same.

Figure 4. Types of investment

1.3 Purpose, tasks, functions and principles of investment management

Investment management is an independent field of economic science, which is aimed at ensuring the achievement of strategic and operational goals with the help of rational investments with the aim of maximizing the market value of a business entity or obtaining the maximum economic and social effects from investments. Investment management is a type of functional management, the direct object of which are investment processes, investment activities, projects implemented in all sectors of the economy.

The main goal of investment management is to ensure the most effective implementation of the investment strategy of business entities aimed at maximizing their market value.

The main tasks of investment management, which determine its main functions:

1. Study of the external environment and forecasting of the investment market situation: study of legal conditions; analysis of the investment market situation and its factors; forecasting the economic situation in terms of its individual segments.

2. Formation of strategic areas of investment activity of the enterprise.

3. Development of a strategy for the formation of investment resources of the enterprise: determination of general needs for investment resources; analysis of the possibility of formation of investment resources at the expense of own and borrowed funds; determination of general needs in investment resources; assessment of the possibility of shareholding.

4. Search and assessment of investment attractiveness of individual projects and their selection.

5. Assessment of investment qualities of individual financial instruments and selection of the most effective ones.

6. Formation of the investment portfolio and its evaluation according to the criteria of profitability, risk, and liquidity.

7. Current planning and operational management of the implementation of individual investment programs and projects.

8. Organization of monitoring of individual investment projects.

9. Preparation of decisions on timely exit from inefficient investment projects and capital reinvestment.

Basic principles of management of investment activity:

1) selective management - consists in supporting investment projects in the main areas of scientific and technological progress. First of all, complex innovative projects are supported;

2) target orientation of projects – aimed at achieving final results. Establishes a relationship between the need for investments and the possibilities of their investments, while the main part of projects is oriented towards needs, and intermediate goals - to ensure the achievement of the main one;

3) hierarchies of the organization of investment processes and management processes - provides an idea of the various degrees of detailing of these processes, which correspond to a certain level of the management hierarchy. All levels of the management hierarchy agree with each other, and processes occurring at the highest level are mandatory for lower levels of management;

4) multivariate management decision - is carried out under the influence of a significant number of uncertainty factors. In order to reduce the degree of uncertainty, it is necessary to proceed to the multivariate preparation of alternative solutions, to the selection of the composition of the final goals of the project and the means of their achievement;

5) systematicity - as a set of measures necessary for the implementation of the project. The systemic approach should be interconnected with market relations as a whole;

6) availability of investment resources and balance - it is manifested in the fact that all necessary measures for the implementation of the project must be provided with the necessary material, financial, labour, information and other resources. For this, a project implementation strategy must be developed.

1.4 Objects and subjects of investment management

From the standpoint of the macroeconomic approach, the objects of investment activity can be any property, including fixed assets and working capital in all branches and spheres of the national economy, securities, targeted cash deposits, scientific and technical products, intellectual values, other objects of ownership, as well as property rights.

The advantage of the classification takes into account the specifics of the functioning of the general management system of the business entity and taking into account the specifics of the implementation of investment activities.

Subjects (investors and participants) of investment activity can be citizens and legal entities of Ukraine and foreign countries, as well

as the state. From the point of view of investment management, the main subjects are:

1. The owner of the enterprise - independently performs the functions of investment management, as a rule, at small enterprises with a small volume of investment activity. (In this case, there is no need to engage a specialist hired worker to perform these functions).

2. Investment manager of a broad profile is a specialist hired worker who performs almost all functions of investment management of the enterprise. Such specialists are used mainly at enterprises for general management of investment activities.

3. A functional investment manager is a highly specialized specialist-hired worker who performs specialized management functions in one of the spheres of investment activity.

According to the current state of the investment market, the following forms of specialization of functional investment managers are distinguished:

- management of real investments of the enterprise;
- management of financial investments of the enterprise;
- formation of investment resources and management of cash flows of investment activities;
- investment risk management;
- management of venture investments;
- formation of project teams for the implementation of individual investment projects.

Of course, in accordance with the specifics of the enterprise's economic activity and current management needs, other variations in the distribution of powers of functional investment managers are possible.

As domestic practice shows, at most enterprises, the director and chief accountant deal with issues of investment implementation. Detailed study and distribution of functional responsibilities for investment management are typical for enterprises with a foreign share of capital, as well as for domestic corporations.

1.5 Investment strategy and its formation

The investment activity of enterprises, especially in the production sectors, is carried out over a long period of time and therefore should be carried out taking into account a certain perspective. Formation of areas of investment activity considerate prospects is the process of developing an investment strategy.

Thus, investment strategy is the process of forming a system of long-term goals of investment activity of business entities and choosing the most effective ways to achieve them based on forecasting the conditions for the implementation of this activity, taking into account the investment market situation and its individual segments.

In the conditions of Ukraine, where the market conditions of business are changing very quickly, the financial stability of enterprises is too low, and the legislative framework is not implemented and is constantly subject to changes, it is necessary to ensure a flexible approach to the formation of an investment strategy.

The main prerequisite for the formation of an enterprise's investment strategy is its general strategy of economic development. In relation to it, the investment strategy has a subordinate character and must be coordinated with it in terms of goals and stages of implementation. Thus, the investment strategy should be considered as part of the single strategy of the enterprise. At the same time, it acts as the most important factor in ensuring the effective development of the enterprise in the future.

The process of forming an investment strategy is implemented in the following stages:

1. Determination of the investment strategy implementation period. This stage includes the following components:

- forecasting the development of the economy as a whole and the investment market in particular;

- establishing a period that corresponds to the basic strategy of the enterprise;

- taking into account the branch affiliation of the enterprise;

- taking into account the size of the enterprise, its capacities and rates of development.

2. Determination of the strategic goals of the development of the enterprise's investment activity. This stage includes the following parts:

- provision of capital and asset growth;
- increasing the level of profitability of investment activity;
- optimization of proportions in the structure of real and financial investment;
- improvement of the technological and reproduction structure of investments;
- improving the sectoral and regional orientation of investment programs and projects, as well as ensuring the appropriate diversification of investment activities.

3. Development of the most effective ways of implementing the strategic goals of investment activity. This stage includes:

- development of directions for capital formation and investment;
- development of a system of measures to achieve the efficiency of the enterprise's investment activity;
- development of stages of implementation of the adopted system of measures to achieve strategic goals of investment activity.

4. Specification of the investment strategy by periods of its implementation. This stage includes:

- establishment of specific periods of investment strategy formation and implementation;

- determination of the sequence of achievement of certain stages of the strategy of investment activity;

- determination of the periods of achievement of specific tasks, sub-goals and the main goal of the enterprise's investment activity.

5. Evaluation of the developed investment strategy of the enterprise. This stage includes:

- carrying out a general assessment of the developed investment strategy;

- assessment of individual stages of investment strategy implementation;

- assessment of individual tasks and sub-goals of the investment strategy;

- assessment of the possibility of implementing an investment strategy, taking into account the availability of resource potential;

- assessment of the possibility of implementing an investment strategy, taking into account various investment risks.

The development of an enterprise's investment strategy is usually based on defined basic principles. Such principles most often include:

- the principle of accounting for the impact of the internal and external environment of the enterprise;

- the principle of combining perspective, current and operational management of investment activities;

- the principle of alternative development of investment activity;

- the principle of taking into account the general strategy of the enterprise's development;

- the principle of orientation towards the ultimate goals of entrepreneurial activity and its mission;

- the principle of taking into account the capabilities of personnel in the implementation of the investment strategy;

- the principle of taking into account investment risks and the variability of entrepreneurial activity.

The enterprise's investment strategy is implemented in the process of developing the enterprise's investment policy.

Investment policy is a targeted set of measures implemented by the enterprise to achieve certain stages of the enterprise's investment strategy in the process of making investments.

The investment strategy of the enterprise is implemented:

- in the process of developing and implementing real investment management policy;

- in the process of development and implementation of financial investment management policy;

- in the process of developing and implementing the policy of formation of investment resources.

1.6 Investment portfolios

An investment portfolio is a defined set of real and financial investment objects, which is formed in accordance with the goals of the previously developed investment strategy of the investor.

Under current conditions, a portfolio can be formed as a set of a certain number of objects of real or financial investment.

The main goal of the investment portfolio is to ensure the implementation of the company's investment strategy by selecting the most effective and safe investment objects.

The theory of the investment portfolio was developed by the American scientist Markowitz, who defined the content of the portfolio as a way for the investor to invest his savings in various types of assets, and William Sharp, who defines the sequence of formation of the investment portfolio, namely: the choice of investment policy; securities market analysis; formation of a portfolio of securities.

The investment portfolio is formed in accordance with the investment strategy (policy) considering the following factors:

- financial ability of the investor (availability of internal sources of financing);
- opportunities to attract external funding sources, domestic and foreign;
- investment climate;
- investment market conditions;

- features of the investment strategy (the level of aggressiveness of the investment strategy, the investor's propensity to risk, the ability to effectively manage the portfolio).

Formation of the investment portfolio should be carried out according to the following principles:

1. The principle of compliance of the portfolio with the enterprise's investment strategy;
2. The principle of ensuring compliance of the portfolio with investment resources;
3. The principle of optimizing the ratio of profitability and risk;
4. The principle of optimizing the yield and liquidity ratio;
5. The principle of management of the investment portfolio.

The process of formation and management of the investment portfolio should be carried out in the following sequence:

1. Determination of the main goal of the investment policy.
2. Determination of the structure of the investment portfolio and its components.
3. Determination of investment objects, from which it is planned to form a portfolio.
4. Determination of terms of acquisition and storage of investment objects in the portfolio.
5. Diversification of portfolio components.
6. Justification of the investment portfolio management scheme.
7. Formation of risk insurance mechanisms.

8. Assessment of profitability, risk and liquidity of the investment portfolio.

9. Optimization of taxation of investment portfolio securities.

10. Legal issues.

11. Final optimization of the structure of the investment portfolio according to the established criteria of profitability, risk and liquidity.

According to the developed strategy, the investor seeks to optimize his portfolio in such a way as to ensure the achievement of all strategic goals by finding the most acceptable combinations of all factors. Optimizing return and risk is the most difficult, because the most profitable investment is at the same time the riskiest.

In the process of managing the formation of investment resources, it is important to determine the total amount of necessary investment resources, choose effective schemes for financing investment activities, ensure the maximum amount of attraction of own investment resources at the expense of internal sources, ensure the necessary amount of attraction of own investment resources from external sources, determine the optimal ratio of the capital structure and ensuring the minimization of the cost of the investment resources involved from various sources.

Therefore, the main goal of strategic management of investment activities is to determine directions, methods, means and forms of investment in order to increase production efficiency and increase the company's profit.

Questions for self-control

1. Define the terms “investment” and “investment activity”.
2. What are gross and net investments?
3. Specify the classification of the company's investments.
4. Describe the main factors influencing the dynamics of investments.
5. What is investment management?
6. Describe the main functions of investment management.
7. Formulate the main principles of investment activity management.
8. Specify the objects and subjects of investment management.

Recommended literature:

1. Shakti Singh (2020). Investment management. Maharshi Dayanand University Press. 72 p. URL : [https://mdu.ac.in/UpFiles/UpPdfFiles/2021/Jun/4_06-11-2021_15-04-44_Investment%20Management\(20MCO22C2\)%20\(1\).pdf](https://mdu.ac.in/UpFiles/UpPdfFiles/2021/Jun/4_06-11-2021_15-04-44_Investment%20Management(20MCO22C2)%20(1).pdf)
2. Robert L. Hagin. (2004) Investment management. Portfolio diversification, risk, and Timing – Fact and Fiction. 304 p. URL : [http://gitamskadapa.org/library/books/mba3sem/IPM/Wiley_Finance,.Investment_Management_-_Portfolio_Diversification,_Risk%20\(1\).pdf](http://gitamskadapa.org/library/books/mba3sem/IPM/Wiley_Finance,.Investment_Management_-_Portfolio_Diversification,_Risk%20(1).pdf)

3. Nenad Vunjak & et al. (2018). Investment management strategy in financial markets. Rconomics 6 (2): 49-56. URL : <https://www.sciendo.com/article/10.2478/eoik-2018-0025>

4. 2021 investment management outlook. Transforming to thrive. A report from the Deloitte Center for financial services. URL : <https://www2.deloitte.com/content/dam/Deloitte/tr/Documents/financial-services/2021-investment-management-outlook.pdf>

5. Principles of investment management for long-term funds. (2014). URL : <https://www.ctphilanthropy.org/sites/default/files/resources/Principles-of-Investment-Management.pdf>

TOPIC 2. INVESTMENT STRATEGY OF THE ENTERPRISE

2.1 The concept and structure of an enterprise's investment strategy

2.2 Principles of investment strategy formation

2.3 Factors affecting the formation of the enterprise's investment strategy

2.4 Formation of the enterprise's investment strategy

2.5 Formation of an investment strategy in the context of the development of the organization

2.1 The concept and structure of an enterprise's investment strategy

The term “strategy” has a military origin. At first, strategy was understood as the science of war; the doctrine of the best deployment and use of all military forces and means; a constituent part of military art, which represents its highest field and covers the theory and practice of preparing the armed forces for war, its planning and conduct.

The term “investment strategy” entered economic theory more than 40 years ago, with the acceleration of the pace of social

development and scientific and technological progress. Characteristic of this definition is presented on the figure 6.

An investment strategy is a set of rules, behaviors or procedures, designed to guide an investor's selection of an investment portfolio.

The term investment strategy refers to a set of principles designed to help an individual investor achieve their financial and investment goals.

Figure 6. Characteristic of the definition “investment strategy”

By investment strategy, some scientists understand the process of forming investment goals and optimizing ways to achieve them, while others understand their system.

Strategy is usually considered as “a detailed comprehensive plan, the purpose of which is to ensure the achievement of strategic goals.”

Accordingly, the investment strategy should also be a comprehensive plan of action, drawn up on the basis of the selection

of the most economically advantageous (optimal) solutions that relate to investment activities and are aimed at the implementation of the strategic goals and objectives of the enterprise.

The main task of the investment strategy is to focus on the long-term functioning and growth of the market value of the enterprise.

When forming an investment strategy, it is necessary to ensure:

- its subordination to the goals of general and competitive strategies;

- the clarity of the management's positions in the field of attracting investment resources, which would, on the one hand, expand the enterprise's resource capabilities, and on the other hand, minimize their cost;

- the balance of investment measures by functions and spheres of management, which will direct management to the priority selection of those projects that will ensure the improvement of the state of the business system and increase its ability to use market opportunities.

2.2 Principles of investment strategy formation

The main principles of forming the investment strategy of the enterprise:

- ensuring subordination to the general development strategy - involves the adoption of such investment decisions, the implementation of which would ensure the achievement of general

strategic goals, strengthening of the competitive position of the enterprise and growth of its market value;

- balance and co-evolution - involves the justification of investment directions taking into account the compatibility of changes in the business system and the business environment in the planned perspective, ensuring the balanced development of all components of the business system to avoid its dysfunction, increase its stability and ability to resist external threats;

- feasibility - provides an assessment of the enterprise's resource potential (in terms of types of resources - labour, technological, financial, which include existing resources or the possibility of attracting them from the outside on acceptable terms) for the implementation of investment programs (projects) provided for by the general development strategy;

- cost-effectiveness - consists in exceeding the results from the implementation of investment projects over the investment of capital in them;

- versatility and efficiency - involves the selection of investment areas and objects from alternative ones according to the criterion of the highest return on capital, which makes the criterion of achieving an innovative monopoly in the long term a determining factor;

- limited rationality - implies a limited ability of decision-makers to accumulate all information related to investment conditions, which affects their assessment of the attractiveness and expediency of

investment projects and makes it impossible to choose the best decision from the position of the business entity;

- consistency of interests - involves taking into account during the justification of investment decisions the interests of all participants in the investment process with the aim of harmonizing their motives and avoiding opportunistic behaviour during the implementation of the investment project; for this, it is necessary to comprehensively evaluate the possible consequences of the implementation of the investment project (including environmental, social, etc.) from the position of maximizing the overall social utility.

It is necessary to emphasize the first principle - investment decisions should contribute to the growth of the market value of the enterprise. At the same time, the development of an investment strategy should be carried out on the basis of a deep and comprehensive study of the conditions of investment activity (investment climate) and the state of the investment market both as a whole and in terms of its individual segments. This is necessary in order to find out the optimal directions of investment for the development of the enterprise, which change not only in view of the market situation, but also taking into account the stage of the life cycle of the enterprise and with the indispensable goal of preserving and strengthening its competitiveness.

2.3 Factors affecting the formation of the enterprise's investment strategy

The formation of an investment strategy requires a toolkit that should justify the choice of investment decisions based on a relevant assessment:

- the institutional environment of the enterprise (internal and external), which determines investment risks, affects the cost of investments and the feasibility of investment decisions;

- financial and economic condition (limits the selection of projects to the available resources);

- market conditions for goods and services - outlines the range of promising investment directions and affects the formation of an investment portfolio.

The main macroeconomic factors affecting the formation of the enterprise's investment strategy are presented in fig. 7.

The main reference point for the formation of an investment strategy is the general strategy of the enterprise's development, in relation to which the investment strategy is subordinate in nature and must be coordinated with it both in terms of goals and stages of implementation.

Not only macroeconomic factors influence the development of an investment strategy, but microeconomics either.

Microeconomic factors that influence the development of an investment strategy:

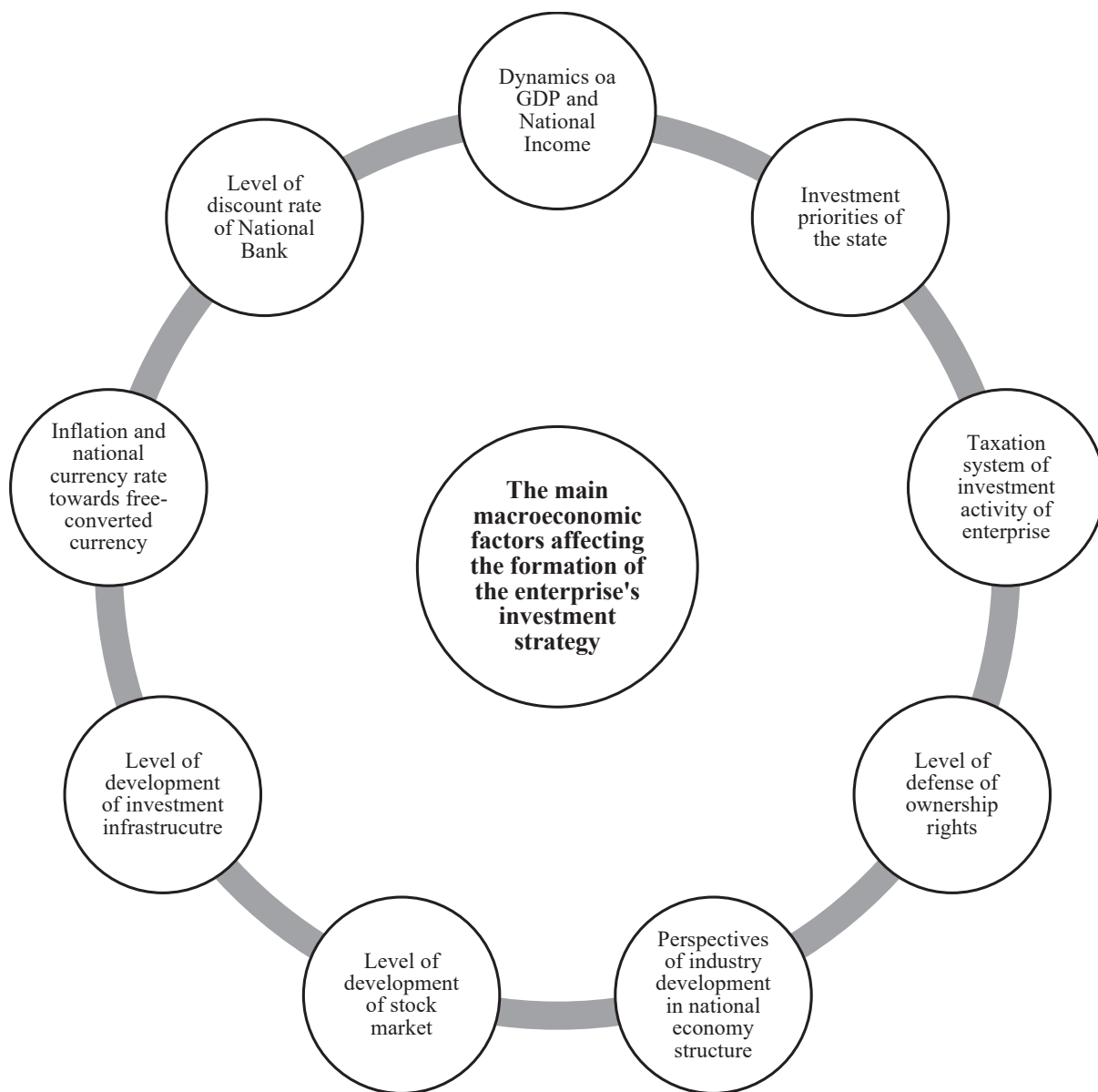


Figure 7. The main macroeconomic factors affecting the formation of the enterprise's investment strategy

- stage of the life cycle of the enterprise;
- the level of demand for the company's products;
- scale of the enterprise's operational activity;
- sectoral and functional orientation of economic activity;
- the degree of compatibility of real projects with the production system;
- efficiency of the enterprise management system from the standpoint of innovation perception;
- provision of an appropriate resource base.

Also, we could define factors that influence investment strategy of every separate person or entrepreneurship. They are performed on the figure 8.

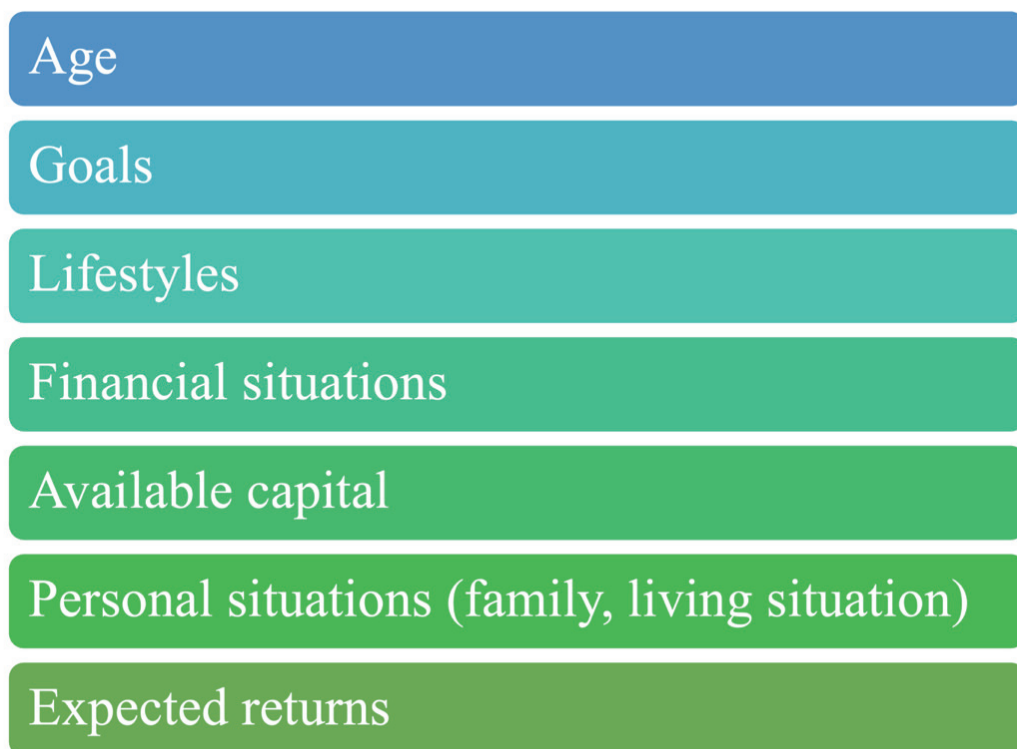


Figure 8. Personal factors that influence investment strategy

2.4 Formation of the enterprise's investment strategy

The process of forming an enterprise's investment strategy is quite complex and time-consuming, therefore it requires clear regulation and orderliness.

Strategies depend on a variety of factors, including:

Stage 1. Determination of the period for which the investment strategy will be formed.

Stage 2. Formation of an investment strategy depends on its adopted type:

– a resource-oriented investment strategy is formed based on the financial resources available or available to the enterprise. Financing of investment activities is determined by the management's decision regarding the use of the enterprise's financial potential, as well as its financial needs for operational activities.

– the target investment strategy is formed depending on the intended investment goals and investment projects planned for implementation, a search and analysis of all possible sources and methods of financing is carried out.

Stage 3. Depending on the adopted type of investment strategy, restrictions on the company's financial resources are clearly formulated and specific goals are established that must be achieved during the implementation of the strategy. Examples of such goals can

be an increase in annual profit to a set level, achieving a certain share of market presence, mastering a new production technology, etc.

Stage 4. Regardless of the type of investment strategy, an investment plan is developed. At the same time, the project selection criteria must be consistent with the limitations and goals adopted at the previous stage.

When developing an investment strategy is carried out:

1) analysis of each potential investment project:

- a general analysis, which involves a preliminary study of the very essence and features of the implementation of new projects, their comparison with the types of activities already existing within the given company (business areas), and the assessment of the possibility of their combination, analysis of human resources (managers, technical specialists, workers), determination of the required volume of investment and its compliance with the limitations of financial resources adopted at stage 3, as well as analysis of other general aspects that may be of significant importance. According to the results of each such stage, those projects that do not meet the established requirements and criteria are excluded from the further analysis process. At the same time, the priority of projects during selection is influenced not only by their economic efficiency, but also by practical necessity and urgency;

– assessment of economic efficiency (stage 4.1.2);

– assessment of project sensitivity to risks (stage 4.1.3).

Stages 4.1.2 and 4.1.3 are based on the performance of precise mathematical calculations, the scope and complexity of which depend on the adopted methods and criteria for evaluating projects. They are designed to form an idea of the feasibility of approving projects from the point of view of the economic effect that can be obtained in the process of their implementation.

2) an optimal investment portfolio is formed from the selected projects (stage 4.2).

An optimal investment portfolio is understood as a certain set of investment projects that will allow the enterprise to achieve its strategic goals as effectively as possible, taking into account all existing conditions and restrictions.

Stage 5. Formation of the consolidated financial budget for the implementation of the investment strategy:

1) analysis and selection of optimal sources of financing (stage 5.1), during which complete information is collected for each financing option, including the following items:

- mandatory requirements for using the funding source;
- the possible amount of financing (at the same time, the availability of collateral or other security, if necessary, must be taken into account);
- possible term of financing;
- direct cost of financing (dividends on shares, interest on loans and other issued securities, etc.);

- additional costs associated with raising funds (collateral assessment, notary services, insurance, bank commissions, etc.);
- other conditions for attracting and using financing from a specific source.

2) after the analysis of funding sources is completed, budgets for individual investment projects are formed (stage 5.2).

Stage 6. After the completion of the formation of plans, a final assessment of the investment strategy as a whole is carried out, which necessarily includes:

- verification of the compliance of the strategy with the established goals and limitations;
- verification of compliance of the strategy with the course set by the general strategy of the enterprise;
- comparison of the economic effect of investment projects with the cost of financing involved for their implementation, etc.

As the practice of domestic and foreign companies shows, some inconsistencies or contradictions usually appear in the process of strategy formation. If they turn out to be significant, it may be necessary to return to previous stages and initial data in order to adjust them. This process is completely normal. If the indicated problem points are absent, the strategy formation process can be considered completed.

2.5 Formation of an investment strategy in the context of the development of the organization

The formation of an investment strategy is associated with the development of the enterprise, which have to take place with the preservation of dynamic balance during the renewal or diversification of the processes of creating consumer goods.

The task of the investment strategy is to ensure minimal losses in the dynamics of such development, which may occur when the balance between current production and preparation for innovative changes is disturbed.

The processes of renewal and development of the production component of the enterprise disrupt the current equilibrium state and worsen the economic situation of the enterprise, however, upon its completion, a qualitatively higher level of development is achieved. It is necessary to take this into account and choose reasonable proportions between the volumes of current production and investments in the renewal and development of the enterprise. Such proportions are primarily determined by market conditions and the dynamics of financial markets.

The development of the production component of the enterprise is influenced by the dynamics of the industry to which it belongs, the strategic intentions and professionalism of management, the political

situation, etc., which determine the direction and scope of business activity and determine the adoption of strategic decisions.

The choice of management priorities will depend on the state of the enterprise's internal environment and trends in the external environment (both market and political), which will determine the features of the enterprise's competitive strategies, as well as the direction of the implemented changes.

The main directions of the development of business structures:

1. Vertical integration - development due to increased control over the entire way of promoting a product or service to the consumer (from the extraction of raw materials to the consumption of finished products).

2. Horizontal diversification of activities - development due to the development of adjacent market segments (related products, expansion of the product range).

3. Market deepening – development due to providing the product or management with such qualities and properties that consumers begin to buy the product in larger quantities.

Accordingly, an investment strategy is formed, which should determine the main proportions of capital investment in the development of the enterprise according to the chosen direction.

Classification of investment strategies according to the main proportions of capital investment:

- capital development;

- maintenance of liquidity (focus on ensuring current liquidity of assets);
- monoinvestment;
- investment diversification;
- product investments;
- process investments;
- research investment;
- licensed investment.

The relationship between the investment strategy and the strategic direction of the company's development and the tasks that must be solved during the implementation of this or that strategy is presented in the table 3.

The implementation of the strategy requires the formation of an appropriate investment policy, which is manifested in a complex of interconnected tools, mechanisms and organizational forms. Ultimately, this will determine the characteristics of development and its type.

Extensive development involves the quantitative growth of the system, its functioning on the same basis, but with the involvement of a larger number of traditional resources. This is achieved mainly by investing in the expansion of the material and technical base on the old technical and technological basis.

Table 3. The relationship between the investment strategy and the company's development directions

Direction of the development	Strategic aim	Investment task	Investment strategy
Vertical integration	Creation of a complete technological complex with a high level of added value	Investing in the acquisition or creation of related and complementary industries	Capital development, investment diversification
Horizontal diversification	Expansion of areas and types of profitable activities	Investing in the development or acquisition of new product lines	Investment diversification, research, licensing or product investment
Market deepening	Increasing the scale of activity based on price or quality leadership	Investing in process innovations (technological, marketing, sales, personnel management (etc.).	Process investment, monoinvestment, maintaining liquidity (focus on ensuring the current value of asset liquidity)

Intensive development is possible only under the condition of qualitative changes, which can be both changes in its internal structure and methods of interaction of elements (structural-functional development), and due to the involvement of qualitatively new technical and technological resources, thanks to which the system is able to become more flexible and productive. This involves real investments in the acquisition of new technological complexes, as well as investments in the professional development of personnel for employees to master the functions inherent in new technologies.

Evolutionary development is characterized by gradual improvement changes (minor investments, mainly from internal sources), revolutionary – sudden changes that can occur, for example, as a result of reengineering business processes or business systems (significant investments, in particular, in the services of engineering firms).

Spontaneous development is more characteristic of natural systems, controlled – those whose vector of development is set by the controlling subsystem, which determines the directions, methods and sources of investment. Rapid development is inherent in socio-economic systems that have a resource with a high potential for overtaking (for example, an innovation capable of creating significant competitive advantages, ensuring an innovative monopoly). The investment strategy of such enterprises should include justification of the feasibility of implementing new investment projects, carrying out portfolio financial investments.

On the figure 9 we present examples of investment strategy on the personal level.

A 25-year-old who starts off their career and begins saving for retirement may consider riskier investments because they have more time to invest and are more tolerant to risk. They can also afford to lose some money in the event that the market takes a dive because they still have time to earn more money. This means they can invest in things like stocks and real estate.

A 45-year-old, on the other hand, doesn't have a lot of time to put money away for retirement and would be better off with a conservative plan. They may consider investing in things like bonds, government securities, and other safe bets.

Meanwhile, someone saving for a vacation or home won't have the same strategy as someone saving for retirement. They may be better off putting their money away in a savings account.

Figure 9. Example of Investment Strategy

From this figure we can see that investing strategy of every separate person can differ depending on different factors.

Also, different types of investment strategies could be defined. They are presented on the fig. 10.

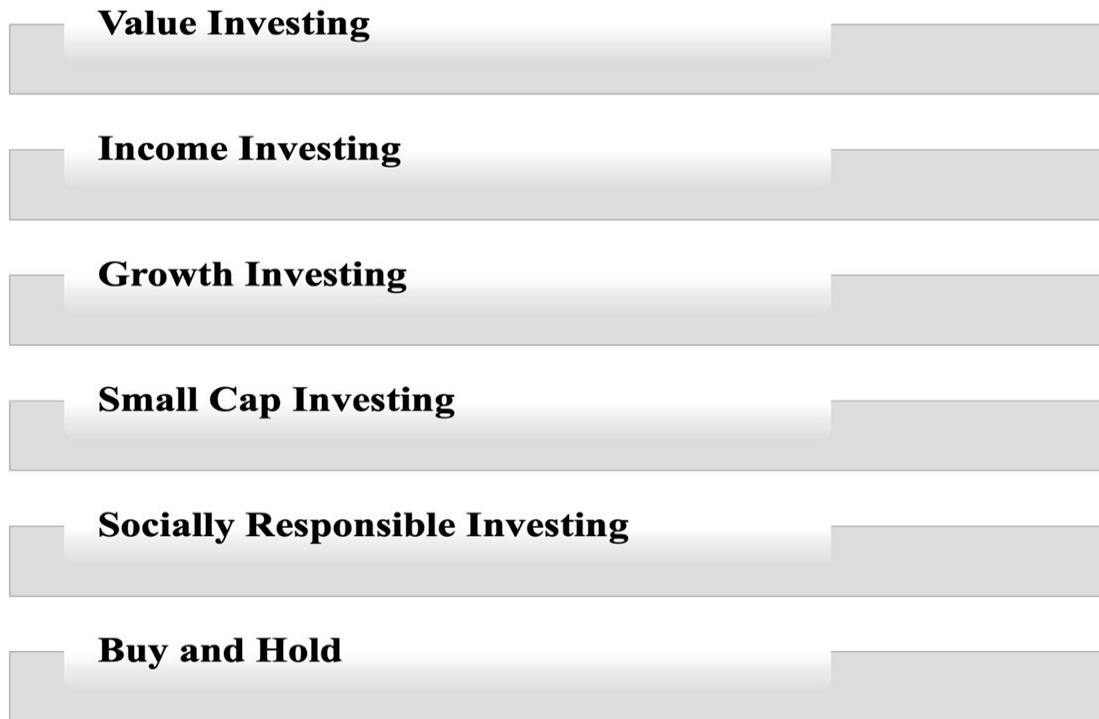


Figure 10. Types of Investment Strategies

When choosing the right investing strategy, there are questions that need to be answered first (fig. 11).

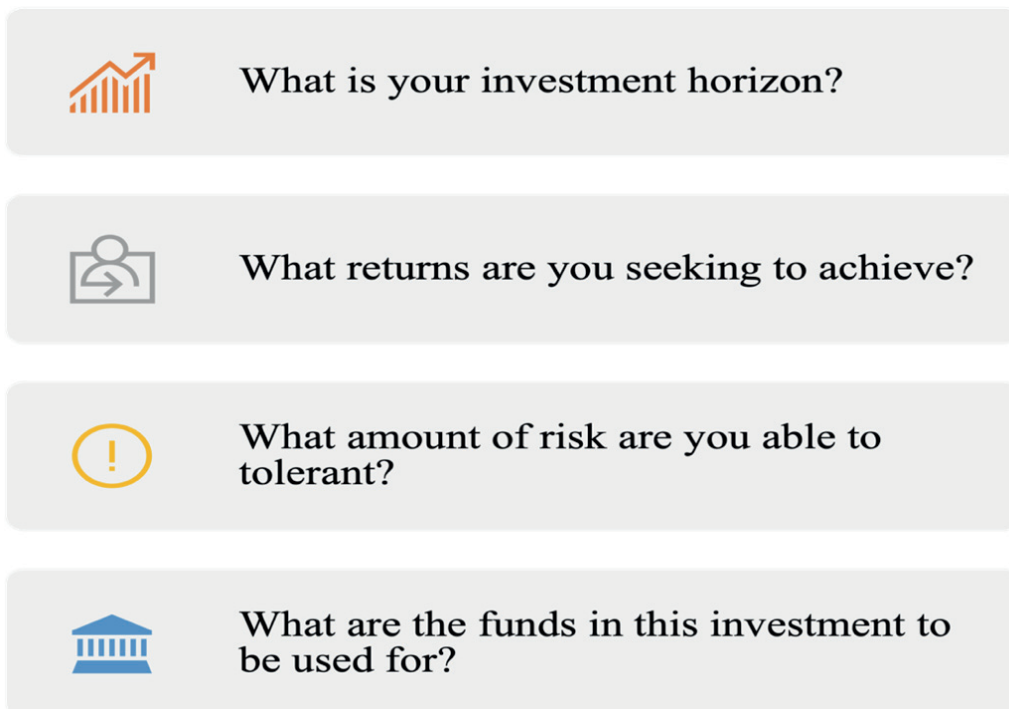


Figure 11. Main questions when you decide which investment strategy to choose

Questions for self-control

1. Define the terms “strategy” and “investment strategy”.
2. Briefly describe the principles of investment strategy formation.
3. Name the main macroeconomic factors that influence the formation of an enterprise's investment strategy.
4. Name the microeconomic factors that influence the development of an investment strategy
5. List the stages of formation of an enterprise's investment strategy
6. What are the main directions of development of entrepreneurial structures do you know?
7. List the types of investment strategy according to the direction of the company's development.

Recommended literature:

1. Frank J. Fabozzi, Sergio M. Focardi & Caroline Jonas (2014) Investment management: a science to teach or an art to learn? CFA Institute research foundation.
2. Ephreim Matanda (2020). Modern Financial Investment Management. Cambridge Scholars Publishing.
3. Security analysis and investment management. Lessons 1 to 6.
URL : <http://icdeolhpu.org/downloads/course-406FM-02.pdf>.

4. Preeti Singh. (2016) Investment Management. Himalaya Publishing House Pvt. Ltd., Mumbai. URL : <http://www.himpub.com/documents/Chapter1893.pdf>.

5. Scientific journal “Investment management and Financial Innovations”. URL: <https://www.businessperspectives.org/index.php/journals/investment-management-and-financial-innovations>

TOPIC 3. METHODOLOGICAL PRINCIPLES AND METHODOLOGICAL TOOLS OF INVESTMENT MANAGEMENT

3.1 Concept of time value of money

3.2 Inflation and its influence on the results of investment activity

3.3 Concept of investment risks

3.4 The concept of investment liquidity

3.1 Concept of time value of money

The concept of time value of money is one of the main ones in the theory and practice of investment management. It is based on the statement that the value of money changes over time. That is, the value of a monetary unit today is greater than the value of a monetary unit that will be received tomorrow or in the future (since money today can satisfy needs and bring income). Money can also lose its value under the influence of such three main factors as inflation, risk, and tendency to liquidity.

The amount of income from investing or lending money depends on the amount of investment, the interest rate and the duration of the investment.

Given the considerable duration of the investment process, in practice, it is usually compared the value of money at the beginning

of its investment with the value of money when it is returned in the form of future profits. In the process of comparison, two main concepts are used: the current (present) value and the future value of money (Fig. 12).

The future value of money is the value of money that will be received from its investment after a certain period, taking into account a certain interest rate.

The movement of cash flows from current value to future value is called compounding, sometimes this process is called capitalization.

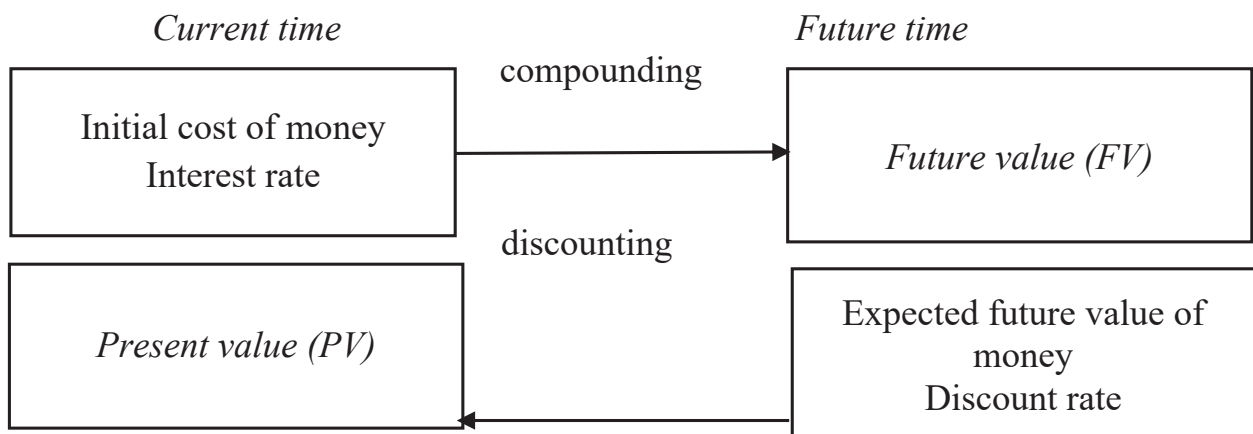


Figure 12. Carrying out financial transactions

The present value of money is the value of future receipts adjusted for the discount rate.

The movement of value from future to current is called discounting

In the process of increasing and discounting money, the following factors are considered:

- current (present) value of money (PV);
- future value of money (FV);
- number of periods (years) (n);
- rate of return (interest rate) (r).

Depending on the conditions of financial transactions, both compounding and discounting can be applied using simple and compound interest.

Simple interest is usually used in short-term financial transactions. In this case, the basis for calculating interest for each planning period is the initial amount of funds:

$$FV = PV + PV \cdot r + \dots + PV \cdot r = PV \cdot (1 + r \cdot n) \quad (1)$$

In the formula, n can be a fraction when the financial transaction is carried out for a period of t days:

$$FV = PV \cdot \left(1 + \frac{r \cdot t}{365}\right) \quad (2)$$

Discounting for simple interest is carried out according to the formulas:

$$PV = \frac{FV}{(1 + r \cdot n)} \quad \text{– for long-term operations, (3)}$$

$$PV = \frac{FV}{\left(1 + \frac{r \cdot t}{365}\right)} \quad \text{– for short-term operations (4)}$$

For compound interest schemes, the initial value required for calculating interest for the planned period includes both the initial amount of the deposit and the amount of interest already accrued so far:

$$FV = PV \cdot (1 + r)^n \quad (5)$$

where $(1 + r)^n$ is the growth factor or multiplicative factor for a single payment (the value of the factor can be found in the table of standard values of the future value factor for the given values of r and n).

The current value of money for compound interest schemes, respectively, will be:

$$PV = \frac{FV}{(1 + r)^n} = FV \cdot \frac{1}{(1 + r)^n} \quad (6)$$

where r – discount rate,

$\frac{1}{(1 + r)^n}$ – discount factor.

If the interest rate changes in different periods of time, that is:

n	1	2	...	n
r	r_1	r_2		r_n

In this case, formulas (5), (6) will have the form:

$$FV = PV \cdot (1 + r_1) \cdot (1 + r_2) \dots (1 + r_n) \quad (7)$$

$$PV = \frac{FV}{(1 + r_1) \cdot (1 + r_2) \dots (1 + r_n)} \quad (8)$$

If interest is accrued several times per period, the formula for calculating the future value of cash flows using the compound interest scheme will look like this:

$$\begin{aligned}
 FV &= PV \cdot \left(1 + \frac{r}{k}\right)^{n \cdot k} = PV \cdot (1 + r_e)^n \Rightarrow \\
 \Rightarrow (1 + r_e)^n &= \left(1 + \frac{r}{k}\right)^{n \cdot k} \Rightarrow r_e = \left(1 + \frac{r}{k}\right)^k - 1 \quad (9)
 \end{aligned}$$

In order to compare the results of accrual (accumulation) according to different interest accrual schemes (simple and complex), it is enough to compare the corresponding accrual coefficients. At the same interest rates, the value of these multipliers depends on the term. Accordingly, the following ratios can be determined, provided that the time period under different schemes is the same:

– for a period of less than a year, the compounding factor for simple interest (r_n) is greater than for compound interest (r_s):

$$(1 + r_n \cdot n) > (1 + r_c)^n,$$

– for a term of more than one year, the compounding factor for compound interest is greater than for simple interest:

$$(1 + r_n \cdot n) < (1 + r_c)^n,$$

– for a term equal to a year, the accrual coefficients are the same.

The graphic representation of the ratio of the increase coefficients is shown in Fig. 13.

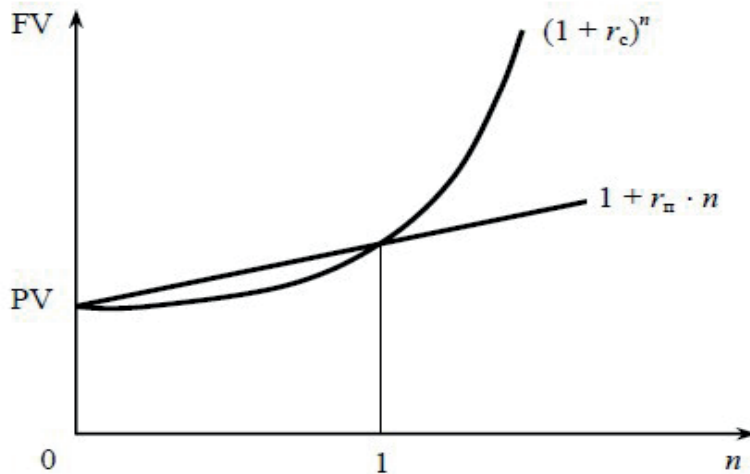


Fig. 13. Accrual coefficients according to the scheme of compound and simple interest

3.2 Inflation and its influence on the results of investment activity

When analysing the effectiveness of long-term investments, you need to take into account the impact of inflation, which depreciates the value of money over time.

The following indicators are used to estimate inflation:

1) inflation rate (T_i)- characterizes the increase in the average level of prices in a certain period and is expressed in fractions of a unit;

2) inflation index (I_i) – general growth rate.

$$I_i = 1 + T_i \quad (10)$$

In calculations related to the adjustment of cash flows taking into account inflation, the following concepts of the sum of money are used:

- nominal value of money – without taking into account changes in inflation;

- real value of money - taking into account changes in inflation.

There are three variants (cases) of taking into account inflation in investment projects:

1) when adjusting the accumulated amount of funds;

2) when forming the interest rate, which is used for compounding and discounting;

3) when determining the level of income from investments.

Accounting for inflation in investment projects when adjusting the accumulated amount of funds

$$S_p = S_H / I_i \quad (11)$$

where S_p is the real future value; S_n is the nominal future value.

Taking into account inflation in investment projects when forming the interest rate, which is used for inflation-adjusted compounding and discounting

The real interest rate (i_p) taking into account inflation is formed as follows:

$$i_p = i - T_i \quad (12)$$

When comparing the nominal interest rate (i) with the inflation rate (T_i), three situations are possible:

- $i = T_i$ – in this case there will be no increase in the real value of money, the increase is absorbed by inflation;
- $i > T_i$ – the real value of money increases, regardless of inflation;
- $i < T_i$ - in this case the investment is unprofitable.

In world practice, the necessary discount rate taking into account inflation is determined from the Fisher formula:

$$(1+i_p)*(1+T_i) = 1+I \quad (13)$$

Taking into account inflation in investment projects when determining the level of income from investments taking into account inflation

$$P = D_p * T_i \quad (14)$$

$$D = D_p + P_i = D_p * (1 + T_i) \quad (15)$$

where D is the total amount of income; D_p - market income; P_i is an “inflationary” premium.

Since forecasting inflation rates is difficult and largely based on assumptions, the following method is also allowed: the value of invested funds at their next increase or the value of their return at the next discounting is transferred from the national currency to one of the strong foreign currencies. Recalculation is carried out at the rate of the national bank at the time of making the calculations. After that, the increase or discounting of the value of the funds is carried out at

an interest rate without taking into account inflation. For example, when investing with loans from a commercial bank, the interest rate of the foreign currency loan of this bank is taken as the discount rate.

In practice, there are not one-time cash flows, but cash flows that are paid out or received by business entities. Cash flows are usually allocated at the beginning of each period - the prenumerando (advance) flow, or at the end of each period - the postnumerando flow.

Postnumerando flows are more common in the analysis process. Directly, it is these flows that form the basis of methods for analyzing the effectiveness of investment projects. This is explained by the fact that financial results are determined most often after the end of the corresponding reporting period (year). Prenumerando flows are important when analyzing various schemes for accumulating cash for future reinvestment.

3.3 Concept of investment risks

Investment activity is always risky. Reasons:

- uncertainty and variability of the economic situation;
- emergence of new financial instruments and issuers;
- expanded offer of investment objects in connection with privatization, etc.

Investment risk is the probability of unexpected financial losses: profit, income, loss of capital (partial or complete) - in the event of uncertainty in the conditions of investment activity.

Types of investment risks:

1. By areas of manifestation:

- economic – related to changes in economic factors;
- political – administrative restrictions on investment activity related to changes in the state political course;
- social – the risk of strikes, unplanned social programs, etc.;
- ecological - catastrophes, natural disasters;
- criminal.

2. By form of investment:

- real investment risk (problems with building materials, equipment, unscrupulous contractor, bad choice of construction site, etc.);
- financial investment risk (unsuccessful selection of financial instruments, bankruptcy of some issuers, direct deception of investors).

3. According to the sources of occurrence:

- systematic (market) risk – associated with changing stages of the country's economic development cycle;
- unsystematic (specific) risk – characteristic of a specific investment object, may be associated with unqualified management,

irrational structure of investment funds. Such risks can be predicted and prevented.

4. According to the quantitative assessment of the level of risk:

- risk-free – short-term government bonds (in foreign practice);
- investments with acceptable risk – the possibility of losing the entire amount of the calculated profit;
- investments with a critical level of risk - the possibility of losing not only profit, but also the entire amount of income from the project;
- investments with a catastrophic level of risk – the possibility of losing all the investor's assets as a result of bankruptcy, etc.

Acceptability criteria for an investment project depending on the level of risk:

- 1) for investments with acceptable risk: 0.1;
- 2) for investments with a critical level of risk: 0.01;
- 3) for investments with a catastrophic level of risk: 0.001.

This means that a project should be rejected if, in one case out of ten, all profits could be lost, if in one case out of 100 all income could be lost, if in one case out of 1000 all assets could be lost.

The level of risk in its assessment is defined as the deviation of expected investment income from the average or estimated value. Therefore, the assessment of investment risks involves: 1) assessment of expected income; 2) assessment of possible losses.

Risk assessment is carried out on the basis of determining:

- 1) the absolute amount of losses;

2) relative amount of losses.

Investment risk assessment methods:

1) economic and statistical

- level of investment risk;
- dispersion;
- root mean square (standard) deviation;
- coefficient of variation;
- beta coefficient;

2) expert;

3) analog.

Formation of the necessary level of profitability taking into account the risk.

“Risk premium”

Since investment activity is always risky, the level of risk must be compensated in a certain way. The investor wants to receive the so-called “risk premium”.

“Risk premium” is the additional income that the investor wants to have above the level that can be given by risk-free investments and which should be proportional to the level of risk. Then the total amount of income (D) will be:

$$D = D_b + Pr, (16)$$

where D_b is income from risk-free investments;

Pr – “risk premium”, corresponds to the possible loss of income based on the totality of risks.

3.4 The concept of investment liquidity

Liquidity of investments is their potential ability to transform into cash over a period of time and with certain financial losses.

That is, when assessing liquidity, 2 main criteria are used:

- 1) the time of transformation of investments into cash;
- 2) the amount of financial losses associated with the transformation.

Criterion of transformation time

List of investment objects in order of decreasing liquidity:

- 1) demand deposits;
- 2) time deposits;
- 3) short-term securities;
- 4) long-term securities, including shares;
- 5) equipment, machines, mechanisms, etc.;
- 6) real estate;
- 7) unfinished construction.

Liquidity assessment over time is measured by the number of days required for the investment object to be sold on the market.

Classification of investment objects according to the criterion of time spent on implementation:

- 1) urgent liquid objects (up to 7 days);
- 2) highly liquid (8–30 days);
- 3) medium liquid (1–3 months);
- 4) weakly liquid (more than 3 months).

If we have to assess the liquidity of not newly made investments, but the assets of an enterprise that has already been operating for some time, then the following classification is used in investment practice:

Asset group	Kinds of assets
Assets that are quickly realized	- cash and money on a current account; - short-term financial investments.
Assets with an average term of realization	accounts receivable for current financial transactions
Slow moving assets	- inventory of goods and material values; - unfinished production.
Hard-to-realize assets	- fixed assets; - intangible assets; - unfinished capital investments; - long-term financial investments.

Criterion of the level of financial losses during transformation into cash. The entrepreneur is interested in the absolute amount of losses compared to the amount of investments. The assessment is carried out according to the indicator of the share of liquidation losses (S_{II}):

$$S_{II} = \frac{\sum losses}{\sum investments} \quad (17)$$

The level of losses is classified as follows:

The ratio of the amount of losses to the amount of investments, %	Loss level
up 5 %	low
6 – 10 %	average
11 – 20%	high
more 20%	very high

Indicators of liquidity of investments in terms of time and level of financial losses are often inversely dependent: if the investor agrees to higher financial losses during the realization of the object, then he will be able to realize it faster, and vice versa (Fig. 14).

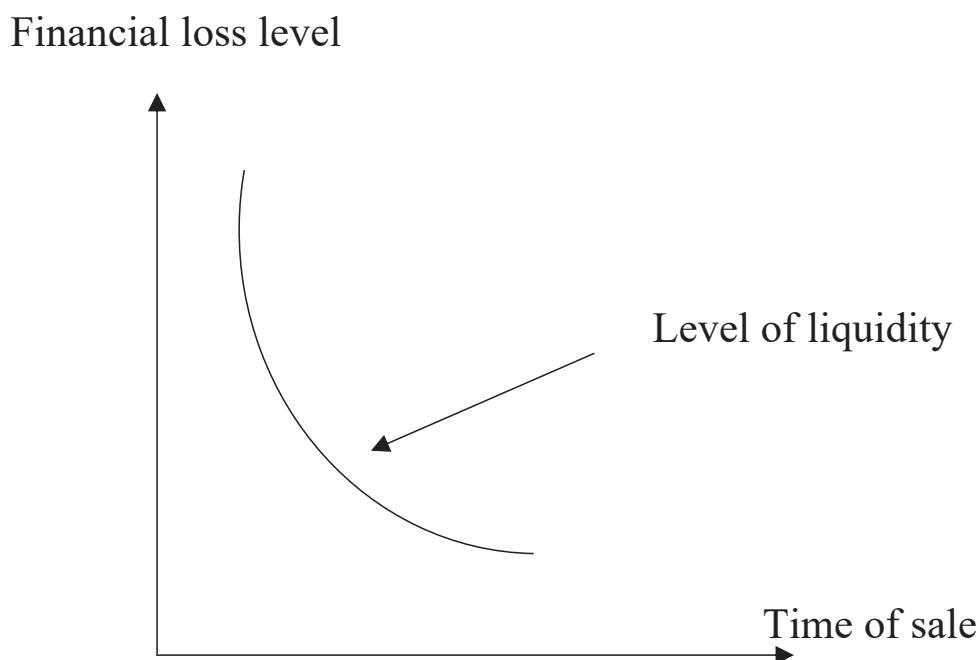


Figure 14. The level of financial losses when selling an investment object

In order to assess the overall level of liquidity in relation to the entire investment portfolio, enterprises determine the structure of the

investment portfolio - the share of assets of each type of liquidity in the total amount of investments. The results of the calculations are presented in tabular form.

The investor always strives for the selection of more liquid objects, because it gives him a greater opportunity to maneuver in the management of the investment portfolio, and if less liquid objects are chosen, then the investor should receive additional incentives in the form of additional investment income (premium for low liquidity).

Questions for self-control

1. Formulate the basic principles of the concept of time value of money.
2. What factors affect the change in the value of money over time?
3. Define the future and present value of money.
4. What is meant by the accumulation and discounting of funds?
5. What interest calculation methods do you know?
6. How is the effective interest rate defined and what characterizes it?
7. What is the discount rate?
8. When does the investment process become unprofitable and unprofitable?
9. Nominal and real value of net cash flow from investment activities.

10. Adjustment of the accumulated amount of money taking into account inflation.
11. In what cases is inflation taken into account in investment projects?
12. Formation of the interest rate, which is used for inflation-adjusted compounding and discounting
13. Inflation rate indicators and their consideration in investment projects.
14. Formation of the level of income from investments taking into account the rate of inflation.
15. What is the essence of post- and prenumerando cash flows?
16. Causes of risks in investment activities.
17. Describe the concept of “investment risk”.
18. Types of investment risks by areas of manifestation.
19. Concept of systematic and unsystematic investment risks.
20. Types of investment risks by quantitative assessment of the level of risk.
21. Acceptability criteria for investment projects depending on the level of risk.
22. Peculiarities of formation of the necessary level of profitability taking into account the risk.
23. “Premium” for risk. “Line of reliability of the market”.
24. Liquidity of investments and their assessment.

25. Classification of liquidity of enterprise assets.
26. Criterion of the level of financial losses during transformation into cash.

Recommended literature

1. Frank J. Fabozzi, Sergio M. Focardi & Caroline Jonas (2014) Investment management: a science to teach or an art to learn? CFA Institute research foundation.

2. Ephreim Matanda (2020). Modern Financial Investment Management. Cambridge Scholars Publishing.

3. Security analysis and investment management. Lessons 1 to 6. URL : <http://icdeolhpu.org/downloads/course-406FM-02.pdf>.

4. Preeti Singh. (2016) Investment Management. Himalaya Publishing House Pvt. Ltd., Mumbai. URL : <http://www.himpub.com/documents/Chapter1893.pdf>.

5. Scientific journal “Investment management and Financial Innovations”. URL: <https://www.businessperspectives.org/index.php/journals/investment-management-and-financial-innovations>.

TOPIC 4. ASSESSMENT AND FORECASTING OF INVESTMENT MARKET DEVELOPMENT

4.1 The concept of the investment market

4.2 Methods of analysing the investment market situation

4.3 Assessment of the country's investment attractiveness

4.4 Assessment of the investment attractiveness of economic sectors

4.1 The concept of the investment market

The investment market (investment and investment goods market) is a set of economic relations between sellers and consumers of investment goods and services, as well as investment objects in all their forms, that is, the investment market is the sphere of market relations where investment demand is formed and offer.

The essence and role of the investment market is most fully revealed in its functions, the main of which are:

- mobilization of temporarily free savings of private individuals, private businesses, state bodies, foreign investors and transformation accumulated funds in investment capital;
- effective distribution of accumulated investment capital among end consumers;
- financial service to the participants of the economic cycle and financial support for the processes of investment in production,

expansion of production and equity participation based on the determination of the most effective directions of capital use in the investment sphere;

- impact on monetary circulation and acceleration of capital turnover, which contributes to the activation of economic processes;
- formation of market prices for certain types of investment goods, tools and services;
- insurance activity and formation of conditions for minimizing investment and commercial risks;
- implementation of qualified mediation between the seller and the consumer of investment goods and instruments;
- implementation of investment intentions of market participants.

Types of investment markets:

1) objects of real investment, which is divided into markets:

- capital investments - investment takes place in various types and forms: capital new construction, technical re-equipment and modernization, expansion;
- privatization objects – developed in connection with the privatization of state-owned enterprises;
- real estate – market objects are land plots, enterprises, buildings and structures of various uses;
- objects of innovative investment – the object of purchase and sale on this market is an innovative product (technique, technology, organization, management);

- services in the field of real investment - the object is such services as preparation of business plans of real investment projects, design of individual objects and technological processes, provision of consulting services, etc.;

- other objects of real investment;

2) financial investment instruments, which are divided into markets:

- securities. There are specific financial instruments in circulation on the market - securities;

- monetary, which is represented by such investment instruments as cash deposits. The money market is divided into accounting, interbank and currency markets;

- precious metals. The object of purchase and sale is precious metals, primarily gold;

- services in the field of financial investment. The object of circulation is intermediary services; related to the registration and investment of securities, etc.

Principles of functioning of developed highly efficient investment markets:

- social justice, which involves the creation of equal conditions and opportunities for all participants to access the investment market, preventing discrimination of the rights of market subjects;

- the reliability of protecting the interests of market participants, which requires the creation of the necessary conditions, ensuring the protection of their rights;

- competitiveness, creation of equal conditions for competition between participants of the investment market for the most favourable conditions, prevention of unfair competition and monopoly in the market, establishment of non-monopoly prices in the market;

- transparency and openness – provides for providing market participants with complete and reliable information regarding the terms of implementation of investments and investment services, prevention of discrimination of service consumers, application of generally recognized standards for submission of information by financial institutions about their activities;

- legal order - involves the creation of a developed legal infrastructure, ensuring market activity, which clearly regulates the rules of relations between market subjects;

- efficiency achieved by maximizing market potential to ensure accumulation and effective distribution of investment capital among end users;

- controllability, i.e. the creation of a reliably functioning mechanism of supervision and control over the activities of professional market participants and their operations, prevention of abuse and violations of legislation.

On the investment market, there are entities (sellers-intermediaries-buyers) who participate in the purchase of investment goods and services, as well as investment objects in all their forms.

I. By role:

- sellers are direct participants of the investment market, performing the main functions of conducting investment operations on it;

- buyers are consumers of investment goods and services, as well as investment objects in all their forms.

II. By form:

- business entities, thanks to participation in the investment market, realize their needs for attracting additional resources, making investments, etc.;

- households - households of individual citizens and their families, which are important suppliers of investment resources and consumers of various services;

- the state regulates the investment market, determines the rules for operations, provides supervision and control over the activities of market entities;

- local authorities.

III. By functions:

- issuers – the state, enterprises, institutions, organizations that issue securities;

- investors – subjects of the investment market, investing capital in investment objects for the purpose of making a profit;

- institutional investors – pool the capital of individual investors for the purpose of joint financial investment. Institutional investors include banks, investment funds, etc.

- financial intermediaries - financial institutions that, through the implementation of various financial transactions, ensure the accumulation of available capital in society and its redistribution;

- market infrastructure institutions – a system that ensures the circulation of financial assets and serves the processes of providing financial services. Institutions of market infrastructure include stock, currency and commodity exchanges, etc.

IV. According to the forms of concluding agreements:

- sellers and buyers;
- financial intermediaries; • subjects performing auxiliary functions.

In the investment market, agreements can be concluded:

- directly, i.e. directly between the seller and the buyer investment goods, tools and services (seller-buyer);

- indirectly, that is, with the involvement of a financial intermediary (seller-intermediary-buyer).

In addition, any of these forms of agreements can be concluded with the help of entities performing auxiliary functions.

V. By belonging to a certain country:

- internal participants – resident individuals and legal entities registered in accordance with national legislation; national and local government authorities;

- external participants – foreign natural persons and legal entities registered in accordance with the legislation of other countries, as well as foreign states.

VI. According to the market structure, the following entities are distinguished:

- real investment objects and goods, which, in turn, are divided into sellers of real investment objects and goods - in their capacity are authorized state bodies, owners of non-state enterprises and natural persons and buyers of real investment objects and goods - as buyers there are holding and other companies, labor groups and individuals on the market;

- real investment, divided into contractors (sellers of services) - they can be consulting firms, various specialized design firms and institutes, construction firms and companies, and customers (buyers of services), in the capacity of which there are enterprises and other investors on the market that carry out investment activities and require the appropriate services of third-party contractors;

- securities, divided into issuers and investors;

- monetary instruments of investment, divided into creditors (depositors) - subjects of the investment market that provide loans on the terms of payment and repayment (creditors are state and

commercial banks and non-bank financial institutions) and borrowers who receive a loan from creditors under certain guarantees of their return and for a certain payment in the form of interest;

- foreign exchange market, divided into currency sellers, represented by the state, commercial banks, enterprises, natural persons, and currency buyers, who are the same subjects as sellers;

- precious metals, divided into sellers of precious metals, which are the state, commercial banks, legal entities and individuals, and buyers of precious metals, which are the same entities as sellers;

- in the field of financial investment. The main types of subjects are also sellers and buyers (the main buyers are enterprises of the real sector of the economy that make financial investments).

4.2 Methods of analysing the investment market situation

The state of the investment market as a whole and its individual components are characterized by such elements as demand, supply, price and competition.

The combination of these elements is constantly changing, therefore it is important for every investor to know what level of activity of the investment market as a whole or its individual components should be oriented when developing an investment strategy and forming an investment portfolio.

The degree of activity of the investment market, the combination of its individual elements is determined by studying the market situation.

The investment market situation is a form of detection in the investment market as a whole or in its individual segments of the system of factors (conditions) that determine the ratio of demand, supply, prices and competition. The investment market situation has four stages:

1) upswing in economic conditions – associated with increasing the activity of market processes in connection with the revitalization of the economy as a whole. It is characterized by an increase in the volume of demand for investment objects, an increase in the price level, and the development of competition among investment intermediaries.

2) economic boom - associated with a sharp increase in demand for all investment goods, which the supply, despite the growth, cannot satisfy. At the same time, the prices of all investment objects are rising, the incomes of investors and investment intermediaries are increasing.

3) the weakening of the economic situation is associated with a decrease in investment activity due to the decline in the economy as a whole, relatively full saturation of demand for investment objects and some excess of their supply. A characteristic feature is first stabilization, and then a decrease in prices for most investment

objects. Incomes of investors and investment intermediaries are decreasing.

4) economic downturn – the most unfavorable stage, which is characterized by the lowest level of demand and a reduction in the supply of investment objects. Prices for investment objects are significantly reduced, incomes of investors and investment intermediaries fall to the lowest possible level (losses).

Constant changes in the investment market situation require systematic research and monitoring. The study of the investment market situation includes:

1. Current monitoring of investment activity and, first of all, in those market segments in which investment activity is planned or is already being carried out. Current monitoring of the state of the investment market requires the formation of a system of indicators that characterize its individual elements (demand, supply, prices, competition), as well as their constant monitoring. The results of current monitoring of the investment market are recorded in tabular or graphic form.

2. Analysis of the current situation and trends in its development. Features of specific segments of the investment market and those changes occurring in the market at the time of observation compared to the previous period are revealed. The analysis is carried out in two stages: in the first stage, indicators are calculated that characterize the current situation of the investment market (on the basis of informative

indicators of current observation). At the second stage, the prerequisites for changing the current economic stage of the investment market are revealed.

3. Forecasting the economic situation for choosing the main directions of the strategy of investment activities and forming an investment portfolio. The main task is to determine the trends of factors that shape the investment climate and will affect the market in the future.

The forecast of the investment market situation has three stages:

1. Selection of the forecasting period. Short-term forecast (up to 1 year) - for the development of investment tactics and the formation of an investment portfolio at the expense of various short-term financial instruments.

Medium-term forecast (from 1 to 3 years) - for adjusting the strategy of investment activity; formation of an investment portfolio at the expense of small capital-intensive real investment objects and various long-term financial instruments; reinvestment of funds invested in ineffective investment projects. The long-term forecast (more than 3 years) is primarily related to the development of an investment activity strategy and the formation of an investment portfolio at the expense of large capital-intensive objects of real investment.

2. Determination of the depth of predictive calculations. It depends on the investment activity and is related to the degree of

segmentation of the investment market. In the process of such segmentation, individual industries, sub-industries, regions, etc. can be singled out.

3. Selection of forecasting methods and implementation of forecast calculations. Forecasting the investment market situation is carried out by two main methods:

- the factor (fundamental) method is based on the study of individual factors that affect demand, supply, price, and the level of competition, as well as on the determination of possible changes in these factors in the future period (general economic, internal market);
- the trend (applied, technical) method extends the business trend identified during the analysis to the future period. This method is not accurate enough and can only be used for short-term forecasting.

Both methods can be supplemented by the method of expert evaluations.

The process of studying the investment market consists of a number of successive stages:

The first stage is the evaluation and forecasting of macroeconomic indicators of the development of the investment market. This assessment allows you to determine the investment climate in the country and the effectiveness of the conditions of investment activity at certain stages of its development.

The second stage is assessment and forecasting of the investment attractiveness of economic sectors.

The third stage is the assessment and forecasting of the investment attractiveness of the regions.

The fourth stage is an assessment of the investment attractiveness of individual enterprises.

Such a sequence of studying the investment market and its individual segments allows you to get reliable information for developing an investment activity strategy and forming an effective investment portfolio.

The functioning of the investment market largely depends on the investment climate. Investment climate is a generalized characteristic of a set of social, economic, organizational, legal, political, socio-cultural prerequisites that determine the state's attractiveness for investment.

The narrowed approach of assessing investment climate is based on the assessment of the dynamics of the gross domestic product, national income and the volume of industrial production, the dynamics of the distribution of national income, the proportions of accumulation and consumption, the privatization process, the state of legislative regulation of investment activities, the development of individual investment markets. This approach is based on the premise that only the optimal rate of accumulation can ensure long-term, stable development of the economy. This approach is quite simple, as it reflects the main goal of any investor – to make a profit and return the invested funds

The factor approach is based on the assessment of a set of factors affecting the investment climate.

A list of the main factors shaping the investment climate is given in Table 4.

Table 4. Factors forming the investment climate

Factor	Characteristic
Natural resource potential	Provision of the territory with resources, bioclimatic potential, availability of free land for industrial investment, level of provision of natural, labor, energy and other resources, ecological security of the territory
Factors of the market environment	Market infrastructure development, the impact of privatization on investment activity, the inflation rate, the development of a competitive business environment, the capacity of the local sales market, the intensity of inter-economic relations, export opportunities, the presence of foreign capital
Financial and credit potential	Budget revenues, availability of financial resources from the state and regional budgets, availability of funds of extrabudgetary funds per capita, the level of bank interest, the share of long-term loans, the amount of contributions per capita, the share of unprofitable enterprises
Economic potential	Volume of GDP, development of branches of material production, the degree of wear and tear of the main production assets, etc
Investment potential	The number of contracting construction organizations of all forms of ownership, project enterprises and architecture, volumes of unfinished construction, the level of development of mechanical engineering, production of building materials, development of the construction base
Infrastructure potential	Development of the banking system, the number of banks and insurance organizations
Scientific, technical and innovative potential	Volumes of innovations, number of enterprises implementing innovations, level of development of science

Political and legal features	The degree of trust of the population in the regional government, the relationship between the central and regional government, the level of social stability, the state of national-religious relations, the legal basis, the clarity, flexibility and stability of the current legislation, the effectiveness of law enforcement agencies
Personnel potential and social conditions	Population, including labour forces, the level of personnel training, the standard of living of the population, housing and living conditions, the development of medical services, the prevalence of alcoholism and drug addiction, the level of crime, the amount of real wages, the impact of migration on the investment process, the attitude of the population to domestic and foreign entrepreneurs, working conditions for foreign specialists
Organizational and managerial	The attitude of the authorities to foreign investors, the level of efficiency in making decisions about the registration of enterprises, the availability of information, the professionalism of the local administration, the conditions for the movement of capital, goods and labour, business qualities and ethics of entrepreneurs

When evaluating the investment climate using the factor approach, the aggregated indicator can be the sum of the set of weighted average estimates for all factors, which is calculated according to the formula:

$$Q = \sum(X_j * P_j), \quad (18)$$

where Q is the total weighted assessment of the investment climate, region, industry;

X_j is the average score of the j th factor for the region, industry;

P_j is the weight of the j th factor.

A summary indicator of the assessment of the investment climate can serve as a certain criterion for the attractiveness of a particular

economic system for investment. Also, it can be supplemented with information about the development of certain factors that have a direct impact on the state and dynamics of the investment climate. When making a decision about an investment object, each investor has the right to focus on his own set of factors.

Advantages of the factor approach:

- 1) Taking into account the interaction of many factors-resources, as well as the hierarchy of the national economic system.
- 2) Use of statistical data.
- 3) A differentiated approach to different levels of the economy, regions when determining their investment attractiveness.
- 4) Striving to ensure the most efficient use of all possible sources of investment.

However, the use of a factor approach in the assessment of the investment climate has a number of disadvantages, namely: the concept of investment climate is not associated with the assessment of investment risk; the essence of different categories of investment and business climate is not defined; the investment climate is associated with investments in the real sector of the economy and investments in fixed capital; it is difficult to distinguish between investment climate and investment potential.

Risk approach – two main options are considered as components of the investment climate:

- investment potential and investment risk;

- investment risk and socio-economic potential.

Sometimes only risk is taken into account, while investment risk is defined as the possibility or probability of complete or partial non-achievement (failure to receive) the results of investments expected by investors.

The main factors of the formation of a favourable investment climate:

- reduction of administrative barriers to investment activity;
- formation of an effective financial system;
- reduction of interest rates to a level that corresponds to the efficiency of investments in the real sector of the economy, while ensuring a balanced budget and further reduction of inflation;
- tax reform, which provides for expansion of investment opportunities of market subjects based on streamlining, simplification and structural restructuring of the existing tax system, as well as improvement of depreciation policy;
- increasing the investment attractiveness of enterprises based on solving the problem of the “effective owner”;
- formation of organizational and legal prerequisites for reducing investment risks on the basis of strengthening the judicial system and increasing guarantees for the protection of investors’ rights, stimulating the transformation into real investments of public savings, direct investments of internal and external strategic investors;

- reduction of the uneven investment attractiveness of Ukrainian regions, which have deep differences both in the level of economic development and in the level of risks of long-term investment in fixed capital;

- increasing the efficiency of the use of budgetary investment resources.

Indicators of improvement of the investment climate:

- increasing efficiency and increasing the volume of investments with a simultaneous increase in the share of innovative investments in their structure;

- improving Ukraine's credit rating, which is published by leading international rating agencies, which ensures a reduction in the cost of borrowing on the global capital market for both the state and Ukrainian corporations;

- improving the quality of investment legislation;

- development of the infrastructure of the investment market (primarily – recapitalization and increasing the reliability of the functioning of the banking system);

- improving the quality of life of the population due to the implementation of investment projects for the development of the social sphere;

- anticipatory growth of investment activity in the depressed regions of the country, which ensures a gradual reduction of their multiple lagging behind the most developed regions.

4.3 Assessment of the country's investment attractiveness

Investment attractiveness is a set of objective features, properties, means and opportunities that determine the potential solvent demand for investments.

The ranking of the countries of the world community according to the investment climate index, or risk index, is a general indicator of the country's investment attractiveness for foreign investors. In Ukraine, there is no unified system for assessing the investment attractiveness of the country and its individual regions, so foreign investors are guided by the assessments of numerous consulting firms that regularly monitor the state of investment attractiveness in many countries of the world, including and in Ukraine. According to these estimates, Ukraine is at a very low level.

Standard & Poor's, Moody's Investors Services, Institutional Investor, Euromoney, and Business Environment Risk Index (BERI) are among the most well-known Western investment climate assessment systems.

Standard & Poor's rating. To determine the sovereign rating, deductive and inductive methods of analysis are used. In the process of deductive analysis, global systemic factors are considered, which, as is known from experience, affect the probability of occurrence and scale of sovereign defaults. For this purpose, quarterly trend models

are built and periodic reviews of the assessment of the dynamics of global financial risks are conducted.

The inductive method uses the analysis of fundamental indicators affecting the level and dynamics of the creditworthiness of a specific national government. The research is carried out in eight main directions, which makes it possible to take into account all important factors that can lead to sovereign default.

According to the methodology of Standard & Poor's experts, the effectiveness of the government of the studied country is evaluated on a scale from one (highest result) to six points (lowest result) for each area of analysis.

Standard & Poor's methodology consists of the following analytical blocks:

1. Determination of the level of political risks, which is calculated considering the following areas:
 - form of government and degree of adaptability of political institutions;
 - the degree of participation of the population in the management of the country;
 - orderliness of the procedure for the transfer of power (succession of power);
 - availability of consensus regarding the goals and objectives of economic policy;

- the degree of integration into the global trade and financial systems;

- internal and external threats to national security.

2. Analysis of the population income structure and the structural organization of the economy. It involves the assessment of the following factors:

- living conditions and income level of the population, distribution of public wealth;

- ratio of market and non-market economy;

- the structure of labour resources and the degree of their diversification.

3. Prospects for economic growth, which are analysed in terms of the following aspects:

- volume and structure of savings and capital investments;

- rates and nature of economic growth.

4. Analysis of the degree of flexibility of tax and budget policy, which is evaluated in three main areas:

- the results of the fiscal activity of the national government and the balance of the budget;

- competitiveness of the taxation system, the degree of flexibility in the area of increasing taxation rates;

- factors causing the growth of public expenditures.

During the analysis of the tax and budget policy of any state, the agency's experts focus on three interdependent factors, namely:

- purposes for which the public sector borrows;
- their impact on state debt;
- influence on the dynamics of inflationary processes.

5 The burden of the state debt, which is analysed in the following areas:

- the size and structure of the state's financial assets in statics and dynamics;

- the amount of public debt in relation to GDP and the scheme of payments for it;

- currency structure of the state debt;

- obligations of the state to pay pensions;

- contingent liabilities of the banking system, corporations and other institutional units.

6 Price stability, which is determined from the content of the analysis conducted in the following directions:

- the trend of price inflation development;

- rates of growth of the money supply and volumes of emission financing of the state budget;

- exchange rate policy;

- degree of independence of the central bank.

7 Study of the flexibility of the balance of payments, which is carried out in the following areas:

- the impact of tax and budget policy on the state of foreign operations accounts;

- structure of current account accounts;
- structure of capital flows.

8 External debt and international liquidity, which can be determined by the following components:

- volume and currency structure of external debt;
- volume of contingent liabilities.

The international rating agency Standard & Poor's uses the following scale of credit ratings:

AAA – a very high ability to fulfil one's debt obligations on time and in full; the highest rating;

AA – high ability to fulfil one's debt obligations on time and in full;

A – moderately high ability to fulfil one's debt obligations on time and in full;

BBB – sufficient ability to fulfil its debt obligations on time and in full, but higher sensitivity to the impact of adverse changes in commercial, financial and economic conditions;

BB – out of danger in the short term, however, higher sensitivity to the impact of adverse changes in commercial, financial and economic conditions;

B – higher vulnerability in the presence of unfavourable commercial, financial and economic conditions, but at this time there is an opportunity to fulfil debt obligations on time and in full;

CCC – today there is a potential possibility of the issuer defaulting on its debt obligations;

CC – today there is a high probability of the issuer defaulting on its debt obligations;

C – bankruptcy proceedings or a similar action has been initiated against the issuer, but payments or fulfilment of debt obligations continue;

SD, D – respectively, selective and complete default on debt obligations.

Moody's Investors Services rating. Quantitative analysis is carried out by Moody's Investors Services agency experts based on determining the value of six separate factors that characterize the country's ability to fulfil its obligations in full and on time.

1. Liquidity, which characterizes the current ability to service debt:
 - amount of reserves as a percentage of the deficit of current items of the balance of payments;
 - the amount of reserves (dynamics) to cover the import deficit.
2. Economic and social stability is a factor used to determine the current and prospective ability to service the debt. The following indicators are calculated in this analytical block:
 - growth (fall) of GDP per capita;
 - actual growth (fall) of GDP;

- the structure of sources of replenishment of the budget and its expenses. According to the Maastricht Treaty, the deficit of the state budget should not exceed 3% of the annual value of GDP/GNP;

- electricity consumption per capita;
- percentage of attendance at secondary special and higher educational institutions.

3. The level of financial stability in statics and dynamics, with forecast elements:

- dynamics of the consumer goods price index;
- amount of money reserves and money supply as a percentage of GDP.

4. The state of the balance of payments, which characterizes the assessment of cash flows and financial relationships:

- increase (decrease) in the export level;
- balance and structure of foreign trade;
- amount of net direct investment as a percentage of the deficit of current items of the balance of payments.

5. Financial incentives – the level of this factor indicates the ability of the country’s leadership to direct currency resources to productive markets as opposed to the “flight” of capital from the country. The analysis is carried out according to the following indicators:

- the actual level of all types of interest rates. Interest rates on bank loans.

6. Amount and maintenance of external and internal debts:

- external public debt as a percentage of GDP. According to the Maastricht Treaty, the amount of public debt should not exceed 60% of the annual GDP/GNP;
- external debt service ratio (ratio of debt payments to exports of goods and services).

Institutional Investor rating. In order to more accurately determine the level of creditworthiness of a specific country, the integral indicator of the International Investor magazine is used. The determination of the level of risk (for more than 135 countries) is based on a survey of bankers who identify, evaluate and weigh the most significant factors for countries. The obtained scores are averaged, the final rating ranges from 0 (very high probability of default) to 100 (minimum probability of default). Each analysed country is ranked by experts on a rating scale from 0 (least creditworthy) to 100 (most creditworthy).

Euromoney rating. The evaluation methodology, calculation and analytical procedures and the system of expert evaluations were developed and implemented by specialists of the leading economic bodies of Switzerland, Denmark, Great Britain, and Germany.

In their evaluation model, Euromoney analysts group the investigated indicators in a table, on the basis of which an integral indicator of reliability is calculated (a scale of points from 0 to 100). The integral indicator is formed on the basis of an assessment in nine

categories, eight of which have a scale from 0 to 10 points, and one indicator – the political risk indicator – has a scale from 0 to 20 points. A higher score corresponds to the most positive value of the relevant factor (that is, maximum reliability and, accordingly, minimum investment risk). The composition of private indicators, both qualitative and quantitative, includes the following:

- 25% – economic indicators assessed by experts (35 experts in the field of world economy from leading financial institutions and other economic centres are involved in the assessment). The following factors are taken into account: the dynamics of economic growth, the degree of its stability, the stability of the monetary system, the state of the current balance of payments, the size of the budget deficit, the unemployment rate, the presence of structural disparities, etc.;

- 25% – political risk factors, which are also assessed by experts. A group of experts, including analysts in the field of insurance and banking workers, gives an assessment of the political situation in each country on a 10-point scale (10 points mean that the risk of defaulting due to changes in the political situation in a particular country is minimal, and a score of zero indicates a very high risk);

- 10% – external debt factors. This indicator is calculated on the basis of statistical information published by the World Bank in tables of world debt. The lower the result shown in the tables, the better the state of external debt;

- 10% – unpaid or restructured debts. Based on the same publications of the World Bank, the amount of external debt is determined on a 10-point rating scale (a rating of 10 means that debt repayment is strictly on schedule, and 0 points means that all debt is “problematic”);

- 10% - government debt rating – credit rating. Countries that do not have a rating or those whose rating is lower than “BB” receive a score of 0. Countries that have a rating only in relation to short-term loans are equated to countries of the “BBB” category;

- 10% – access to bank loans. The assessment is based on determining the amount of long-term loans of banks not guaranteed by the state, expressed as a percentage of the annual GNP published by the World Bank;

- 10% – indicators of access to short-term loans. Borrowers of group I receive a score of 10, borrowers of group II – a score of “5” and borrowers of group III – a score of 0;

- 5% – indicators of access to capital markets. The analysis is carried out by Euromoney experts, who determine how easily the country could place loans on the international bond market or receive a syndicated trade credit. A score of 10 means that there would be no problems. A score of 8 is a 95% probability of a problem, and the assignment of 6 points indicates that, in principle, the borrower should not face problems. If the experts assign a score at level 4, then the placement of the loan is determined by the conditions of its placement,

and a score of 2 indicates that serious difficulties may arise in a number of cases. A zero rating indicates the impossibility of placing a loan;

- 5% - discount for forfeiting. Countries for which forfeiture operations are not available receive a score of 0.

The resulting value ranges from 0 (maximum risk) to 100 (minimum risk). The resulting numerical values are transformed into ten-letter categories from AAA to N/R.

The BERI rating assesses political stability, presence of foreign investment, balance of payments, economic growth rates, infrastructure, etc. About 100 experts are engaged in its definition, who, using various methods of expert evaluations, conduct analysis four times a year. In this methodology, the assessment is based on the arithmetic mean of three components:

a) political risk (weighted assessment) – 10 political and social variables grouped into four clusters (Lrquant):

- exchange rate dynamics – information published in the IMF statistical guide is used for the assessment. The weight of this factor is 30%;

- external debt service – 30%;

- dynamics and structure of gold and foreign exchange reserves – 30%;

- size, structure and execution of the budget – 10%;

b) operational risk – weighted assessment with the help of experts – includes 15 economic, financial and structural variables (Lrqual);

c) R-factor is a weighted assessment of the legislative system, level analysis legal risk, risk of loss of reputation (Lrenvir).

The final value is formed on the basis of the obtained evaluations for individual components. At the same time, the Lrquant component has a weight of 50%, and Lrqual and Lrenvir – 25% each. In this way, an analysis of all aspects of the political and economic situation in the country is carried out on the basis of the obtained business risk index.

4.4 Assessment of the investment attractiveness of economic sectors

Assessment of the investment attractiveness of industries is carried out quite rarely, Ukraine has not developed a single methodology for such an assessment.

The World Bank formed the following criteria for assessing the investment attractiveness of the industry (sub-industry):

- market (market size, growth rate and potential; cyclical demand; price elasticity, profitability, product differentiation);
- competitive;
- barriers to entry into the industry (availability of distribution capital, access to them; access to raw materials; protection from the

state; social problems of the industry that may negatively affect the entry of capital into branch);

- barriers to the exit of the enterprise from the industry (existing restrictions of the state and social order that prevent exit from the industry; specialization of assets, as well as the possibility of their repurposing and use for another purpose);

- relations with suppliers;
- technological factors;
- social factors.

In Ukraine, the majority of scientists and practitioners, when assessing the investment attractiveness of the industry, take as a basis the methodology proposed by I. Blank, which is based on the use of the following components:

1. The level of prospects for the development of the industry (sub-industry):

- the importance of the industry in the country's economy – the quantitative assessment of this indicator is determined by finding the specific weight of the industry's (sub-industry) products in the GDP;

- resilience of the industry to the economic downturn – determined on the basis of the analysis of the ratio of the dynamics of the volume of industry production and the dynamics of GDP;

- the social importance of the industry is calculated as the ratio of the number of employed population in the industry (sub-industry) to the number of employed population in the country;

- provision of one's own development resources is defined as the ratio of the volume of capital investment in the industry (sub-sector) as a whole to the volume of capital investment at the expense of one's own funds;

- the level of state support for the industry (sub-industry) is calculated as the ratio of the volume of government orders in the industry to the volume of sales of the industry;

- stage of the life cycle of the industry – such an assessment is carried out only for those branches of the economy, the development of which is carried out according to separate stages of the life cycle.

2. The level of average industry profitability of the industry (sub-industry):

- assets;
- own capital;
- sale of products;
- current costs.

3. Level of investment risks:

- coefficient of variation of the average industry profitability of own capital for individual years of the analysed period;

- coefficient of variation of profitability indicators in the section of individual enterprises of the industry;

- the level of competition in the industry, which is calculated as the ratio of the number of enterprises in the industry to the total number of enterprises;

- the level of social tension in the industry is calculated as the ratio of the average salary in the industry to the subsistence minimum;
- the level of inflation stability is calculated as the ratio of the rate of inflation in the industry to the rate of inflation in the country.

On the basis of three elements and their ranking value in the general characteristics of investment attractiveness, an integral indicator of the level of investment attractiveness of individual sectors of the economy is calculated in three stages

Stage I – the ranking importance of the economic sector is calculated for each element of the assessment, which is defined as the average ranking importance for all analytical indicators included in this element.

Stage II – the integral ranking indicator of the investment attractiveness of the industry is calculated. The assessment is carried out by an expert, the importance of individual elements is established accordingly:

- 20% – the level of prospects for the development of the industry;
- 65% – the level of average industry profitability of the enterprises of the industry;
- 15% is the level of industry investment risks.

Stage III – the grouping of economic sectors is carried out, in the process of which priority sectors are established according to the level of investment attractiveness; industries with a high level of investment

attractiveness; industries with medium and low levels of investment attractiveness.

There are also other methods to analyse investment climate as states, as well of regions, industries etc. You can find information about them during your independent work.

Questions for self-control

1. Define the term “investment market”.
2. Name the main functions of the investment market.
3. What types of investment markets do you know?
4. Describe the main principles of the investment market.
5. By what signs is the classification of investment market subjects carried out?
6. Define the term “investment climate”.
7. Describe a narrow approach to assessing the investment climate.
8. What is the essence of the factor approach to the assessment of the investment climate.
9. Describe the risk-based approach to assessing the investment climate.
10. Define the term “investment attractiveness”.
11. Methods of determining the country's investment attractiveness.

12. Criteria for assessing the investment attractiveness of the industry.

13. Describe the methodology proposed by I. Blank for assessing the investment attractiveness of economic sectors.

14. Describe the methodology for assessing the investment attractiveness of economic sectors, which is based on the calculation of the β coefficient.

15. Give a comparative description of the existing methods used to assess the investment potential of the region.

16. Describe the methodology proposed by I. Blank for assessing the investment attractiveness of the region.

17. What methods of assessing the investment attractiveness of an individual enterprise do you know?

Recommended literature

1. Frank J. Fabozzi, Sergio M. Focardi & Caroline Jonas (2014) Investment management: a science to teach or an art to learn? CFA Institute research foundation.

2. Ephreim Matanda (2020). Modern Financial Investment Management. Cambrifge Scholars Publishing.

3. Security analysis and investment management. Lessons 1 to 6.
URL : <http://icdeolhpu.org/downloads/course-406FM-02.pdf>.

4. Preeti Singh. (2016) Investment Management. Himalaya Publishing House Pvt. Ltd., Mumbai. URL : <http://www.himpub.com/documents/Chapter1893.pdf>.

5. Investment management risk assessment: marketing and selling practices. A report on the technical committee of the International Organization of Securities Commissions. URL : <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD156.pdf>

TOPIC 5. INVESTMENT RESOURCES OF THE ENTERPRISE

5.1 The essence of the enterprise's investment resources, their characteristics

5.2 Sources of formation of investment resources

5.3 Principles of formation of investment resources

5.4 Assessment of the cost of investment resources

5.1 The essence of the enterprise's investment resources, their characteristics

Investment resources mean all types of monetary and other assets of the enterprise that can be used for investment activities. They can be understood as all types of property and intellectual values that can be invested in entrepreneurial activity.

Types of investment resources are usually classified according to certain characteristics.

According to the Law “On Investment Activity”, the values necessary for entrepreneurial activity include:

- cash, targeted bank contributions, units, shares and other securities;

- movable and immovable property (buildings, premises, equipment) and other tangible assets;

- property rights arising from copyright, experience and other intellectual values, formalized in the form of technical documentation, skills and production experience, which are necessary for the organization of one or another type of production, but unpatented (“know-how”);

- a set of technical, technological, commercial and other knowledge, formalized in the form of technical documentation, skills and production experience, which are necessary for the organization of one or another type of production, and also non-patented;

- rights to use land, water, resources, premises, structures, equipment, other property values.

Investment resources are attracted by enterprises to make investments in financing objects in the form of financial, material, intangible and labour resources.

The priority of the forms of investment resources may differ at enterprises of different organizational and legal forms, however, all the specified components are mandatory for the implementation of effective investment activities.

5.2 Sources of formation of investment resources

In general, the formation of investment resources is a rather complex process. The main thing in the process of formation of investment resources is the determination of their sources (Table 5).

Table 5. Sources of formation of investment resources

Internal resources:	External resources:		
	Borrowed resources	Involved resources	Free financing
Share capital; profit (after taxation); sale of assets; reduction of working capital;	bank loans (including factoring, forfeiture, mortgage); commercial credit; leasing; franchising;	issue of shares; investments of state programs; charitable funds	funds of centralized associations of citizens; budget investment allocations; extrabudgetary funds

We also can perform main investment resources on the figure 15.

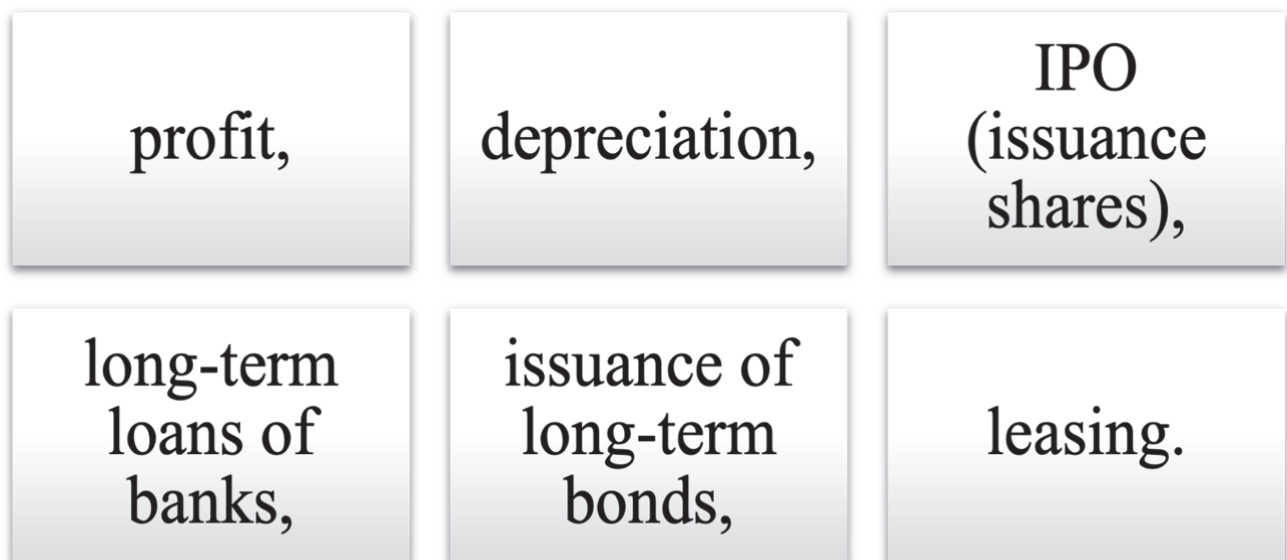


Figure 15. Main investment resources of an enterprise

It is customary to divide the sources of investment resources into:

1) internal. They are used most often to finance small-scale projects (for example, the implementation of a system of quality standards, modernization of some types of equipment, modification of products, etc.). Among them, the following are distinguished:

- share capital. It is formed both from the money of shareholders and at the expense of income from property (structures, buildings, vehicles, equipment, raw materials), securities and others;

- profit (after paying taxes) - it has an important place in the set of internal sources of financial resources. It makes up the majority of own financial resources, ensures growth of own capital;

- sale of assets. Assets of the enterprise are material elements that take a direct part in the production process (machines, machines, equipment, tools, devices, household equipment, buildings, structures, vehicles, etc.). The company can sell assets if there is no need for them, or if it wants to receive additional funds, which can be directed to investment purposes;

- reduction of working capital. Working capital means the part of the enterprise's capital invested in its current assets (cash and their equivalents, other assets intended for sale or consumption within a period not exceeding one year). The sale of these current assets can bring a certain profit to the enterprise, which is a source of investment resources;

- depreciation charges play a significant role in the composition of internal sources of project financing, especially for enterprises with a high cost of capital and intangible assets. The economic role of depreciation consists in the actual reimbursement of operating fixed assets, in addition, the corresponding depreciation deductions reflect the real depreciation of fixed capital in the process of production and provision of services and are applied to the costs of business entities;

2) external, which are usually divided into:

a) loan funds:

- bank loans (including factoring, forfeiting, mortgage) - the essence is that an individual or legal entity receives money or goods on credit under certain conditions for their return (term, bank loan rate, purpose of loan, security) ;

- commercial loan - received at any enterprise that has the opportunity to provide such a loan. An appropriate non-cash agreement is concluded between the seller (creditor) and the buyer (borrower), the instrument of which is a promissory note;

- leasing - is one of the methods of investment, when a company with free financial resources can participate in the financing of business projects of other companies (most often small and medium-sized), whose funds are not sufficient for full-scale financing of these projects. It is used when solving the task of rapid industrial development of major technical innovations, which requires the purchase of expensive equipment;

- franchising - is the most complete financial scheme for attracting investment resources in the process of replicating innovative projects that have passed market approval. It involves the interaction of two parties - the franchisor (the party that is the owner of a certain intangible resource and dictates the terms of the contract) and the franchisee (the party that is ready to manufacture products according to the technology and conditions proposed by the franchisor);

- interest-free loans - can be granted, both by legal entities and individuals, on the condition of returning the principal amount of the loan without paying interest (as a rule, this type of loan is granted by interested persons);

- equity participation, establishment of joint ventures - is a mechanism of capital formation of enterprises at the expense of contributions from subjects of entrepreneurial activity under the conditions of distribution of rights and responsibilities in the management of the enterprise;

- special funds and programs - provide targeted support to enterprises and, thus, stimulate the development of certain industries national economy;

- issue of debt securities - issuance of bonds, promissory notes, savings certificates and other securities;

b) raised funds are a way to increase equity, because are not returned to the persons who provided them. Forms of raising funds are:

- issue of shares - a method of attracting investments through the additional issue of shares of the organization. Available only to those of them that have the organizational and legal form of private (closed) or public (open) joint-stock companies. Widespread in economically developed countries, but not popular in Ukraine, in particular due to insufficient development of the stock market. This source is paid because shareholders buy shares in anticipation of dividends. The insufficient amount of dividends may lead to the fact that the additional issue of shares to finance the innovative investment project will not be placed. Therefore, all circumstances related to the additional issue of shares must be carefully analysed and weighed;

- investments of state programs - in this case, certain economic relations arise between the enterprise and the state, which are expressed either in the enterprise's purchase of state securities, or in the receipt of budgetary or extra-budgetary loans from the state;

- funds of charitable funds;

c) free financing is based on receiving funds from budgets of various levels and funds from citizens' associations without obligation to return.

Forms of free financing are:

- funds of centralized associations of citizens;

- budget investment allocations;
- funds from extrabudgetary funds.

The sources of formation of investment resources are decisive for the choice of methods of their financing. The choice of methods of formation of investment resources depends on their required volume, duration of the investment project, interests of owners and other interested parties, support of the state and local self-government bodies.

Taking into account the mentioned factors, the main methods of financing the investment activity of the enterprise, in the order of their priority for business entities, include self-financing; debt financing; shareholding; financing through state subsidies and mixed.

Domestic enterprises are characterized by the mobilization of internal sources, that is, self-financing. However, very often self-financing is carried out in a hidden form, since the funds of domestic investors are returned to Ukraine through offshore zones in the form of foreign investments, although the real investor may be the owner of the enterprise himself.

We also can assume and perform types of funding financing (fig.16) that fulfil abovementioned information.

Equity financing: Raising funding from equity is a trade: you give up a share of ownership in your business in return for money. Taking a company public and selling stocks is one way to raise equity funding. Keeping it private and selling an ownership stake to venture capitalists is another.

Debt financing: Taking out loans is an everyday part of business finances. It has an advantage over equity in that you don't have to give up any control. The flip side is that you have to make regular payments on the loan, including interest.

Grants: Federal, state and local governments have various initiatives for supporting business. These include low-interest loans, but also grants for businesses that bring jobs into a community.

Figure 16. Types of funding financing

5.3 Principles of formation of investment resources

Formation of investment resources at the enterprise should be based on the following principles:

1) consideration of prospects for the development of investment activities. In the process of forming the volume and structure of investment resources, all stages of the investment process should be taken into account - pre-investment, investment and operational;

2) ensuring compliance of the amount of investment resources involved with the amount of investment needs of the enterprise. The general need for investment resources of the enterprise is based on calculations of the total volumes of real and financial investment;

3) ensuring the optimal structure of investment resources from the standpoint of effective investment activity. The conditions for the formation of significant final results of investment activity depend on the structure of the formed investment resources. The optimal structure ensures the financial balance of the enterprise's development in the process of investment activity, on the other hand, the suboptimal structure generates risks in the financial sphere of the enterprise, that is, it leads to the bankruptcy of the enterprise;

4) ensuring the minimization of costs for the formation of investment resources from various sources. Such minimization of costs is carried out in the process of managing the cost of capital, which is attracted for investment activities in order to obtain the maximum amount of net profit;

5) ensuring highly efficient use of investment resources in the process of investment activity. Investment resources that are temporarily unused may lose their value over time. Therefore, when forming investment resources, one should take into account inflation rates and other factors that will affect the value during the period of implementation of investment activities.

The process of formation of investment resources consists of several stages

In the process of formation of investment resources, enterprises must adhere to the following rules:

- use own sources as much as possible and external sources as little as possible;
- minimize the costs of attracting investment resources from various sources;
- optimize the capital structure used in the investment process.

Only reliable calculations of the ratio of own and borrowed funds with the optimal price of their use can ensure stable development of the enterprise.

5.4 Assessment of the cost of investment resources

In investment management, it is advisable to consider the value of investment resources in two aspects - as the value of the total aggregate investment resources (investment capital) of a business entity, and as the value of investment resources necessary for the implementation of a certain project.

The cost of investment capital is the necessary rate of income that a company must have in order to cover the costs of raising capital in the market.

The main factors determining the cost of investment capital: the riskiness of income, the weight of debt in the capital structure, the financial stability of the company and other factors. For example, if expected revenues and cash flow are variable, debt is high, the firm does not have a strong financial reputation, investors will buy the company's shares only when their risk is compensated by high returns. Conversely, steadily growing revenues, low debt and a good financial reputation enable the firm to issue bonds and stocks at low costs.

To estimate the cost of the investment capital of the business entity as a whole, the Weighted Average Cost of Capital (WACC) indicator is mainly used, which is determined by the formula:

$$WACC = W_d * C_d * (1-T) + W_p * C_p + W_z * C_z + W_e * C_e \quad (19),$$

where W_d , W_p , W_z , W_e – shares of loan funds, preferred shares, ordinary shares and retained earnings;

C_d , C_p , C_z , C_e – the share of the corresponding source in the capital of the company.

WACC calculation methodology:

- divide the amount of dividends on preferred shares by the amount that was mobilized by the sale of these shares;

- divide the amount of dividends on ordinary shares by the amount of funds that were mobilized by the sale of these shares and retained earnings;

- calculate the average calculated interest rate for borrowed funds;
- determine the specific weight of each of the defined sources of funds in the liabilities of the company's balance sheet;
- multiply the cost of funds for each source by the corresponding specific weight;
- summarize.

The price of equity capital is determined by the dividend policy of the business entity (the price of raising equity capital) in proportion to the share of equity capital in the organization's own funds:

$$C_s = p * \frac{U}{U+A+M+B}, \quad (20),$$

where CS – equity price;

p – the ratio of the amount of dividends to the market capitalization of the company (r/e-ratio);

U – share capital;

A – depreciation fund;

M – profit;

B - gratuitous income in the form of financial assistance from sponsors.

The cost of capital from common shares can also be calculated using the Capital Assets Price Model (CAPM). The use of this model is most common in conditions of a stable market economy with reliable data characterizing the profitability of the enterprise. The model uses the risk indicator of a specific firm, which is formalized

by the indicator β . This indicator is characterized by the following ratios:

$\beta = 0$, if the company's assets are risk-free;

$\beta = 1$, if the risk of the company's assets is at the average level on the market of all enterprises in the country;

$0 < \beta < 1$, if the company's assets are less risky in relation to other companies on the market;

$\beta > 1$, if the company's assets have a significant degree of risk.

Thus, the formula for calculating the cost of capital from the issue of ordinary shares will look like this:

$$C_E = C_{RF} + (C_M - C_{RF}) \beta, \quad (21)$$

where C_E is the cost of capital;

C_{RF} - profitability index for risk-free capital investments;

C_M - the average level of profitability on the market;

β – asset risk factor.

As most experts point out, one of the main problems is in the definition cost of capital under CAPM is that it is difficult to determine what the safe rate of return will be at a certain time and how to correctly determine the risk factor β . In countries with a developed stock market, information with the indicator β for large market players (companies) is periodically published.

For countries with a transformational economy, the risk premium model can be used to estimate the cost of capital. The essence of this model is to determine a certain risk premium, which is added to a

certain “normal” level of profitability from standard investments of the investor's capital in alternative projects. The formula is used to determine the cost of capital:

$$C_E = C_N + RP, (22)$$

where C_N is the “normal” rate of return on standard investments capital; RP is the risk premium.

Under the condition of self-financing, the price of equity capital is the lower limit of profitability; the decision to implement an investment at a lower rate of return than the cost of capital may cause insolvency and bankruptcy of the enterprise. For an external investor, the price of the entity's own capital is a guarantee of the return of invested funds.

The price of the involved capital is calculated as a weighted average percentage rate of involved financial resources according to the formula:

$$C_{inv} = \frac{\sum_{j=1}^m k * V_j}{\sum_{j=1}^m V_j}, (23)$$

where C_{inv} is the price of the involved capital;

k_i – interest rate of financial capital, % ($k_i = 0$ – for interest-free loans);

V_i – amount of funds involved;

m is the number of sources of involved funds.

The price of the involved capital depends on both internal factors (reputation firms, image, political support), as well as external factors (inflation rate, NBU refinancing rate, GDP growth rate, etc.).

Therefore, the investor, when deciding on the start of an investment project, has to take into consideration the price of own and borrowed capital, as well as its structure (ratio of own and borrowed funds). The combination of these factors in the capital price indicator is the basis for determining the investment attractiveness of the project.

Questions for self-control

1. Define the term “investment resources”.
2. What types of values belong to investment resources?
3. Name the forms of investment resources.
4. Describe the sources of formation of investment resources.
5. Name the main methods of financing investment activities of enterprises.
6. Describe the principles of formation of investment resources.
7. Name the main stages of formation of investment resources.
8. Definition of the term “cost of investment resources”.
9. Give the formula and sequence for calculating the weighted average price of capital.
10. Give the formula for calculating the price of equity capital.
11. Describe the main loan repayment schemes.

Recommended literature

1. Frank J. Fabozzi, Sergio M. Focardi & Caroline Jonas (2014) Investment management: a science to teach or an art to learn? CFA Institute research foundation.

2. Ephreim Matanda (2020). Modern Financial Investment Management. Cambridge Scholars Publishing.

3. Security analysis and investment management. Lessons 1 to 6. URL : <http://icdeolhpu.org/downloads/course-406FM-02.pdf>.

4. Preeti Singh. (2016) Investment Management. Himalaya Publishing House Pvt. Ltd., Mumbai. URL : <http://www.himpub.com/documents/Chapter1893.pdf>.

5. Nenad Vunjak & et al. (2018). Investment management strategy in financial markets. Economics 6 (2): 49-56. URL : <https://www.sciendo.com/article/10.2478/eoik-2018-0025>

6. Principles of investment management for long-term funds. (2014). URL : <https://www.ctphilanthropy.org/sites/default/files/resources/Principles-of-Investment-Management.pdf>

TOPIC 6. MANAGEMENT OF REAL INVESTMENT OF THE ENTERPRISE

- 6.1 The economic essence of real investments**
- 6.2 Investment project, its content and development procedure**
- 6.3 Evaluation of the effectiveness of investment projects**

6.1 The economic essence of real investments

Economic resources that are directed to increase the real capital of society (expansion or modernization of the production process) are called real investments.

Real investment is investment in capital equipment, such as a factory, plant and machinery, etc., or valuable social assets, such as a school, a dam, etc., rather than in such paper assets as securities, debentures, etc.

Real investments are investments in real (fixed and working) capital aimed at increasing production assets and material and technical stocks of the enterprise.

It is accepted to distinguish:

- investments in “external conditions” - the most profitable investment of free funds in third-party production and other structures;

- investment in own activity - investment of capital to increase the competitive status of the enterprise both at the expense of internal and at the expense of external sources of financing.

Investments in “external conditions” are usually made in the form of equity participation of the enterprise in joint projects.

Investments in own activities are determined by both external and internal factors, therefore, the investment activity of the enterprise is directed to:

1) to strengthen the positive influence of external conditions on the activities of enterprises;

2) to improve the production potential of one's own enterprise due to the increase in technical, technological, intellectual and other resources and the formation of the necessary commodity and material stocks.

A significant part of real investment is capital investment.

Capital investments are investments directed to the construction, manufacture, reconstruction, modernization, acquisition, creation of non-current assets (including non-current material assets intended to replace existing ones and equipment for installation), as well as advance payments for financing capital construction.

Structure of capital investments:

1) investments in fixed capital (capital investments):

- capital construction, including costs for construction and installation works

- purchase of machines and equipment (without construction)
- purchase of machines and equipment that were in use in other organizations

- implementation of equipment installation works
- other non-current material assets, including for the purchase of land plots

2) expenses related to the improvement of the object (capital repair):

- buildings and structures
- equipment

3) investments in intangible assets:

- costs for the acquisition (creation) of software tools
- expenses related to the acquisition of other intangible assets

4) expenses for the formation of the main herd

5) capital investments for the acquisition of buildings, structures, their separate parts (including apartments) and objects of unfinished construction.

Capital investments are divided into:

- state capital investments - investments aimed at the creation and restoration of fixed assets, the source of financing of which are funds from the state budget, state enterprises and organizations, as well as local budgets;

- non-state capital investments - investments financed by the funds of investors with non-state forms of ownership, namely:

- the investor's own financial resources (profit, depreciation deductions, compensation for damages from accidents, natural disasters, cash accumulations and savings of citizens, legal entities, etc.);

- borrowed financial funds of the investor;

- involved financial funds of the investor (funds received from the sale of shares, bonds, shares and other contributions of citizens and legal entities);

- free and charitable contributions, donations of organizations, enterprises and citizens;

- funds of foreign investors (foreign investments, both direct and portfolio, capital transfers, loans).

- capital transfers – investment of capital investments by transferring foreign currency to Ukraine and transferring the right to own foreign securities;

- mixed capital investments - investments aimed at the creation and restoration of fixed assets, in the total amount of which there is a share of state funds.

The total amount of all real investments mentioned above has the form of aggregate real investments, the objects of which are:

- objects of industrial purpose - objects that after the completion of construction will function in the field of material production: industry, agriculture, water and forestry, in transport and

communication, in construction and public catering, material and technical supply and sales;

- objects of non-production purpose, objects of housing and communal economy, institutions of health care, physical education, social security, education, culture, art, as well as research and other organizations related to the development of science;

- structures are a set of buildings and structures (objects), the construction of which is expanded, usually according to a single design and estimate documentation with a summary estimate of the cost of construction, for which the title of the structure is approved in the prescribed manner;

- construction phases – parts of the structure, defined by the project (working project), which ensure the production of products or provide services, may consist of one or more start-up complexes;

- launch complexes - a set of objects of main, auxiliary and service purposes, energy, transport and storage, communications, engineering communications, environmental protection, landscaping, which ensure the production of goods or the provision of services provided by the project for a certain launch complex;

- construction objects - separate buildings or structures, for the construction, reconstruction or expansion of which a separate estimate and project must be drawn up;

- new construction - the construction of a complex of objects for the main, auxiliary and service purposes of newly established

enterprises, buildings, structures, as well as branches and individual factories, which after commissioning will be on an independent balance, which is carried out on new sites with the aim of creating a new production capacity;

- expansion of operating enterprises – construction of additional production facilities at an operating enterprise (building), as well as construction of new and expansion of existing separate workshops and objects of primary, auxiliary and service purposes on the territory of operating enterprises or on areas adjacent to them, with the aim of creating additional or new production facilities, which will not be on a separate balance sheet after commissioning;

- reconstruction of existing enterprises - conversion of existing workshops and objects of primary and secondary purposes, usually without expansion of existing buildings and structures of primary purpose, connected with the improvement of production and raising its technical and economic level based on the achievements of technical progress and carried out in general with the aim increasing production capacity, improving quality and changing the range of products, first of all, without increasing the number of employees while simultaneously improving their working conditions and environmental protection;

- technical rearmament of existing enterprises is a set of measures aimed at increasing the technical and economic level of individual factories, workshops and sites based on the introduction of advanced

equipment and technology, mechanization and automation of production, modernization and replacement of outdated and physically worn equipment with new, more productive ones, as well as regarding improvement of general plant management and auxiliary services.

All objects are selected by investors on a competitive basis.

An investor will invest in the construction of a new enterprise only if the object:

- meets modern technical requirements, which is confirmed by the conclusion of the relevant examination bodies;

- has a positive conclusion of the state environmental examination;

- ensures: efficiency of use of invested funds; payback of capital investments within five years; compliance with regulatory construction terms; facilitating the solution of economic and social problems; expansion of export opportunities.

Investment in technical rearmament, reconstruction and expansion of existing enterprises will be carried out only if it ensures:

- development of knowledge-intensive industries;
- release of new highly efficient products;
- significant increase in product quality;
- increasing labour productivity and reducing the number of employees;

- expansion of production of goods and paid services to the population.

By investing the following requirements must be met:

- the duration of spending should not exceed the standard, and in the absence of standards, should not exceed 2 years;

- the products planned for release as a result of the measures being invested must meet or exceed the world level, be competitive on the world market and meet all the requirements for sale in freely convertible currency.

6.2 Investment project, its content and development procedure

Investment takes place through the implementation of projects.

An investment project is a project related to the implementation of a full cycle of investments (from capital investment to commissioning and obtaining profit).

In the broadest sense, an investment project is a systemically limited and completed set of activities, documents and works, the financial result of which is profit (income), the material result is new or reconstructed fixed assets (complexes of objects), or the acquisition and use of financial instruments or intangible assets with further income or social effect.

Most often, an investment project is an object of real investment.

An investment project can be in the form of:

- a) zero project – which involves the creation of a new production;
- b) reconstruction – implementation of advanced technologies without changing the profile of the enterprise;
- c) repurposing of an existing enterprise.

Each project must contain the following components:

- project materials;
- participants and actions performed by them;
- organizational and economic mechanism of project implementation (interaction of participants);
- organizational, operational and time frames.

Project materials:

1) Official documents required for the design of capital construction facilities (project documentation), including:

- technical and economic justification of the construction project of the enterprise, buildings, facilities;

- construction project of the enterprise, buildings, structures;

- justification of investments in the construction of an enterprise, building or structure;

- a business plan submitted as part of an application for participation in the competitive allocation of investment resources.

2) Additional materials developed by investment project participants during the examination of these projects and preparation for project implementation.

Requirements for design materials:

- 1) description of the composition of participants;
- 2) a description of the actions that must be performed with an indication of the specified volumes, terms and executors;
- 3) information about participating enterprises;
- 4) information about the products that will be produced, including the difference from what is present on the market;
- 5) information about the situation of the products to be produced, as well as about the necessary resources;
- 6) substantiation of the admissibility of urban planning, architectural, engineering, technological and other solutions in the project, information on the availability of initial permit information;
- 7) justification of the possibility of staffing the enterprise with specialists of the necessary profession and qualification during the project implementation period;
- 8) information about the environmental and social consequences of project implementation;
- 9) justification of the legal admissibility of the project;
- 10) justification of the commercial implementation of the project;
- 11) attitude of the local administration to project implementation;
- 12) justification of the prices accepted in the project for manufactured products, works and services;

13) description of the organizational and economic mechanism of project implementation, including a list of necessary state support measures;

14) calculations and substantiation of results and costs for each project participant, as well as for third-party economic entities whose interests are affected in the process of project implementation;

15) justification of the economic feasibility of project implementation for its participants in the national economy in general and individual regions, in particular;

16) conditions for termination of project implementation.

A participant in an investment project is a person (individual or legal entity).

Investments and production of products (provision of services or performance of works, together with construction and installation), sale or purchase of securities should be included in the actions performed by project participants. This also includes operations on granting (repayment) of loans, sale or purchase of goods by a project participant.

The organizational and economic mechanism of project implementation is a form of interaction between project participants.

The organizational and economic mechanism of project implementation includes:

1. Normative documents on the basis of which participants interact.

2. Obligations accepted by the participants in connection with the implementation of joint actions for the implementation of the project, guarantees of such obligations and sanctions for their violation.

3. Investment financing conditions, as well as measures for mutual financial, organizational or other support.

4. Special conditions for the turnover of products and resources between participants, prices for mutual settlements, commodity lending, free transfer of fixed assets for permanent or temporary use.

5. Project implementation management system, which ensures appropriate synchronization of participants' activities, protection of the interests of each of them, and timely adjustment of further actions.

6. The main features of the accounting policy of each participating enterprise.

Organizational, operational and time frames of the project:

- the operational framework of the project is characterized by the composition of the participants and their actions. Various actions provided by the project can be reflected in project materials and efficiency calculations with varying degrees of detail;

– time frames are characterized by the period of project implementation and its division into separate time intervals, steps;

– project implementation period – a period of time during which the actions provided for in the project are carried out;

– the project implementation schedule, which displays all types of activities that the participants plan to perform as part of the project implementation.

Investment projects are classified according to such features as: volume of investments; directions of investment; type of income; type of interdependence, type of cash flow, level of risk; form of ownership.

6.3 Evaluation of the effectiveness of investment projects

The basis of the process of making management decisions of an investment nature is the assessment and comparison of the volume of investments offered with future cash receipts. Since the compared indicators belong to different time periods, the key problem remains the problem of their comparison. In this case, it is necessary to take into account objective and subjective conditions: the rate of inflation, the volume of investments and revenues generated, the horizon of forecasting, the level of qualification of the analyst, etc.

Efficiency means the ability to bring an effect, the effectiveness of the project, etc., it is defined as the ratio of income to costs that ensured this result.

There is a generally accepted three-level method of classification of indicators for evaluating the effectiveness of investment projects:

- indicators of budgetary efficiency reflecting the financial results of project implementation for budgets of all levels;
- indicators of socio-economic (national economic) efficiency, which take into account the results of the implementation of the investment project for society in general;
- indicators of the project's commercial efficiency (financial and economic evaluation) of the project, which take into account the financial results of the project's implementation for its direct participants.

Indicators of commercial evaluation of the effectiveness of investment projects are divided, in turn, into indicators of financial evaluation (financial capacity) of the project and indicators of economic evaluation (investment effectiveness).

Both approaches complement each other. The first is used to analyze profitability, financial stability, liquidity and business activity, while the second approach allows you to assess the ability of the project to increase shareholder wealth.

Indicators of economic assessment of investment efficiency, in turn, can be divided into two groups. The first group includes the so-called static (traditional) methods based on the principles of accounting and reporting, namely: the investment payback period (RR) and the accounting rate of return (ARR). The second group includes dynamic methods that take into account changes in the value of funds over time: net present value (NPV), profitability index (PI),

internal rate of return (IRR), discounted investment payback period (DPP).

For this we can use the next methodological tools:

- **Net Present Value (NPV)**
- **Internal rate of return (IRR)**
- **Return on Investment (ROI)**
- **Payback Period (PP)**
- **Discount Payback Period (DPP)**

Within the group of commercial performance indicators, economic performance evaluation indicators dominate, as only they provide the final investor (enterprise owner) with information on whether the investment project is enriching or not. In this case, the results of the financial assessment are necessary, and the economic results are sufficient when making a decision regarding the implementation of an investment project.

One of the main indicators that belong to the group of static methods of evaluating the effectiveness of investments is the accounting rate of income and the payback period.

The accounting rate of return (ARR) is calculated as the ratio of the average annual return (AR) to the average amount of invested funds. The average amount of invested funds is found by dividing the initial amount of capital investments by two, provided that after the end of the project implementation period, all capital costs will be written off. If the residual or liquidation value (RV) is predicted, then its assessment should be taken into account in the calculations:

$$ARR = \frac{AP}{1/2(IC + RV)} \quad (24)$$

where IC is the amount of capital investment in the investment project

In most cases, the obtained indicator is compared with the rate of return on advanced capital, which is calculated by dividing the total net profit of the enterprise by the total amount of funds advanced for its activities.

One of the simplest methods of evaluating investment projects is the payback period (PP — Payback Period). The PP indicator is the minimum time interval from the start of investment, during which investment costs are covered by net cash receipts from their implementation. The use of this method is advisable when, first of all, it is necessary to solve the problem of liquidity, and not the profitability of investments, and when investments are associated with a high degree of risk.

If the initial investment is one-time, and the successive cash flows are approximately the same throughout the life cycle of the project, then the PP can be calculated according to the following formula:

$$PP = \frac{IC}{\overline{CF}} \quad (25)$$

where IC is the amount of capital investments in the investment project;

CF is average net cash flow.

If the cash flows are different for different periods, the following equation must be solved to calculate the PP:

$$PP = \min n, \text{ when } \sum_{k=1}^n CF_k \geq IC \quad (26)$$

Disadvantages of PP are ignoring the temporary value of money and cash flows beyond the payback period, which can lead to an underestimation of the investment project. Some of the shortcomings are eliminated by applying the discounted payback period in practice.

In the process of evaluating investment projects, both indicators of the payback period can be used either to confirm that the project will pay off, or to compare the obtained value of the payback period with a subjectively established normative value.

The basis of the net present value (NPV) method is the realization of the main goal of investment activity — the maximization of

shareholder wealth. This method is based on comparing the value of initial investment costs (IC) with the total amount of discounted net cash flows.

Since the cash flow is time-distributed, each cash flow CF_k is discounted using the appropriate discount rate r , which is set by the investor (the alternative return, the return required by the investor, the cost of capital):

$$NPV = \sum_{k=1}^n \frac{CF_k}{(1+r)^k} - IC \quad (27),$$

where n is the duration of the net income period.

This method makes it possible to get a direct answer to questions about the feasibility of implementing an investment proposal. If $NPV > 0$, then if the project is accepted, the value of the company will increase, that is, the wealth of shareholders will increase. If $NPV < 0$, the value of the company will decrease, that is, the wealth of the shareholders will also decrease. A special case is when $NPV = 0$. In this case, the wealth of the shareholders will not change, but here too we can talk about a positive effect, that is, the company will increase in scale, which, in turn, can be considered as a positive trend.

Also, there is another method of calculation of NPV:

$$NPV = TVECF - TVIC$$

where:

TVECF = Today's value of the expected cash flows

TVIC = Today's value of invested cash

If the project involves the investment of financial resources over m periods, then the previous formula is modified as follows:

$$NPV = \sum_{k=1}^n \frac{CF_k}{(1+r)^k} - \sum_{j=0}^m \frac{IC_j}{(1+r)^j} \quad (28),$$

where IC_j are investments made at the end of the j th period.

The second most important method of evaluating investment decisions is the return on investment index (ROI), which is also sometimes called the ratio of costs and revenues. The profitability index is a fraction of the expected future cash flows divided by the initial costs.

$$ROI = \frac{\sum_{k=1}^n \frac{CF_k}{(1+r)^k}}{IC} \quad \text{or} \quad ROI = \frac{NPV}{IC} + 1 \quad (29)$$

The project is accepted if ROI is greater than one (in this case the net present value will be positive). If $ROI = 1$, then the profitability of the investment project corresponds to the alternative rate of income (in this case, $NPV = 0$). If $ROI < 1$, then the project is not accepted due to the fact that it does not bring additional income to the investor

(in this case, NPV will be a negative value). Unlike NPV, the yield index is a relative measure. Thanks to this, the ROI criterion is a convenient indicator when choosing one project from among alternatives that have approximately the same NPV values, or when forming a portfolio of investment projects in order to maximize its net present value.

The rule of net present value gives a theoretically justified answer to the question of accepting or rejecting an investment proposal. An alternative approach is to calculate the internal rate of return (IRR). The internal rate of return is the rate of return that equates expected net cash flows to initial costs. To calculate the IRR, you need to solve the following formula (assuming the one-time use of capital investments):

$$0 = \sum_{k=1}^n \frac{CF_k}{(1 + IRR)^k} - IC \quad (30)$$

where IRR is the rate of return at which $NPV = 0$ and all other symbols are the same as in the NPV formula.

If the project envisages investments for m years, then the previous formula is modified as follows:

$$0 = \sum_{k=1}^n \frac{CF_k}{(1 + IRR)^k} - \sum_{j=0}^m \frac{IC_j}{(1 + IRR)^j} \quad (31)$$

The project is accepted if the value of its internal rate of return is greater than the rate of return required by the project. In this case, r

from the net present value formula is the rate of return required. In the vast majority of cases, the IRR method of evaluating capital projects gives the same decision regarding the acceptance or rejection of an investment proposal as the net present value method. Projects with positive net present values will have an IRR greater than r .

To calculate the IRR in the Excel package, there is a financial IRR function that can be used for an investment project with the same interval between cash flows.

The practical application of this method is complicated if the analyst does not have the appropriate software at his disposal. In this case, the method of successive iterations is used. Two values of the discount rate r_1 and r_2 are selected so that in the interval (r_1, r_2) the function $NPV = f(r)$ changes its value from “+” to “-“ or vice versa. Then the formula is used:

$$IRR = r_1 + \frac{NPV_{r_1}}{NPV_{r_1} - NPV_{r_2}} * (r_2 - r_1) \quad (32),$$

where r_1 is the value of the discount rate at which $NPV > 0$ ($NPV < 0$);

r_2 is the value of the discount rate at which $NPV < 0$ ($NPV > 0$).

The accuracy of calculations is inversely proportional to the length of the interval (r_1, r_2) , so the most accurate result is achieved when the length of the interval is minimal (is 1%).

The meaning of the IRR calculation when analysing the efficiency of investment projects is to obtain the value of the expected profitability of the project and, accordingly, the maximum permissible value of the cost of its financing (CC). Hence, if $IRR > CC$, then the investment proposal should be accepted for implementation, if on the contrary, the project should be rejected.

To avoid some of the disadvantages inherent in IRR, it is recommended to use the modified internal rate of return (MIRR).

The advantages of the MIRR indicator, compared to the IRR, include:

- the assumption of reinvestment of received net cash flows at a rate equal to the cost of capital, rather than the internal rate of return;
- the possibility of taking into account the variable cost of capital by years of project implementation;
- the MIRR indicator always has a single value for both non-traditional (extraordinary) and ordinary cash flows;
- non-contradiction to the recommendations for choosing an investment option using the NPV method.

At the same time, it should be noted that if the alternative options differ significantly in the amount of investment costs, a wrong choice of the worst investment option is possible when using the MIRR.

MIRR, in contrast to IRR, is a discount rate that equates the present value of investment costs not with the current value, but with the future value of the project's income cash flows.

Accordingly, the MIRR indicator can be determined from the equation:

$$\sum_{j=0}^m \frac{IC_j}{(1+r)^j} = \frac{\sum_{k=1}^n CF_k * (1+r)^{n-k}}{(1+MIRR)^n} \quad (33),$$

The discounted payback period (DPP) is the period from which the initial capital investments and other costs associated with the investment process are compensated by the total economic result (the components of which are determined taking into account the time factor) from the implementation of the business project. This indicator, like RR, can be calculated by two methods. If the discounted net cash flows are approximately the same in each period, the following formula can be used:

$$DPP = \frac{IC * n}{\sum_{k=1}^n \frac{CF_k}{(1+r)^k}} \text{ or } DPP = \frac{\sum_{j=0}^m \frac{IC_j}{(1+r)^j} * n}{\sum_{k=1}^n \frac{CF_k}{(1+r)^k}} \quad (34)$$

where CF_k is the net cash flow of the project at the end of the k th period;

IC_j — investments made at the end of the j th period;

r — discount rates set by the investor (rate of alternative income, cost of capital);

n — the duration of the period of receipt of net income.

In case of irregular cash flows for the project, the following equation must be solved:

$$DPP = \min n, \text{ when } \sum_{k=1}^n \frac{CF_k}{(1+r)^k} \geq IC \text{ or } \sum_{k=1}^n \frac{CF_k}{(1+r)^k} \geq \sum_{j=0}^m \frac{IC_j}{(1+r)^j} \quad (35)$$

Despite the relationship between the indicators of NPV, ROI and IRR when evaluating alternative projects, the problem of choice arises, first of all, due to the fact that NPV is an absolute indicator, ROI and IRR are relative.

In the process of making investment decisions, most practitioners tend to use NPV and IRR indicators. However, there may be situations when these indicators contradict each other, for example, when evaluating alternative projects. Some authors tend to prefer the NPV criterion, as it characterizes the possibility of increasing the economic potential of the organization and has the property of additivity (the ability to add NPV for different projects, which makes it possible to optimize the investment portfolio).

The main disadvantage of the NPV indicator is that it cannot provide information about the project's safety margin. That is, in the event of an erroneous assessment of cash flows or the discount rate,

previously profitable projects (according to the NPV criterion) may become unprofitable.

Information about the safety reserve of the project is provided by the RI and IRR criteria. So, the higher the value of the IRR compared to the cost of capital of the project, the greater the margin of safety; accordingly, the more the RI criterion exceeds one, the greater the safety margin. Also, if the cost of investment in alternative projects is less than the value of IRR, the choice for them can be made only with the help of additional criteria.

Example of calculation some main indicators of project efficiency:

Company considering two investment projects A and B. Initial costs both of them is \$10 000. Interest rate – 12%. Net cash flow (CF_t) of every year is in the table. Calculate, please, NPV, IRR, PP.

Year	Project A	Project B
0	(10 000)	(10 000)
1	6500	3500
2	3000	3500
3	3000	3500
4	1000	3500

Solution:

1. Payback period (PP) of the projects:

$$\bullet A = 2 + \frac{500 \cdot 12}{3000} = 2,2 \text{ years}$$

$$\bullet B = 2 + \frac{3000 \cdot 12}{3500} = 2,10 \text{ years}$$

2. Net present value (NPV) of the projects:

$$NPV_A = -10000 + \frac{6500}{1 + 0,12} + \frac{3000}{(1 + 0,12)^2} + \frac{3000}{(1 + 0,12)^3} + \frac{1000}{(1 + 0,12)^4} = 966,01$$

$$NPV_B = -10000 + \frac{3500}{1 + 0,12} + \frac{3500}{(1 + 0,12)^2} + \frac{3500}{(1 + 0,12)^3} + \frac{3500}{(1 + 0,12)^4} = 630,73$$

2.1. For calculating IRR we need find such interest rate when NPV is negative
So calculate NPV_A if interest (discount) rate is 20%:

$$NPV_A = -10000 + \frac{6500}{1 + 0,20} + \frac{3000}{(1 + 0,20)^2} + \frac{3000}{(1 + 0,20)^3} + \frac{1000}{(1 + 0,20)^4} = -281,64$$

$$NPV_B = -10000 + \frac{3500}{1 + 0,20} + \frac{3500}{(1 + 0,20)^2} + \frac{3500}{(1 + 0,20)^3} + \frac{3500}{(1 + 0,20)^4} = -939,43$$

3. Calculation of IRR:

$$IRR = i_1 + \frac{NPV_1}{NPV_1 - (-NPV_2)} * (i_2 - i_1)$$

$$IRR_A = 12\% + \frac{966,01}{966,01 + 281,64} * (20\% - 12\%) = 18,00\%$$

$$IRR_B = 12\% + \frac{630,73}{630,73 + 939,43} * (20\% - 12\%) = 15,22\%$$

Questions for self-control

1. Identify the characteristics of real investments.
2. Name the main objects of real investment.
3. Determine the criteria by which objects are selected for real investment.
4. By what signs are real investments classified?
5. Define the role of investment projects and programs for the economic development of Ukraine.
6. Determine the structure and content of investment projects.
7. According to what characteristics are investment projects classified.
8. Describe the procedure for developing an investment project.

9. Define the pre-investment, investment and production phases of the investment project cycle.

10. What does the technical and economic justification of the project contain?

11. Describe the procedure for evaluating an investment project by an investor (creditor).

12. What is the investment project examination procedure?

13. Describe the three-level method of classification of investment project performance indicators.

14. Formulate the concept of commercial evaluation of the effectiveness of projects.

15. Net present value: essence, advantages and disadvantages of the indicator, calculation method.

16. Internal rate of income: essence, advantages and disadvantages of the indicator, calculation method.

17. Identify the IRR calculation methods you know.

18. Modified internal rate of income: essence, advantages and disadvantages of the indicator, calculation method.

19. Discounted payback period: essence, advantages and disadvantages of the indicator, calculation method.

20. Describe the essence and methodology of calculating static indicators of investment performance assessment.

21. What indicators will the investor prefer when evaluating the effectiveness of the project?

22. What indicators of investment efficiency are mostly used in practice?

Recommended Literature

1. Frank J. Fabozzi, Sergio M. Focardi & Caroline Jonas (2014) Investment management: a science to teach or an art to learn? CFA Institute research foundation.

2. Ephreim Matanda (2020). Modern Financial Investment Management. Cambridge Scholars Publishing.

3. Security analysis and investment management. Lessons 1 to 6. URL : <http://icdeolhpu.org/downloads/course-406FM-02.pdf>.

4. Preeti Singh. (2016) Investment Management. Himalaya Publishing House Pvt. Ltd., Mumbai. URL : <http://www.himpub.com/documents/Chapter1893.pdf>.

5. Nenad Vunjak & et al. (2018). Investment management strategy in financial markets. Economics 6 (2): 49-56. URL : <https://www.sciendo.com/article/10.2478/eoik-2018-0025>

6. Principles of investment management for long-term funds. (2014). URL : <https://www.ctphilanthropy.org/sites/default/files/resources/Principles-of-Investment-Management.pdf>

TOPIC 7. FORMATION OF THE PROGRAM OF REAL INVESTMENTS OF THE ENTERPRISES

7.1 The concept of a real investment program and the principles of its formation

7.2 The main stages of the formation of the real investment program of the enterprise

7.3 Formation of an investment project

7.1 The concept of a real investment program and the principles of its formation

The company's real investment program is a set of investment projects that meet the criteria for the level of profitability, risk and liquidity, the general goals of the company's investment policy and ensure the highest rates of its development and market value growth in the forecast period.

The investment program is formed by the enterprise based on the assessment of each of the considered real investment projects and their final selection.

Principles of formation of the real investment program of the enterprise are performed on the fig. 17.

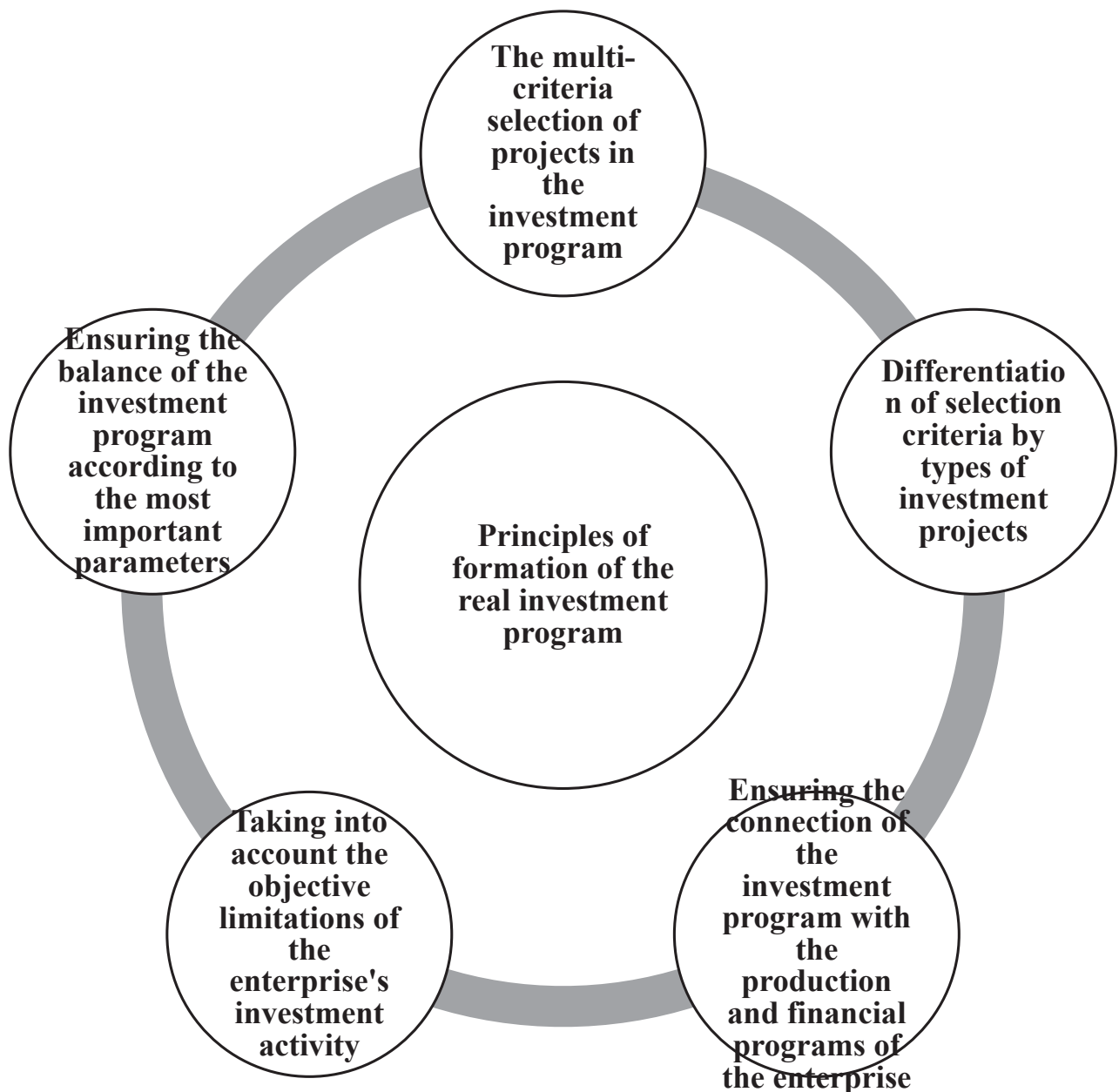


Figure 17. Principles of formation of the real investment program

1. The multi-criteria selection of projects in the investment program allows taking into account in the process of forming the investment program the entire system of goals of the enterprise's investment strategy, as well as the nature of the tasks of investment activity, which are formed under the influence of changes in external

and internal factors in the medium-term period. The principle of multi-criteria selection of projects in the investment program is based on the ranking of the goals (tasks) of investment activity by importance, the definition of the main target indicator as the main criterion for the selection of investment projects and the use of individual target indicators as a system of appropriate restrictions in the process of their selection.

2. Differentiation of selection criteria by types of investment projects is carried out in terms of specific forms of real investment from independent, interrelated and mutually exclusive investment projects.

3. Taking into account the objective limitations of the enterprise's investment activity. When forming a real investment program, the main objective limitations of the enterprise's investment activity that require consideration are: projected volumes of investment activity in accordance with the investment strategy; directions and forms of sectoral and regional diversification of investment activity; the potential of forming own investment resources; possibilities of attracting loan capital to finance individual investment projects; the main state regulatory requirements for the implementation of investment projects.

4. Ensuring the connection of the investment program with the production and financial programs of the enterprise assumes that in the process of forming the investment program it is necessary to

synchronize its main parameters with the corresponding parameters of the production and financial programs of the enterprise development.

5. Ensuring the balance of the investment program according to the most important parameters. The internal balance of the enterprise's investment program is ensured, first of all, by an effective ratio of its most important parameters, such as the level of profitability, risk and liquidity. Such a ratio of the parameters of the investment program as a whole is determined according to the “return-risk” and “profitability-liquidity” scale, taking into account the chosen investment ideology (aggressive, moderate or conservative). In the process of ensuring the balance of the investment program according to the considered parameters, reserves should be found to reduce the level of risk and increase the level of liquidity at a given value of the level of its profitability.

7.2 The main stages of the formation of the real investment program of the enterprise

The main stages of the formation of the real investment program of the enterprise are presented on the figure 18.

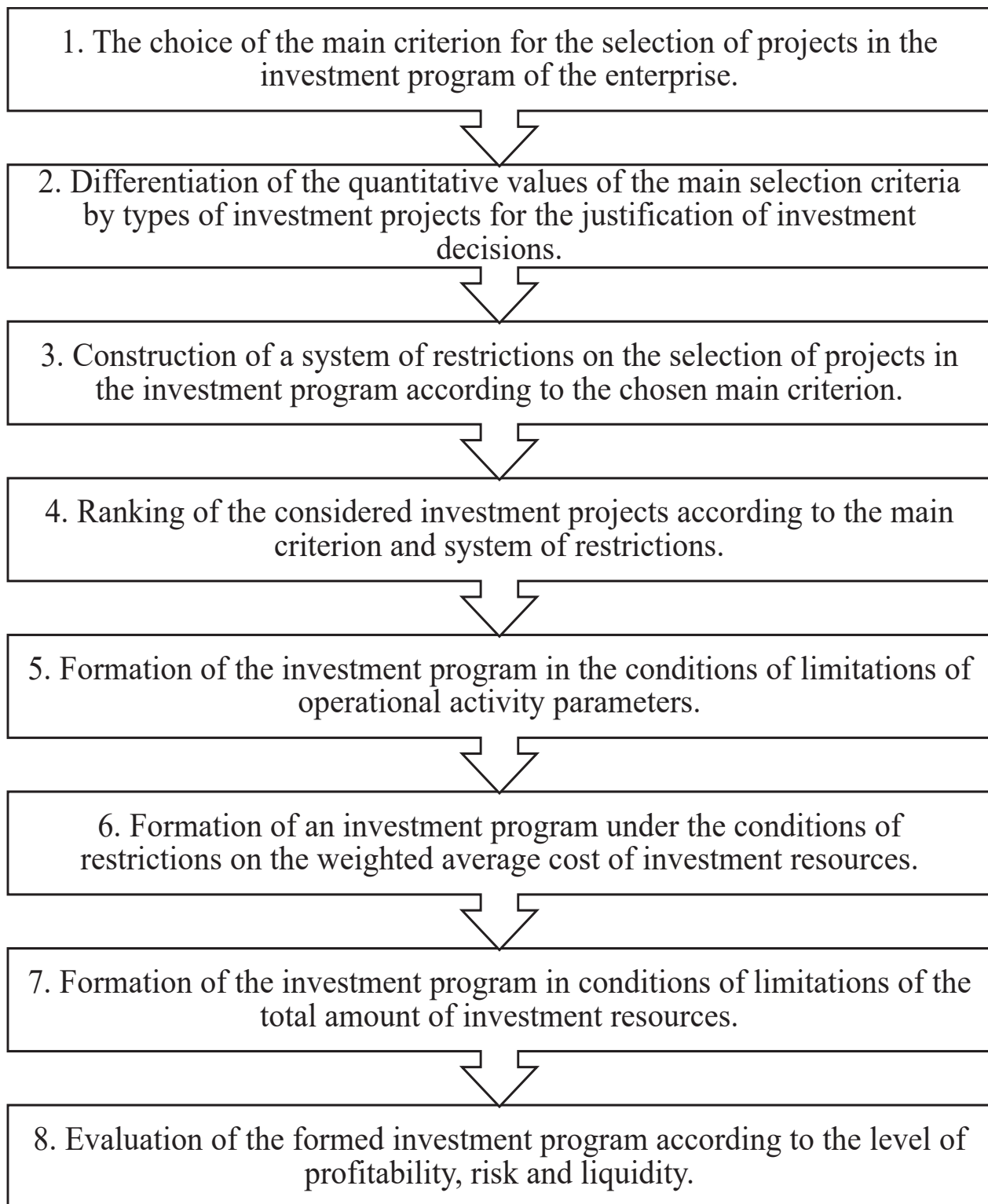


Figure 18. The main stages of the formation of the real investment program of the enterprise

1. The choice of the main criterion for the selection of projects in the investment program of the enterprise. The main criterion for the selection of projects should be related to their performance indicators, which reflect the pace or volume of capital growth in the process of investment activity. In the practice of investment management, such an advantage is usually given by the indicator of net reduced income (sometimes the indicator of the internal rate of return is also used for these purposes). The selection of the net adjusted income indicator as the main criterion for the selection of projects in the investment program of the enterprise is due to the fact that it gives the clearest idea of the possibilities of increasing equity capital (and, accordingly, the market value of the enterprise) in both absolute and relative terms.

2. Differentiation of the quantitative values of the main selection criteria by types of investment projects for the justification of investment decisions. In the practice of investment management, the quantitative value of the main criterion indicator of selection is usually differentiated by the forms of real investment (projects providing different forms of real investment may have different quantitative values of the main criterion indicator), as well as by the nature of the projects themselves. In particular, the differentiation of the quantitative values of the main selection criterion is carried out according to independent, interrelated and mutually exclusive investment projects:

- for independent investment projects, the quantitative value of the main selection criterion is usually the target strategic norm of the efficiency of investment activity (the target norm of one of the indicators of the evaluation of the effectiveness of investment projects during their selection);

- for interdependent investment projects, the main criterion is adopted not for each specific investment project, but for the entire interconnected complex of them;

- for mutually exclusive investment projects, the selection is carried out based on the highest values of the selected main criterion indicator (on the basis of its comparative evaluation).

Differentiation of the quantitative values of the main selection criterion allows you to substantiate “investment decisions” at the first stage of forming a real investment program. This term means screening out of the total number of considered investment projects those that do not meet the quantitative values of the main criterion.

3. Construction of a system of restrictions on the selection of projects in the investment program according to the chosen main criterion. The system of restrictions, which is established in the process of selecting real investment projects for the enterprise's investment program, usually includes basic and auxiliary normative indicators.

The main limiting normative indicators are, as a rule:

- one of the alternative performance indicators of the project (for example, if the main criterion indicator is the net reduced income, the limiting performance indicators can be chosen: the minimum internal rate of return or the maximum discounted payback period of the project);

- the maximum permissible level of the overall risk of the project;
- the maximum permissible period or minimum investment liquidity ratio.

Auxiliary limiting normative indicators can be:

- the level of readiness of the investment project for implementation (availability of a completed business plan; completion of project works; approval of project financing schemes, etc.);

- the estimated period of implementation of the investment stage of the project (before it enters the operational stage and the beginning of the formation of returnable cash flow);

- the level of realization of the project (in terms of economic, technological, economic and other parameters);

- innovative level of the project (its compliance with the latest achievements of scientific and technical progress);

- the possibility of diversifying the risk of the investment program enterprises due to the sectoral or regional orientation of the project;

- synchronicity of the formation of the expected cash flows for the implementation of the investment project and its financing from various sources;

- the possibility of postponing the implementation of the investment project without significant damage to the implementation of the strategic goals of the company's development.

The construction of a system of restrictions on the selection of projects allows deepening the justification of investment decisions in the process of forming the program of real investments of the enterprise.

4. Ranking of the considered investment projects according to the main criterion and system of restrictions.

The ranking process consists of several stages:

1) at the first stage, investment projects, after appropriate cleaning, are ranked according to the selected main criterion for their selection into the enterprise's investment program;

2) at the second stage, investment projects that are planned before being included in the real investment program of the enterprise are ranked according to each of the indicators included in the system of restrictions on their selection;

3) at the third stage, by establishing the specific significance of each restriction for the enterprise's investment activity, separate ranking values of investment projects are integrated into a single ranking indicator of them throughout the system of restrictions.

Experts may be involved in determining the specific significance of restrictions;

4) at the fourth stage, the ranking of individual investment projects according to the selected main criterion is specified taking into account their integral ranking value according to the system of restrictions.

5. Formation of the investment program in the conditions of limitations of operational activity parameters. In the practice of investment management, there is often a situation when the priority of the enterprise's investment activity at certain stages of its strategic development is the need to quickly reach the given volumes of production and sales of products (with a strategy of accelerated growth, a strategy of accelerated sectoral or regional diversification of operational activities, etc.). In this case, the company's real investment program is formed according to the criteria for selecting investment projects based on the indicator of the productivity of the invested capital (for these purposes, the ranking of investment projects is carried out according to the indicator of the volume of production or sales of products per unit of invested capital).

To solve this problem, a special model of optimization of the enterprise's investment program is being developed for a given production program (a given amount of increase in production or sales of products).

The starting conditions for building such a model are:

- investment projects are independent, that is, mutually exclusive;

- by the time the investment program is formed, the necessary increase in production (sale) of products has already been determined in accordance with the strategic goals of the enterprise's development;

- in the process of preliminary consideration of investment projects of the enterprise, their ranking was carried out according to the indicator of the volume of production (sale) of products per unit of invested capital (with appropriate cleaning according to the system of selected restrictions).

6. Formation of an investment program under the conditions of restrictions on the weighted average cost of investment resources.

Such a situation arises if the implementation of investment projects is connected with the use of loan capital, the volume and cost of which increase with the expansion of investment activities. The starting conditions for building a model for solving this problem are:

- investment projects are independent, i.e. not mutually exclusive;

- when forming the investment program, clearly defined indicators of the marginal value of investment resources (MVIR) when increasing the amount of additional capital attraction;

- in the process of consideration of investment projects, their preliminary ranking was carried out according to the indicator of the internal rate of return (IRR), which for these purposes is chosen as the

main criterion for selection into the investment program (with appropriate cleaning according to the system of selected restrictions).

7. Formation of the investment program in conditions of limitations of the total amount of investment resources. Such a situation arises in the event that the company's ability to generate its own investment resources is limited, and the amount of capital borrowing beyond certain limits may negatively affect its financial stability and solvency.

The initial conditions for building the model are the same as in the previous case.

The starting conditions for building a model for solving this problem are:

- investment projects are independent, i.e. not mutually exclusive;
- when forming the investment program, clearly defined indicators of the marginal value of investment resources (GVIR) when increasing the amount of additional capital attraction;
- in the process of consideration of investment projects, their preliminary ranking was carried out according to the indicator of the internal rate of return (IRR), which for these purposes is chosen as the main criterion for selection into the investment program (with appropriate cleaning according to the system of selected restrictions).

They are supplemented only by the total volume of possible attraction of investment resources by the enterprise for the implementation of real projects included in its investment program.

8. Evaluation of the formed investment program according to the level of profitability, risk and liquidity. The overall assessment of the formed investment program of the enterprise based on these indicators allows to assess the effectiveness of all work on its formation.

The level of profitability of the investment program is determined on the basis of the general indicator of net reduced income or net investment profit for all investment projects included in it (calculated in a single time dimension).

The risk level of the investment program is determined by calculating the coefficient of variation for it (according to the expected level of variability of indicators of net cash flow or net investment profit).

The level of liquidity of the investment program is determined on the basis of the average weighted ratio of investment liquidity for individual projects (weighted by the amount of required investment resources).

The final formation of the enterprise's investment program is carried out taking into account all three of its parameters based on the priorities defined by the company. This process is characterized in investment management as the justification of “preferential investment decisions” for the final selection into the investment

program of the most desirable investment projects for the enterprise, which will ensure the implementation of its investment strategy.

7.3 Formation of an investment project

When starting the search for financing, you should remember that it takes more than one day to write a high-quality investment project. You need to start preparing in advance. In this way, the project manager will have more time to familiarize himself with the requirements of potential investors (donors).

Despite the fact that each investor has his own requirements for the design of investment projects, certain elements can be distinguished in their structure (fig.19).

Title page

The title page is a kind of business card of the investment project. It should contain all the information necessary for the investor.

The title page should take up only one page. Sometimes investors offer their own developed sample, which should be used by the developer of the investment project.

-
1. Title page.

 2. Abstract.

 3. Introduction.

 4. Statement of the problem.

 5. The purpose and tasks of the project.

 6. Methods.

 7. Audience of the investment project

 8. Risks.

 9. Expected results.

 10. Evaluation.

 11. Viability of the investment project.

 12. Project implementation plan.

 13. Reporting.

 14. Budget.

 15. Attachments.

Figure 19. Structure of investment project

The title page should contain the following items:

- The name of the project should be short (no more than 10 words), convey the main idea of the project and be “visible”. The title can also be quite general or have a subtitle.
- Applicant organization/developer - the name of the organization implementing the project, its address, phone, fax, etc.

identification data. If the organization has its own website or an official page in social networks, they should also be indicated.

- Partner organizations - state, communal institutions or non-governmental organizations that will participate in the implementation of the project, their full names and addresses.

- The duration of the project is calculated in months and usually takes no more than one year.

- The cost of the project – indicates the required amount of financing for the entire term or for the first year of project implementation. In addition, it is necessary to indicate the full cost of the project (including own contribution and funds that are planned to be received from other sources).

Abstract/Summary of the project

This is one of the most important parts of the investment project. Most experts first study only the abstract. If they like it, only then they proceed to work on the prepared project. Therefore, the abstract should be as clear, concise, specific and expressive as possible.

The abstract is a way to convince the investor of the importance and attractiveness of the project. It is here that the project should be represented and answers to conventional questions: who, what, when, where, why and how.

The abstract should include the following information:

- about the organization and its achievements;
- about the implementation period and territory of the project;

- about the actual problem (why is this project needed?);
- about the purpose and tasks of the project (what will be the result?);
- about methods and resources (how will the project be implemented?);
- about the full cost of the project, own contribution and the requested investment amount.

The abstract should contain a short and clear text. Investors usually indicate exactly how many characters, words or lines the abstract can have. Sometimes the abstract should be written last, when all other sections of the investment project have already been written. This will allow to characterize the project as clearly as possible.

Introduction

In this part of the project, you should talk about the organization as an applicant for investment. As a rule, projects are funded based on the reputation of the applicant organization, and not only on the quality of the project itself. In the introduction, it is necessary to justify why this project deserves support.

The recommended length of the introduction is 0.5-2 pages.

The introduction and budget are analysed by investors most carefully. Therefore, these sections should be written in such a way that the investor does not have the slightest doubt about the ability of

the project manager to perform the assigned tasks and manage the funds correctly.

The introduction should contain the following information:

- the purpose and tasks of the organization;
- time of investment of the organization, its material and personnel resources;
- uniqueness of the organization;
- partners;
- the most significant achievements;
- successes in projects;
- financial support that the organization already received from other sources.

Statement of the problem

This section should accurately describe the specific problem the designer intends to solve with the project.

In this section, you should describe the situation that prompts you to start developing the project. It should be remembered that there is a close connection between the description of the problem and the goal of the project, which will solve this problem.

It should be obvious to the reader/investor that the implementation of the project, albeit in a small amount, will improve the condition of a certain group of people, the situation in the field of the organization's activities.

The text of this section should be built on emotional assumptions. Argued, logically connected reasoning will convince the investor that the project manager's expectations regarding the project's results are realistic and not based only on assumptions.

The situation should be presented transparently, clearly and truthfully, based on verified information and data.

In this section it is necessary:

- logically connect the task performed by the organization with the problems that must be solved with the help of this investment project;

- to clearly define all the problems that the project team will work on, to make sure that the assigned task, in principle, can be solved in the specified real time by own forces for specified limited funds;

- confirm the existence of a problem with the help of additional materials, statistical data, surveys, private letters from clients or partners working in this field, etc.;

- be realistic - do not try to solve all the world's problems in the next six months;

- avoid general phrases.

The purpose and tasks of the project

A well-prepared project should be logically structured. The introduction should prepare the investor for the perception of the next section - Statement of the problem, respectively. The statement of the problem should have a logical transition to the goal and tasks.

The goal or overall objective of a project is a general statement of what is to be done. It describes the purpose of the investment project - directly its final result.

Therefore, the project goal is a description of the situation that will occur when the project is implemented according to the plans. At the same time, it should be understood that it is usually difficult to solve a social problem with the help of the implementation of only one investment project, that is, the goal can be achieved by combining efforts in many projects and programs.

The goal is determined by taking into account the causes of existing problems that must be eliminated. The goal must be formulated without objections, i.e. “What do you want?” instead of “What don't you want?”.

The goal of the project does not necessarily have to be one. There can be several goals, they can be short-term, medium-term and long-term, but necessarily interdependent. The achievement of short-term goals usually depends on the achievement of a long-term goal. Short-term goals relate to the target groups of the project, medium-term goals may cover a wider audience, and long-term goals relate to the entire society.

There are two types of tasks - productive and qualitative.

Productive tasks:

- the results are specific products - a computer database, a library, an information and advisory center, a playground, a volunteer center, a cycle of trainings, etc.;

- productive tasks are checked statistically - the number of people who underwent retraining and received new qualifications in small business; the number of houses connected to the purification system; the amount of water used in liters; the number of crops sown per hectare, etc.

Qualitative tasks:

- the result of the performance of quality tasks are "intangible" things - improvement of knowledge, acquisition of new skills, acquisition of qualifications, etc.;

- the degree of change in quality can be felt during observation, revealed during an individual interview, by conducting surveys, etc.;

- the quantitative results of a qualitative task cannot be limited only to the number of people who underwent retraining, but must also take into account the number of people who actually work in the field for which they actually underwent retraining, using the acquired knowledge.

When developing the tasks of an investment project, the following scheme of reasoning should be followed: from the general to the partial, from the problem to the goal (general goals) and tasks (specific goals) and methods. Then in the reverse direction, that is, to

check whether the implementation of specific tasks will serve to achieve the goals and solve the formulated problem or part of it.

A convenient method for formulating the goal and tasks of the project is the construction of two interconnected diagrams, which have the names: “tree of problems” and “tree of goals”. This approach is best implemented by a team representing various stakeholders.

A problem tree is a hierarchical arrangement of problems. From the previously formulated problems, you need to choose one as the central one (that is, one that is the center of the entire problematic situation) and establish cause-and-effect relationships between other problems. On the “tree of problems” causes are located at a lower level, consequences - at a higher level. If the problem is neither cause nor effect, it is placed on the same level. Cause-and-effect relationships are drawn between the problems in the form of arrows, directed from cause to effect.

As the tree grows, the remaining problems are added to it according to the same principle. Repeated analysis of problems may lead to the appearance of another central problem at a later stage, which, however, does not reduce the validity of the analysis.

Thus, the effects and causes of the root problem (level zero problems) constitute level 1 problems. Each problem of the 1st level has its own causes and consequences, which are already revealed as problems of the 2nd level, etc. The finished problem tree presents a complete picture of the existing situation.

Other parts of an investment project will be presented in other books of the authors.

Questions for self-control

1. Define the real investment program of the enterprise.
2. Name the main principles of forming a real investment program.
3. Explain the essence of the multi-criteria selection of projects in the investment program.
4. Name the main objective limitations of the enterprise's investment activity that require consideration when forming a real investment program.
5. How is the relationship between the investment program and the production and financial programs of the enterprise ensured?
6. Explain the content of ensuring the balance of the investment program according to the most important parameters.
7. Name the main stages of the formation of the company's real investment program.
8. How is the selection of the main criteria for the selection of projects in the investment program of the enterprise carried out?
9. Explain how the quantitative values of the main selection criterion are differentiated.

10. Name the main limiting regulatory indicators in the process of selecting real investment projects for the enterprise's investment program.

11. What normative indicators can be auxiliary limiting indicators in the process of selecting real investment projects for the enterprise's investment program?

12. Describe the optimization model of the enterprise's investment program for a given production program.

13. Describe the peculiarities of the formation of an investment program in the conditions of restrictions on the weighted average cost of investment resources.

14. Describe the indicators by which the formed investment program is evaluated.

Recommended literature

1. Frank J. Fabozzi, Sergio M. Focardi & Caroline Jonas (2014) Investment management: a science to teach or an art to learn? CFA Institute research foundation.

2. Ephreim Matanda (2020). Modern Financial Investment Management. Cambridge Scholars Publishing.

3. Security analysis and investment management. Lessons 1 to 6. URL : <http://icdeolhpu.org/downloads/course-406FM-02.pdf>.

4. Preeti Singh. (2016) Investment Management. Himalaya Publishing House Pvt. Ltd., Mumbai. URL : <http://www.himpub.com/documents/Chapter1893.pdf>.

5. Nenad Vunjak & et al. (2018). Investment management strategy in financial markets. Economics 6 (2): 49-56. URL : <https://www.sciendo.com/article/10.2478/eoik-2018-0025>

6. M.E. Konovalova, O. Yu. Kuzmina, A. M. Mikhaylov, L.V. Levchenko, S. Yu. Salomatina (2019). The management of Investment Portfolios. TEM Journal. Vol. 8, Iss. 3. P.928-937. URL : https://www.temjournal.com/content/83/TEMJournalAugust2019_928_937.pdf.

7. 2021 investment management outlook. Transforming to thrive. A report from the Deloitte Center for financial services. URL : <https://www2.deloitte.com/content/dam/Deloitte/tr/Documents/financial-services/2021-investment-management-outlook.pdf>

TOPIC 8. MANAGEMENT OF IMPLEMENTATION AND RISKS OF INVESTMENT PROJECTS

8.1 Development of a calendar plan for the implementation of the investment project

8.2 Development of the investment project implementation budget

8.3 Ensuring the neutralization of project risks

8.1 Development of a calendar plan for the implementation of the investment project

The successful implementation of each investment project depends on the timely and high-quality development of the plan for its implementation.

The calendar plan for the implementation of an investment project is one of the forms of the operational plan of the investment activity of the enterprise, which reflects the scope, terms and executors of certain types of work related to its implementation.

Basic principles of development of a calendar plan for the implementation of investment projects (Fig. 20):

1. The principle of the differentiation of the calendar plan provides for a different degree of detailing of the calendar plan for the implementation of the investment project in time and by forms of development.

The main forms of time differentiation of the calendar plan for the implementation of the investment project are presented in fig. 21.

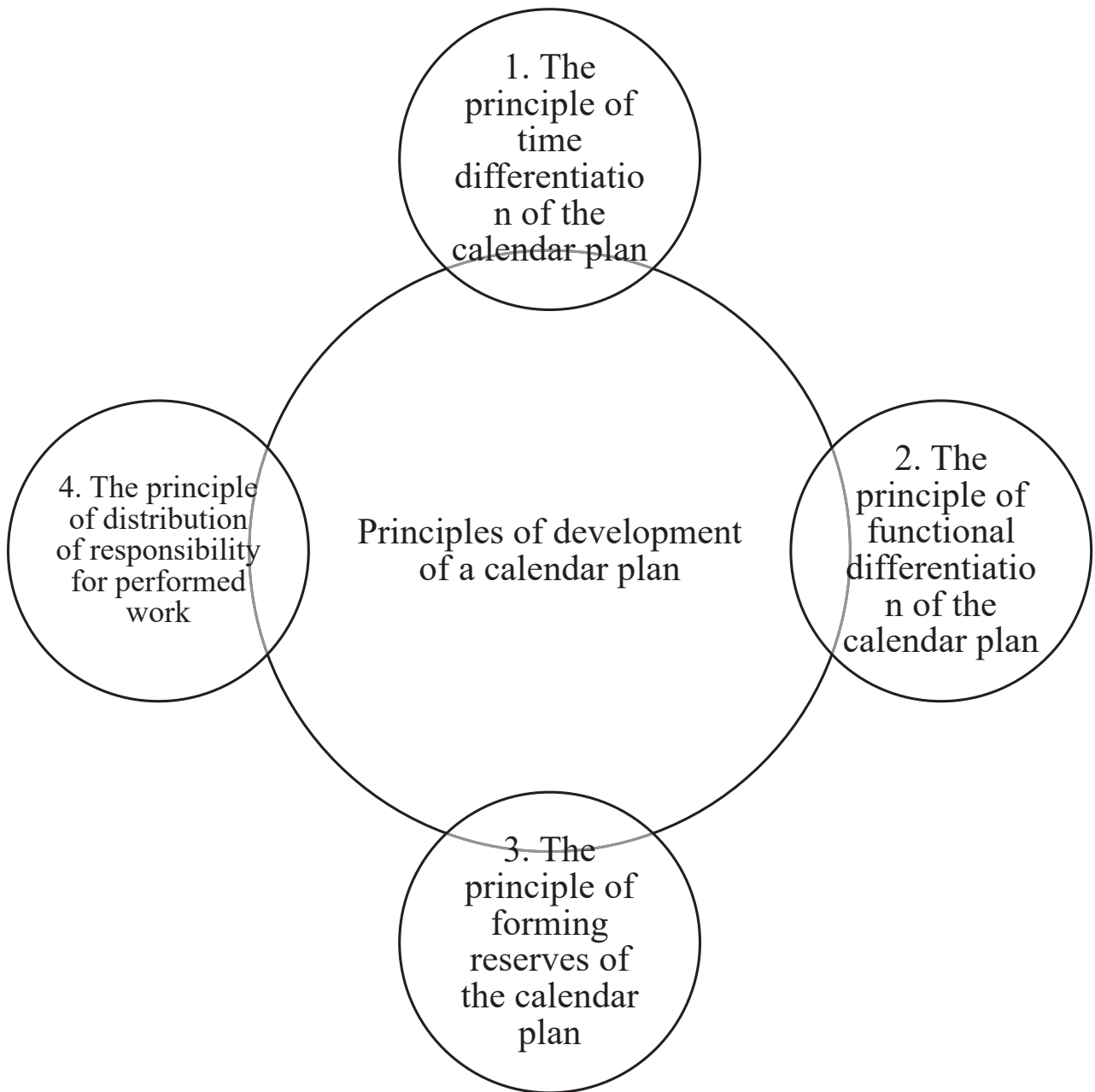


Figure 20. Basic principles of development of a calendar plan for the implementation of real investment projects

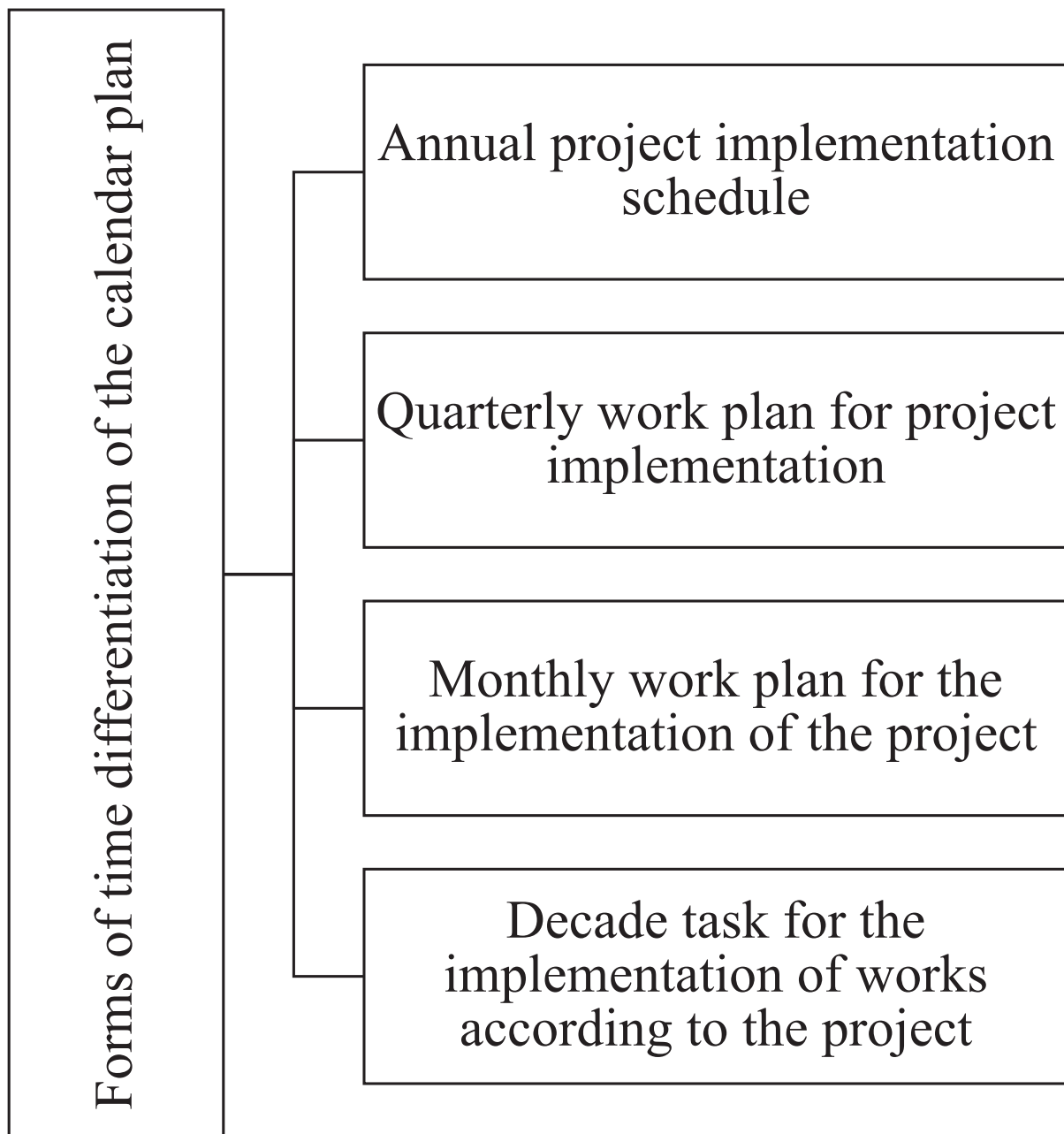


Figure 21. The main forms of time differentiation of the calendar plan for the implementation of the investment project

The annual investment project implementation schedule is the initial and main document that reflects the results of operational planning.

For projects implemented over several years, it covers only the amount of work that is expected to be performed within the planned calendar year.

For projects implemented within one year, it characterizes the sequence of project implementation as a whole.

Two main methods are used when developing the annual schedule of investment project implementation:

- the method of network planning (compilation of a network schedule), which is more visual, but complicates the assessment of bottlenecks, actual volumes of work performed, possible reasons for delays in the implementation of certain types of work, etc;

- the critical path method, which, compared to the network method, has a number of advantages, as it ensures the interconnection and sequence of works; takes into account limitations and obstacles; identifies bottlenecks; makes it possible to apply optimization methods; provides an opportunity to evaluate various work performance options; builds a graph model of the investment process based on deviations and disturbances. The main disadvantage of this method is high labour intensity.

Quarterly and monthly project implementation plans cover specific volumes within the specified time intervals. The basis of their development is the annual schedule of investment project implementation with appropriate further detailing. The quarterly work plan is issued and approved simultaneously with the provision of the

annual schedule. The monthly work plan is drawn up only for the upcoming quarter.

Decadal tasks are a form of further detailing of the monthly work plan that ensures the implementation of the project. In domestic practice, this form of differentiation of the calendar plan is rarely used. In foreign practice, when implementing large investment projects, this form of calendar planning is widely used.

2. The principle of functional differentiation of the calendar plan requires the implementation of differentiated planning of certain types of work according to different functional blocks, the composition of which depends on the stage of implementation and the size of the investment project.

In large investment projects, the calendar implementation plan is usually differentiated by six functional blocks (Fig. 22).

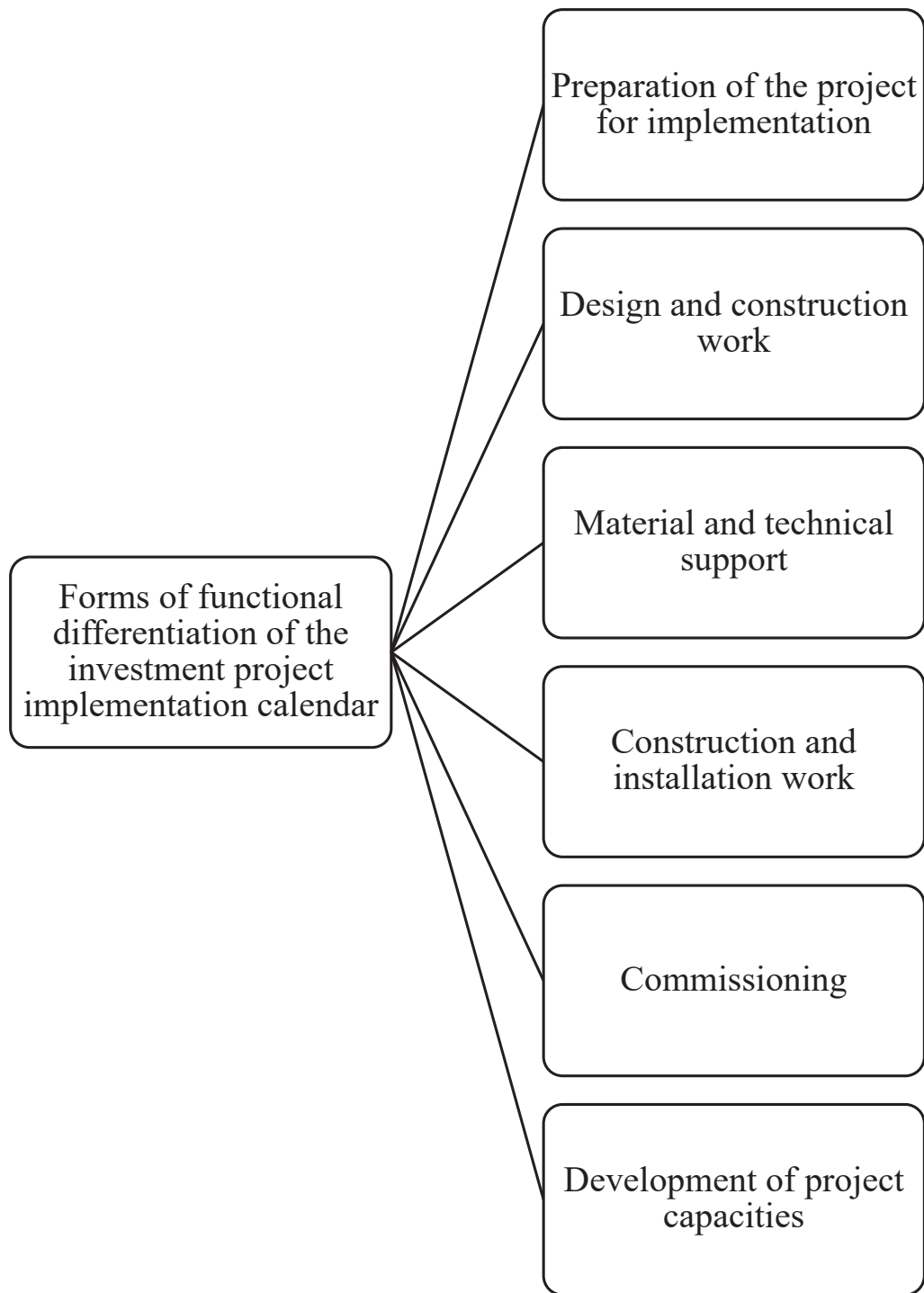


Figure 22. The main forms of functional differentiation of the investment project implementation calendar

Preparation of the project for implementation includes a plan of measures for selecting a contractor (subcontractors) and concluding a contract. This functional block usually includes types of work;

planning of contract preparation; selection of applicants; preparation and sending of requests; receiving and reviewing offers; conclusion of contracts.

Planning of contract preparation includes: selection and analysis of informative data related to the investment project, which influence (or can potentially influence) the conclusion of the contract and the implementation of the project; creation of options for potential contract strategies for the project, including determination of quantitative and qualitative advantages and disadvantages of each of them; determination of the contract strategy that best allows the realization of the goals of the investment project.

The main content of the contract preparation plan:

- assignment of the plan;
- the most important prerequisites for creating a draft contract;
- formation of the principles of concluding a contract;
- recommended strategy for concluding a contract;
- analysis of alternatives when concluding a contract;
- schedule of performance of contract works; – contract conclusion procedures;
- potential partners (contractors);
- necessary solutions and statements.

Selection of applicants:

- compiling a complete list of potential partners who are able to implement the investment project (“long list”);

- a preliminary proposal with a description of the nature and production capacity of the investment project, the time frame for its implementation, intermediate stages of work and other significant conditions;

- receiving information from potential partners: information about interest in providing an offer; data on the applied technologies, fleet of machines and mechanisms; technical staff; data on the experience of implementing similar projects, etc.;

- compilation of a “short list” of applicants based on the analysis of the answers of potential partners, their rating assessment;

- repeated negotiations with selected applicants;

- preparation by applicants of a request for proposal submission: a list of proposal documents; proposal submission procedures; date of proposal submission and other conditions;

- review of submitted proposals by the head of the investment project or by a group of experts created for this purpose (proposal review group): general review of all proposals and, based on it, identification of the leading applicants for the conclusion of the contract; an in-depth review of the proposals of the leading applicants;

- the final choice of a partner.

The conclusion of the contract is the final stage of the first functional block of works. The contract is drawn up on the basis of a compromise between the requirements of the request and the offer.

Design and construction work during the development of the calendar plan is provided only for those investment projects, according to which they were not carried out or completed when they were included in the investment program. The schedule of design works determines the composition and terms of preparation of sets of working drawings and specifications, formed according to individual parts of the investment project, as well as from the analysis and approval of the design documentation by the customer.

Material and technical support during the development of the calendar plan is provided in the form of a detailed list of equipment and materials with their delivery dates:

- drawing up a list of potential suppliers;
- preparation of price offers;
- conducting trades with suppliers;
- delivery of purchased equipment and materials.

This functional block of the calendar plan must be clearly coordinated in time with subsequent production functional blocks, first of all, with the construction and installation project.

Construction and assembly works require the most careful planning during calendar planning. This functional block of the calendar plan should display:

- the start and end dates of each type and stage of work;
- the dynamics of the use of equipment and labour force;
- the dynamics of the use of materials;

- verification and testing of all major systems of the investment project.

In this functional block of the calendar plan, the elements of the works under the two previous functional blocks (design and construction works and material and technical support of the project) are integrated.

Commissioning in the process of calendar planning of the implementation of the investment project involves:

- personnel training for the start of operation of the object;
- purchase and delivery of necessary raw materials and materials;
- planning of technological processes;
- other necessary measures.

This functional block completes the stage of direct investment, transferring it to the stage of the start of operation of the investment project (post-investment phase).

Development of project capacities completes the functional calendar planning of the implementation of the investment project and includes measures that ensure the output of the investment object to the planned project capacity.

3. The principle of forming a schedule reserve is implemented in the planning process by determining the maximum permissible size of the violation of the terms of individual works included in it and distributing this reserve among the participants of the implemented investment project (customer, contractor, subcontractors). The reserve

should usually be no more than 10-12% of the total time of the calendar plan. The order of distribution of this reserve of time between project participants can be discussed in the contract. If there is no such condition in the contract, then usually the time reserve is used in the required amount by the party that first declares its need.

4. The principle of distribution of responsibility for the performed works determines the assignment of responsibility for the execution of individual stages of the works to specific representatives of the customer or contractor in accordance with their functional duties outlined in the contract. At the same time, entrusting the implementation of certain measures to one of the parties, as a rule, automatically entrusts it with specific investment risks (with appropriate forms of compensation for their negative consequences).

The calendar plan (in tabular or graphic form) developed taking into account these principles and agreed with the parties is reviewed and approved by the head of the relevant investment centre.

8.2 Development of the investment project implementation budget

The capital budget for the implementation of an investment project is one of the forms of the operational plan of the enterprise's investment activity, which reflects the volumes, terms and sources of financing of certain types of work related to its implementation.

The development of the capital budget of an investment project is aimed at solving two main tasks:

1. Determination of the volume and structure of costs for the implementation of the investment project according to individual stages of the calendar plan.

2. Ensuring the flow of investment resources necessary to cover these costs within the framework of the total amount of funds intended to finance the implementation of the investment project.

Initial prerequisites for developing a budget for the implementation of an investment project:

- calendar plan for implementation of the investment project;
- an estimate of costs for the execution of certain types of work and the purchase of raw materials, materials, mechanisms and equipment for separate functional blocks of the calendar plan;
- the general strategy and financing scheme of the investment project;
- a preliminary schedule of the investment flow drawn up at the stage of developing the business plan of the project;
- the financial condition of the investor in the current period.

The capital budget for the implementation of the investment project consists of two sections:

- 1) capital costs;
- 2) receipt of funds (investment resources).

Capital costs are costs for the acquisition of long-term assets that operate over a long period with gradual depreciation of the cost: the initial cost of the buildings and structures put into operation (or the phased costs of their construction); the cost of new types of machines and mechanisms; the cost of equipment and inventory (except low-value and perishable); the value of acquired intangible assets (patents, licenses, “know-how”, etc.), which are subject to gradual write-off, etc.

The purpose of planning capital expenditures is to ensure the implementation of the investment project in the expected volumes, the use of appropriate technologies and technical equipment to avoid excessive amounts of these expenditures.

Since the volume and structure of investment costs are pre-determined at the stage of substantiation of the business plan of the investment project, the process of developing the “capital costs” section of the budget is reduced to:

- 1) separating from the total volume of investment costs determined by the business plan, that part of them that belongs to the current period (if the duration of the implementation of the investment project exceeds one year);

- 2) clarification of the amount of investment costs of the current period, taking into account the adjustments made by the contractor to the technology of works;

3) clarification of the volume and structure of investment costs in connection with the change in the price index after the approval of the indicators of the business plan of the project;

4) clarification of the initial volume of investment costs, taking into account the reserve of financial funds provided for in the contract with the contractor to cover unforeseen costs (in the order of internal insurance of investment risks). The amount of this reserve when developing the capital budget should be determined taking into account only those categories of expenses that were included in the initial assessment of investment risks.

The receipt of funds during the development of the capital budget includes the planned flow of investment resources in terms of individual sources: the investor's own funds (profit, depreciation deductions, income from the sale of disposed property, etc.), raised capital, bank loans, leasing, sales, etc. The process of developing the section "receipts of funds" of the budget involves:

1) clarification of the total amount of funds received - this indicator must correspond to the indicator of the total amount of investment expenses under the first section of the budget;

2) clarifying the structure of sources of funds (if the indicator of their total volume changes);

3) ensuring the docking of the volume of receipts of funds for separate periods of the formation of the profitable part of the budget

with the volume of investment costs provided for in separate periods according to the calendar plan for the implementation of works.

The capital budget is developed first for the next year in terms of quarters, and then, within the framework of the next quarter, it is detailed in terms of months.

When developing the capital budget for the implementation of an investment project, the “flexible” method of its preparation can be used, which involves setting planned capital expenditures not in firmly fixed amounts, but in the form of a standard of expenditures “tied” to the relevant indicators of investment activity. According to the investment cycle of the project related to the construction of the object, such an indicator is usually the volume of construction and installation works. The considered method of developing the budget allows to ensure its automatic adjustment depending on the real volume of activities for the implementation of the investment project.

When using this method of developing the capital budget for the implementation of investment programs, a certain reserve of investment resources should be provided for a possible increase in the volume of capital expenditures (for example, when construction and installation works are accelerated).

The development of a “flexible” capital budget in the form of a system of various types of expenditure standards allows not only quickly to adjust cash flows, but also to implement an effective policy for the implementation of an investment project in the current period.

8.3 Ensuring the neutralization of project risks

In the system of measures to ensure the implementation of investment projects, an important place belongs to the neutralization of project risks.

The main stages of developing measures to neutralize project risks (Fig. 23):

1. Study of factors that affect the level of project risks of the enterprise.

The purpose of the research: to reveal the level of manageability of certain types of project risks, as well as to determine ways of possible neutralization of their negative consequences.

In the process of research, factors that affect the level of project risks are divided into objective (external factors) and subjective (internal factors).

2. Establishing the maximum permissible level of risks for individual operations related to the implementation of the investment project. This level is established in terms of individual types of operations, taking into account the appropriate mentality of the company's managers and investment managers (their commitment to the implementation of a conservative, moderate or aggressive investment policy).

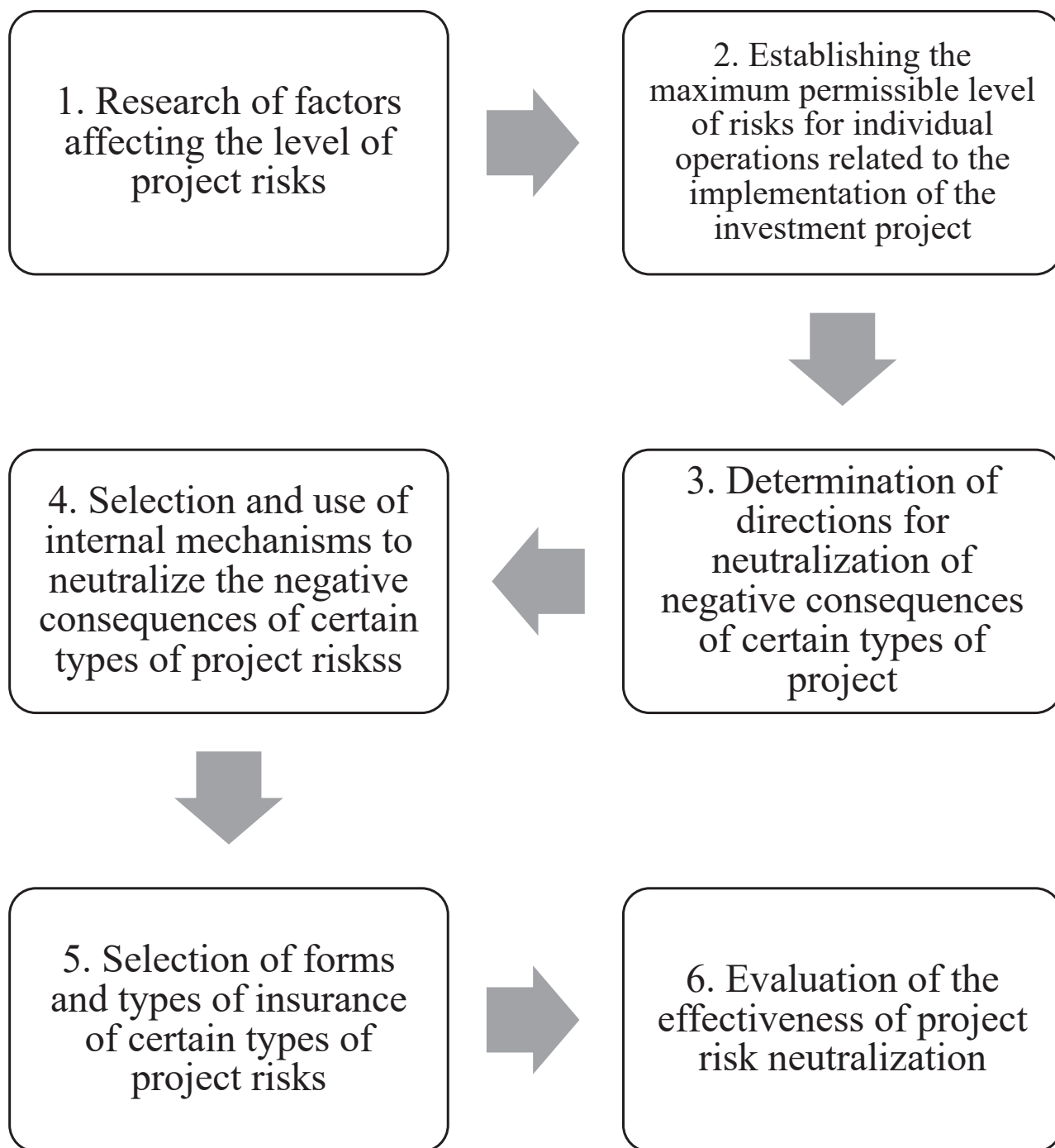


Figure 23. The main stages of work on the neutralization of project risks, which are carried out at the enterprise

When implementing a moderate investment policy, the limit values of the level of risks of individual operations, according to experts, are:

- for operations with a permissible size of losses - 0.1;
- for operations with a critical amount of losses - 0.01;
- for operations with catastrophic losses - 0.001.

This means that a planned operation with risks that are not insured should be rejected if, in one case out of 10, the entire estimated amount of profit may be lost; in one case out of 100 – the amount of estimated gross income is lost; in one case out of 1,000, all equity capital invested in the project was lost as a result of bankruptcy.

3. Determination of directions for neutralization of the negative consequences of certain types of project risks. In the investment management system, two main directions are used for this - the choice of internal mechanisms of neutralization or external insurance. The main role in the neutralization of project risks belongs to the system of measures included in the first direction.

4. Selection and use of internal mechanisms for neutralizing the negative consequences of certain types of project risks.

These mechanisms are selected and implemented for each investment project implemented by the enterprise.

In modern conditions, internal mechanisms of neutralization cover the majority of project risks of the enterprise.

The main objects of use of internal neutralization mechanisms:

- all types of permissible project risks;
- a significant part of the risks of the critical group;
- catastrophic risks that are not insured if they are accepted by the enterprise due to objective necessity.

The advantage of using internal mechanisms to neutralize project risks is a high degree of alternative management decisions that do not depend, as a rule, on other business entities. They are based on the specific conditions of the enterprise's investment activity and its financial capabilities, allow taking into consideration the influence of internal factors on the level of project risks in the process of neutralizing their negative consequences. Internal mechanisms for neutralizing project risks:

1) Risk avoidance is the most radical direction of project risk neutralization, which consists in the development of internal measures that completely exclude a specific type of project risk. The main such measures include:

- refusal to use large amounts of loan capital, which allows you to avoid one of the most significant project risks - loss of financial stability of the enterprise;

- refusal of excessive use of investment assets in low-liquidity forms, which allows to avoid the risk of insolvency of the enterprise.

Disadvantages: the avoidance of project risks, despite its radicalism in rejecting certain types of them, deprives the company of additional sources of profit formation, and accordingly negatively

affects the pace of its economic development and the efficiency of the use of own capital. Therefore, in the system of internal mechanisms for the neutralization of project risks, their avoidance should be carried out very carefully under the following basic conditions:

- if the rejection of one project risk does not lead to the occurrence of another risk of a higher or unambiguous level;

- if the level of risk is incomparable with the level of profitability of the investment operation according to the “yield-risk” scale;

- if the financial losses due to this type of risk exceed the possibility of their compensation at the expense of the company's own financial resources;

- if the amount of income from the operation that generates certain types of risk is insignificant, that is, it has an imperceptible specific weight in the generated positive cash flow of the enterprise;

- if the investment operations are not typical for the enterprise's investment activity, are innovative in nature and there is no information base for them, necessary for determining the level of project risks and making appropriate management decisions.

2) Limiting the concentration of risk is usually used for those types of risks that go beyond the permissible level, that is, for investment operations that are carried out in the zone of critical or catastrophic risk. Such limitation is implemented by establishing appropriate internal standards at the enterprise in the process of developing a policy for real investment.

The system of standards that ensure limiting the concentration of risks may include:

- the maximum size (specific weight) of loan funds used for the implementation of real investment projects;
- the minimum size (specific weight) of investment assets in a highly liquid form and others

Limiting the concentration of project risks is one of the most common internal mechanisms of risk management, which implement the investment ideology of the enterprise in terms of accepting these risks and do not require high costs.

3) The distribution of risks is based on their partial transfer to partners for individual investment operations. At the same time, business partners are transferred that part of project risks of the enterprise, according to which they have more opportunities to neutralize their negative consequences and have at their disposal more effective methods of internal insurance protection.

In the modern practice of risk management, the following main areas of distribution of project risks (their transfer to partners) have become widespread:

- risk distribution among investment project participants;
- distribution of risk between the enterprise and suppliers of raw materials;
- distribution of risk between the participants of the leasing operation.

The degree of distribution of project risks, and therefore the level of neutralization of their negative financial consequences for the enterprise, is the subject of its contractual negotiations with partners, which are reflected in the terms of the respective contracts agreed with them.

4) Self-insurance (internal insurance) is based on the company reserving part of the investment resources, which allows to overcome the negative financial consequences of those investment operations in which these risks are not related to the actions of counterparties. The main forms of this direction of project risk neutralization are:

- formation of a reserve (insurance) fund of the enterprise, for the formation of which at least 5% of the amount of profit received by the enterprise in the reporting period is directed;
- formation of target reserve funds;
- formation of reserve amounts of financial resources in the system of budgets, which are reported to various investment centres;
- the undistributed balance of the profit received in the reporting period as a reserve of financial resources directed to the elimination of the negative consequences of individual project risks.

Disadvantages: using this mechanism of project risk neutralization, it is necessary to keep in mind that insurance reserves in all their forms, although they allow to quickly compensate the financial losses incurred by the company, nevertheless "freeze" the use of a fairly significant amount of investment resources. As a result,

the efficiency of using the company's own capital decreases, and its dependence on external sources of investment resources increases. This determines the need to optimize the amounts of reserved financial resources from the standpoint of their future use in order to neutralize only certain types of project risks:

- types of project risks that are not insured;
- design risks of an acceptable and critical level with a low probability of occurrence;
- most project risks of an acceptable level, the estimated cost of the estimated loss for which is low.

5) Other methods of internal neutralization of project risks:

- ensuring recovery from the counterparty with an investment operation of an additional level of risk premium. If the risk level of the planned investment operation exceeds the estimated level of income (according to the “return-risk” scale), it is necessary to ensure the receipt of additional income or refuse to carry it out;
- obtaining from counterparties certain guarantees related to the neutralization of negative financial consequences in the event of a risky event, which can be provided in the form of sureties, letters of guarantee from third parties, insurance policies in favour of the enterprise from its counterparties for high-risk investment operations;
- reduction of the list of force majeure circumstances in contracts with counterparties. In modern domestic economic practice, this list is unreasonably expanded (against generally accepted international

commercial and financial rules), which allows the partners of the enterprise to avoid financial responsibility for non-fulfilment of their contractual obligations;

– provision of compensation for possible financial losses due to project risks due to the system of fines, which provides for the calculation and inclusion in the terms of contracts with counterparties of the necessary amounts of fines, fines, penalties and other forms of financial sanctions in case of violation by them of their obligations (late payments for products , non-payment of interest, etc.). The level of fines should fully compensate for the company's financial losses due to non-receipt of estimated income for the project, inflation, decrease in the value of money over time, etc.

Only the main internal mechanisms of project risk neutralization are considered. They can be significantly supplemented taking into account the specifics of the enterprise's investment activity and a specific type of investment project.

5. Selection of forms and types of insurance (transfer) of certain types of project risks. They include the most complex and dangerous project risks that cannot be neutralized by internal mechanisms.

Project risk insurance is the protection of the company's property interests in the event of an insurance event by special insurance companies (insurers) at the expense of funds formed by them by receiving insurance premiums (insurance premiums) from policyholders.

In the process of insurance, the enterprise is provided with insurance protection for all the main types of its project risks - both systematic and unsystematic. At the same time, the scope of indemnification of the negative consequences of project risks by insurers is not limited - it is determined by the real value of the insured object (the amount of its insurance assessment), the sum insured and the amount of the paid insurance premium.

The insurance services offered on the market, which provide insurance for project risks of the enterprise, are classified according to a number of features.

Types of insurance by forms:

- compulsory insurance – a form of insurance based on the legally established obligation to carry it out both for the insured and for the insurer. The mass of this insurance makes it possible to significantly reduce the amount of insurance tariffs and simplify the procedure for its implementation;

- voluntary insurance - a form of insurance based only on the voluntary conclusion of a contract between the insured and the insurer based on the insurable interest of each of them.

Types of insurance by objects:

- property insurance covers almost all the main types of tangible and intangible assets of the enterprise involved in the investment process. Insurance relations in property insurance are determined by specific obligations of the parties;

- liability insurance of the enterprise and its personnel to third parties who may suffer financial and other types of loss as a result of any action or inaction of the insured;

- personnel insurance - the company insures the life of its employees participating in the implementation of the investment project, as well as possible cases of their loss of working capacity, onset of disability, and others.

Types of insurance by volume:

- full insurance, which provides insurance protection of the enterprise against the negative consequences of project risks in their full extent in the event of an insurance event;

- partial insurance, which limits the insurance protection of the enterprise against the negative consequences of project risks both to certain insured sums and to a system of specific conditions for the occurrence of an insured event.

6. Evaluation of effectiveness of project risk neutralization. The system of indicators of effectiveness of neutralization of the negative consequences of certain types of project risks includes the level of neutralization of possible financial losses; cost-effectiveness of neutralization (ratio of costs for its implementation with the size of possible losses), etc.

When carrying out external insurance of project risks, its effectiveness is determined according to the following parameters:

- the probability of occurrence of an insurance event for this type of project risk;
- the degree of insurance protection according to the risk, which is determined by the insurance coefficient (the ratio of the insured amount to the size of the insurance assessment of the property);
- the size of the insurance tariff in comparison with its average size on the insurance market for this type of insurance;
- the amount of the insurance premium and the order of its payment during the insurance period;
- the size of the franchise - conditional or unconditional (when using the appropriate insurance systems).

The effectiveness of the insurance of certain types of project risks of the enterprise, determined taking into account these parameters, is the basis for making management decisions to neutralize their consequences.

Questions for self-control

1. Define the calendar plan for the implementation of the investment project and name the main principles of its development.
2. Describe the features of the principle of time differentiation of the calendar plan of the investment project.
3. Explain the content of the form of time differentiation of the calendar plan for the implementation of the investment project.

4. Describe the features of the principle of functional differentiation of the calendar plan of the investment project.

5. Describe the peculiarities of the principle of formation of the reserve of the calendar plan of the investment project.

6. Describe the features of the principle of distribution of responsibility for the work being performed.

7. Define the capital budget for the implementation of the investment project and describe the main tasks to be solved by its development.

8. How is the development of the "receipt of funds" section of the budget carried out?

9. Name the main stages of developing measures to neutralize project risks.

10. Describe the main factors affecting the level of project risks of the enterprise.

11. Explain the advantages of using internal mechanisms to neutralize project risks.

12. Name the main internal mechanisms for neutralizing project risks and briefly describe one of them.

13. Which of the internal mechanisms of risk management is one of the most common? Explain why.

14. What is the essence of project risk insurance?

15. By what parameters is the effectiveness of external insurance of project risks determined?

16. Name the most common methods of quantitative risk assessment. Briefly describe one of them.

17. What are the advantages and disadvantages of sensitivity analysis as a quantitative risk assessment method?

18. Describe the adjustment of the discount rate as a method of quantitative risk assessment.

19. Give the main reasons for adjusting the company's investment program.

20. What are the responsibilities and complexity of making managerial decisions about the “exit” of real projects from the enterprise's investment program?

21. The main stages of substantiating management decisions on exiting projects from the enterprise's investment program.

22. Name the main reasons that lead to a decrease in the efficiency of the implementation of the enterprise's investment projects.

23. The main forms of output of real projects from the enterprise's investment program.

Recommended literature

1. Frank J. Fabozzi, Sergio M. Focardi & Caroline Jonas (2014) Investment management: a science to teach or an art to learn? CFA Institute research foundation.

2. Ephreim Matanda (2020). Modern Financial Investment Management. Cambridge Scholars Publishing.
3. Security analysis and investment management. Lessons 1 to 6. URL : <http://icdeolhpu.org/downloads/course-406FM-02.pdf>.
4. Preeti Singh. (2016) Investment Management. Himalaya Publishing House Pvt. Ltd., Mumbai. URL : <http://www.himpub.com/documents/Chapter1893.pdf>.
5. Nenad Vunjak & et al. (2018). Investment management strategy in financial markets. Economics 6 (2): 49-56. URL : <https://www.sciendo.com/article/10.2478/eoik-2018-0025>
6. M.E. Konovalova, O. Yu. Kuzmina, A. M. Mikhaylov, L.V. Levchenko, S. Yu. Salomatina (2019). The management of Investment Portfolios. TEM Journal. Vol. 8, Iss. 3. P.928-937. URL : https://www.temjournal.com/content/83/TEMJournalAugust2019_928_937.pdf;
7. 2021 investment management outlook. Transforming to thrive. A report from the Deloitte Center for financial services. URL : <https://www2.deloitte.com/content/dam/Deloitte/tr/Documents/financial-services/2021-investment-management-outlook.pdf>

TOPIC 9. FEATURES OF INNOVATIVE INVESTMENT MANAGEMENT OF THE ENTERPRISE

9.1 Innovative investments of the enterprise

9.2 Features of innovation financing. Search for optimal sources of financing

9.3 The role of the state in financing and stimulating innovative investment

9.1 Innovative investments of the enterprise

Innovation is the final result of creative activity, embodied in a new or improved product brought to the market, a technological process used in practical activities, or a new approach to providing consumer services.

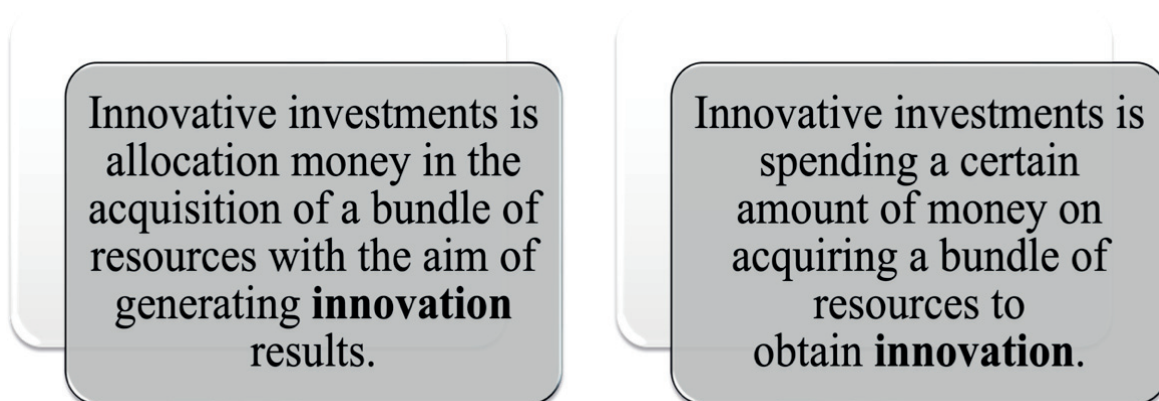
The main distinguishing feature of innovation from the concept of “invention” is the need for its mandatory implementation. Therefore, it should be noted that at the initial stage, the content of innovative activity coincides with the content of the concept of innovation, but its implementation, distribution and commercialization are necessary to transform an innovation into an innovation.

One of the key factors inhibiting the innovative activity of domestic enterprises is the insufficient amount of investments.

The activation of innovative activity is, first of all, connected with the search for sources of investment.

In the aggregate of real investments, two relatively independent forms of their implementation are distinguished: innovative investments and intellectual investments.

Innovative investments are investments in innovations. In the conditions of a developed economy, all investments should be innovations, but in the conditions of a crisis, investments are possible only to support the existing technologically outdated production funds.



“Intellectual investment” are investments in objects of intellectual property arising from copyright, invention and patent rights, rights to industrial designs and utility models.

The subject of changes in the process of implementation of innovative investments may be:

– content and forms of activity (examples – change of assortment and price policy, production of new types of goods and services, etc.);

- means of activity (transition to new production technologies);
- methods of activity. In the change of methods of activity, one can distinguish the technological aspect (“production” methods) and the organizational aspect – methods of managing the firm and its changes (development).

Innovative investments are made in the form of the purchase of ready-made scientific and technical products and in the form of the development of new scientific and technical products.

1. Innovative investments in the form of the purchase of finished scientific and technical products have the following types:

- acquisition of patents for scientific inventions, discoveries, industrial designs and trademarks. Patent protection gives their owners the exclusive right to use, manufacture and sell products (design, technology, etc.) for a certain period of time. A patent secures the priority, authorship of an invention, utility model or industrial design and the exclusive right to their use;

- acquisition of “know-how”. “Know-how” refers to various types of technical, commercial, production and economic knowledge and experience that are not generally known and practically applicable in production and economic activity, including methods, methods and skills necessary for design, calculations, construction and production of any objects and products, scientific research, research and development works, development and use of technological processes, methods and tools of treatment, knowledge and experience of

administrative, organizational, managerial, economic, financial or other order.

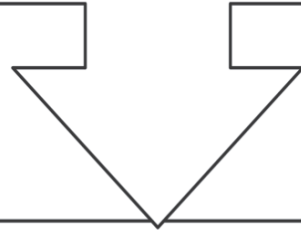
The main features of “know-how” are economy, secrecy and historicity. Economy means that the “know-how” should be useful for production purposes, can become the subject of purchase and sale, and will ultimately bring profit.

2. Innovative investments in the form of development of new scientific and technical products are of the following types:

- development of new scientific and technical products within the framework of the enterprise itself. Financial resources are invested in a specific object of innovation (intangible assets) created at this enterprise with the possible participation of third parties;

- development of new scientific and technical products by third-party organizations on the order of the enterprise. In a broader sense, this direction is called “engineering”. It is a set of works for carrying out research and design works with the aim of developing recommendations for improving the organization of production and management, equipment and technology, forms of sale of finished products and provision of services.

Organizations should decide as early as possible on focus areas and structured processes for their innovation efforts and ensure leadership is on board with the ambition level and risk involved.



Companies without parameters and shared understandings around their innovation efforts are more likely to see huge misses.

9.2 Features of innovation financing. Search for optimal sources of financing

Sources of funding for innovative activities:

- funds of the state budget of Ukraine;
- funds from local budgets;
- own funds of specialized state and communal innovative financial and credit institutions;

- own or borrowed funds of subjects of innovative activity;
- funds (investments) of any individuals and legal entities;
- other sources not prohibited by the legislation of Ukraine.

The main sources of funding for innovative activities of the enterprise:

1. By types of financing, bank loans can be divided into investment lending (a credit line for a non-targeted loan) and project financing (a credit line for a targeted loan). At investment lending as a source of return funds are all economic activities of the borrower, including income received from the implementation of the project. With project financing, the source of loan repayment is the project itself. Project financing is riskier compared to conventional investment lending;

2. Innovative loan – innovative banks and innovative funds specialize in issuing this type of loan;

3. Issuance of securities - the attraction of investment resources for the issuance of securities is called emission financing and significantly contributes to the attraction of funds for large investments of the innovator enterprise. In order to attract additional funds, the innovative enterprise can place various types of securities on the market (shares, bonds, derivative financial instruments);

4. Creation of a venture - the functional task of venture financing is to help the growth of a competitive business by providing a certain amount of money in exchange for a share in the authorized capital of

the enterprise or a package of its shares. A venture capitalist is an intermediary between collective investors and entrepreneurs. Venture capital is long-term risk capital that is invested in the shares of new and fast-growing enterprises with the aim of obtaining high profits;

5. Self-financing can be carried out in two ways: from the profit allocated for development purposes and the depreciation fund;

6. Project bundling is the financing of a long-term innovative project from the revenues of a parallel short-term project (projects) synchronized with the expected project costs;

7. Budget financing is carried out by the state. State participation in innovative activities includes both direct financial support through centralized means (direct funding) and the creation of conditions for the use of the market mechanism for attracting funds (indirect funding);

8. Renting and leasing of free assets – realization of surplus assets with investment of the received funds in the implementation of the project. This method, as it is implemented, is transformed into self-financing. Leasing is a long-term lease of machines, equipment, various types of special equipment, vehicles, as well as industrial buildings with the right of redemption;

9. Pledge of property - a document that defines the relationship between the debtor and the creditor is a mortgage, that is, a security, a type of debt obligation under which the creditor receives one or

another real estate (land, buildings, etc.) in case of non-payment of the debt by the borrower.

One form of pledge is a mortgage - a type of pledge of real estate for the purpose of obtaining funds;

10. Income from the sale of “know-how” - innovative enterprises can sell licenses for technologies for the production of innovative goods;

11. Forfaiting is a kind of transformation of a commercial loan into a bank loan. Forfaiting is used when the innovator's company does not have the funds to purchase any products necessary for internal production. The buyer looks for a seller of the goods he/she needs, and after receiving the prior consent of a commercial bank (a third party to the transaction), agrees on its delivery on the terms of forfeiting. After concluding a contract for the supply of the necessary products, the innovative enterprise offers the seller a package of promissory notes, the total value of which is equal to the value of the received goods, including interest for deferred payment, that is, for the granted commercial credit;

12. Factoring is a set of financial services provided by the bank to the client in exchange for the assignment of receivables.

A set of certain sources of investment support for innovative development forms an investment mechanism. Investment mechanisms are designed to ensure the attraction of investment resources for the realization of existing (potential) market

opportunities for their innovative development with the aim of gaining significant positions on the market, obtaining profit, sustainable development within the framework of the chosen mission and motivation of activity.

The following mechanisms are also used: the use of funds from the privatization of state property (through the State Property Fund), targeted state loans, tax investment credits, World Bank loans, grants, etc.

The stages of financing the creation of an innovation depend significantly on its life cycle.

The curve of the life cycle of the product is most often described by five stages, within which the ratio between the volume of its sale and the amount of profit changes.

We can present stages of financing the creation of an innovation on the fig. 24.

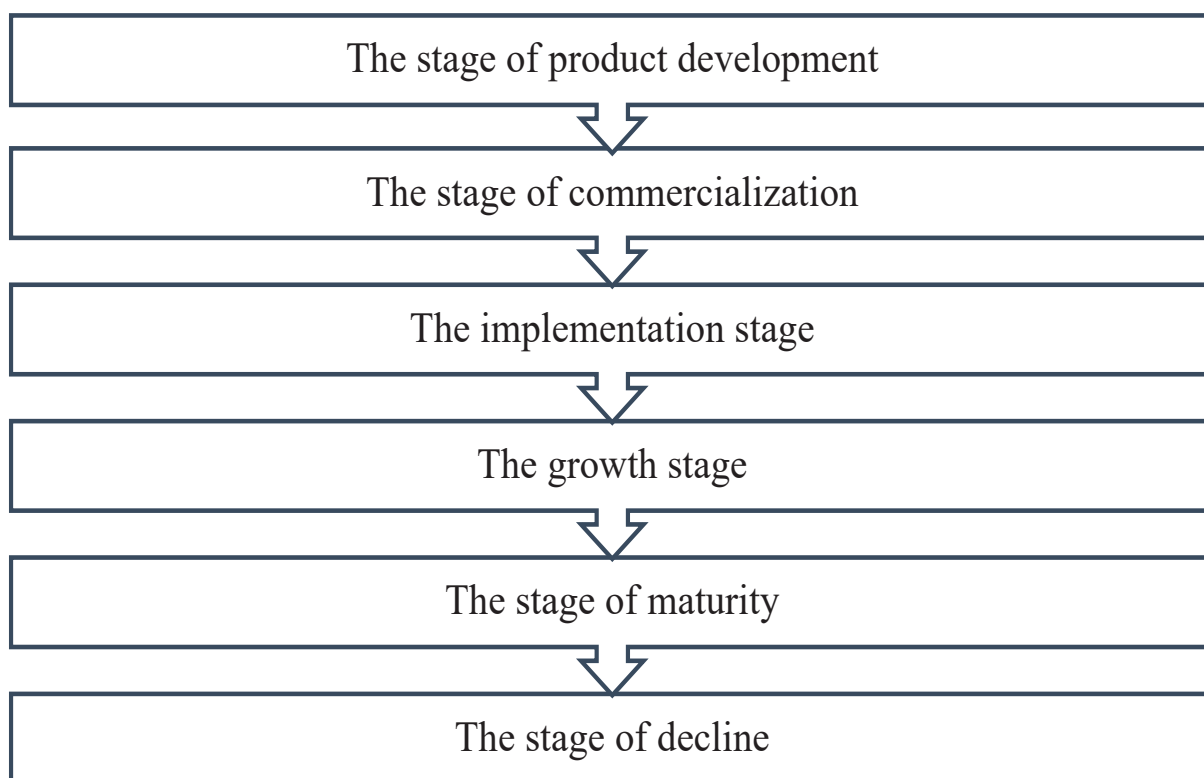


Figure 24. Stages of financing the creation of an innovation

The stage of product development includes the stages of idea generation, research and experimental design work to transform an idea into a product, and the development of its production technology. There is no product on the market, only capital investment is available. This stage is characterized by self-financing and budget financing.

At **the stage of commercialization** of the innovation, there is a need to form an effective financing mechanism and adequate distribution of funds according to the directions of implementation of the innovation policy.

At the implementation stage, the technological process is set up, a small batch is produced and its market approval is carried out,

the strategy and sales channels are formed. At this stage, there is no profit, since the expenses exceed the sales revenue, it is at this stage that there is a need for risky investments.

The growth stage is a period of rapid acceptance of a new product by the market and rapid growth of profits from its sale.

The stage of maturity is characterized by a slowdown in sales due to the purchase of the product by a larger number of buyers. The product ceases to be a novelty. The profit stabilizes or decreases due to the increase in the costs of protecting it from competitors. At this stage, the life cycle of the innovation actually ends.

The stage of decline is characterized by a sharp decrease in sales and profits. The product is withdrawn from production. At this stage, investment resources are formed for further production and partially used for the implementation of a new innovative project.

In order to determine the optimal source of innovation financing, it is customary to use two indicators:

1. The effect is the overall result obtained as a result of the use of all the involved means during a certain period of time. The effect of using the source is estimated by the formula:

$$E = r_{ef.i} - r_{ef.min} \quad (36),$$

where E – the effect,

$r_{ef.i}$ – effective interest rate for the entire period of implementation of the innovative project of the i -th source (individual source or complex of sources);

$r_{ef.min}$ - the minimum effective interest rate from a set of sources.

Calculation of the efficiency of the interest rate for each of the sources can be determined by the formula:

$$r_{ef} = \frac{\sum_{i=1}^3 r_{ef.i}}{K} \quad (37),$$

where K - number of used funding sources.

2. Efficiency - the capacity of a unit of involved costs (labour, capital) in a unit of the created product. The efficiency of E_f from the use of the source is determined by the formula:

$$E_f = \frac{r_{ef.i} - r_{ef.min}}{r_{ef.min}} \quad (38),$$

Based on the results of the analysis of limitations, the list of potential funding sources is adjusted. After that, the cost of their involvement is calculated and the best option is chosen according to two criteria - the annual interest rate r and the effective interest rate for the entire period of implementation of the innovative project $r_{ef.i}$. The left part of the algorithm is the choice of a project financing option from one source, the right part is a complex method from a combination of sources.

9.3 The role of the state in financing and stimulating innovative investment

The main types of state stimulation of innovative activity:

1. Financial support at the expense of the state budget of Ukraine, the budget of the Autonomous Republic of Crimea, local budgets (within the funds provided for by the relevant budgets), which is provided in the following forms:

- full interest-free lending;
- partial (up to 50%) interest-free lending;
- full or partial compensation of interest paid by subjects of innovative activity to commercial banks and other financial and credit institutions for lending to innovative projects;
- provision of state guarantees to commercial banks providing loans to priority innovation projects;
- property insurance for the implementation of innovative projects;
- providing financial support to subjects of innovative activity by reducing the price of long-term loans.

2. Tax benefits may be granted.

3. Depreciation allowances. They are provided to innovative enterprises that are allowed accelerated depreciation of fixed assets and the annual rate of accelerated depreciation of fixed assets of the third group is established. It is carried out until the balance sheet value of the group reaches zero.

4. Customs benefits. Exemption from payment of import duties for raw materials, equipment, components and other goods (except excise goods) that are not produced in Ukraine or are produced but do not meet the requirements of the project, provided they are used for the implementation of a priority innovation project regarding the release of a particularly important innovative product.

Questions for self-control

1. Define the terms “innovation” and “innovative investment”.
2. Describe the main sources of funding for innovative activities of the enterprise.
3. Describe the stages of financing the creation of an innovation based on its life cycle.
4. Name the indicators used in determining the optimal source of innovation financing.
5. What role does the state play in financing innovative activities? Name the types and forms of state stimulation of innovative investment.

Recommended literature

1. Frank J. Fabozzi, Sergio M. Focardi & Caroline Jonas (2014) Investment management: a science to teach or an art to learn? CFA Institute research foundation.

2. Ephreim Matanda (2020). Modern Financial Investment Management. Cambridge Scholars Publishing.
3. Security analysis and investment management. Lessons 1 to 6. URL : <http://icdeolhpu.org/downloads/course-406FM-02.pdf>.
4. Preeti Singh. (2016) Investment Management. Himalaya Publishing House Pvt. Ltd., Mumbai. URL : <http://www.himpub.com/documents/Chapter1893.pdf>.
5. Nenad Vunjak & et al. (2018). Investment management strategy in financial markets. Economics 6 (2): 49-56. URL : <https://www.sciendo.com/article/10.2478/eoik-2018-0025>
6. M.E. Konovalova, O. Yu. Kuzmina, A. M. Mikhaylov, L.V. Levchenko, S. Yu. Salomatina (2019). The management of Investment Portfolios. TEM Journal. Vol. 8, Iss. 3. P.928-937. URL : https://www.temjournal.com/content/83/TEMJournalAugust2019_928_937.pdf

TOPIC 10. FINANCIAL INVESTMENT MANAGEMENT OF THE ENTERPRISE

10.1 Financial investments: essence and types

10.2 Securities market

10.3 Assessment of investment qualities of financial instruments of investment

10.1 Financial investments: essence and types

Financial investments - investing funds in various financial instruments, in particular in securities, bank deposits, deposits, shares, etc., with the aim of obtaining income (profit) in the future.

Financial instruments are contracts that simultaneously lead to the emergence (increase) of a financial asset in one enterprise and a financial liability or equity instrument in another.

Financial instruments in accounting are divided into:

- financial assets - cash, unrestricted for use and their equivalents; receivables not intended for resale; financial investments held for repayment; assets intended for resale; other assets;

- financial liabilities - include financial liabilities intended for resale and other financial liabilities;

– equity instruments – ordinary shares, shares and other types of equity;

– derivative financial instruments, which will include futures and forward contracts and other derivative financial instruments.

Also, we can find such classification (fig.25).

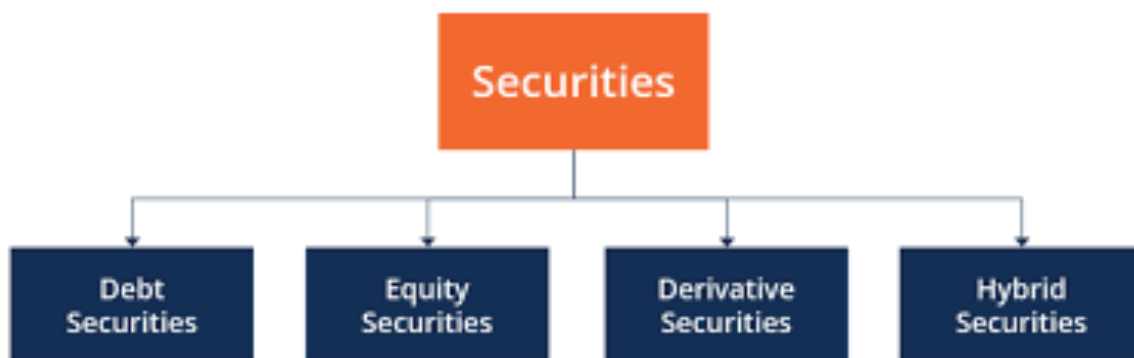


Figure 25. Classification of securities

Also, we can perform structure of financial market:

Financial markets comprise five key components:	the debt market,
	the equity market,
	the foreign-exchange market,
	the mortgage market, and
	the derivative market.

Securities are the basis of financial instruments.

A security is a monetary document certifying the right of ownership or a loan relationship between the person who issued it (the issuer) and its owner (the investor) and provides, as a rule, the payment of income in the form of dividends or interest, as well as the possibility of transferring monetary and other rights arising from this document to other persons. The following groups of securities are issued in Ukraine:

- shares - certify ownership (shares and investment certificates);
- debt - the issuer is obliged to return within a certain period the funds invested in its activities and to pay income or grant other material rights, with the exception of the rights to participate in the management of the issuer's activities (bonds of enterprises, bonds of internal and external state loans, state treasury bonds, savings (deposit) certificates and other types of documents in monetary form, which may be assigned to this group);

- derivatives – options, futures contracts, depository receipts, etc.;

- privatization - certify the right of their owner to receive part of the property of state enterprises, housing and land fund in the process of privatization (privatization property certificates). The following types of securities are in circulation in Ukraine:

- shares – securities without a specified period of circulation, certifying participation in shares in the statutory fund of a joint-stock company, confirming membership in it and the right to participate in

its management, giving its owner the right to receive part of the profit in the form of a dividend, as well as to participate in distribution of property upon liquidation of a joint-stock company. On the fig. 26 we perform types of stocks;

- bonds of internal and external state loans - securities placed on the stock markets and confirming the country's obligation to reimburse the bearers of these bonds their nominal value with the payment of income in accordance with the terms of issue;

- local loan bonds;

- corporate bonds - issued by enterprises of all forms of ownership, associations of enterprises, joint-stock and other companies and do not give their owners the right to participate in management.

Bonds are securities certifying the deposit of funds by its owner and confirming the obligation to reimburse him the nominal value of these securities within the stipulated period with the payment of a fixed interest (unless otherwise provided by the terms of issue). Bonds of all types are distributed among enterprises and citizens on a voluntary basis:

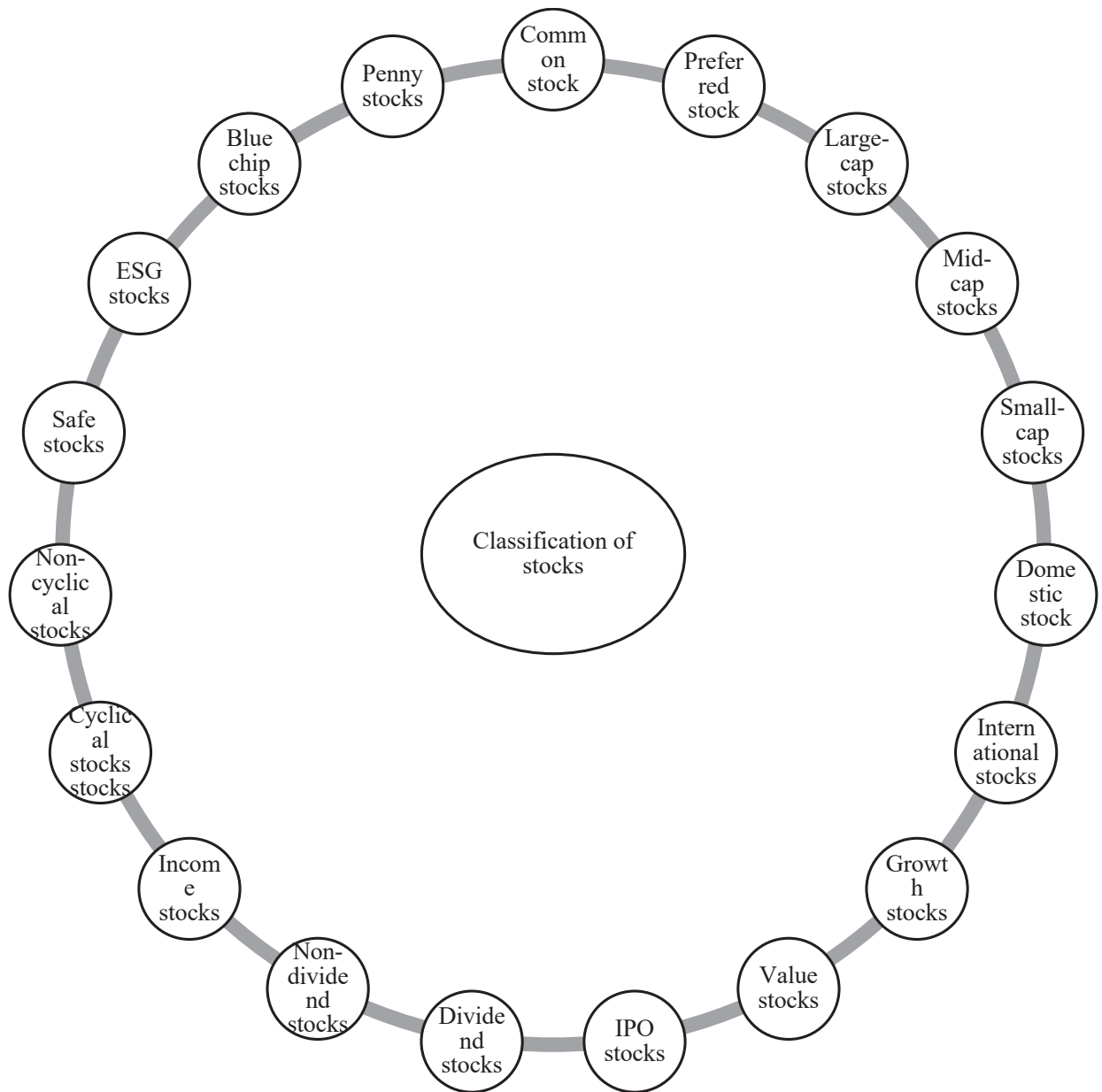


Figure 26. Classification of stocks

– treasury obligations – bearer securities that are distributed exclusively among the population on a voluntary basis, certify that their owner has contributed funds to the budget and provide the right to receive a specified income;

- savings certificates - a written certificate of the bank on the deposit of funds, certifying the depositor's right to receive the deposit and interest on it after the end of the established term;

– investment certificates – securities issued exclusively by an investment fund (investment company) and entitling their owner to receive income in the form of dividends;

- promissory notes - securities certifying the unconditional monetary obligation of the issuer of the promissory note to pay a certain amount of money to the owner of the promissory note (the holder of the promissory note) after the due date;

– privatization securities;

– pledged securities;

– mortgage securities;

- real estate transaction fund certificates.

Securities are classified according to certain characteristics:

1. According to the degree of predictability of investment income:

- debt;

- equity - securities representing the share of the holder (owner) in the real property of the issuer.

2. According to the functional load:

– basic – reflect basic property rights or claims (shares, bonds);

– auxiliary or derivative - reflect a certain or additional right, requirement or condition. These securities are also called derivatives and include options, futures.

3. According to the level of risk associated with the nature of the issuer:

- state - mainly debt obligations, which have the lowest level of investment risk, however, the profitability of these securities is usually low;

- municipal bodies. The level of investment quality of such securities (as a rule, debt securities) is determined by the level of investment attractiveness of the respective region. The level of investment risk of securities of municipal bodies is usually low;

- issued by banks - the investment qualities of these stock instruments are considered to be quite high, as their level of profitability is usually higher than that of state and municipal securities. The level of investment risk of securities issued by banks is usually quite high;

- enterprises - the investment qualities of these financial investment instruments are considered low in our country, as their level of profitability is usually low. The level of investment risk of corporate securities (especially those belonging to the “venture” category) is the highest; – securities of other issuers.

4. By circulation period:

- long-term - financial investments for a period of more than one year, as well as all investments that cannot be freely implemented at any time. These include: held-to-maturity investments; investments in associated and subsidiary enterprises; investments in joint activities; other financial investments;

- short-term - financial investments with a term not exceeding a year, which can be freely implemented at any time (except for investments that are cash equivalents). Investments can be classified as equivalents if they are: freely convertible into a known amount of cash; are characterized by an insignificant risk of change in value; have a short maturity, for example within three months. These include: cash equivalents; other current financial investments.

5. By level of liquidity:

- liquid - quickly sold on the market and easily converted into cash;

- illiquid - are difficult to sell on the market due to low demand for them and are characterized by the impossibility of converting them into cash without significant losses.

6. According to the method of transmission:

- registered - financial instruments, the name of the owner of which is recorded on their form and (or) in the register of owners. Registered securities cannot circulate freely and are transferred only by full endorsement, that is, a special entry is made about the transfer in the register of the joint-stock company on the transfer of rights;

- bearer - financial instruments, the name of the owner of which is not fixed directly on them, and their circulation does not require any registration. Therefore, bearer securities circulate freely without registration and instruction of the owner;

- promissory notes - financial instruments transferred by execution of a directly transferable inscription on a registered security (by endorsement on the back of the paper) to another person. An example of a promissory note is a promissory note.

7. According to the form of existence:

– paper (documentary) – financial instruments, which must contain details specified by law and have appropriate forms of protection against forgery.

– paperless (documentless) – securities that exist as accounting units in a computer system and circulate in the form of transfers from the accounts of some stock market participants to the accounts of others are registered and have pre-negotiated rights and obligations in relation to the capital user.

8. According to the method of circulation on the market:

- negotiable - financial instruments that can be freely sold and bought by any person on the terms stipulated by law. They are often called market;

- non-negotiable - financial instruments that cannot be freely sold and bought on stock markets (non-market);

- with limited circulation - financial instruments, which are characterized by the fact that the conclusion of agreements using such securities can be carried out with certain restrictions;

- emission - financial instruments issued in large series and in large quantities. Each series consists of absolutely identical securities regardless of their type. Shares and bonds are emission securities.

10.2 Securities market

The securities market is a complex mechanism by which appropriate legal and economic relationships are established between entrepreneurs, corporations and other structures that need financial resources for their development and organizations and citizens who can borrow (provide) them under certain conditions.

The securities market performs the following functions:

1. Provision of state and private sector financing. The state and business entities provide themselves with the necessary financial resources by issuing and placing securities on the market.

As a result of the implementation of the specified function, the overflow of savings of the population and accumulations of economic entities into investments is ensured.

2. Financing of the state budget deficit. The implementation of the specified function is carried out by the state at the expense of issuing and placing on the domestic and foreign markets of state securities. This method of overcoming the budget deficit is considered

non-inflationary, as it does not lead to an increase in the money supply.

3. Regulation of the amount of money in circulation. The essence of this function is to reduce (increase) the mass of money in circulation due to the issue (redemption) of securities. The mechanism for issuing and redeeming state securities is one of the instruments for implementing the state's monetary policy.

4. Formation of demand for money as a means of accumulation. With the help of this function, under the influence of the market yield of securities, the amount of demand for money that can be used for accumulation is formed. In conditions of high profitability of operations on the stock market, there is a tendency to increase the volume of demand for money as a means of accumulation, in case of low profitability of operations with stock values, the reverse trend is observed.

5. Social function. The essence of this function has two manifestations: first, due to the ownership of securities, their owners receive additional income in the form of interest, dividends, market price growth, indexation of the value of securities, etc. Secondly, the owners of shares realize themselves as co-owners of the property of the joint-stock company and, according to the available number of shares, can take part in the management of the company.

6. Privatization function, which has a temporary manifestation. Implementation of this function took place during the privatization of

state property of Ukraine with the help of privatization securities. Mass privatization of the property of domestic enterprises took place with the help of such securities as privatization property certificates.

7. Anti-inflation function. It has a non-permanent nature and manifests itself in conditions of a high level of inflation in the country. To reduce the excess mass of money and, accordingly, the government issues debt obligations with the aim of placing them on the domestic market to reduce the level of inflation. It is customary to divide the securities market into primary and secondary.

We can present financial market on the fig. 27.

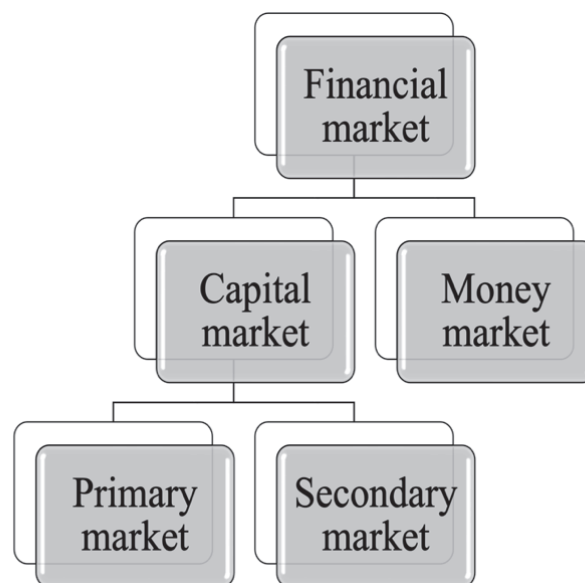
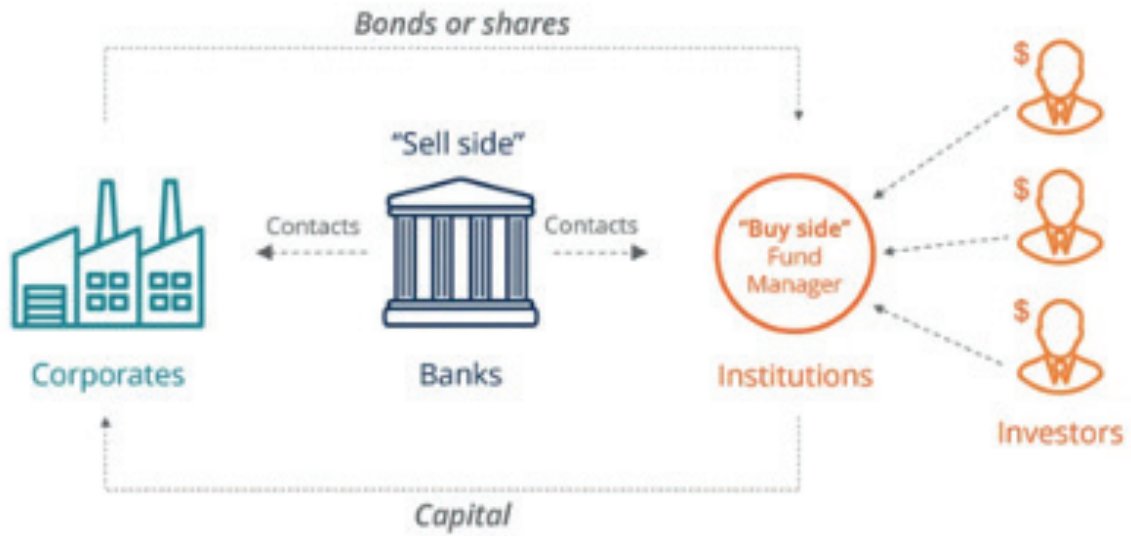


Figure 27. Structure of financial market

The primary securities market serves the issue (issue) and initial placement of securities. Its participants are issuers and investors. The income belongs to the issuer.

Primary Markets



The secondary securities market is a market where previously issued securities are bought and sold. The income does not belong to the issuer, but to the owners who act as sellers. This market can be unorganized (over-the-counter) and organized (exchange).

Secondary Markets



Investment banks help facilitate the trade in shares and bonds.

On the fig. 28 we present main difference between primary and secondary market.

Primary Market	Secondary Market
It is a way of issuing fresh shares in the market. It is also called New Issue Market. A major component of the primary market is the IPO.	It is a place where already issued or existing shares are traded. It is called After Issue Market.
The amount received from the issue of shares goes to the company for their business expansion purposes.	The amount invested by the buyer of shares goes to the seller, and hence the company doesn't receive anything.
Securities are issued by the companies to the investors.	Securities are exchanged between buyers and sellers, and stock exchanges facilitates the trade.
The securities are all issued at one price for all investors participating in the offering.	Securities are exchanged at the market price.
The primary market doesn't provide liquidity for the stock.	The secondary market provides liquidity to the stock.
Underwriters act as intermediaries.	Brokers act as intermediaries.
On the primary market, security can be sold just once.	On the secondary market, securities can be sold innumerable times.

Figure 28. Difference between primary and secondary market

In most countries of the world, the bulk (approximately 85%) of securities are traded on the over-the-counter market, and a relatively small share of them - 15% - is traded on the stock market. However, it is the stock market, where the highest quality and therefore the most important securities are concentrated, that determines the situation and the development process of the stock market.

Securities trading on the stock market of Ukraine is carried out on stock exchanges and in over-the-counter trading and information systems.

A stock exchange is an organized, permanently operating market on which securities are traded. This is a joint-stock company that concentrates the demand and supply of securities, contributes to the formation of their exchange rate and carries out its activities in accordance with this Law, other acts of the legislation of Ukraine, the charter and rules of the stock exchange.

The main task of the stock market is to accumulate free investment resources and ensure their most complete and rapid transfer to investments through the issuance and circulation of securities.

A stock exchange is an organization that is created without the purpose of making a profit and deals exclusively with the organization of contracts for the purchase and sale of securities and their derivatives. It cannot carry out transactions with securities in its own name and on behalf of clients, as well as perform the functions of a depository. The subject of circulation on the stock market is a special monetary document, a property title, which confirms the right of its owner to income or property.

Participants of the securities market are:

- issuers are the state represented by an authorized body, a legal entity and, in cases provided for by law, an individual. The issuer issues securities on its own behalf and undertakes to fulfil the obligations arising from the conditions of their issuance;

– investors – individuals and legal entities, including institutional investors, investment funds, trust companies, pension funds, insurance companies, etc., who have free funds and wish to invest them in securities in order to receive income (interest) from the invested funds or an increase in the market value of securities;

- stock brokers - most often they are called investment institutes, that is, it is a legal entity that is formed in any organizational and legal form that are allowed in the state.

Intermediaries are usually divided into three large groups:

1. Deposit intermediaries are financial institutions that have the right to accept contributions and deposits. They include:

a) depositories, i.e. institutions carrying out storage, accounting and settlement of securities. The main functions of depository institutions are to attract funds of the population and institutions in the form of deposits and to provide loans to the population and enterprises;

b) commercial banks are financial institutions that attract financial funds from depositors and use them on their own behalf to provide loans and purchase securities. Depositors - individuals and legal entities - are the owners of funds that they provide to banks for use. Raising funds is made in the form of checking and savings accounts, time deposits, various accounts for loaned and deposited funds, etc.;

c) savings institutions that operate without a contract and which include:

- savings and credit associations are specialized financial organizations that raise funds through the opening of savings accounts and use them to provide targeted mortgage loans;

- credit unions - are relatively small savings and credit organizations focused on providing consumer loans. They are created by religious organizations, trade unions, etc. They open savings accounts and provide loans to their members. Credit unions are managed by depositors, as a rule, on a public basis;

- mutual funds are organizations that issue “stocks”, which are essentially deposits that pay interest. Customers can write checks for these deposits. The check amount and deposit amount must meet certain limits. Mutual funds raise funds from thousands of depositors and use the funds to purchase income securities (certificates of deposits, treasury bills and commercial paper).

2. Contract savings intermediaries - attract long-term savings on a contractual basis. These institutions form their funds in the form of periodic contributions in accordance with contracts. They include:

- a) life and property insurance companies are financial intermediaries that make payments to their clients upon the occurrence of certain events specified in the insurance policy. Policyholders pay premiums to the insurance company in exchange for an obligation to pay specified amounts in the future upon the

occurrence of certain events. Insurance premiums are used to purchase bonds, shares, mortgages and other securities;

b) various pension funds - provide employees with income after retirement in the form of periodic payments. The founders of the pension fund are corporations, private firms, institutions, unions and individuals. Funds are attracted to the fund through periodic contributions from both employers and employees. Up to 90% of the assets of pension funds are shares and securities with fixed income, which is determined by the specifics of the funds' activity, namely, the need to make periodic payments to pensioners over a long period.

3. Investment intermediaries - they include:

a) investment banks - mobilize long-term loan capital and transfer it to borrowers through the issuance and placement of bonds or other debt obligations;

b) mortgage banks are banks that specialize in mortgage operations, i.e. issue depository and long-term mortgage loans, accumulate resources due to the issue and placement of mortgage bonds and perform operations related to the issuance of mortgage loans;

c) housing banks are banks specializing in lending and housing construction financing;

d) financial companies - obtain their funds by selling commercial paper and issuing shares and bonds. Received loans are provided to consumers in the form of loans for the purchase of expensive goods.

They are formed at large productions to stimulate the sale of their goods by providing loans to buyers;

e) mutual funds - companies raising funds through the issue of shares

and selling them to the public. Mutual funds invest the proceeds in the purchase of shares of business corporations, ensuring, in view of the high professionalism of their employees, a wide diversification of the company's assets and a low cost of servicing operations. Unlike ordinary corporations, mutual funds buy back their issued shares at the request of the owners;

f) investment companies are legal entities operating on the securities market not at the expense of the client, but at their own expense. Investment companies are specialized enterprises that serve to organize and guarantee the issue of securities, invest funds in securities, buy and sell securities and work as a dealer. The main activity of investment companies is determining the terms and preparation of new issues of securities, buying them from issuers and then reselling securities to investors, guaranteeing placement; creation of subscription syndicates or groups for the sale of new issues;

g) trust funds - are created for the purpose of management by proxy property and securities of individuals or organizations.

10.3 Assessment of investment qualities of financial instruments of investment

Assessment of investment qualities of financial instruments is an integral characteristic of their individual types, which is carried out by an investor taking into account the goals of forming an investment portfolio.

The most common financial investment instruments are shares and bonds.

The main parameters for assessing the investment qualities of shares:

- characteristics of the species, depending on the degree of protection of the amount of dividend payments;
- assessment of the industry in which the issuer carries out its operational activities;
- main indicators of economic activity and financial condition of the issuer;
- nature of share circulation on the stock market;
- conditions of issue of shares.

1. Characteristics of the type of shares depending on the degree of protection of the amount of dividend payments.

Common shares differ from preferred shares:

a) they entitle the owner to participate in voting at meetings shareholders;

b) payment of dividends and liquidation value for them in liquidation of the enterprise can be carried out only after the distribution of the corresponding funds among the owners of preferred shares.

Preferred shares differ from ordinary shares primarily in that, as a rule, they do not give their owners the right to participate in voting at shareholders' meetings, if it is not fixed for them in the charter of the joint-stock company.

In world practice, preferred shares, which have advantages in terms of the order of payment of dividends on them compared to other preferred shares, are called preferential preferred. Preferred shares can be convertible and cumulative. A convertible preferred share is a share that can be exchanged for other shares - common or other varieties of preferred. Cumulative preferred shares are shares that accrue dividends if they are not paid. The issuer determines the period of time during which dividends can accumulate.

The owners of common stock are the owners of the corporation and the providers of its initial capital. Capital invested in shares is considered venture or risky because in the event of bankruptcy of the corporation, the owners of common shares can lose all their investments. The payment of dividends on shares is not a contractual obligation of the company.

2. Assessment of the industry in which the issuer carries out its operational activities. Such an assessment involves, first of all,

studying the stages of the industry's life cycle. The greatest increase in capital and net profit is characteristic, as a rule, for enterprises in those industries that are at the initial stages of their life cycle. Among other factors that determine the investment qualities of shares of enterprises of various industries, there is the place assigned to the industry in the structural restructuring of the country's economy, the average level of profitability of the enterprises of the industry, as well as the level of taxation of their income (profit).

3. The evaluation of the main indicators of economic activity and the financial condition of the issuer is differentiated depending on whether the shares are offered for the first time, or whether they have been circulating on the stock market for a long period (at least a year).

The assessment of the quality of shares of the first group is carried out on the basis of the analysis of the issuer's financial condition according to the accounting reports, including the analysis of solvency and liquidity, financial stability, turnover of assets and capital, profitability, determination of the value of net assets and book value of shares.

If the shares are already traded on the stock market, to determine their quality, it is recommended to calculate the indicators of the market activity of the joint-stock company, which include:

- coefficient return on equity ratio, that is calculated as a percentage and characterizes the level of the company's net profit on equity capital:

$$Kr_{e.r.} = NP/EC*100\% (39),$$

where NP is the amount of net profit of the enterprise in the period under consideration;

EC is the average cost of equity capital in the period under consideration;

- book value of one share BV_s , shows the size of the share capital and the company's reserve fund per share, and is calculated according to the formula:

$$BV_s = \frac{EC + RF}{A_0} (40),$$

where EC is the value of share capital on a certain date;

RF - the value of the reserve fund on a certain date;

A_0 - total number of shares;

- coefficient of dividend payout K_d , the profit share of the joint-stock company that was paid out as dividends:

$$K_d = \frac{\sum D}{\sum NP} * 100\% (41),$$

where $\sum D$ - amount of dividends paid by the joint-stock company;

$\sum NP$ – amount of net profit of the enterprise;

– the coverage ratio of preferred shares with the net assets of *KCps*. It allows you to determine the degree of capital protection when investing it in preferred shares:

$$KCps = NA/Sp \text{ (42),}$$

where *NA* - the amount of net assets of a joint-stock company, which is defined as the difference between the total amount of assets on the balance sheet, on the one hand, and intangible assets, current and long-term liabilities, on the other hand;

Sp - the number of preferred shares of the company;

– dividend coverage ratio for preferred shares *KCd*. It allows to assess to what extent the size of the company's net profit ensures the payment of dividends for preferred shares.

$$KCd = \frac{NP}{\sum D_{pref}} \text{ (43),}$$

where $\sum D_{pref}$ – amount of dividends provided for payment on preferred shares.

4. The assessment of the nature of stock turnover on the stock market is primarily related to its quotation and liquidity indicators. Among these indicators, the most important are:

– the level of payment of dividends LPD , which is determined by the formula:

$$LPD = \frac{\sum D}{P_q} \quad (44),$$

$\sum D$ – amount of dividends paid per share;

P_q – quotation price of the share;

– coefficient of ratio of price and profitability $K_{p/p}$:

$$K_{p/p} = \frac{P_q}{\sum D} \quad (45),$$

The lower this ratio, the more attractive the stock is for an investor;

- liquidity ratio of shares on the Stock Exchange K_l :

$$K_l = \frac{V_{ss}}{V_{soffer}} \quad (46),$$

V_{ss} - total volume of sales of a specific type of shares at auctions;

V_{soffer} - total volume of the offer of the same type of shares at this auction.

5. Evaluation of the terms of share issuance is the final stage of studying their investment qualities. The subject of such an assessment is the purpose of the issue, the conditions and frequency of dividend payments, the degree of participation of the owners of shares in the management and other data of interest to the investor and contained in the issue prospectus.

Determination of the rating of the open issue of certain securities is a characteristic feature of developed stock markets. The rating of the issuer or issue determines the status of the issuer and its difference from others. Among dozens of rating agencies, the most famous in the world are four American agencies – “Moody's Investor Service, Inc.”, “Standard & Poor's Corporation” (S & P), “Duff & Phelps Credit Rating Co.” (DCR) and “Fitch IBSA”, which resulted from the merger of the American firm “Fitch Investors Service” and the English agency “International Bank Credit Analysis” (IBCA).

Based on the analysis of the investment qualities of the security, experts of rating agencies give the security an appropriate category.

An integral assessment of the investment qualities of bonds is carried out according to the following parameters:

- type of bonds by nature of issuers, maturity and forms of income payment;
- assessment of the investment attractiveness of the region;
- assessment of financial stability and solvency of the issuer's enterprise;

- assessment of the nature of bond turnover on the stock market;
- assessment of bond issue conditions.

1. The type of bonds according to the nature of the issuers, maturity and forms of income payment significantly affects the main investment qualities - the level of profitability, risk and liquidity.

Bonds can be classified according to several features: depending on the type of issuers (domestic state loan bonds, local loan bonds and bonds of companies and firms); according to the form of the order (registered and bearer); by form of issue (coupon and non-coupon); by term of circulation (short-, medium-, long-term and eternal); according to the method of security (secured and unsecured); by the method of income payment (interest, cumulative, two-currency, with a “floating rate”, with participation in income); by type of repayment (with early repayment, deferred and redeemable funds, serial, reimbursable, expanding or narrowing).

2. Assessment of the investment attractiveness of the region is carried out only for domestic local loan bonds. When considering the investment qualities of bonds, the dynamics of the region's budget balance should be studied, and the structure of the sources of its formation should be investigated.

3. Assessment of the financial stability and solvency of the issuing enterprise is carried out only for enterprise bonds. Its goals are to identify the enterprise's credit rating, the level of its financial stability, and its forecast for the bond's repayment period.

4. The assessment of the nature of bond turnover on the stock market consists in determining the ratio of the bond's market price and its real value.

5. Evaluation of bond issue conditions. The subject of the assessment is the purpose and conditions of the issue, the periodicity of the interest payment and its amount, the terms of repayment of the principal sum (principal), and other indicators.

S&P Ratings perform ratings as for short-term debt (Table 6) as well for long-term bonds (Table 7).

Table 6. S&P Ratings Scale for Short-Term Debt

Letter Rating	Investment Grade	Degree of Creditworthiness
A-1	Investment	Strong
A-2	Investment	Satisfactory
A-3	Investment	Adequate
B	Speculative	Currently meets commitments but faces uncertainties
C	Speculative	Vulnerable to nonpayment
D	Speculative	In default

Table 7. S&P Ratings Scale for Long-Term Bonds

Letter Grade	Grade	Capacity to Repay
AAA	Investment	Extremely strong
AA+, AA, AA-	Investment	Very strong
A+, A, A-	Investment	Strong
BBB+, BBB, BBB-	Investment	Adequate
BB+, BB	Speculative	Faces major future uncertainties
B	Speculative	Faces major uncertainties
CCC	Speculative	Currently vulnerable
CC	Speculative	Currently highly vulnerable
C	Speculative	Has filed bankruptcy petition
D	Speculative	In default

It should be noted that a higher quality of bonds means a lower interest when paying them. At the same time, there is a guarantee of interest payment depending on the rating of the bond.

Questions for self-control

1. What are financial instruments? What types of financial instruments are distinguished in accounting?

2. Name the types of securities. Describe one of the types.
3. Define the term “securities market”. What are the functions of the securities market?
4. Describe the participants of the securities market.
5. Name the main parameters and features of assessing the investment qualities of shares.
6. Describe the features of the integral assessment of the investment qualities of bonds.
7. Name the main classification features of stocks.

Recommended literature

1. Frank J. Fabozzi, Sergio M. Focardi & Caroline Jonas (2014) Investment management: a science to teach or an art to learn? CFA Institute research foundation.
2. Ephreim Matanda (2020). Modern Financial Investment Management. Cambridge Scholars Publishing.
3. Security analysis and investment management. Lessons 1 to 6. URL : <http://icdeolhpu.org/downloads/course-406FM-02.pdf>.
4. Preeti Singh. (2016) Investment Management. Himalaya Publishing House Pvt. Ltd., Mumbai. URL : <http://www.himpub.com/documents/Chapter1893.pdf>.
5. Nenad Vunjak & et al. (2018). Investment management strategy in financial markets. Economics 6 (2): 49-56. URL : <https://www.sciendo.com/article/10.2478/eoik-2018-0025>

6. M.E. Konovalova, O. Yu. Kuzmina, A. M. Mikhaylov, L.V. Levchenko, S. Yu. Salomatina (2019). The management of Investment Portfolios. TEM Journal. Vol. 8, Iss. 3. P.928-937. URL : https://www.temjournal.com/content/83/TEMJournalAugust2019_928_937.pdf

METHODICAL RECOMMENDATIONS FOR PRACTICAL TASK AND INDEPENDENT WORK PREPARATION

Practical task 1. The essence, purpose and functions of investment management

The aim of class - to know the main meaning of investments, investment management, its functions.

Task execution:

1. Get acquainted with the lecture material and presentation.
2. Define your own categories: investments, investment management, and functions of investments.
3. Methodical recommendations to execution of practical task: you should learn lecture, find additional information and give your own ideas on the following questions:

1. What is an investment?
2. What type of investments do you know?
3. What is the difference between real and financial investments?
4. Give examples of real investments.
5. What are the reasons for investing money?

Additional information for preparation:

https://www.youtube.com/watch?time_continue=5&v=VelJ64U_EKw&feature=emb_logo and

https://www.youtube.com/watch?v=Arz_9WX-pn0&t=1s

Please, prepare file with answers in MS Word.

4. Questions for self-control:

1. Describe the essence of investments.
2. List types of investments.
3. What is the difference between real and financial investments?
4. Answer the question why people decide to invest money.

Evaluation criteria:

maximum number of points - 7, of which

answering the task - 4 points

task defense - 3 points

Practical task 2. Investment strategy of the enterprise

The aim of the class - to study investment strategies, its types and advantages.

Task execution:

1. Get acquainted with the lecture material and presentation.
2. Define your own categories: investments strategy, types of strategies, best-in-class strategy.
3. Methodical recommendations to execution of practical task: you should learn lecture, find additional information and give your own ideas on the following questions:
 1. Compare two investment strategies and describe the advantages and disadvantages of them.
 2. Which investment strategy is the best for you? Describe why you choose this strategy.

As additional information you can follow this link:
https://www.youtube.com/watch?v=5ENlzD8bIQc&feature=emb_imp_woyt

Please, prepare your file in format of MS Word.

4. Questions for self-control:

1. What is investment strategy?
2. List types of investment strategies.
3. Which one is better?
4. What disadvantages of investment strategy?

Evaluation criteria:

maximum number of points - 7, of which

answering the task - 4 points

task defense - 3 points

Practical task 3. Methodological principles and methodological tools of investment management

The aim of the class – to study main tools of investment management.

Task execution:

1. Get acquainted with the lecture material and presentation.
2. Define your own categories: simple interest, compound interest, effective interest rate.

3. Methodical recommendations to execution of practical task:
you should learn lecture, find additional information and give your own ideas on the following questions:

1. What is simple and compound interest? What is the difference?

2. In which cases do we use simple and when compound interests?

3. What is an effective interest rate?

As additional information you can follow next links:

https://www.youtube.com/watch?v=gyiiqUQgEeA&feature=emb_i mp_woyt

and

<https://www.youtube.com/watch?v=1aaAaMa6pXU>

Please, prepare file with answers in MS Word.

4. Questions for self-control:

1. What is simple interest?

2. What is compound interest?

3. In which cases is used simple interest or compound interest?

4. What is an effective interest rate? What can we calculate by it?

Evaluation criteria:

maximum number of points - 5, of which

answering the task - 3 points

task defense - 2 points

Practical task 4. Assessment and forecasting of investment market development

The aim of the class - to know main tools for assessment and forecasting of investment market development.

Task execution:

1. Get acquainted with the lecture material and presentation.
2. Define your own categories: investment market, financial market, stock market, bonds market.
3. Methodical recommendations to execution of practical task: you should learn lecture, find additional information and give your own ideas on the following questions:

1. Describe, please, what is investment market.
2. List 5 key components of the financial market.
3. Compare two of these 5 components; what is the difference.

As additional information for task preparation you can use follow links: https://www.youtube.com/watch?v=yRr0_gJ-3mI

and

https://www.youtube.com/watch?v=ZCFkWDdmXG8&feature=emb_imp_woyt

Please, prepare file with answers in MS Word.

4. Questions for self-control:
 1. What is an investment market?
 2. Which parts is it consisted of?
 3. What is financial market?

4. Describe stock market.
5. Describe derivatives market.

Evaluation criteria:

maximum number of points - 5, of which
answering the task - 3 points
task defense - 2 points

Practical task 5. Investment resources of the enterprise

The aim of the class - to learn, list main financial resources that can be used by enterprise.

Task execution:

1. Get acquainted with the lecture material and presentation.
2. Define your own categories: financial resources, loan, ownership, credit, grant.
3. Methodical recommendations to execution of practical task: you should learn lecture, find additional information and give your answer:

Please, choose one of the types of financing start-up and describe it. What type of financing is the best?

As additional information you can follow links:

<https://www.youtube.com/watch?v=VWAnXZYG6r0>

and

https://www.youtube.com/watch?v=NNtMCbs47N8&feature=emb_imp_woyt

Please, prepare file with answers in MS Word.

4. Questions for self-control:

1. What resources for financing an enterprise can be?
2. Can personal savings be a resource for enterprise?
3. Is a loan a resource for enterprise?
4. Explain the essence of “love money”?
5. Is a grant a resource for an enterprise?

Evaluation criteria:

maximum number of points - 5, of which

answering the task - 3 points

task defense - 2 points

Practical task 6. Management of real investment of the enterprise

The aim of the class - to study main indicators that could be use for evaluation of investments' effectiveness and its management.

Task execution:

1. Get acquainted with the lecture material and presentation.
2. Define your own categories: real investments, effectiveness, investment management, NPV, IRR.
3. Methodical recommendations to execution of practical task: you should learn lecture, find additional information and describe main indicators that evaluate effectiveness of investments.

As additional information you can follow the next links:
<https://www.youtube.com/watch?v=Fw5-wccViOM>

And https://www.youtube.com/watch?v=CZ_xpo_AMIc

Pease, prepare file with answers in MS Word.

4. Questions for self-control:

1. What is a real investment?
2. What does management of real investment include?
3. What do we calculate for evaluating the effectiveness of investments?
4. What does the indicator NPV mean? What for is it been calculated?
5. What does the indicator IRR mean? What for is it been calculated?

Evaluation criteria:

maximum number of points - 6, of which

answering the task - 4 points

task defense - 2 points

Practical task 7. Formation of the program of real investments of the enterprises

The aim of the class - to know procedure of formation of the programme of real investment of the enterprise.

Task execution:

1. Get acquainted with the lecture material and presentation.

2. Define your own categories: real investments, effectiveness, investment management, ROI; PP; DPP.

3. Methodical recommendations to execution of practical task: you should learn lecture, find additional information and describe main indicators that evaluate effectiveness of investments. Please, download Excel file and do your option. The first sheet has a list with names and your option.

As additional information you can follow the next links:

<https://www.youtube.com/watch?v=0zQmSIstt6o>

and

<https://www.youtube.com/watch?v=tATPx0Urzx8>

and

<https://www.youtube.com/watch?v=wPVZBPWYYXY>

Please, prepare file with answers in MS Excel.

4. Questions for self-control:

1. What is a program of real investment?

2. What does the management of real investment include?

3. What do we calculate for evaluating the effectiveness of investments?

4. What does the indicator ROI mean? What for is it been calculated?

5. What does the indicator PP, DPP mean? What for is it been calculated?

Evaluation criteria:

maximum number of points - 6, of which

answering the task - 4 points

task defense - 2 points

Practical task 8. Management of implementation and risks of investment projects

The aim of the class - to study different types of risks and the process of their management.

Task execution:

1. Get acquainted with the lecture material and presentation.
2. Define your own categories: risk, management of risk, tax risk, counterparty risk, liquidity risk, execution risk.
3. Methodical recommendations to execution of practical task: you should learn lecture, find additional information and choose any type of risk, describe it and list main steps to manage it.

As additional information you can follow links:

<https://www.youtube.com/watch?v=-EHq-Tna97A>

and

<https://www.youtube.com/watch?v=kaB-RUnrhlU>

Please, prepare file with answers in MS Word.

4. Questions for self-control:

1. What is a risk?

2. What does management of risk include?
3. What is the process of risk management?
4. What is a tax risk?
5. What is an execution risk?
6. What is a liquidity risk?
7. What is a counterparty risk?
8. List other types of investments risks.

Evaluation criteria:

maximum number of points - 6, of which

answering the task - 4 points

task defense - 2 points

Practical task 9. Features of innovative investment management of the enterprise

The aim of the class - to study the essence, meaning of innovative investment and the process of its management

Task execution:

1. Get acquainted with the lecture material and presentation.
2. Define your own categories: innovative investment, return on innovative investment, innovation capital.
3. Methodical recommendations to execution of practical task: you should learn lecture, find additional information and describe the

essence of innovative investment. Eou should mention what the value of innovative investments is.

As additional information you can follow the next links:
<https://www.youtube.com/watch?v=Lmf8M1P19jE> and
https://www.youtube.com/watch?v=Dh_YUx0vI70

Please, prepare file with answers in MS Word.

4. Questions for self-control:

1. What is an innovative investment?
2. What does management of innovative investment include?
3. What is return on innovative investment?
4. What is innovative capital?
5. What is the value of innovation in investment process?

Evaluation criteria:

maximum number of points - 6, of which

answering the task - 4 points

task defense - 2 points

Practical task 10. Financial investment management of the enterprise

The aim of class - to know what financial investment is, the process of functioning of the financial market.

Task execution:

1. Get acquainted with the lecture material and presentation.

2. Define your own categories: financial investments, financial market, annuities, bonds, certificate of deposit.

3. Methodical recommendations to execution of practical task: you should learn lecture, find additional information and describe one of the type of financial investment or financial market.

As additional information you can follow the next links:
<https://www.youtube.com/watch?v=UOwi7MBSfhk>

and

https://www.youtube.com/watch?v=WQui_3Hpmmc&list=PL8FB14A2200B87185 and

<https://www.youtube.com/watch?v=ZCFkWDdmXG8&t=21s>.

Please, prepare file with answers in MS Word.

4. Questions for self-control:

1. What is a financial investment?
2. What is a financial market?
3. List types of financial investment?
4. What is a bond?
5. What is annuities?
6. What is a certificate of deposit?

Evaluation criteria:

maximum number of points - 6, of which

answering the task - 4 points

task defense - 2 points

Independent work 1. Assessment of investments

The aim of the independent work - to occupy skills of finding present and future value of money.

Task execution:

1. According to the lecture 3 and additional information you have to solve the following tasks

1. A loan in the amount of UAH 200,000 was granted on January 13, 2021 with repayment on September 18, 2021 at 14% annually. The principal amount of the debt with interest is paid at the time of loan repayment. Determine the amount to be repaid.

2. How much do you need to put in the bank today to get 50,000 UAH in 12 years, at 11 % per annum on a quarterly basis?

For execution of this task you can revise tasks that were solved on the practical classes. Please, use attached file to this independent work.

Evaluation criteria:

maximum number of points - 10, of which

only one task is solved - 5 points

two tasks are solved - 10 points.

Independent work 2. Research of investment market in foreign countries

The aim of the independent work - to analyse peculiarities of foreign countries' investment market development.

Task execution:

1. On the basis of lectures for module 1 and additional information research the development of different types of investments in foreign countries.

2. Think which factors influence on this tendency.

3. Prepare the essay on the topic “What type of investments are the most widespread in China and explain why”.

Please, prepare this task in MSWord.

Evaluation criteria:

maximum number of points - 10, of which

the answer, which partially reveals the task - 5 points

the answer that reveals the task at the average level - 6-8 points

the answer that reveals the task at a high level - 9-10 points

Independent work 3. Law and theoretical bases of investment management in foreign countries

The aim of independent work 3 - to provide research of theoretical foundations of investment management in foreign countries.

Task execution:

1. On the basis of lectures for module 2 and additional information research the theoretical and law foundations of investment management and development of investment markets in different countries and prepare your answer on this task.

2. Besides, you have to study this question in one particular industry. The choice of industry is up to you, but research has to be done concerning any industry (for example, automobile industry of China or textile industry of any country).

3. Number of items in this task depends on the volume of information that you prepare, but at least it has to be 2 items.

For example,

1. Theoretical foundations for investment development in Chinese textile industry.

2. Law regulation of investments in Chinese textile industry.

Please, prepare this task in MSWord format and attach to this task.

Evaluation criteria:

maximum number of points - 10, of which

the answer, which partially reveals the task - 5 points

the answer that reveals the task at the average level - 6-8 points

the answer that reveals the task at a high level - 9-10 points

Independent work 4. Practical development of investments in foreign countries

The aim of independent work 4- to provide research of practical development of investment management in foreign countries.

Task execution:

1. On the basis of lectures for module 2 and additional information research the statistical data of investments and current realization of investment management in different countries and prepare your answer on this task. This task is continuation of previous one.

2. Besides, you have to study this question in one particular industry. The choice of industry is up to you, but research has to be done concerning any industry (for example, automobile industry of China or textile industry of any country).

3. Number of items in this task depends on the volume of information that you prepare, but at least it has to be 2 items.

For example,

1. Statistical analyse of investment development in Chinese textile industry.

2. Main factors that influence the development of investments in Chinese textile industry.

Please, prepare this task in MSWord format and attach to this task.

Evaluation criteria:

maximum number of points - 10, of which

the answer, which partially reveals the task - 5 points

the answer that reveals the task at the average level - 6-8 points

the answer that reveals the task at a high level - 9-10 points

TEST TASKS AND OPEN QUESTIONS

Open questions:

1. What is an investment?
2. What is “love money”?
3. What are the main reasons for investing money?
4. What is the difference between simple and compound interest?
5. List type of investments.
6. List investment strategies.
7. What is socially responsible investing?
8. Describe strategy “buy and hold”.
9. Describe income investing.
10. What is angels investing?
11. Describe the main objects of investment.
12. Justify why companies need investment.
13. Identify the characteristics by which investments are classified.
14. Who are the investors? Identify the criteria by which investors are classified.
15. Determine the content of investment activities, its relationship with other activities.
16. Cash flow: the economic essence of the concept, definition, types and their characteristic.

17. Why cash flow rather than profit becomes central in investing.

18. The role of depreciation in the structure of cash flow in investing.

19. Two main methods of calculating the amount of cash flow.

20. Significant characteristics of cash flow balances, their difference from the balance sheet.

21. The essence of “inflows” and “outflows” in cash flows.

22. Indirect method of calculating the amount of cash flow.

23. Direct method of calculating the amount of cash flow.

24. Cash flows from operating, investing and financing activities.

25. Total cash flow.

26. Traditional cash flow.

27. Net cash flow.

28. Additional and relevant cash flows.

29. Describe the shares as an object of financial investment.

30. List the types of shares.

31. What is the difference between common and preferred shares?

32. Describe bonds as an object of financial investment.

33. List the types of bonds.

34. Describe savings and investment certificates as objects of financial investment.

35. What is a bill?

36. How is the level of investment risk on a security interrelated with the level of investment income?

37. What is the content of assessing the effectiveness of financial investments?

Test tasks:

1. The process of building a portfolio of stocks, bonds and other investments based on your goals is:

- A) investment management
- B) financial management
- C) bank management
- D) Human Resources management

2. This type of investments includes funds collected from different investors.

- A) stocks
- B) bonds
- C) mutual funds
- D) Life-long insurance

3. This type of asset are highly liquid assets that are either in cash or could be fast converted to cash

- A) financial
- B) real

C) real estate

D) plants

4. This type of asset are value-driven physical assets that a company owns.

A) financial

B) real

C) stocks

D) bonds

5. It is a resource with economic value that an individual, corporation, or country owns or controls with the expectation that it will provide a future benefit -

A) An asset

B) An item

C) An investment

D) An investment management

6. It is an asset or item acquired with the goal of generating income -

A) An investment

B) An item

C) A financial resource

D) Real estate

7. Can be an investment in the form of money, time, effort etc.?

A) No, an investment can be only in the form of money.

B) No, an investment can be only in the form of cash.

C) Yes, an investment can have all these forms.

D) Yes, but very rare.

8. A fixed income instrument that represents a loan made by an investor to a borrower (typically corporate or governmental) it is -

A) an investment

B) an asset

C) a bond

D) stocks

9. By the characteristic of the period of investment investments could be:

A) short term and long term

B) direct and indirect

C) alternative and interconnected

D) domestic, foreign

10. By the characteristic of the level of risks investments could be:

A) risk-free, low-risk, mid-range risk, high-risk

- B) direct and indirect
- C) alternative and interconnected
- D) domestic, foreign

11. By the characteristic of the regional affiliation investments could be:

- A) risk-free, low-risk, mid-range risk, high-risk
- B) direct and indirect
- C) alternative and interconnected
- D) domestic, foreign

12. This type of investments includes shares of ownership of any company and helps you earn dividends in return.

- A) stocks
- B) bonds
- C) mutual funds
- D) life-long insurance

13. A set of rules, behaviours or procedures, designed to guide an investor's selection of an investment portfolio is

- A) investment strategy
- B) investments
- C) interests
- D) bonds

14. This strategy where an investor buys a small proportion of all the shares in a market index

- A) value investing
- B) income investing
- C) buy and hold
- D) indexing

15. At this step we evaluate our income, debt, expenses etc.

- A) Step 1. Evaluate Your Current Financial Standing
- B) Step 2: Define What You Want to Accomplish
- C) Step 3: Determine How Much Risk You Can Take
- D) Step 4: Decide What Type of Investment to Make

16. At this step you detect short or long term goals that you want to achieve in your life

- A) Step 1. Evaluate Your Current Financial Standing
- B) Step 2: Define What You Want to Accomplish
- C) Step 3: Determine How Much Risk You Can Take
- D) Step 4: Decide What Type of Investment to Make

17. At this step you think how much risk can you take based on what you want to accomplish

- A) Step 1. Evaluate Your Current Financial Standing
- B) Step 2: Define What You Want to Accomplish

C) Step 3: Determine How Much Risk You Can Take

D) Step 4: Decide What Type of Investment to Make

18. At this step you need to decide what type of investments will help you accomplish what you have set out to accomplish

A) Step 1. Evaluate Your Current Financial Standing

B) Step 2: Define What You Want to Accomplish

C) Step 3: Determine How Much Risk You Can Take

D) Step 4: Decide What Type of Investment to Make

19. At this step you decide when you start investing

A) Step 1. Evaluate Your Current Financial Standing

B) Step 2: Define What You Want to Accomplish

C) Step 5: Establish Your Timeline

D) Step 4: Decide What Type of Investment to Make

20. Investment strategies which are seeking rapid growth by focusing on capital appreciation are

A) conservative

B) highly aggressive

C) compound

D) simple

21. Investment strategy depends on the following factors (choose incorrect answer):

- A) age
- B) lifestyle
- C) population of the country
- D) financial situation

22. Which investment strategy was made popular by Warren Buffet?

- A) value investing
- B) income investing
- C) growth investing
- D) social responsible investing

23. This investment strategy means buy stocks that are cheaper than they should be

- A) value investing
- B) income investing
- C) growth investing
- D) social responsible investing

24. This investment strategy involves buying securities that generally pay out returns on a steady schedule

- A) value investing
- B) income investing
- C) growth investing
- D) social responsible investing

25. This investment strategy focuses on capital appreciation

- A) value investing
- B) income investing
- C) growth investing
- D) social responsible investing

26. This investment strategy involves purchasing stock of small companies with smaller market capitalization

- A) value investing
- B) income investing
- C) growth investing
- D) small cap investing

27. Portfolios using the buy and hold strategy have been called lazy portfolios

- A) value investing

- B) income investing
- C) buy and hold
- D) small cap investing

28. This formula $SI = P * r * n$ shows calculation of :

- A) Simple interest
- B) Compound interest
- C) Effective interest rate
- D) Deposit

29. Calculate effective interest rate for this data: Investor pays 10% interest, compounded monthly

- A) 10,47
- B) 10,1
- C) 11,0
- D) 10,36

30. This process is a sustained rise in overall price levels

- A) Inflation
- B) Risk
- C) Increase of prices
- D) Decrease of price

31. The value of a current asset at a future date based on an assumed rate of growth is:

- A) Future value
- B) Present value
- C) Compound Interest
- D) Simple interest

32. The current value of a future sum of money or stream of cash flows given a specified rate of return is

- A) Future value
- B) Present value
- C) Simple interest
- D) Compound interest

33. You make a deposit in bank for 158 days, 15% per year and principal sum is equal \$18,000. Please, calculate Future value.

- A) 19169
- B) 20000
- C) 19874
- D) 18973

34. Which sum of money we should deposit in bank now if we want to receive in a 3 year \$15000, a year interest – 10%?

- A) 11538

B) 12000

C) 14530

D) 11257

35. This formula $P \times ((1+r)^t - 1)$ shows calculation of :

A) Simple interest

B) Compound interest

C) Effective interest rate

D) Deposit

36. With this interest, borrowers must pay interest on the interest as well as the principal

A) Simple interest

B) Compound interest

C) Effective interest rate

D) Deposit

37. $FV = PV \times (1 + r/k)^{n \times k}$. In this formula k means:

A) number of accounting interests per period

B) interest rate

C) Effective interest rate

D) Compound interest

38. It is the real return on a savings account or any interest-paying investment when the effects of compounding over time are taken into account.

- A) Simple interest
- B) Compound interest
- C) Effective interest rate
- D) Deposit

39. It is a set of economic relations between sellers and consumers of investment goods and services, as well as objects of investment in all its forms

- A) Investment market
- B) Compound interest
- C) Investment percent
- D) Investing

40. This is a long-term loan secured by a pledge of real estate

- A) share
- B) physical assets
- C) mortgage
- D) derivative

41. These are securities that derive their value from an underlying asset such as a stock, interest rate, currency, or physical asset.

- A) share
- B) physical assets
- C) mortgage
- D) derivative

42. This market is a financial market in which only short-term debt instruments (original maturity of less than one year) are traded.

- A) debt market
- B) money market
- C) mortgage market
- D) derivative market

43. This is a broad term for many different methods of evaluating investments, industry sectors, and economic trends.

- A) investment management
- B) investment market
- C) investment analysis
- D) investment activity

44. What are the key factors of investment analysis? (choose incorrect answer)

- A) the appropriate entry price

- B) the expected time horizon for holding an investment
- C) the role the investment will play in the portfolio as a whole
- D) the competences of the analysed company workers

45. This type of investment analysis assesses individual stocks by using their merits

- A) bottom-up
- B) top-down
- C) technical analysis
- D) fundamental analysis

46. This market is used to trade public stock.

- A) stock market
- B) foreign-exchange market
- C) mortgage market
- D) derivative market

47. This market allows investors to buy and sell shares of ownership in publicly traded companies.

- A) stock market
- B) foreign-exchange market
- C) mortgage market
- D) derivative market

48. This market is used by governments, companies, and financial intermediaries to issue debt instruments to raise capital.

- A) debt market
- B) foreign-exchange market
- C) mortgage market
- D) derivative market

49. The most common type of financial instruments issued in this market are bonds, bills, notes, and certificates of deposit. What market is it?

- A) debt market
- B) foreign-exchange market
- C) mortgage market
- D) derivative market

50. It is a massive loan usually issued by a corporation or government entity.

- A) bond
- B) stock
- C) derivative
- D) forward

51. What is usually safer: bond or share?

- A) bond

- B) share
- C) they both almost risk-free
- D) they both are very risky

52. This market allows investors to speculate on changes in the exchange rates between currencies.

- A) debt market
- B) foreign-exchange market
- C) mortgage market
- D) derivative market

53. This market means investing in some goods.

- A) debt market
- B) physical assets
- C) mortgage market
- D) derivative market

54. The resources from which the enterprises obtain the funds they need to finance their investments, capital and current activities is...

- A) financial resources
- B) currency resources
- C) natural resources
- D) raw materials

55. Business incubators has another name

- A) accelerators
- B) angels
- C) venture capitalists
- D) family

56. This type of financing is the most commonly used source of funding for small and medium-sized businesses

- A) bank loans
- B) grants
- C) angels
- D) venture capital

57. This type of investors will invite future businesses and other fledgling companies to share their premises, as well as their administrative, logistical and technical resources

- A) business incubators
- B) angels
- C) venture capital
- D) love money

58. These types of investments referring largely to things like stocks, real estate, precious objects

- A) Ownership Investments

- B) Lending Investments
- C) cash equivalents
- D) financial resources

59. This type of investments (Taking out loans is an everyday part of business finances) refers to

- A) debt financing
- B) equity financing
- C) grants
- D) subsidies

60. This type of investments (you give up a share of ownership in your business in return for money) refers to

- A) debt financing
- B) equity financing
- C) grants
- D) subsidies

61. When you start business with your own cash it is

- A) personal investment
- B) love money
- C) bank loans
- D) grants

62. When you start business with money of your spouse is

- A) personal investment
- B) love money
- C) bank loans
- D) grants

63. These type of investors are looking for companies with high-growth potential

- A) venture capitalists
- B) business angels
- C) relatives
- D) spouses

64. These type of investors are usually generally wealthy individuals

- A) venture capitalists
- B) angels
- C) relatives
- D) spouses

65. These investing resource generally focus on the high-tech sector by providing support for new businesses in various stages of development.

- A) Business incubators

- B) Angels
- C) Venture capital
- D) Family and friends

66. For evaluation the effectiveness of investments we DON'T use:

- A) Net present value
- B) Internal Rate of Return
- C) Payback period
- D) Number of workers

67. This indicator gives the number of years it takes to break even from undertaking the initial expenditure, by discounting future cash flows and recognizing the time value of money.

- A) DPP
- B) PP
- C) NPV
- D) IRR

68. This term refers to the amount of time it takes to recover the cost of an investment

- A) PP
- B) DPP
- C) ROI
- D) IRR

69. This indicator shows that when discount rate will be equal to it, NPV will be equal to zero “0”.

- A) IRR
- B) ROI
- C) NPV
- D) DPP

70. When discount rate is equal to IRR, so NPV is equal to:

- A) 0
- B) 100
- C) 5
- D) 1

71. Abbreviation IRR means:

- A) Internal rate of return
- B) Payback period
- C) Discount payback period
- D) Return on Investment

72. Abbreviation ROI means:

- A) Internal Rate of Return
- B) Payback Period
- C) Discount Payback Period

D) Return on Investment

73. Abbreviation DPP means:

A) Internal rate of return

B) Payback period

C) Discount payback period

D) Return on Investment

74. Abbreviation NPV means:

A) Internal rate of return

B) Payback period

C) Discount payback period

D) Net present value

75. This indicator is characterized as the difference between the present value of cash inflows and the present value of cash outflows over a period of time.

A) NPV

B) ROI

C) DPP

D) IRR

76. This indicator is characterized as metric used in financial analysis to estimate the profitability of potential investments.

- A) NPV
- B) ROI
- C) DPP
- D) IRR

77. This indicator is characterized as measuring the probability of gaining a return from an investment

- A) NPV
- B) ROI
- C) DPP
- D) IRR

78. What is the difference between PP and DPP?

- A) They are equal.
- B) PP doesn't take into account discount rate.
- C) DPP doesn't consider an investments.
- D) PP characterises an initial costs of the project.

79. If your interest rate = IRR, so

- A) $NPV = 0$
- B) $NPV > 0$
- C) $NPV < 0$
- D) We can not calculate NPV in this case

80. Could be accepted the investment project with $NPV=0$?

A) Sometimes yes, when we positively assess our future

B) No, never, it is impossible

C) NPV could not be equal to 0

D) In some countries - yes, in some - no

81. The risk of loss when investing in foreign countries. When you buy foreign investments, for example, the shares of companies in emerging markets, you face risks that do not exist in Canada, for example, the risk of nationalization is

A) tax risk

B) counterparty risk

C) competitive risk

D) inflation risk

82. This risk that any project depends heavily on the charterer's/counterparty's ability to honour its obligations.

A) counterparty risk

B) competitive risk

C) inflation risk

D) foreign investment risk

83. The risk of loss when investing in foreign countries. When you buy foreign investments, for example, the shares of companies in emerging markets, you face risks that do not exist in Canada, for example, the risk of nationalization is

- A) credit risk
- B) competitive risk
- C) inflation risk
- D) foreign investment risk

84. The risk of loss when investing in foreign countries. When you buy foreign investments, for example, the shares of companies in emerging markets, you face risks that do not exist in Canada, for example, the risk of nationalization is

- A) reinvestment risk
- B) competitive risk
- C) inflation risk
- D) foreign investment risk

85. The risk of a loss in your purchasing power because the value of your investments does not keep up with inflation is

- A) tax risk
- B) counterparty risk
- C) competitive risk
- D) inflation risk

86. The risk of a loss in your purchasing power because the value of your investments does not keep up with inflation is

- A) tax risk
- B) counterparty risk
- C) competitive risk
- D) foreign investment risk

87. The risk of a loss in your purchasing power because the value of your investments does not keep up with inflation

- A) interest rate risk
- B) competitive risk
- C) inflation risk
- D) foreign investment risk

88. It is the risk of losing money because of a movement in the exchange rate.

- A) currency risk
- B) competitive risk
- C) inflation risk
- D) foreign investment risk

89. The risk of loss because your money is concentrated in 1 investment or type of investment is

- A) concentration risk

- B) competitive risk
- C) inflation risk
- D) foreign investment risk

90. This risk applies to an investment in shares

- A) equity risk
- B) competitive risk
- C) inflation risk
- D) foreign investment risk

91. It is a form of market where transaction of financial products takes place between two parties directly.

- A) stock markets
- B) bond markets
- C) insurance market
- D) private market

92. It is the insurance products, are usually low risk and can guarantee you a regular income stream for retirement.

- A) annuities
- B) stocks
- C) bonds
- D) commodities

93. It is a raw material or a primary product that can be bought or sold as an economic good.

- A) annuities
- B) stocks
- C) bonds
- D) commodities

94. It is a low-risk, low-return financial investments that have maturity dates ranging from 28 days to 10 years after your purchase date.

- A) certificate of deposit
- B) stocks
- C) bonds
- D) commodities

95. It is fixed-income investments, which means that you know how much the return will be before buying.

- A) certificate of deposit
- B) stocks
- C) bonds
- D) commodities

96. These funds combine features from both stocks and index funds into one diversified investment.

- A) mutual funds
- B) stocks
- C) exchanged traded funds
- D) commodities

97. A place where individuals are involved in any kind of financial transaction refers to

- A) financial market
- B) services market
- C) real estate market
- D) commodities market

98. It is a type of capital market which deals with the issuance and trading of shares and stocks at a certain price.

- A) stock markets
- B) bond markets
- C) insurance market
- D) derivatives market

99. It is market which deals with the trading of contracts which are derived from any other asset.

- A) stock markets

- B) bond markets
- C) insurance market
- D) derivatives market

100. Investment activity is:

- A) the process of finding investment resources;
- B) selection of effective investment objects;
- C) formation of the capital investment program;
- D) all of the abovementioned.

Tasks

1. Determine the future amount of the deposit at simple interest per year under the following conditions:

- initial amount – 1,000 USD;
- interest rate calculated quarterly - 5%.

2. Determine the future amount of the deposit at compound interest per year under the following conditions:

- initial amount – 1,000 USD;
- interest rate calculated quarterly - 5%.

3. Determine the initial amount of the deposit at compound interest (per year) under the following conditions:

- amount received - 1000 USD;
- interest rate calculated quarterly - 5%.

4. Determine the initial amount of the deposit at simple interest (per year) under the following conditions:

- the amount received is 1000 USD;
- interest rate calculated quarterly - 5%.

5. Calculate the initial amount of the deposit, if 450 USD is received at the end of the validity period. as accrued interest, under the following conditions:

- deposit term 1 year;
- interest accrual - quarterly.

Accrual terms: simple interest, 4% per quarter.

6. Calculate the initial amount of the deposit, if 500 USD is received at the end of the validity period. as accrued interest, under the following conditions:

- deposit term 1 year;
- interest accrual - quarterly;

Accrual terms: compound interest, 4% per quarter.

7. At what interest is the deposit made, if its term is 1 year, the initial amount is 1,000 USD, and the final amount is 1,250 USD, with quarterly, simple interest accrual?

8. At what percentage was the deposit made, if its validity period is 1 year, the initial amount is 1,000 USD, and the final amount is 1,300 USD, with quarterly compound interest?

9. At the end of the term of the deposit agreement, the investor received 1,200 USD. What was the percentage if the initial amount of the deposit was 900 USD, simple interest was accrued quarterly, the term of the deposit was 2 years?

10. At the end of the term of the deposit agreement, the investor received 1,200 USD. What was the percentage if the initial amount of the deposit was 900 USD, compound interest was calculated quarterly, the term of the deposit was 2 years?

11. The investor has 100,000 USD and chooses two possible investment options:

a) accrual of simple interest quarterly, at 12% per annum;

b) accrual of compound interest quarterly at 11% per annum. Which option is more profitable?

12. An investor has 1,000 USD, wants to invest them for six months and chooses two possible investment options:

- a) accrual of simple interest quarterly, at 12% per annum;
- b) accrual of compound interest monthly, at 1% monthly.

Which option is more profitable?

13. An investor has 1,000 UAH, wants to invest them for six months and chooses two possible investment options:

- a) accrual of simple interest quarterly, at 10% per annum;
- b) accrual of simple interest monthly, at 1% per month.

Which option is more profitable?

14. An investor has 1,000 UAH, wants to invest them for six months and chooses two possible investment options:

- a) accrual of compound interest quarterly at 10% per annum;
- b) accrual of compound interest monthly, at 1% per month.

Which option is more profitable?

15. The enterprise received a loan of 100,000 USD for a term of 1 year, what is the amount of monthly payments, if the lending condition is the monthly accrual of simple interest at 20% per annum?

16. What amount should the company return if it receives a loan for 5 years at 15% per annum, with a loan amount of UAH 150,000?

17. Which lending option is more profitable for the enterprise:

- a) quarterly payment of simple interest (12% per annum) with payment of the loan amount at the end of the validity period (1 year);
- b) payment of the loan and interest at the end of the loan term (1 year), with complex, quarterly interest calculation at 12% per annum.

GLOSSARY

Alpha

- The amount of return expected from an investment from its inherent value

Annual report

- The yearly audited record of a corporation or a mutual fund's condition and performance that is distributed to shareholders.

Annualized

- A procedure where figures covering a period of less than one year are extended to cover a 12-month period.

Annualized rate of return

- The average annual return over a period of years, taking into account the effect of compounding. Annualized rate of return also can be called compound growth rate.

Appreciation

- The increase in value of a financial asset.

Average maturity

- For a bond fund, the average of the stated maturity dates of the debt securities in the portfolio. Also called average weighted maturity. In general, the longer the average maturity, the greater the fund's sensitivity to interest-rate changes, which means greater price fluctuation. A shorter average maturity usually means a less sensitive - and consequently, less volatile - portfolio.

Benchmark

- A standard, usually an unmanaged index, used for comparative purposes in assessing performance of a portfolio or mutual fund.

Best-in-class

- A top performing product, service or person within a category or peer group.
- A sustainable investment style that involves investing in companies that lead their peer groups with respect to sustainability performance.

Beta

- A measurement of volatility where 1 is neutral; above 1 is more volatile; and less than 1 is less volatile.

Blue chip

- A high-quality, relatively low-risk investment; the term usually refers to stocks of large, well-established companies that have performed well over a long period. The term Blue Chip is borrowed from poker, where the blue chips are the most valuable.

Bond

- A bond acts like a loan or an IOU that is issued by a corporation, municipality or the U.S. government. The issuer promises to repay the full amount of the loan on a specific date and pay a specified rate of return for the use of the money to the investor at specific time intervals.

Bond fund

- A mutual fund that invests exclusively in bonds.

Bull market

- Any market in which prices are advancing in an upward trend. In general, someone is bullish if they believe the value of a security or market will rise. The opposite of a bear market.

Capital

- The funds invested in a company on a long-term basis and obtained by issuing preferred or common stock, by retaining a portion of the company's earnings from date of incorporation and by long-term borrowing.

Capital gain

- The difference between a security's purchase price and its selling price, when the difference is positive.

Capital loss

- The amount by which the proceeds from a sale of a security are less than its purchase price.

Capitalization

- The market value of a company, calculated by multiplying the number of shares outstanding by the price per share.

Cash equivalent

- A short-term money-market instrument, such as a Treasury bill or repurchase agreement, of such high liquidity and safety that it is easily converted into cash.

Corporate engagement

- Shareholders entering into discussions with company management in order to better understand the company's management of certain risks and/or to influence a company's decision making process.

Corporate social responsibility

- A business' commitment to their customers, employees and communities around the world to be conscious of the kind of impact they are having on all aspects of society, including economic, social, and environmental.

Country breakdown

- Breakdown of securities in a portfolio by country.

Custodian

- A bank that holds a mutual fund's assets, settles all portfolio trades and collects most of the valuation data required to calculate a fund's net asset value (NAV).

Cut-off time

- The time of day when a transaction can no longer be accepted for that trading day.

Daily dividend factor (date)

- Daily dividend distributed by a money market mutual fund.

Default

- Failure of a debtor to make timely payments of interest and principal as they come due or to meet some other provision of a bond indenture.

Distribution schedule

- A tentative distribution schedule of a mutual fund's dividends and capital gains.

Diversification

- The process of owning different investments that tend to perform well at different times in order to reduce the effects of volatility in a portfolio, and also increase the potential for increasing returns.

Dividend

- A dividend is a portion of a company's profit paid to common and preferred shareholders. Dividends provide an incentive to own stock in stable companies even if they are not experiencing much growth. Companies are not required to pay dividends.

Dividend paid

- Amount paid to the shareholder of record a security or mutual fund.

Dollar cost averaging

- Investing the same amount of money at regular intervals over an extended period of time, regardless of the share price. By investing a fixed amount, you purchase more shares when prices are low, and fewer shares when prices are high. This may reduce your overall average cost of investing.

Dow Jones Industrial Average (Dow)

- The most commonly used indicator of stock market performance, based on prices of 30 actively traded blue chip stocks, primarily major industrial companies. The Average is the sum of the current market price of 30 major industrial companies' stocks divided by a number that has been adjusted to take into account stocks splits and changes in stock composition.

Environmental, social and governance (ESG) integration

- The systematic inclusion of financially material ESG factors in investment analysis and investment decisions, with the goal of enhancing long-term, risk adjusted financial returns:
- Environmental - Factors that relate to the quality and functioning of the natural environment, and natural systems, e.g., carbon emissions, environmental regulations, water stress and waste.
- Social - Factors that relate to the rights, well-being, and interests of people and communities, e.g., labor management, health & safety.
- Governance - Factors that relate to the management and oversight of companies and investee entities, e.g., board structure, pay.

EPS

- The portion of a company's profit allocated to each outstanding share of common stock. EPS serves as an indicator of a company's profitability.

Equities

- Shares issued by a company which represent ownership in it. Ownership of property, usually in the form of common stocks, as distinguished from fixed-income securities such as bonds or mortgages. Stock funds may vary depending on the fund's investment objective.

Equity fund

- A mutual fund/collective fund in which the money is invested primarily in common and/or preferred stock. Stock funds may vary, depending on the fund's investment objective.

Exchange privilege

- The ability to transfer money from one mutual fund to another within the same fund family.

Exclusions

- An investment process that excludes specific investments or classes of investment from the investment universe based on specific values or norms-based criteria.
- A sustainable investment style that excludes certain sectors, companies or practices based on specific values or norms-based criteria from a fund or portfolio. For example, certain industries, such as defense, tobacco or fossil fuel producers, can systematically be excluded from investment.

Expense ratio

- The ratio between a mutual fund's operating expenses for the year and the average value of its net assets.

Federal Funds Rate (Fed Funds Rate)

- The interest rate charged by banks with excess reserves at a Federal Reserve district bank to banks needing overnight loans to meet reserve requirements. The most sensitive indicator of the direction of interest rates, since it is set daily by the market, unlike the prime rate and the discount rate, which are periodically changed by banks and by the Federal Reserve Board.

Financial materiality

- An event or information that are reasonably likely to impact the financial condition or operating performance of a company and should be considered during the investment decision-making process.

Fixed income fund

- A fund or portfolio where bonds are primarily purchased as investments. There is no fixed maturity date and no repayment guarantee.

Fund

- A pool of money from a group of investors in order to buy securities. The two major ways funds may be offered are (1) by companies in the securities business (these funds are called mutual funds); and (2) by bank trust departments (these are called collective funds).

Green Bond Principles

- Voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the Green Bond market by clarifying the approach for issuance of a Green Bond.e potential for increasing returns.

Green bonds

- A type of fixed-income instrument that is specifically earmarked to raise money for climate and environmental friendly projects.

Growth investing

- Investment strategy that focuses on stocks of companies and stock funds where earnings are growing rapidly and are expected to continue growing.

Growth stock

- Typically a well-known, successful company that is experiencing rapid growth in earnings and revenue, and usually pays little or no dividend.

Growth-style funds

- Growth funds focus on future gains. A growth fund manager will typically invest in stocks with earnings that outperform the current market. The manager attempts to achieve success by focusing on rapidly growing sectors of the economy and investing in leading companies with consistent earnings growth. The fund grows primarily as individual share prices climb.

Impact investing

- A sustainable investment style that seeks to generate measurable positive social or environmental impact alongside financial return. Investment themes include activities such as affordable housing, education and healthcare.

Index

- An investment index tracks the performance of many investments as a way of measuring the overall performance of a particular investment type or category. The S&P 500 is widely considered the benchmark for large-stock investors. It tracks the performance of 500 large U.S. company stocks.

Inflation

- A rise in the prices of goods and services, often equated with loss of purchasing power.

Interest rate

- The fixed amount of money that an issuer agrees to pay the bondholders. It is most often a percentage of the face value of the bond. Interest rates constitute one of the self-regulating mechanisms of the market, falling in response to economic weakness and rising on strength.

Interest-rate risk

- The possibility of a reduction in the value of a security, especially a bond, resulting from a rise in interest rates.

Investment objective

- The goal of a mutual fund and its shareholders, e.g. growth, growth and income, income and tax-free income.

Investment stewardship

- Engaging with companies and voting proxies to ensure our clients' interests are represented and protected and the company is focused on responsible allocation of capital and long-term value creation.

Large-cap

- The market capitalization of the stocks of companies with market values greater than \$10 billion.

Liquidity

- The ability to have ready access to invested money. Mutual funds are liquid because their shares can be redeemed for current value (which may be more or less than the original cost) on any business day.

Loads (back-end, front-end and no-load)

- Sales charges on mutual funds. A back-end load is assessed at redemption (see contingent deferred sales charge), while a front-end load is paid at the time of purchase. No-load funds are free of sales charges.

Long-term investment strategy

- A strategy that looks past the day-to-day fluctuations of the stock and bond markets and responds to fundamental changes in the financial markets or the economy.

Market price

- The current price of an asset.

Market risk

- The possibility that an investment will not achieve its target.

Mid-cap

- The market capitalization of the stocks of companies with market values between \$3 to \$10 billion.

Money market mutual fund

- A short-term investment that seeks to protect principal and generate income by investing in Treasury bills, CDs with maturities less than one year and other conservative investments.

Mutual fund

- Fund operated by an investment company that raises money from shareholders and invests it in stocks, bonds, options, commodities or money market securities.

NASDAQ

- National Association of Securities Dealers Automated Quotations system, which is owned and operated by the National Association of Securities Dealers. NASDAQ is a computerized system that provides brokers and dealers with price quotations for securities traded over-the-counter as well as for many New York Stock Exchange listed securities.

Net Asset Value per share (NAV)

- The current dollar value of a single mutual fund share; also known as share price. The fund's NAV is calculated daily by taking the fund's total assets, subtracting the fund's liabilities, and dividing by the number of shares outstanding. The NAV does not include the sales charge. The process of calculating the NAV is called pricing.

P/B Ratio

- The price per share of a stock divided by its book value (net worth) per share. For a stock portfolio, the ratio is the weighted average price-to-book ratio of the stocks it holds.

Par value

- Par value is the amount originally paid for a bond and the amount that will be repaid at maturity. Bonds are typically sold in multiples of \$1,000.

Portfolio

- A collection of investments owned by one organization or individual, and managed as a collective whole with specific investment goals in mind.

Portfolio manager

- The person or entity responsible for making investment decisions of the portfolio to meet the specific investment objective or goal of the portfolio.

Positive tilt

- An investment process which tilt a fund of portfolio toward a specific sector, company, or project based on specific values or norms-based criteria.
- A sustainable investment style in which the portfolio will be tilted toward sectors, companies, or projects with positive ESG characteristics.

Power Purchase Agreements (PPAs)

- a financial agreement where a developer arranges for the design, permitting, financing and installation of a solar energy system on a customer's property at little to no cost.

Preferred stock

- A class of stock with a fixed dividend that has preference over a company's common stock in the payment of dividends and the liquidation of assets. There are several kinds of preferred stock, among them adjustable-rate and convertible.

Premium

- The amount by which a bond or stock sells above its par value.

Price-to-earnings (P/E) Ratio

- A stock's price divided by its earnings per share, which indicates how much investors are paying for a company's earning power.

Public offering price (POP)

- A mutual fund share's purchase price, including sales charges.

Quality distribution

- The breakdown of a portfolio's assets based on quality rating of the investments.

Ratings

- Evaluations of the credit quality of bonds usually made by independent rating services. Ratings generally measure the probability of timely repayment of principal and interest on debt securities.

Relative risk and potential return

- The amount of potential return from an investment as related to the amount of risk you are willing to accept.

Risk tolerance

- The degree to which you can tolerate volatility in your investment values.

Securities

- Another name for investments such as stocks or bonds. The name 'securities' comes from the documents that certify an investor's ownership of particular stocks or bonds.

Securities and Exchange Commission (SEC)

- The federal agency created by the Securities and Exchange Act of 1934 that administers the laws governing the securities industry, including the registration and distribution of mutual fund shares.

Stock

- A long-term, growth-oriented investment representing ownership in a company; also known as 'equity.'

Stockholder

- The owner of common or preferred stock of a corporation. Also called 'shareholder.'

Sustainability Bonds

- Bond instrument where the proceeds will be exclusively applied to finance or re-finance a combination of both Green and Social Projects.

Sustainable investing

- A forward-looking investment approach that aims to deliver long-term sustainable financial return in a fast changing world. It encompasses a wide ranging spectrum of approaches, the core of which starts with the incorporation of ESG information.

Systematic investment plan

- A service option that allows investors to buy mutual fund shares on a regular schedule, usually through bank account deductions.

Tax-exempt income

- Tax-exempt income is income that is exempt from income taxes. A purchaser of state municipal bonds is exempt from federal taxation on the income earned from the bonds.

Time horizon

- The amount of time that you expect to stay invested in an asset or security.

Value investing

- A strategy whereby investors purchase equity securities that they believe are selling below estimated true value. The investor can profit by buying these securities then selling them once they appreciate to their real value.

Value stock

- Typically an overlooked or underpriced company that is growing at slower rates.

Volatility

- The amount and frequency with which an investment fluctuates in value.

RECOMMENDED LITERATURE

1. 2021 investment management outlook. Transforming to thrive. A report from the Deloitte Center for financial services. URL :
<https://www2.deloitte.com/content/dam/Deloitte/tr/Documents/financial-services/2021-investment-management-outlook.pdf>
2. Ephreim Matanda (2020). Modern Financial Investment Management. Cambridge Scholars Publishing.
3. Frank J. Fabozzi, Sergio M. Focardi & Caroline Jonas (2014) Investment management: a science to teach or an art to learn? CFA Institute research foundation.
4. Investment management risk assessment: marketing and selling practices. A report on the technical committee of the International Organization of Securities Commissions. URL :
<https://www.iosco.org/library/pubdocs/pdf/IOSCOPD156.pdf>
5. Investopedia. URL: <https://www.investopedia.com>
6. M.E. Konovalova, O. Yu. Kuzmina, A. M. Mikhaylov, L.V. Levchenko, S. Yu. Salomatina (2019). The management of Investment Portfolios. TEM Journal. Vol. 8, Iss. 3. P.928-937. URL :
https://www.temjournal.com/content/83/TEMJournalAugust2019_928_937.pdf
7. Nenad Vunjak & et al. (2018). Investment management strategy in financial markets. Economics 6 (2): 49-56. URL :
<https://www.sciendo.com/article/10.2478/eoik-2018-0025>

8. Official site of International Monetary Fund. URL: <https://www.imf.org/en/Home>
9. Official site of the World Bank. URL: <https://www.worldbank.org/en/home>
10. Preeti Singh. (2016) Investment Management. Himalaya Publishing House Pvt. Ltd., Mumbai. URL : <http://www.himpub.com/documents/Chapter1893.pdf>
11. Principles of investment management for long-term funds. (2014). URL : <https://www.ctphilanthropy.org/sites/default/files/resources/Principles-of-Investment-Management.pdf>
12. Priscilla Luk and Arpit Gupta, “SPIVA® Japan year-end 2019,” S&P Dow Jones Indices, April 6, 2020.
13. Robert L. Hagin. (2004) Investment management. Portfolio diversification, risk, and Timing – Fact and Fiction. 304 p. URL : [http://gitamskadapa.org/library/books/mba3sem/IPM/Wiley_Finance,.Investment_Management_-_Portfolio_Diversification,_Risk%20\(1\).pdf](http://gitamskadapa.org/library/books/mba3sem/IPM/Wiley_Finance,.Investment_Management_-_Portfolio_Diversification,_Risk%20(1).pdf).
14. Scientific journal “Investment management and Financial Innovations”. URL: <https://www.businessperspectives.org/index.php/journals/investment-management-and-financial-innovations>

15. Security analysis and investment management. Lessons 1 to 6. URL : <http://icdeolhpu.org/downloads/course-406FM-02.pdf>.

16. Shakti Singh (2020). Investment management. Maharshi Dayanand University Press. 72 p. URL : [https://mdu.ac.in/UpFiles/UpPdfFiles/2021/Jun/4_06-11-2021_15-04-44_Investment%20Management\(20MCO22C2\)%20\(1\).pdf](https://mdu.ac.in/UpFiles/UpPdfFiles/2021/Jun/4_06-11-2021_15-04-44_Investment%20Management(20MCO22C2)%20(1).pdf)

17. Sridhar Natarajan and Michelle F. Davis, “Wall Street return-to-work push finds virus won’t cooperate,” Bloomberg, September 18, 2020.

18. Vault career guide to investment management. The inside scoop on investment management careers. (2015). URL : <https://www.schroders.com/en/sysglobalassets/digital/careers/2015-european-guide.pdf>

19. Бланк І. О., Гуляєва Н. М. Інвестиційний менеджмент : підручник. заг. ред. А. А. Мазаракі. К., 2003. 397 с.

20. Державна податкова служба України URL: <http://www.tax.gov.ua>

21. Державна служба статистики України. URL: <http://www.ukrstat.gov.ua>

22. Кабінет Міністрів України. URL: <http://www.kmu.gov.ua>

23. Міністерство економіки України. URL : <https://www.me.gov.ua/?lang=uk-UA>

24. Міністерство фінансів. URL: [http://
www.minfin.gov.ua](http://www.minfin.gov.ua)

25. Шинкарук Л.В., Барановська І.В. Інвестиційний менеджмент (Тестові та практичні завдання) : навч. посібник. К., 2016. 58 с.

26. Ярошевич Н.Б., Кондрат І.Ю., Ливдар М.В. Фінанси: Навчальний посібник. Львів: Видавництво «Простір-М», 2018. 298с.

Підписано до друку 18.05.23 Формат 70x100\16
Ум. друк. арк. 27,3 Наклад 100 прим. Зам. № 230288

Видавець і виготовлювач Національний університет біоресурсів
і природокористування України,
вул. Героїв Оборони, 15, м. Київ, 03041.
Свідоцтво суб'єкта видавничої справи
ДК № 4097 від 17.06.2011