Kyiv National University of Trade and Economics

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FINAL QUALIFYING PAPER on the topic:

Non-government pension fund asset management: domestic and foreign experience

ık Lina
O.E.
O.E.

Kyiv National University of Trade and Economics

Approved by

Faculty of Finance and Accounting
Department of Banking
Specialty 072 Finance, Banking and Insurance
Specialization Financial Intermediation

	Head of the Department of Banking
	Nataliia P. Shulha
	Doctor of Sciences in Economics, Professor
	on,, 20
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	piuk Lina
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<u>CHAPTER 2. RESEARCH OF NON-GOVERNMENT PENSION FUNDS ASSET MANAGEMENT</u>

- 2.1. Analysis of trends in the development of non-government pension funds in Ukraine
- 2.3. Research of the strategy (or mechanism) of non-government pension funds asset management

<u>CHAPTER 3. DIRECTIONS FOR IMPROVING OF NON-GOVERNMENT PENSION FUNDS ASSET MANAGEMENT</u>

- 3.1. Foreign experience in non-government pension funds asset management
- 3.2 Directions for improving of domestic non-government pension funds asset management

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9. Head of the project team	
(Manager of the educational program)	
Erkes O.E., PhD in Economics,	
Associate Professor of the Department of Banking	L'UT KUTELK
	(last name, initials, signature)
10. The task received by the student Karpiuk L.Y.	KI'LE KHILE
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11. Resume of a scientific adviser of a final qualifying paper

The final qualifying paper, completed by the student Karpiuk Lina, was performed about the very relevant topic "Non-government pension fund asset management: domestic and foreign experience".

While working on research the student used all the knowledge and practical skills which acquired while studying at The Master's program "Financial intermediation".

The final qualifying paper contains research of the theoretical principles of non-government pension funds asset management, analysis of trends in the development of non-government pension funds in Ukraine, research of the strategy of non-government pension funds asset management and investigation the foreign experience in non-government pension funds asset management.

The main achievement of the work is the developed proposals and suggestions about the key directions for improving of domestic non-government pension funds asset management.

The final qualifying paper includes a sufficient number of graphic elements (tables, figures) that demonstrate the results of the study and the relevant substantiated conclusions.

Summing up, the final qualifying paper was structured according to the
general requirements for such work and may be recommended for its protection i
exam commission, and the student Karpiuk Lina deserves the excellent grade.
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INTRODUCTION

Relevance of research. Reforming the pension system of Ukraine and the development of non-government pension provision (NPP) are priority areas of state policy in the field of improving social protection. International practice shows that the main entities that are able to accumulate significant amounts of financial resources, convert them into investment capital and multiply them effectively are non-government pension funds (NPFs).

Insufficient domestic experience in the operation of NPFs, complexity and multifaceted activities require integrated approaches to managing their financial assets, which is associated with long-term financing of private pension funds, effective investment policy and fulfillment of pension obligations over a long period of time. The lack of thorough developments in this area necessitates the development of NPF asset management tools and the improvement of scientific and methodological approaches to the formation of effective investment policy.

Analysis of recent research and publications. The most important scientific works on the activities of private pension funds and the management of their assets are the works of A. Fedorenko [1,2], D. Leonov [2,3], S. Cherkasova [4], M. Sorokivska [4], V. Kryklia. [5], V. Grushko [6], G. Nazarova [7], A. Kuznetsova [8], O. Mindova [9], S. Pakhody [10], O. Petrushka [11] and others [12-18], which formulated the fundamental principles that have not lost their relevance in modern conditions.

Despite the thoroughness of the research, the specific conditions for the development of national and world economies require clarification and evaluation of the asset management process of private pension funds. These important issues require scientific justification and practical solution, which led to the relevance of this research.

The aim of the research is to identify the features of NPFs asset management in modern conditions of socio-economic development in foreign and national practice.

To achieve this goal, the following **tasks** were formulated:

- to characterize the theoretical foundations of NPFs asset management;
- to analyze the development trends of NPFs in Ukraine;
- to investigate the mechanism of asset management of domestic NPFs;
- -to evaluate foreign experience in NPFs asset management;
- to suggest the ways to improve the management of assets of domestic NPFs.

The object of the research is non-government pension fund asset management.

The subject of the research is a set of theoretical foundations and methodological principles for assessing and improving the non-government pension fund asset management.

Research methods. The methodological basis of the research is the fundamental provisions and principles of general economic theory, the theory of public finance, money and credit, insurance, portfolio investment, research of domestic and foreign scholars on the activities of NPFs and asset management companies.

In order to solve the tasks in the work used the following research methods: system-structural and abstract-logical - in defining and clarifying the basic economic concepts and categories; theoretical and empirical research - in revealing the essence, functions and tools of financial flow management in the refinery system; logical generalization - when studying the peculiarities of the world experience of refinery implementation; comparison and statistical analysis - in the research of the peculiarities of the development of the refinery system and the introduction of pension schemes in Ukraine; comparative analysis and grouping - in the development of financial asset management system NPF.

The information base of the research is regulations and legislation on the functioning of the pension system and its participants, namely: Laws of Ukraine, Presidential decrees, regulations of the Cabinet of Ministers of Ukraine, the National Bank of Ukraine, the National Commission on Securities and Stock Market, the Convention economic cooperation and development, Directives of the European

Parliament, statistical reports of research institutions, as well as publications of domestic and foreign scientists and researchers.

The scientific novelty of the obtained results lies in the deepening of theoretical positions and substantiation of a set of measures aimed at the practical solution of the problems of NPF functioning as oil refineries and the expansion of their role in the state pension system.

- the definition of the term «private pension fund» is *proposed*;
- received further development: analysis of trends in the development of NPFs in Ukraine; research of the asset management strategy of domestic NPFs;
 - *improved* research on asset management of domestic private pension funds.

The practical significance of the results of the research is that the main provisions and proposals can be used in the practice of NPFs, asset management companies, as well as in the legislative and executive authorities in justifying the directions of pension reform in Ukraine.

Personal contribution of the master. The final qualifying work is an independent completed research of the author.

Approbation of research results. The results of the research became the basis for a report at the student scientific conference «Non-government pension fund asset management: domestic and foreign experience». *Financial policy in the context of economic transformation: Section Nol. Financial markets and institutions: the challenges of time*: abstracts of the report Stud. Science conf. (Kyiv, November 17, 2021): / Kyiv: Kyiv National University of Trade and Economics, 2021.

Publications. According to the results of the final qualifying work, 1 article was published: Karpiuk L. Theoretical fundamentals of non-government pension funds in Ukraine. *Financial institutions in the context of global imbalances*: a collection of scientific articles by students / resp. ed. N. Shulga. - Kyiv: Kyiv National University of Trade and Economics, 2021. – 386 p.

Structure and scope of work. The work consists of an introduction, three sections, conclusions, a list of sources used from 60 titles and 12 appendices. The volume of the work is 53 pages. The work contains 7 tables and 22 figures.

PART I

THEORETICAL PRINCIPLES OF NON-GOVERNMENT PENSION FUNDS ASSET MANAGEMENT

The Constitution of Ukraine, as a key source of constitutional law of Ukraine, ensures the stability of the state, determines the rights of all citizens to receive social protection, which may include their provision in case of full, partial or temporary disability, unemployment for independent reasons, in old age, and other cases. This right is guaranteed by the generally accepted state social insurance of the population at the expense of insurance payments of citizens, enterprises of various forms of ownership and organizations [20]. Thus, according to the Constitution of Ukraine, every citizen has the right to a state pension at the retirement age.

According to Article 2 of the Law of Ukraine «On Compulsory State Pension Insurance», the pension system of Ukraine consists of three levels [21]:

- 1) the first level a set of elements of compulsory state pension insurance, which are based on the principles of solidarity and payment;
- 2) the second level the system of accumulation of compulsory state pension insurance, which consists in the accumulation of funds of insured persons. Their funds are in the Accumulative Fund or in non-state pension funds, which are the subjects of the second level of the system of financing the costs, which are to insure pensions and benefits in the manner prescribed by applicable law;
- 3) the third level the system of private pension provision, which is based on the principles of voluntary participation of the population, whose activity is to create pension savings in order to receive pension income.

According to Article 2 of the Law of Ukraine «On Non-State Pension Provision» of 09.07.2003, non-state pension provision is a part of the system of accumulative pension provision of the population based on the generally accepted bases of voluntary participation of individuals and legal entities in the formation of pension savings payments to the basic state pension insurance [22].

Analyzing the research of scientists in the field of private pension provision, we can conclude that the concept of «private pension fund» in the modern economic literature has not yet received a unified definition. There are two main approaches to the interpretation of the essence of NPF:

- 1) NPF as a set of assets that accumulate in the form of pension contributions and are invested for income;
- 2) NPF as a legal entity, institution or organization intended to make pension payments to its members.

We believe that the comprehensive definition should reflect the socioeconomic nature of NPFs, which lies in the appointment of funds as institutions of pension provision for citizens and at the same time institutional investors who have a long-term investment resource.

We propose to consider non-state pension funds as a socio-financial institution that is created and operates for the social protection of citizens and is designed to preserve and increase pension savings in the process of their accumulation, investment and use to finance an acceptable level of pension benefits.

It should be noted that private pension provision is based on the following key principles:

- voluntary creation of pension funds by individuals or legal entities, as well as their associations;
- voluntary participation of individuals in the formation of private pension provision and the choice of types of pension benefits;
- decision-making by employers on the formation of pension contributions in favor of their employees to the private pension provision;
- equal rights of all participants of the pension fund who can participate in the pension formation [23].

As for the specifics of the functioning of NPFs, the Law of Ukraine «On Private Pension Provision» reveals the main aspects of their activities. For non-state pension funds, non-state pension activities are an exclusive activity. The mechanism of interaction of refinery entities on the basis of NPF is given in Appendix A.

Increased attention to NPFs is explained by their special social purpose and, accordingly, implies the presence of a large number of requirements and restrictions on the part of the state, presented in the legal framework.

The history of the formation of private pension provisionis schematically given in Appendix B.

Unfortunately, the formation of a funded pension system in Ukraine is just beginning. In practice, only the refinery system is functioning, which is developing at a rather slow pace, while the introduction of the second level of the pension system is constantly delayed.

After the enactment of the Law of Ukraine «On Amendments to Certain Legislative Acts of Ukraine on Improving the Functions of State Regulation of Financial Services Markets» of September 12, 2019, which entered into force on October 19, 2019, the National Commission for State Regulation of Financial Services Markets was liquidated. division of its functions between the NBU and the National Commission on Securities and Stock Market (hereinafter NSSMC), which became the supervisory and regulatory body for private pension funds. From now on, the NSSMC, in accordance with the procedure established by it, issues licenses for NPF administration activities; approves the statutes and registers the investment declarations of NPFs and changes to them; approves the candidacies of persons delegated to the NPF councils; raises before the NPF board the issue of replacing the person who manages the pension assets of such a fund, etc. [24].

In Figure 1.1. the directions of legislative regulation of non-state pension funds are determined, according to which all subjects of NPF activity are under the control of the state supervision body. The legal framework for the functioning of NPFs today is represented by: Laws of Ukraine, decrees of the President of Ukraine, resolutions and orders of the Cabinet of Ministers of Ukraine, orders and decisions of public administration, other regulations governing legal relations in this area [8,9,10,12].

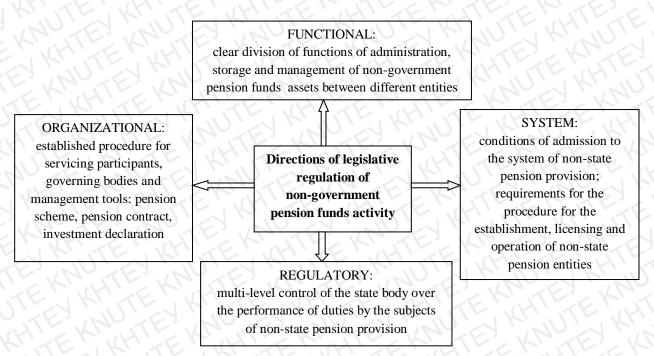


Fig. 1.1. Directions of legislative regulation of non-government pension funds*
* Compiled by the author based on thesourse [25]

NPFs operate on the principles of voluntary participation of citizens in the formation of pension savings to provide additional pension benefits. The source of funds for private pension funds is the contributions of depositors, the sale of assets or investments. Participants have the right to open individual savings accounts in the selected NPF and pay contributions in accordance with the agreement with the administrator of such funds. It should be noted that contributions can also be paid by the employer [25].

By concluding an agreement with the pension fund, the depositor independently sets the amount of monthly contributions, despite the fact that the fund independently makes calculations and reports on the projected amount of pension in the future.

The funds that go to the NPF account in the bank are at the disposal of the asset management company, which tries to invest them to get the maximum possible income, with minimal risks [28].

According to the Law of Ukraine «On Non-State Pension Provision», non-state pension funds operating in Ukraine can be of three types. We describe them in table 1.1.

Table 1.1

Types of private pension funds*

Type of fund	Participants	Founders
Open	Any one or more legal entities	Citizens of Ukraine, foreigners and stateless persons, regardless of the place and nature of their work
Corporate	Legal entity-employer or several legal entities. persons- employers to whom employers- payers can join	Only citizens who are in employment with the founders or employers - payers of the fund
Professional	Associations: legal entities of employers, individuals, including trade unions or individuals related by type of activity	Only citizens related by the nature of their professional activity, defined by the charter of the fund

^{*} Compiled by the author based on the source [21]

It should be emphasized that the private pension fund does not carry out its activities independently, but uses the services of a pension administrator, custodian bank and asset management company. Asset administration and management services may be provided by one legal entity. The functions of the entities serving the NPF will be considered in Appendix C.

The board of the non-state pension fund exercises control over the current activity of the pension fund, reports on the activity of the pension fund before the meeting of the founders of the fund and resolves the main issues of its work [28].

The investment strategy of private pension funds is more conservative than in other financial institutions. NPF assets are formed at the expense of pension contributions and profit (loss) from investing pension contributions. Transactions with pension assets are carried out in accordance with the investment declaration of the NPF and the concluded asset management agreement [30].

NPF assets can be used in the following areas:

1) for the purposes of investment activity of the fund;

- 2) fulfillment of the fund's obligations to its participants (fulfillment of pension payment agreements for a definite term; implementation of one-time pension payments; payment of life pension insurance agreements, etc.);
- 3) payment of expenses related to the implementation of non-state pension provision (payment for the services of a professional administrator; payment of remuneration for the provision of pension fund asset management services, etc.) [21].

Directions and restrictions on investing the assets of a private pension fund are shown in Fig. 1.2.

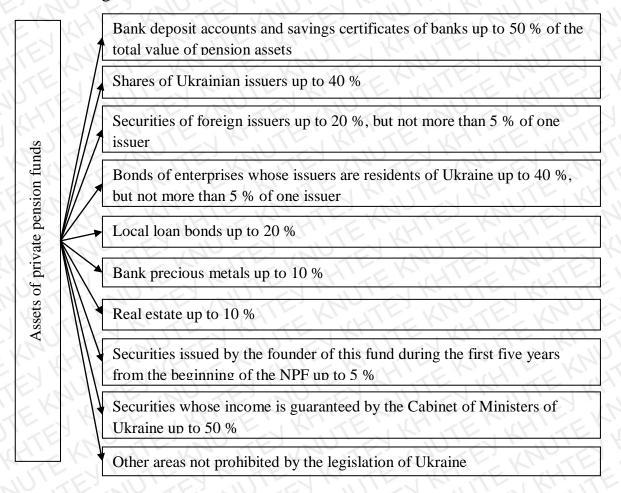


Fig. 1.2. The directions and restrictions on investing the assets of a private pension fund are legally established*

* Compiled by the author based on the source [26]

Investments in the assets of a private pension fund may be made in the following securities:

- securities, redemption and receipt of income guaranteed by the Cabinet of Ministers of Ukraine, local councils;

- shares and bonds of Ukrainian issuers that have been listed and are traded on the stock exchange or in the trading information system, the trading volume of which is not less than 25 % of the total trading volume on the organized securities markets of Ukraine;
- securities, redemption and income for which are guaranteed by foreign governments;
- bonds of foreign issuers with the appropriate investment rating, the requirements for the establishment of which are determined by the NSSMC;
- shares of foreign issuers that are traded on organized stock markets and are listed on one of the stock exchanges, such as New York, London, Tokyo, Frankfurt, or in the trade information system NASDAQ. The issuer of these shares must have been operating for at least 10 years and be a resident of a country whose external debt rating is determined by the NSSMC [21].

However, there are restrictions on the placement of pension assets:

- 1) securities issued by the custodian, persons managing pension assets, administrator, auditor and persons providing consulting, agency or advertising services, with whom the pension fund has concluded relevant agreements, and their related parties, founders of the pension fund;
- 2) securities that have not been listed on the stock exchange (except in cases where the credit rating of bonds corresponds to the investment level on a national scale);
- 3) securities issued by collective investment institutions, unless otherwise established by regulations of the National Commission on Securities and Stock Market;
 - 4) promissory notes, derivative securities [21].

Diversification of investment areas remains an urgent task. But the number of instruments, among which it is advisable to choose the objects of investment, today is quite limited, on the one hand, regulatory requirements, and on the other - the realities of the stock market in Ukraine.

The structure of assets of domestic NPFs does not correspond to world trends. In the world, stocks are a popular and profitable investment tool for NPFs. However, in Ukraine this tool is extremely risky [30].

There are currently no reliable types of financial instruments in the domestic financial market that would allow for the proper diversification of pension assets of private pension funds. A comprehensive analysis of asset management will make it possible to identify prospects for further development and effective investment of financial resources.

Therefore, despite all the difficulties and limitations of managing the assets of private pension funds, it should be borne in mind that the investment of pension assets should ensure the future fulfillment of pension obligations in sufficient amounts. The investment policy of the private pension fund aims to select the most effective areas of use of pension reserves and own property in order to obtain the largest investment return to meet obligations to depositors and participants [18]. It is necessary to take into account the impact of investment risks. In particular, the growth of the fund's assets, ie the growth of the book value of funds raised under private pension agreements under the amount of investment income is an important factor in its strategic development.

The economic and social effects of the rational construction of the system of pension accumulation and investment of pension resources can be manifested not only in the recovery of the pension system, but also as a factor in stabilizing the economy, strengthening financial markets.

PART II

RESEARCH OF NON-GOVERNMENT PENSION FUNDS ASSET MANAGEMENT

2.1. Analysis of trends in the development of non-government pension funds in Ukraine

In Ukraine, there is a gradual development of private pension provision, which reflects the dynamics of the main indicators of non-state pension funds. However, the quantitative increase in the performance of private pension funds does not indicate its scale, but due, in large part, to the stage of formation of this segment of life insurance. Ukraine is characterized by a low level of coverage of the population with non-state pension insurance services, which reduces its role in financing the needs of pensioners in the short and medium term [31].

This is due, first of all, to the low level of income of the population, and hence the inability to make contributions to the needs of pension insurance on a voluntary basis. In addition, the development of voluntary insurance programs is limited by the low level of public confidence in financial institutions, as well as the lack of financial instruments to invest the accumulated funds of members of private pension funds. That is why it is necessary to take into account that non-state pension provision can be planned as a significant addition to the state component of the pension system of Ukraine, most likely, only in the long run.

As of December 31, 2020, the State Register of Financial Institutions contained information on 63 non-state pension funds and 22 NPF administrators (as of December 31, 2019, 65 NPFs and 22 administrators). In addition, there is information about 1 sole founder who decided to independently administer the corporate private pension fund created by him (received a license to administer such a private pension fund and in accordance with the law does not require entry in the State Register of Financial Institutions) [32].

In fig. 2.1 shows the dynamics of the number of private pension funds in Ukraine over the past 10 years.

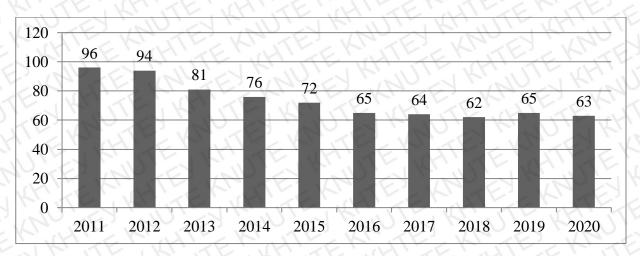


Fig. 2.1. Dynamics of the number of private pension funds in Ukraine*

* Compiled by the author based on [33]

According to fig. 2.1 there is a dynamics of reducing the number of NPFs over 10 years by more than 30 %.

Ukraine has the largest number of corporate and professional NPFs. In particular, the largest NPF belongs to the National Bank. Its assets make up about half of all assets of the NPF of Ukraine. According to the data provided by administrators to comply with the Regulations on the procedure for compiling, submitting and disclosing by the administrator of a private pension fund administrative data, including reports on private pension provision, approved by the NSSMC decision of July 23, 2020 № 379, registered in the Ministry of Justice of Ukraine on September 4 In 2020, № 847/3513, NPFs were registered in 9 regions of Ukraine (Fig. 2.2) [32].

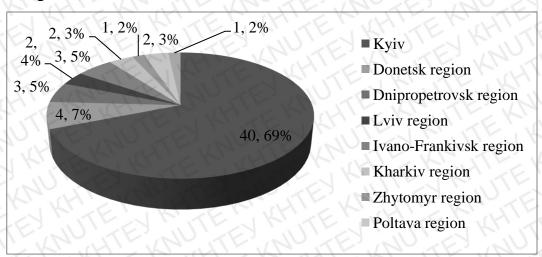


Fig. 2.2. Territorial distribution of NPF (pcs., %.)*

^{*} Compiled by the author based on [34]

Therefore, the data of fig. 2.2 show that the largest number of NPFs is concentrated in Kyiv - 40, or 69 % of the total number of registered NPFs [32].

The analysis of the activity of the market of non-state pension provision was carried out on the basis of the submitted reporting data as of 31.12.2020. The main indicators of NPF activity, according to the submitted reporting data, and their growth rates are given in Appendix D.

Therefore, the analysis of Appendix D indicators allows us to draw the following conclusions. In 2020, the number of concluded pension contracts increased by 13,9%, and the number of NPF participants increased by 1,0 %. At the same time, the financial results of non-state pension funds are positive: the value of NPF assets increased by 13,4 %, pension payments increased by 16,9 %, the amount of investment income increased by almost 20 %, investment income increased by 20,4 % assets of a private pension fund [32].

As of December 31, 2020, pension contracts were concluded with 81,9 thousand depositors, of which: legal entities -2,1 thousand, or 2,6 % of the total number of depositors, individuals -79,8 thousand, or 97,4 %.

The number of depositors as of 31.12.2020 increased compared to the same period in 2019 by 2,2 % (1,8 thousand depositors) and as of 31.12.2019 compared to the same period in 2018 the number of depositors increased by 28,4 % (17,7 thousand depositors).

The dynamics of the number of concluded pension contracts and the number of depositors will be considered in Fig. 2.3.

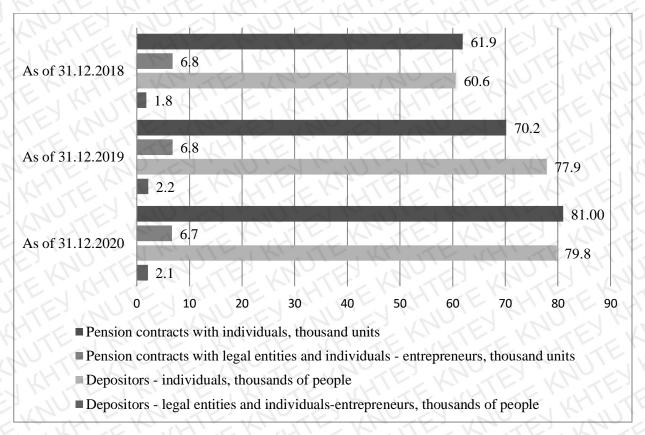


Fig. 2.3. Dynamics of the number of concluded pension contracts and the number of depositors*

* Compiled by the author on the basis of Appendix E

As we can see, the total number of depositors as of 31.12.2020 increased compared to the same period in 2019 by 2,2 % (1,8 thousand depositors) and as of 31.12.2019 compared to the same period in 2018 the number of depositors increased by 28,4 % (17,7 thousand depositors). The total number of depositors for the period from 31.12.2019 to 31.12.2020 increased due to an increase in the number of individual depositors by 2,4 % [32].

As of December 31, 2020, the total number of NPF participants was 883.0 thousand people (as of December 31, 2019 - 874.6 thousand people), of which 87.0 thousand people received / are receiving pension payments (% of the total number of participants) (Fig. 2.4).

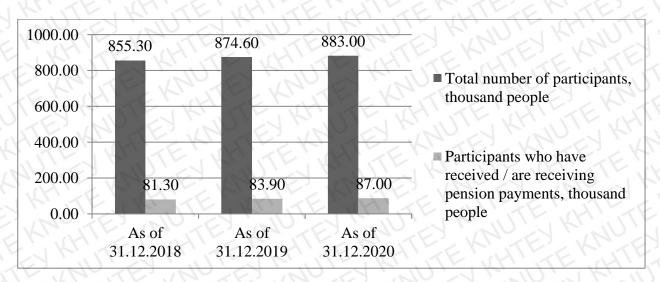


Fig. 2.4. Dynamics of the number of NPF participants*

* Compiled by the author on the basis of [34]

Fig. 2.3 shows that the total number of NPF participants increased in 2020 by 1,0 % (in 2019 by 2,3 %), and participants who received / are receiving pension benefits by 3,7 % and 3,2 % in 2020 and 2019 years, respectively [32].

The vast majority of NPF participants were persons aged 25 to 50, namely 55,2%, and persons aged 50 to 60, which accounted for 25,5 %. The share of NPF participants in the age group older than 60 years was 18,6 %, in the age group up to 25 years -0.7 % (Table 2.1, Fig. 2.5).

Table 2.1
The number of NPF participants by gender in terms of age groups
as of 31.12.2020*

Age group	Units of	W	M	Total	Specific weight from age category, %		
	measurement	TE	14		women	men	
up to 25 years	thousand people	2,6	3,7	6,3	41,3	58,7	
25-50 years	thousand people	208,9	278,8	487,7	42,8	57,2	
50-60 years	thousand people	102,1	122,6	224,7	45,4	54,6	
over 60 years	thousand people	60,0	104,3	164,3	36,5	63,5	
Total	thousand people	373,6	509,4	883,0	42,3	57,7	

^{*} Compiled by the author based on [34]

As can be seen from Table 2.1, in each age group the majority are men, namely 57,7 % of the total number of NPF participants. Moreover, in the age group older than 60 years, their number exceeds the number of women in 1,7 times.

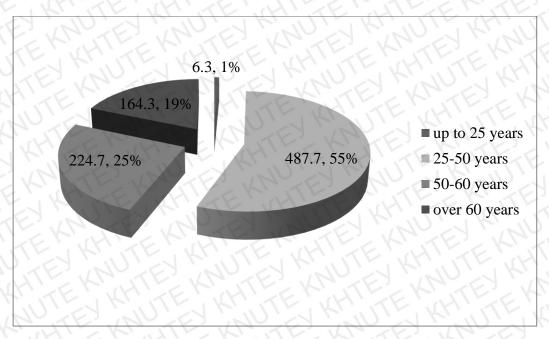


Fig. 2.5. Distribution of NPF participants by age groups (thousand people) as of 31.12.2020*

* Compiled by the author based on [34]

Pension payments (one-time and fixed-term) as of 31.12.2020 amounted to UAH 1 107,4 million, which is 16,9 % more than in the same period of 2019 (Fig. 2.6), while one-time payments increased by 9,3 %, pension payments for a fixed period - by 29,6% [32].

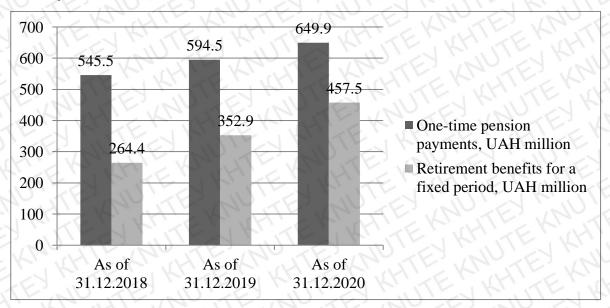


Fig. 2.6. Dynamics of pension payments*

^{*} Compiled by the author based on [34]

As of 31 December 2020, a total of 87,0 thousand participants made non-state pension funds (single and fixed-term) pension payments, ie 9,9 % of the total number of participants who received / are receiving pension payments.

The average amount of one-time pension payment per one NPF participant, who received / receives a one-time pension payment, as of 31.12.2020 was UAH 7,9 thousand (as of December 31, 2019 - UAH 7,5 thousand, as of December 31, 2018 - UAH 7,1 thousand) and the average amount of pension payment for a specified period per one NPF participant who received / receives a pension payment for a specified period term, amounted to 106,5 thousand UAH (as of December 31, 2019 - UAH 82,7 thousand, as of December 31, 2018 - UAH 63,4 thousand) [32].

One of the main qualitative indicators that characterize the refinery system is the paid pension contributions.

The amount of pension contributions as of December 31, 2020 is UAH 2 377,9 million, an increase of 10,0 % (UAH 217,1 million) compared to the same period in 2019. Compared to December 31, 2018, the amount of pension contributions as of December 31, 2019 increased by 8,0 % (UAH 160,3 million).

In the total amount of pension contributions as of 31.12.2020, the main part, or 87,3 %, consists of pension contributions from legal entities, which account for UAH 2 075,5 million.

The increase in the amount of pension contributions as of 31.12.2020 was influenced by the increase in the amount of pension contributions from individuals by 35,0 % (UAH 78,0 million), from individual entrepreneurs - by 50,0 % (0,1 million UAH) and from legal entities - by 7,4 % (UAH 138,2 million) [32].

The average size of the pension contribution for 2020 per depositor:

- a legal entity and an individual entrepreneur66 984,58 UAH;
- an individual is 985,69 UAH.

The total value of assets formed by non-state pension funds as of December 31, 2020 amounted to UAH 3 563,7 million, which is by 13,4 % or by UAH 420,4 million more compared to the same period in 2019 and by 29,8 %, or by UAH 818,5 million more compared to the same period in 2018 (Fig. 2.7).

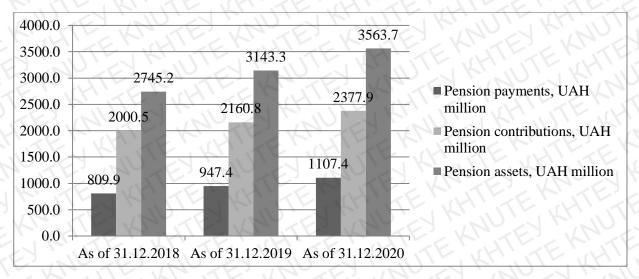


Fig. 2.7. Dynamics of the main indicators of the private pension system*

* Compiled by the author based on [34]

According to the Ukrainian Association of Investment Business, thanks to NPFs, employers and their employees can have a number of advantages and opportunities, which are summarized in table. 2.2.

Table 2.2 Advantages and opportunities of NPFs for employers and their employees*

For the employee For the employer - the possibility to receive a supplementary pension, which may significantly exceed the protection of employees of enterprises; pension from the solidarity system;

- to form their pension savings not at their own expense, but at the expense of pension contributions that will be paid to the NPF at the expense of other persons (in particular, the employer);
- if pension contributions are made by the employer, they can be considered as additional wages, in addition to wages; - independently influence the amount of their pension savings by independently making pension contributions;
- the ability to redistribute income within the family to optimize the payment of personal income tax by making pension payments in favor of their spouses, children, parents.

- expands and strengthens the system of social
- creates an opportunity for employees to receive an additional pension;
- strengthens the positive image of the employer;
- is an additional incentive to work at such an enterprise;
- the offer of various software conditions is a tool of personnel management and can serve as an advantage in case of competition in the labor market;
- creates a long-term investment resource in the form of pension assets that can be used in accordance with the requirements of the legislation to meet the investment needs of the enterprise;
- allows you to optimize labor costs (pension contributions in the amount prescribed by law may be attributed to gross costs, namely up to 15% of accrued wages per employee).

^{*} Compiled by the author based on [35]

The use of pension funds in the economy as a source of long-term domestic investment is another important reason for intensifying the investment activities of NPFs, which will help improve not only the pension system but also the economy as a whole. For example, in many countries of the world the assets of pension funds average more than 60 % of GDP, and in some countries even exceed the value of GDP (for example, the Netherlands, Iceland, Switzerland) [44], which indicates a significant resource for domestic investment.

2.2. Research of the strategy of non-government pension funds asset management

The development of NPF asset management strategy is primarily determined by the need to: improve the quality of their management in order to increase the efficiency of the real sector of the economy through NPF assets; social orientation of the state; ensuring the economic security of the state; protection of the rights and legitimate interests of citizens in obtaining a fair amount of pension benefits [36].

According to the classical theory of investment management, the process of asset management includes five stages, which can be depicted schematically (Fig. 2.8).

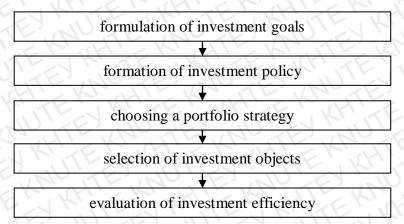


Fig. 2.8. Stages of the asset management process*

* Compiled by the author based on [37]

Today, the main pressing problem for private pension funds is to ensure the return on pension assets above inflation. To achieve it, it is necessary to: implement

effective investment strategies and processes; strict approach to risk management and budget planning, as well as to investment management [38].

For non-state pension funds, it is common to form a portfolio that includes investment objects with a minimum degree of risk. Therefore, the choice of investment instruments becomes especially important, using which NPFs will be able to protect the population's money from inflation and at the same time receive a certain increase in capital.

As of December 31, 2020, the main areas of investment of pension assets were government securities (47.3 %), deposits in banks (38.8 % of invested assets), bonds of enterprises issued by residents of Ukraine (5.4 %), domestic bonds local loans (2.7 %), real estate (2.5 %) (Fig. 2.9).

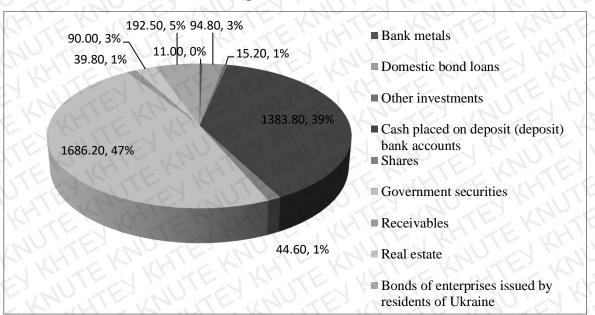


Fig. 2.9. Structure of invested pension assets as of 31.12.2020 (UAH million)*

* Compiled by the author based on [34]

In developed countries, the share of pension assets placed on bank deposits does not exceed 6-7 % in the total structure of the investment portfolio, in Ukraine this figure is 38,8 % [34].

The purpose of investing pension assets is, first of all, to preserve the pension savings of citizens. The investment strategy of private pension funds is more conservative than that of other financial institutions. Therefore, for a long time, the

main areas of investment of NPFs are government securities and cash placed on deposit.

As of December 31, 2020, there was an increase in investments in local bonds (by 717,2 %), bank metals (by 120,0 %), government securities (by 16,8 %), cash on deposit (deposit) bank accounts (by 13.3 %) and shares (by 10,3 %). At the same time, the volume of assets invested in other investments (by 42,2 %) and in bonds of enterprises whose issuers are residents of Ukraine (by 18,7 %) decreased significantly (Table 2.2).

Table 2.2

Dynamics of the structure of invested pension assets

MUTENNU	As of 3	31.12.2019	As of 31	Increase	
Asset name	Total cost, UAH million	Percentage of total assets,%	Total cost, UAH million	Percentage of total assets,%	as of 31.12.2020 / as of 31.12.2019, (%)
Government securities	1 443,5	45,9	1 686,2	47,3	16,8%
Cash	1 221,6	38,9	1 383,8	38,8	13,3%
Enterprise bonds	236,7	7,5	192,5	5,4	-18,7%
Real estate	86,8	2,8	90,0	2,5	3,7%
Receivables	66,1	2,1	39,8	1,1	-39,8%
Promotions	45,7	1,4	50,4	1,4	10,3%
Other investments	26,3	0,8	15,2	0,5	-42,2%
Domestic local bonds	11,6	0,4	94,8	2,7	717,2%
Bank metals	5,0	0,2	11,0	0,3	120,0%
Total:	3 143,3	100,0	3 563,7	100,0	13,4%

^{*} Compiled by the author based on [34]

The total income received from investing pension assets as of December 31, 2020 amounted to UAH 2 635,7 million, having increased by UAH 435,7 million or by 19,8 % compared to December 31, 2019 [34].

Expenses reimbursed at the expense of pension assets, as of 31.12.2020 increased by 17,2 % compared to the same period in 2019 and in general during the existence of pension funds amounted to UAH 456,1 million, or 12,8 % of the total value of NPF assets.

During the period from December 31, 2019 to December 31, 2020, such expenses increased by 17,2 % (UAH 67,0 million), including due to the provision of NPF asset management services by UAH 33,5 million (15,3%), custodian services by UAH 5,0 million (22,0 %), conducting scheduled audits for UAH 1,7 million (24,6 %) related to transactions with pension assets provided to third parties for UAH 0,7 million (14,6 %), other services provided by the current legislation on private pension provision (including NPF administration services) by 19,2% (UAH 26,1 million) (as of 31.12.2019 such expenses amounted to UAH 389,1 million) [32].

The structure of costs reimbursed from pension assets will be shown in Fig. 2.10.

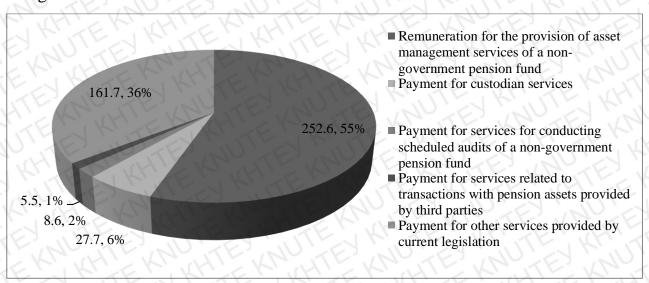


Fig. 2.10. Structure of expenses reimbursed at the expense of pension assets as of 31.12.2020 (UAH million)*

^{*} Compiled by the author based on [34]

Appendix F provides more detailed information on the dynamics of the structure of expenses reimbursed from pension assets.

Analysis of the data allows us to conclude that the main part of the costs reimbursed from pension assets, as of 31.12.2020 falls on the payment of asset management services of private pension funds – 55,4 % of the total costs. Expenditures on: other services provided by the current legislation on private pension provision (including NPF administration services) amounted to 35,4 %; to pay for the services of a custodian who carries out responsible storage of pension fund assets – 6,1 %; on scheduled audits of NPFs – 1,9 %; related to transactions with pension assets, which are provided to third parties – 1,2 % of the total amount of expenses reimbursed from pension assets [32].

One of the indicators of the efficiency of non-state pension funds is their ability or ability to provide pension benefits to their members, because it is at the expense of the net asset value that pension payments are made. That is, this indicator is one of the key indicators of the development of NPF in general.

As of December 31, 2020, the amount of assets per NPF participant amounted to UAH 11,07 thousand. If we go back to 2016, this figure increased by UAH 3,67 thousand, which indicates a positive trend. The largest value is demonstrated by NPF «NBU» (126,2 thousand UAH), followed by NPF «Pharmaceutical» (121,13 thousand UAH), NPF «Ukrainian Pension Fund» (83,79 thousand UAH) and others (Appendix J).

The total net asset value of all private pension funds amounted to UAH 3 563,7 million. 45 % of the assets of the private pension system are the assets of the NBU Corporate Pension Fund. According to the criterion of net asset value, the following NPFs are in the lead: OTP Pension - UAH 245 255,34 thousand, PrivatFund - UAH 234 018,45 thousand, Emerit-Ukraine - UAH 206 036,79 thousand (Fig. 2.11).

It should be noted that for many funds there is no information on the value of assets and the number of participants, which indicates unsatisfactory performance or lack of administrators due to the lack of relevant records for some funds in the NCFP

register, but they are not in liquidation, which contradicts paragraph 8 of Art. 6, paragraph 2 of Art. 12 of the Law № 1057-IV.

About 30 % of NPFs in Ukraine either have a low level of net asset value per participant, or do not disclose information on their performance at all [34].

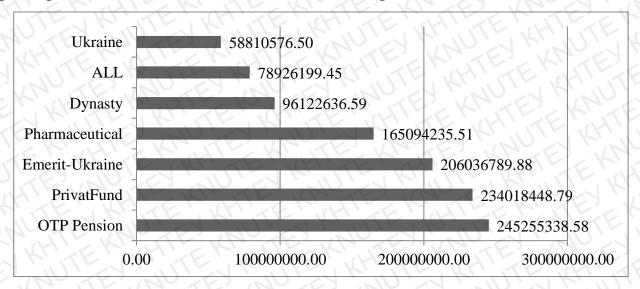


Fig. 2.11. Net asset value of NPFs as of December 31, 2020 (UAH)*

* Compiled by the author based on [34]

It is worth noting that the vast majority of private pension funds showed a return for 2020, which exceeded inflation. Only 5 NPFs declared a loss in 2020, but this loss was mainly due to violations in the operating activities of NPFs. Thus, the companies managing the assets of NPF «Styrol», the Professional Fund «Bread» and the NPF «Nika» had their asset management license revoked. Contrary to the law, the boards of the above-mentioned funds did not enter into agreements with the new AMCs, and the state regulator of the NSSMC did not influence the situation. Thus, the activities of these funds are actually blocked, and as a result, the result is unprofitable [39].

The highest returns in 2020 were shown by non-state pension funds, which made currency diversification of pension assets, ie, which have in their portfolio financial instruments denominated in US dollars, Euros and bank metals.

The best results in 2020 were shown by funds with a wide diversification of assets, which invested not only in deposits and IGLBs, but also in such assets as bank

metals, real estate, Eurobonds. For example, the price of bank gold increased by more than 25% [39].

As of December 31, 2020, the total amount of payments to NPF participants amounted to UAH 1 107,4 million. The leaders in payments were the corporate NPFs of the National Bank and Ukreximbank (Fig. 2.12).

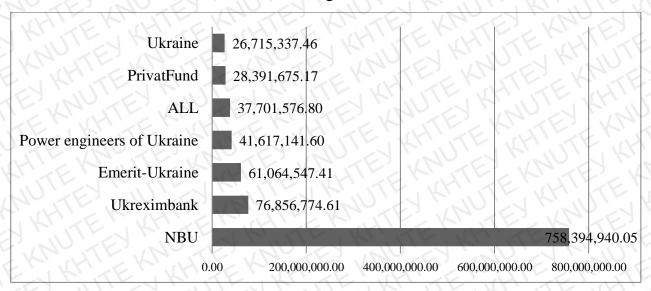


Fig. 2.12. NPF payments in 2020 (UAH)*

NPF

 $N_{\underline{0}}$

1

3

4

ALL

OTP Pension

Pharmaceutical

PrivatFund

It should be noted that in 2020, despite the coronary crisis, depositors were quite active in paying contributions to the NPF. The total amount of paid contributions for 2020 amounted to UAH 217,1 million.

The Ukrainian Association of Pension Fund Administrators believes that it is important when choosing a private pension fund not only the size of assets, profitability, investment portfolio and amount of payments, the professionalism of service companies, the attitude of the NPF administrator to its clients, the extent to which the administrator can fund to the NPF participant, as far as this information is clear and correct [39].

TOP-10 most profitable NPFs*

value

18,79%

15,40%

13,73%

11,93%

Change in net asset Place by assets 6 2

Table 2.3

^{*} Compiled by the author based on [34]

Continuation of Table 2.3

No	NPF	Change in net asset value	Place by assets	
5	Ukraine	11,69%	NO 17h, NI	
6	Social standard	11,22%	9	
7	Dynasty	11,07%	5 1	
8	Emerit-Ukraine	10,46%	3	
9	Golden autumn	9,31%	8	
10	Ukrainian Pension Fund	2,63%	10	

^{*} Compiled by the author based on [39]

As we can see in Table 2.3, the leading positions in assets are occupied by NPF «OTP Pension», NPF «PrivatFund», NPF «Emerit-Ukraine», NPF «Pharmaceutical» and others.

Currently, the OTP Pension Fund is one of the largest open-end pension funds in Ukraine in terms of assets, number of participants and is one of the most dynamically growing funds. In recent years, the OTP Pension Fund has entered the TOP-3 of the largest open-end NPFs in Ukraine in terms of assets. As of December 31, 2020, the total value of the Fund's net assets amounted to UAH 245 255 339,00, the number of participants was 56 684,00 [40].

The fund's strategy is aimed at forming a conservative investment portfolio with maximum capital protection. The main components: bank deposits and bonds, government-guaranteed bonds. Up to 80 % of assets can be invested in the most profitable segment of the money market - bank deposits and bonds; up to 50 % of assets - in government bonds, which show the highest yields in terms of lower interest rates in the money market. The target share of instruments in foreign currency is 10 % of assets.

The analysis of the dynamics of the assets of NPF «OTP Pension» for 2015-2019 (unfortunately, reporting for 2020 is not yet publicly available) (Appendix G, M) showed a steady upward trend in asset value, which is undoubtedly positive. On fig. 2.13. demonstrated a constant trend of increasing the value of assets.

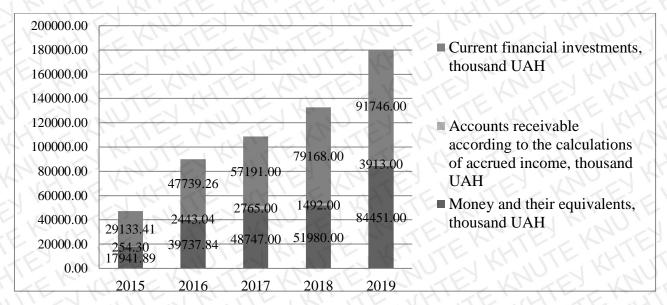


Fig. 2.13. Dynamics of assets of NPF «OTP Pension» for 2015-2019*
* Compiled by the author based on [40]

The vertical analysis of the fund's assets for the same period (Appendix D) reflects the structure of the presented assets. The largest share for all periods is occupied by current financial investments. In second place is money and their equivalents. Hence, in 2019 - current financial investments amounted to 50.98 % (decreased by 8,75 % compared to 2018), and money and their equivalents – 46,89 % (increased by 7,7 % compared to 2018 p.). The increase in the share of current financial investments is positive in the fund's activities [40].

The reporting of NPF «OTP Pension» presents the following types of assets in terms of their investment:

- cash placed in deposit bank accounts;
- securities, the income on which is guaranteed by the Cabinet of Ministers of Ukraine:
 - bonds of enterprises issued by residents;
 - shares of Ukrainian issuers;
 - receivables:
 - -funds on the current account [40].

Based on the monthly results of the NPF «OTP Pension», published on the official website of the fund, we can characterize the dynamics of the fund's portfolio for the period 2020 - 3rd quarter of 2021 (Fig. 2.14).

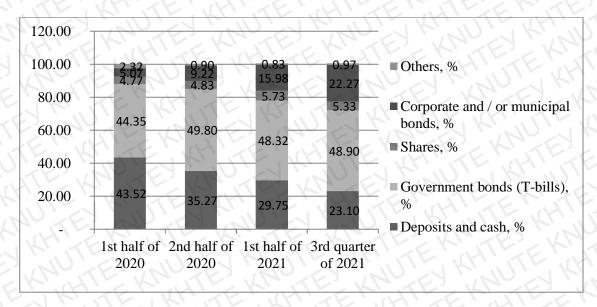


Fig. 2.14. The structure of the portfolio of NPF «OTP Pension» for 2020 - 3rd quarter of 2021, %

* Compiled by the author based on [40]

As we can see on Fig. 2.13, the structure of asset use in the period 2020 - 3rd quarter of 2021showed that the share of funds placed in deposit bank accounts decreased by 20.42 % (from 43.52 % in early 2020 to 23.10 % at the end of the 3rd quarter of 2021). At that time, the share of corporate and municipal bonds is constantly growing - 48.9 %, in contrast to shares, the share of which did not exceed 5 % during the period.

The net asset value of the private pension fund is presented on Fig. 2.15 shows a positive upward trend, which indicates a stable investment activity of the fund in this period.

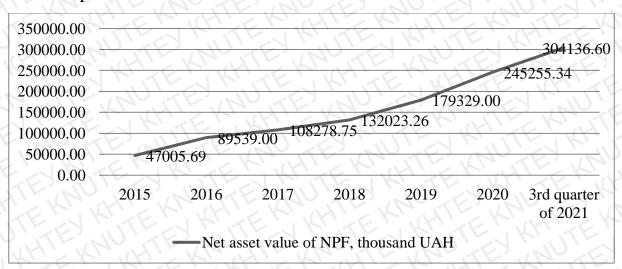


Fig. 2.15. Net asset value of NPF «OTP Pension» for 2020 - 3rd quarter of 2021*
* Compiled by the author based on [40]

Analysis of the return on assets of NPF «OTP Pension» for 2018-2019 (Table 2.4) showed an increase in this indicator by 6.67 % in 2019, namely (Appendix H): due to the growth of return on investment - return on assets increased by 12,14 %, due to an increase in assets - decreased by 5,47 %. Return on assets shows how much profit per 1 UAH of assets, ie characterizes the efficiency of use of assets, in this case, investment efficiency. Thus, we can positively assess this trend of increasing return on assets, which indicates the effectiveness of NPF «OTP Pension».

Table 2.4
Assessment of the impact of factors on the return on assets of
NPF «OTP Pension»*

THE KIT	2018	2019	Deviation		
Article			Total	By changing the return on investment	Due to changes in assets
Profit (loss) from investing NPF assets, thousand UAH	11422,13	27517,67	16095,54	UTEX KHIE	EKATI
Total assets, thousand UAH	132640,00	180110,00	47470,00	HITEKH	JEKN
Return on assets,%	8,61	15,28	6,67	12,14	-5,47

^{*} Compiled by the author based on [40]

The assessment of compliance with the requirements of the investment declaration confirmed compliance with the legislative and declaration requirements for investment objects (Appendix I).

Thus, the analysis of the assets of NPF «OTP Pension» positively characterizes its activities. The fund has a small amount of income from pension contributions, but this is due to the specific economic situation in Ukraine, so NPF «OTP Pension» occupies a share of private pension funds in our country and is actively developing, increasing assets.

Based on the analysis, it can be concluded that the strategy of NPF «OTP Pension» is aimed at forming a conservative investment portfolio with maximum protection of capital. The main components: bank deposits and bonds, government-guaranteed bonds.

Up to 80 % of assets can be invested in the most profitable segment of the money market - bank deposits and bonds; up to 50 % of assets - in government bonds, showing the highest yield in terms of lower interest rates in the money market. The target share of instruments in foreign currency is 10 % of assets [40].

In most cases, bank deposits and government and municipal bonds - ie low-risk assets with a stable level of income - remain the most popular areas of investment for OTP Pension and other domestic NPFs. The reasons for this situation are considered, on the one hand, insufficient level of NPF development, as insignificant assets of most NPFs hinder the implementation of an effective investment strategy, and on the other - unsatisfactory stock market and lack of investment attractive and reliable financial instruments.

At the same time, on April 30, 2021, Ukrainian non-state pension funds began to invest their savings in securities of foreign companies, which were admitted to circulation in Ukraine by the National Commission on Securities and Stock Market. The portfolios of private pension funds and mutual funds included securities of the world's largest technology companies - Apple, Microsoft, Tesla and some of the most famous index funds - Vanguard 500 Index Fund and Invesco QQQ Trust SM [34].

Thus, due to the admission to the Ukrainian capital market of securities of foreign issuers, the Commission expands the list of financial instruments that are already becoming interesting for investing pension assets.

PART III

DIRECTIONS FOR IMPROVING OF NON-GOVERNMENT PENSION FUNDS ASSET MANAGEMENT

3.1. Foreign experience in non-government pension funds asset management

Today, the issue of ensuring a decent standard of living for people who have reached retirement age is quite acute in almost every country. In recent years, pensions in most countries have undergone many changes.

Today, the problem of pension reform is especially relevant in many countries around the world, regardless of the level of economic development, due to the aging population, changes in its age structure, the complexity of the economic situation.

In the structure of pension systems of developed countries, NPFs are the institutions of their three main components: the system of mandatory funded, occupational and private pension provision. Eighteen of the thirty-seven OECD countries have separate forms of mandatory or quasi-mandatory private pension systems, which ensure a high level of coverage of the working age population.

In Finland, Iceland, Norway and Switzerland, occupational pensions are mandatory and cover almost 70 % of the working age population: employers use appropriate pension schemes, with contribution rates set by the government. Iceland, where the pension coverage rate is almost 85 %, is in fact the leader in this indicator among OECD countries. Occupational pension systems are classified here as quasimandatory: on the basis of sectoral or national collective agreements, employers establish pension schemes to which employees must join. Another example is the occupational pension systems of Denmark, the Netherlands and Sweden, in which the level of coverage of the working age population is more than 60% [41, p. 10-11].

Mandatory savings systems are also common in Latin America and Central and Eastern Europe, where they have partially replaced social benefits, and are successfully operating in Chile, Mexico, Sweden, Denmark, Estonia, Poland, the Slovak Republic, Israel, and more. The level of development of private pension funds

varies from country to country. Thus, more than 50% of citizens aged 15-64 are participants in the NPF of the Czech Republic, New Zealand and the USA. On the other hand, the level of coverage of the population by the refinery system is very low (less than 5%) in countries such as Greece, Luxembourg, Portugal and Turkey [41, p. 8]. To some extent, this situation can be explained by the adequacy of the state pension insurance system.

The use of pension funds in the economy as a source of long-term domestic investment is another important reason for intensifying the investment activities of NPFs, which will help improve not only the pension system but also the economy as a whole. For example, in OECD countries, pension fund assets average almost 70 % of GDP, and in some countries even exceed GDP (eg the Netherlands, Iceland, Switzerland), indicating a significant resource for domestic investment. In fig. 3.1 presents the OECD countries, whose pension fund assets (as % of GDP) are more than 100 %.



Fig. 3.1. The world's leading countries in terms of pension fund assets in 2020, % of GDP*

Significant differences remain across countries between the level of assets in pension funds relative to the size of the domestic economy. Assets exceeded the size of the domestic economy in five countries: the Netherlands (210,3 %), Iceland (194,3%), Switzerland (149,1 %), Australia (128,7 %) and the United Kingdom

^{*} Compiled by the author based on the sourse [42]

(118,5 %). In contrast, pension fund assets remained much smaller in countries such as Albania, Greece and France, accounting for 0,2 %, 1 % and 2,6 % of GDP respectively [42].

Within the OECD, 7 of the 37 countries own more than 90% of total assets. The United States has the largest pension market with an asset value of 32,2 trillion dollars US, accounting for 65,4% of total OECD assets. The United Kingdom is the second largest asset (\$ 3,7 trillion or 7,3 %), followed by Canada (\$ 2.8 trillion or 5,7 %) (Figure 3.2).

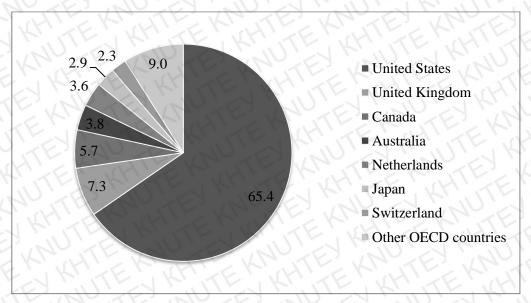


Fig. 3.2. Geographical distribution of pension assets in the OECD area, 2020*
* Compiled by the author based on the sourse [44]

Analysis of the structure of assets of the world's largest pension markets shows that the main direction of their investment is investing in securities. As of 2020, 45 % of total pension assets were invested in shares, 29 % - in bonds. The share of cash in the assets of pension funds was 3 %, and 23 % of assets were invested in other instruments [44].

It should be noted that the areas of investment of pension assets in different countries differ significantly. Thus, in the United States, Australia and Canada, a significant share in the total structure of assets belonged to shares. At the same time, the main instrument in the structure of pension assets of the Netherlands, Japan and the United Kingdom were bonds.

In OECD countries, where private pension provision is virtually underdeveloped (Denmark, Finland), there are high regulatory requirements to limit the investment of private pension fund assets. In countries such as Australia, Belgium, the Netherlands, there are no restrictions on investment limits for non-state pension funds [45].

In OECD member countries, restrictions on investment activities are applied in two forms:

- 1) restrictions on the amount of funds that can be invested in shares (for example, Denmark 70% of all assets of NPFs, Japan 40 %) [45];
- 2) France and Portugal have introduced restrictions in the form of a minimum share of investment in government securities. And although this minimum varies from 15 to 50 %, it has almost the same effect as limiting the share of shares in the portfolios of pension funds [46].

In Latin American countries, restrictions are generally stricter than in OECD member countries. And the biggest concessions in this regard are offered by the regulatory regimes of Chile, allowing to invest more than 30 % of assets in shares. In Bolivia, the situation is more complicated. Although the regulation of investment here is the mildest among the countries of the region, high requirements for the minimum amount of investment in government debt have led to the formation of portfolios with the vast majority of government securities [46].

In addition, in some OECD countries, pension funds are an important means of investing in infrastructure and real estate (through direct investment by the fund itself or through specially designed mechanisms - real estate investment trusts or infrastructure investment funds), operated by private management companies. assets. Pension fund assets can be used to purchase real estate. In this case, the fund either acts as a developer and receives the so-called profit of the developer (which is often the most significant part of the profit), or is engaged in mortgage financing.

When using alternative investments and derivative financial instruments, pension funds are given the opportunity to receive a return on investment, which could not be guaranteed in traditional investment activities. However, as practice

shows, such investments are associated with significant risks. When deciding to use alternative investments and derivative financial instruments, NPFs should be clearly aware of the consequences of such a strategy and exercise appropriate control using an early response and warning system.

The above allows us to highlight the following features of the investment policy of foreign private pension funds: quantitative restrictions on the structure of investment portfolios; government restrictions on investing in foreign financial instruments; supervision of NPF investment activities based on risk assessment.

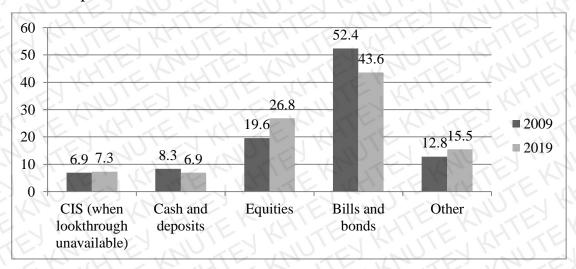


Fig. 3.3. Average allocation of pension assets in selected asset classes and investment vehicles in the OECD area, in 2009 and 2019*

* Compiled by the author based on the sourse [47]

Figure 3.3 shows the average relative allocation of pension assets in all OECD jurisdictions in 2009 and 2019. As we can see, the allocation of pension assets in deposits decreased by 1,4 %, in equities increased by 7,2 %, which is generally positive.

Asset allocation and returns go hand in hand, as well as risk levels. Higher portfolio allocation to risky assets entail higher potential returns and higher return volatility. In most countries, bonds and equities are the two main asset classes in which retirement savings were invested at the end of 2019, accounting for more than half of investments in 34 out of 37 OECD countries, and 39 out of 47 other reporting jurisdictions. Therefore, developments in bond and equity markets played a major role in the financial performance of retirement savings plans. The combined

proportion of bonds and equities was the highest (relative to the size of the portfolio) in Chile (99%), the Dominican Republic (97,3 %), Mexico (96,6 %), Estonia (96,4%), Nigeria (96,4 %), Romania (96,3 %), the Maldives (96,2 %) and Croatia (95,7 %) [47].

Pension funds were mostly invested in equities and bonds at the end of 2020. These instruments together accounted for 74 % of the investment of pension funds on average, directly or indirectly through collective investment schemes, among the 68 reporting jurisdictions. Bonds alone represented 50 % of pension fund investments on average. Equities accounted for more than 50 % of the investments of pension funds in Hong Kong (China), Lithuania, Malawi, Namibia and Poland, while pension funds invested almost none of their assets in equities in Armenia, the Czech Republic or Georgia for instance.

In some jurisdictions, pension funds held a significant share of their assets in deposits (e.g. in Georgia) or alternative investments such as loans or real estate (e.g. in Canada and Germany). In Georgia, all the assets were held in bank deposits and current accounts before the newly introduced mandatory scheme started its investment operations in other asset classes. Pension funds in Canada and Germany had some of the highest proportions of assets invested in instruments other than bonds, equities, cash and deposits, at 39 % and 44 % respectively.

While pension funds generally maintained their asset allocation relatively similar to 2019, some jurisdictions observed a switch to cash and other liquid options to face potential outflows from early withdrawals due to COVID-19. Pension funds in Australia increased the share of their assets in cash and deposits by nearly 3 percentage points between end June-2019 and end June-2020, as funds prepared for potential outflows coming from the COVID-19 related early release initiative and some plan members may have switched to cash and other conservative options. Likewise, pension funds in Peru sold some local long-term fixed income securities to increase their cash holdings and be able to meet early withdrawal requests from plan members.

Low and declining interest rates also led some pension funds to adjust their asset allocation in 2020. Because of the declining interest rates, pension funds in the Czech Republic diverted over 8 percentage points of their assets in cash towards bonds (especially government bonds). Croatia's pension supervisor also reported an increase in pension funds' investments in riskier assets such as equities as a result of the low interest rate environment [44].

According to foreign experience, private pension funds (NPFs) are active players in the global capital market. By transforming the savings of households and enterprises into investments, NPFs are a source of long-term investment resources, contributing to economic growth. At the same time, in Ukraine there is a different situation - during the whole period of NPF development they were significantly inferior in economic potential not only to banks, but also to investment funds and insurance companies [48].

International experience shows that the activities of private pension funds increase investment in the real sector of the economy, using previously unused private pension assets, which is a necessary condition for the development of the economic system of any state. In a relatively short time, developed countries have managed to address the issue of decent pensions.

The need to introduce private pension systems is now accepted by most developed countries and is perceived at all levels of government by various segments of the population. The use of non-state sources of pension funding in developed countries has been time-tested and encouraged by the state because:

- reduces the number of people who depend on state support;
- creates conditions for the state to focus on pensions for the most vulnerable;
- eliminates the need to excessively increase state social programs.

As we can see, long-term investment of private pension funds contributes to economic growth. The latter are the most active participants in the capital market due to the fact that they transform the free funds of enterprises and households into investments.

Pension reform in Ukraine, which aims to build a multi-level pension system with a transition to the accumulative principles of financing, requires more attention to the process of managing the assets of private pension funds in domestic practice. As a result of a comparative analysis of the structure of placement of pension funds in Ukraine and OECD countries, it can be stated that the investment policy of domestic NPFs is focused on minimizing investment risk by investing in low-risk financial instruments and, consequently, profitability. At the same time, the analysis of the experience of OECD countries shows that private pension funds are powerful institutional investors, whose priority is to invest in shares, which in case of successful implementation, maximizes investment income of investors and economic development as a whole. This is a promising area for improving the investment activities of NPFs in Ukraine, but its implementation is inextricably linked with the further development of the stock market.

3.2 Directions for improving of domestic non-government pension funds asset management

Currently, the problem of developing the investment potential of private pension funds is especially relevant given the limited investment resources and investment opportunities in the domestic financial market, the inflexibility of state regulation of investment activities, against the background of increased competition between funds [58]. The intensity of changes in environmental factors affecting the investment activity of NPFs and fluctuations in investment market conditions do not allow to effectively manage the assets of NPFs based only on previous experience and traditional methods of investment management. In such conditions, the lack of a developed investment strategy, adapted to possible changes in the external investment environment, may lead to the fact that investment decisions will reduce the efficiency of investment activities in general. Therefore, the effective functioning of funds can be ensured only on the basis of a scientifically sound conceptual approach to the formation of a strategy for the development of investment potential of NPFs.

In our opinion, the formation of the strategy for the development of the investment potential of the NPF should be carried out within the general strategy of the fund, which is implemented in the process of strategic management of the NPF.

Figure 3.4 presents a set of components of strategic management NPF.

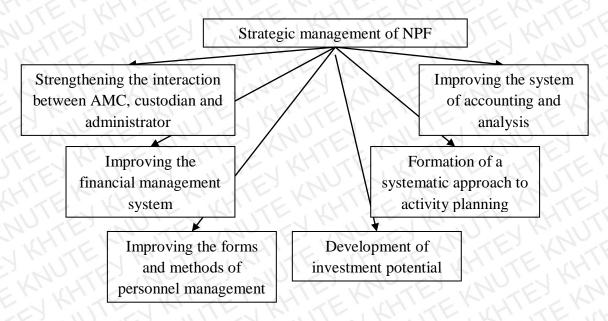


Fig. 3.4. Components of strategic management of a private pension fund*
* Compiled by the author

As shown in Figure 3.4, the structure of strategic management of NPFs is formed by measures, the implementation of which will contribute to the effective achievement of goals in the field of asset management and overall development of funds.

The structural and logical scheme of formation and implementation of the strategy for the development of investment potential of NPFs is presented in Appendix K.

It is worth noting that after formulating the mission of the NPF (stage 1), defining the target priorities and objectives of the fund's investment activities (stage 2), we move on to stage 3 - the formation of investment policy of the NPF. Note that the establishment of conservative investment restrictions significantly complicates the task of forming an optimal investment portfolio of NPFs and effective management of pension assets, because each restriction reduces the investment choice of asset managers.

Careful selection of an asset management company with different approaches to pension savings management, from conservative to aggressive, taking into account the level of required costs and the amount of remuneration, will contribute to continuous optimization of internal processes, costs, subject to continuous monitoring of asset management companies.

The next important stage (4) is the diagnosis of internal and external environments of investment activities of NPFs. The best result is observed with the priority of strengths over weaknesses and opportunities over risks. Establishing such a ratio in the future is one of the tasks of strategic management of NPFs.

Stage 5. Development of a strategy for the development of investment potential of NPFs. Investment of pension savings of NPF is carried out on the principles of:

- investing in market instruments with low non-systematic risk;
- placement of assets in the expectation of receiving dividend, coupon income or income from the increase in the value of the asset;
 - investing in financial instruments to reduce the risk of losses;
- maximizing profits during market growth and minimizing losses in the event of a market crash. Based on the stated goals, analysis of the external environment, assessment of the NPF potential, investment attractiveness, the degree of risk allowed for the fund, as well as the stage of its development life cycle, a basic strategy of the fund development is adopted, reflecting the general direction of its activity.

Summing up, we note that the effective investment activities of the NPF provides such investment strategy which provides the mechanism of realization of long-term general and investment purposes of development of fund; allows to realistically assess the investment potential of the fund; promotes the rapid implementation of new promising investment opportunities that arise in the process of dynamic changes in the factors of the external investment environment; allows to take into account in advance possible variations in the development of uncontrolled factors of the external investment environment; reflects the comparative advantages of NPFs in investment activities in comparison with competitors; ensures the

implementation of investment policy in the most important strategic decisions; provides a clear link between strategic, tactical and operational management of investment activities; allows to form criteria assessments of the choice of financial instruments for the formation of the investment portfolio; ensures efficient allocation and use of available investment resources; promotes adaptation to changes in the external environment [59].

In modern conditions, as evidenced by domestic practice, the system of private pension provision is still in its infancy. Despite the stable growth of the private pension insurance sector, it still does not play a significant role in the pension system. This is due to the presence of a number of internal and external problems, which does not encourage further development of private pension funds and requires an urgent solution.

Therefore, actions aimed at intensifying and modernizing the activities of private pension funds should be comprehensive and cover all stages of the institutions, in particular:

- stage of attracting participants creation of a quality system of motivation for participants in order to increase the confidence and awareness of the population in the system of private pension provision, search for reserves to increase revenues to private pension funds;
- stage of investing pension assets attracting investment-attractive and effective financial instruments in the context of ensuring the development of private pension funds, the choice of alternative areas for attracting investment resources of funds;
- stage of control over the activities of funds modernization of the system of state regulation of private pension insurance [49, p. 5-6].

In particular, the current problem for private pension funds is to ensure the return on pension assets above inflation. The main reasons for the insufficient development of private pension provision in Ukraine include [50; 39; 40]:

- low level of return on pension assets;
- legislative unresolved issues of the non-state pension provision market;

- low level of public confidence in private pensions, the banking system and other financial institutions:
- insufficient interest of employers in financing non-state pension programs for employees;
- low financial level of citizens' ability to participate in the private pension system;
- limited choice of financial instruments suitable for investing pension funds in them, due to the lag of capital market development from the needs of institutional investors;
- low level of explanatory work on the content and role of the funded pension system in society and insufficient funding.

In our opinion, for the stable development of private pension provision and intensification of NPF activities as institutional investors in Ukraine, it is necessary to implement a number of measures at all levels of government (Table 3.1).

Table 3.1

Measures to intensify the activities of NPFs and expected results*

Subjects	Measures / actions of actors for development	Expected results
Individuals	participation in private pension provision;payment of pension contributions to the NPF	 additional non-state pension; increasing the level of well-being or maintaining the achieved level after the end of active employment; optimization of taxation (pension contributions made for own benefit are not taxed by personal income tax within the amount of social tax benefits)
Entities	- creation of corporate NPFs;- participation in professional NPFs	 improving employee motivation; solving social, personnel and financial and economic development issues; improving the image
State	 strengthening of control of NPF activity by state bodies; ensuring the reliability of NPF participants' payments; active interest of citizens in individual participation in NPF; protection of NPFs as institutional investors 	 optimal and efficient use of NPF assets; development of long-term investment; effective functioning of the non-state pension system; reduction of the burden on the solidarity level of the pension system; improving the welfare of the population; economic growth

^{*} Compiled by the author

In our opinion, further implementation of the pension reform is a significant impetus for the development of private pension funds. It is important to increase their participation in mandatory funded and professional pension systems.

The key to increasing the investment attractiveness of the industry, in particular for private pension funds is «the transformation of the existing tariff mechanism to meet the following parameters: long-term nature of regulation, ensuring a fair rate of return on invested capital, stimulating efficiency and quality of customer service. It is possible to satisfy these conditions and reconcile the interests of stakeholders through the use of incentive regulation approaches, in particular the method of return on invested capital (Regulatory Asset Base, RAB).

The high results of the use of the RAB-regulation method in the countries of Western Europe have turned it into a model of tariff regulation in the world. The methodology of RAB-regulation is based on such a tariff calculation mechanism, which provides for the gradual return of borrowed capital and interest for its use. Thus, regulators primarily determine the required level of gross revenue for a network company, which includes: operating costs, return on invested capital and return on invested capital. At the same time, the established tariffs have a long-term character, as a rule, 5-7 years» [25].

However, the lack of sufficient investment-attractive and effective financial instruments limits the opportunities for efficient use of pension assets. Such problems determine the existence of the following two options for their solution:

- liberalization of legislative restrictions on investment activities of private pension funds by expanding the list of assets allowed for investment;
- development of the financial market in relation to the supply of new types of financial assets suitable for investment of non-state pension funds [53, p. 5-6].

In modern conditions, it is advisable to use two options at the same time, as the transformation of private pension funds requires partial removal of quantitative restrictions, respectively, the involvement of pension assets in the real sector of the economy encourages the development and application of new financial instruments. Despite the current legislative, institutional and regulatory environment, the level of development of private pension provision in Ukraine still remains low. The unpopularity of NPFs among Ukrainian citizens is explained by two main reasons:

- 1) low level of income, and hence the lack of financial opportunities to participate in NPFs;
- 2) a high level of paternalism and hope for the state pension provision. However, almost the only potential category of participants, in the consideration of which these obstacles are absent, namely, migrants, is left out of consideration. The level of income of workers allows them to pay pension contributions, while they do not have guarantees of state pension provision [54].

According to the World Bank rating, Ukraine is among the top ten countries - the largest recipients of remittances from abroad and is the leader in a similar ranking among Europe and Central Asia [55]. Unofficial statistics are even more impressive. According to some scholars, the volume of remittances of Ukrainian migrants exceeds \$ 20 billion a year, which confirms the significant economic potential of migratory capital.

In the long run, labor migration will only increase. Therefore, today it is necessary to effectively use its main achievements - remittances, including for the development of the refinery system.

According to experts, the services of NPFs are quite attractive for migrants. The advantages of the refinery for this category of citizens are:

- the possibility of receiving a pension after returning to Ukraine;
- no requirements for the minimum insurance period, as well as for sources of payment of pension contributions;
- flexible conditions for payment of pension contributions: the period of accumulation of contributions and the frequency of their payment is chosen by the depositor independently;
- the possibility of self-determination of retirement age, as well as the choice of type of pension.

However, the use of the investment potential of migrants for the purpose of their private pension provision requires the adaptation of the existing mechanism of servicing participants to the specifics of this target group. In our opinion, it is necessary to supplement the legislation, namely to introduce the payment of a one-time pension contribution, in particular through the use of such a financial instrument as bonds.

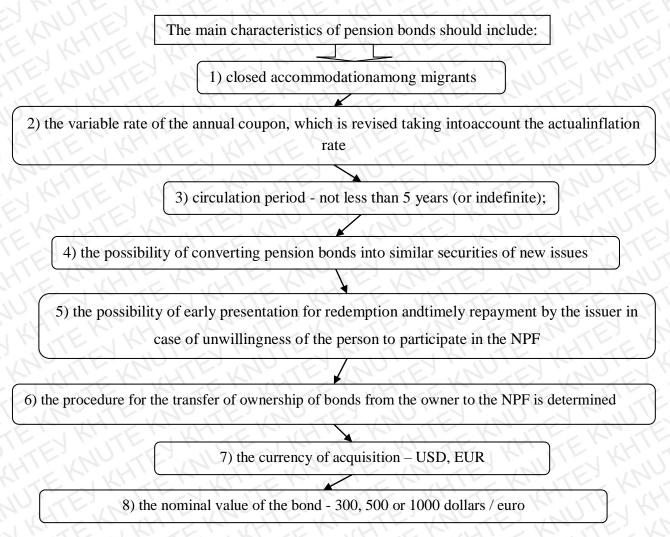


Fig. 3.5. Main characteristics of pension bonds for Ukrainian migrants*

* Compiled by the author

Successful implementation of pension bonds in the countries of residence of migrants requires the solution of the following tasks: the study of the main regions of concentration of migrants and their socio-economic characteristics (employment, income, savings, transfers); ensuring their proper information in various ways (embassies, consulates, media resources, financial intermediaries); determining the

categories of bond placement agents and signing relevant agreements (banks, transfer systems, diplomatic missions); analysis of the legislation of the bond placement countries, assessment of the total cost of project implementation (Appendix L).

Creating an effective and efficient mechanism for issuing and placing pension bonds for Ukrainian migrants is of triple importance:

- 1) for migrants, pension bonds provide an opportunity to take care of their own pension provision on favorable terms in advance;
- 2) for the state, funds raised from migrants are a source of long-term investment resources for the country's economy, as well as a guarantee of increasing the level of social protection of this category of citizens;
- 3) for NPFs, attracting potential participants creates additional opportunities for increasing pension assets [25].

Thus, according to domestic practice, the system of private pension provision is still in its infancy. At the same time, the effective functioning of funds and management of their assets can be ensured only on the basis of a scientifically sound conceptual approach to the formation of a strategy for the development of investment potential of NPFs. In addition, actions aimed at intensifying and modernizing the activities of private pension funds should be comprehensive and cover all stages of the work of institutions at all levels of government. The application of new types of financial instruments and the development of a clear and understandable legal framework remains a necessary aspect.

Also, the priority area for intensifying the activities of NPFs is to attract migrants. However, the use of the investment potential of migrants for the purpose of their private pension provision requires the adaptation of the existing mechanism of servicing participants to the specifics of this target group. Therefore, the proposed mechanism for paying a one-time pension contribution is promising, in particular through the use of such a financial instrument as individual pension bonds.

CONCLUSIONS AND RECCOMENDATIONS

In the final qualifying work the domestic and foreign experience of asset management of non-state pension funds was considered.

Today in Ukraine there are only the first and third levels of the pension system, and the introduction of the second level has not yet taken place. In the absence of accumulative mandatory state pension insurance, it is the non-state pension provision that allows every citizen to save money on a safe old age. But it should be noted that due to the difficult economic situation in the country, low incomes of the working population, distrust of financial institutions, private pension provision has not yet become a common mechanism for the formation of pension savings [60, p. 127-128].

Based on the results of research conducted in this work, the following conclusions can be drawn.

- 1) Based on the works of domestic and foreign scientists, the interpretation of the essence of NPF was considered and a comprehensive definition of NPF is provided a social and financial institution created and functioning for social protection of citizens and designed to preserve and increase pension savings in the process of their accumulation, investmentand use to finance an acceptable level of pension benefits to fund members. A research of the history of the formation of refineries and areas of legislative regulation of NPFs in Ukraine was conducted. The classification of types of non-state pension funds was given, the directions and restrictions on investment of assets were determined.
 - 2) The analysis of tendencies of development of NPF was carried out.

As of December 31, 2020, the State Register of Financial Institutions contained information on 63 NPFS and 22 NPF administrators (in 2019 - 65 NPFs). This trend indicates a narrowing of the segment of the financial market in which NPFs operate.

Analysis of the main indicators of non-state pension funds in Ukraine for the period 2016-2020 allows us to say about:

- annual growth of pension contributions with higher or lower growth rates: despite the corona crisis, depositors were quite active in paying contributions to NPFs. The total amount of paid contributions for 2020 amounted to UAH 217,1 million;

- almost absolute predominance of the average share of pension contributions from legal entities over the average share of pension contributions from individuals in their overall structure (87,3 % or UAH 2075,5 million);
- annual increase in pension benefits with different growth rates: as of 31.12.2020, the total amount of benefits amounted to UAH 1107,4 million. The leaders were the corporate NPFs of the NBU and Ukreximbank;
- excess of the amount of one-time pension benefits over the amount of pension benefits for a specified period by 29,6% for the last study year;
- achievement of the average number of persons who have received or are receiving pension benefits, the level of more than 87 thousand;
- the total value of assets formed by NPFs amounted to UAH 3563,7 million, which is by 13,4 % or by UAH 420,4 million more than in the same period in 2019.

At the same time, the dynamics of financial indicators of Ukrainian NPFs indicates the development of their investment potential. In particular, the decrease in the number of registered NPFs against the background of an increase in the total value of fund assets indicates a gradual consolidation of the NPF market and an increase in the concentration of pension fund assets.

3) The analysis of the structure of the investment portfolio of domestic private pension funds was carried out.

It can be stated that deposits, securities guaranteed by the Cabinet of Ministers of Ukraine, as well as bonds of domestic issuers averaged 91.7 % of the investment portfolio of non-state pension funds of Ukraine. In developed countries, the share of pension assets placed on bank deposits does not exceed 6-7 %, in Ukraine - 38.8 %.

4) On the example of NPF "OTP Pension", the strategy of domestic non-government pension funds was researched. The fund's strategy is aimed at forming a conservative investment portfolio with maximum capital protection. The structure of asset use showed that the largest share is made by bank deposits and bonds (23 % and 22 % respectively), government-guaranteed bonds (49 %). It was found that the most

popular areas of investment of NPF «OTP Pension» and other domestic NPFs are bank deposits and government and municipal bonds - ie low-risk assets with a stable income. The reasons for this situation are, on the one hand, the insufficient level of development of NPFs, and on the other - the unsatisfactory state of the stock market and the lack of investment-attractive and reliable financial instruments.

5) The foreign experience of NPF asset management was evaluated.

Global experience confirms that NPFs are important institutional investors in many countries and act as a source of long-term financial resources in national financial markets. In OECD countries, pension fund assets average almost 70 % of GDP. The main direction of investing in the largest pension markets in the world is investing in securities. As of 2020, 45 % of total pension assets were invested in shares, 29 % - in bonds.

As a result of a comparative analysis of the structure of pension funds in Ukraine and OECD countries, it can be stated that the investment policy of domestic NPFs is focused on minimizing investment risk by investing in financial instruments with low risk and, consequently, profitability. At the same time, NPFs are powerful institutional investors, whose priority is to invest in shares, which in case of successful implementation, maximizes investment income of investors and economic development as a whole. This is a promising area for improving the investment activities of NPFs in Ukraine, but its implementation is inextricably linked with the further development of the stock market.

Thus, the development of private pension funds at this stage of development has a number of problems. The main ones, in our opinion, are:

- 1. Insufficient information support on the promotion of pension reform, which is manifested by public distrust in the NPF. It is necessary to introduce a state program of informing the population about all aspects of private pension provision and prospects for pension reform.
- 2. Imperfection of the regulatory framework for NPF, which needs to be worked out and improved. Legislative regulation should be improved by strengthening state supervision and control in the field of private pension provision.

- 3. Strict restrictions on the areas of investment of pension contributions. It is necessary to legislatively expand the areas of investment activities of NPFs.
- 4. Low yield on the stock market and a small number of liquid securities in circulation and high investment risk. It should be noted that the process of investing pension funds should be clear and transparent for participants in pension savings. The main priority in the activities of NPFs should not be high profitability, but the safety and growth of pension assets with minimal investment risks.
 - 5. Unstable political and economic situation in the country.

The gained practical experience of non-state pension institutions convincingly shows that in Ukraine even during the crisis NPFs work with relatively significant funds, but the lack of a civilized stock market and effective financial instruments in Ukraine makes it impossible to form effective investment portfolios of NPFs.

Currently, NPFs are new financial institutions for the vast majority of Ukraine's population. This significantly explains the distrust of citizens towards them. Therefore, the state should stimulate public confidence in the existence of a private pension system, which will significantly expand the opportunities for NPFs to increase their investment potential.

Therefore, for further development of the market of private pension provision, and also stimulation of its investment function it is necessary:expand the list of financial instruments in which NPFs can invest their assets; introduce more flexible requirements for the diversification of NPF assets; to expand the areas of investment of pension assets in the presence of favorable conditions in the stock market.

Prospects for further research in this area. NPFs are active in the capital market all over the world. By transforming the free funds of households and enterprises into investments, NPFs thus create a source of long-term investment resources, contributing to economic growth in the country. In view of the above, the issues of investment activity of NPFs need further research, in particular, in terms of analysis of all, without exception, indicators that characterize its financial results.

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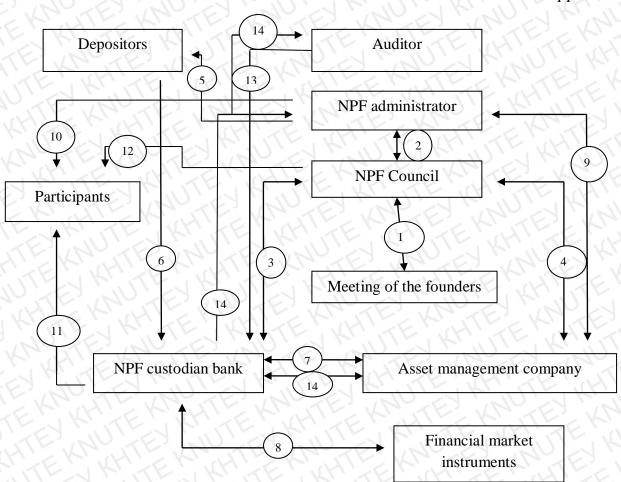
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APPENDICES

AppendixA



- 1. Formation of the board of the non-state pension fund (within three months from the date of foundation) and hearing of the report on the activity of the fund based on the results of the year.
- 2. Concluding an agreement on the administration of NPF; exercising control over the activities, hearing the reports of the administrator.3. Concluding an agreement on servicing the fund, opening an account; exercising control over the activities, hearing the reports of the custodian bank.
- 4. Concluding an agreement on the management of NPF assets; exercising control over the activities, hearing AMC reports.5. Concluding contracts with depositors on behalf of NPFs.
- 6. Cash flow 1: depositing funds into the current account of the NPF opened in the custodian bank.
- 7. The management company provides the custodian bank with information on the directions of investment; the custodian bank reports to the AMC on the results of investment activities.
- 8. Cash flow 2: investment of pension assets in financial market instruments in accordance with the AMC areas; in the opposite direction, pension assets and investment income.
- 9. The Administrator informs the AMC about the amount of projected pension contributions; AMC provides information to the administrator on asset management.
- 10. The administrator informs the participants about the status of their individual pension accounts: accumulated funds, the amount of investment income; enters into an agreement on the payment of pensions.
- 11. Cash flow 3: on the basis of the administrator's order, the pension is paid by the custodian bank at the expense of pension assets.
- 12. The Board of the Fund considers controversial issues that arise between the administrator, the custodian bank and the participants.13. Audit of the administrator, AMC and custodian bank by the auditor.
- 14. Cash flow 4: payment for the services of auditor, administrator and AMC.
- Fig. A.1.1. The mechanism of interaction of subjects of non-state pension provision on the basis of

* Compiled by the author based on the source [27,28]

AppendixB

Stages of formation of non-state pension funds in Ukraine*

Stage	Characteristic	Regulatory framework		
Transitional (1991-2002)	Operation of NPFs in a legal and regulatory vacuum, financial abuse and fraud, loss of public confidence	NPFs were initially created and operated in accordance with non-pension legislation (Civil Code of the USSR №1540-VI of 18.07.1963, Laws of Ukraine "On Enterprises" of 27.03.1991 №887-XII, «On Business Associations» of 19.09.1991 №1576-XII, Decree of the Cabinet of Ministers of Ukraine «On Trust Societies» of March 17, 1993 № 23-93). Decree of the President of Ukraine «On the main directions of pension reform in Ukraine» № 291/98 of 13.04.1998; Law of Ukraine «On Financial Services and State Regulation of Financial Services Markets» №2664-III of 12.07.2001.		
Reformation (2003 - present)	Determining the legal, economic and organizational principles of refineries in Ukraine. Formation of institutional and normative-legal bases of NPF market regulation	Law of Ukraine «On Compulsory State Pension Insurance» № 1058-IV of July 9, 2003; Law of Ukraine «On Non-State Pension Provision» № 1057-IV of July 9, 2003; Law of Ukraine «On Measures to Legislate the Reform of the Pension System» № 3668-VI of 08.07.2011. Bylaws		
Transformational	It will start from the moment of introduction of the obligatory accumulative pension system with the participation of NPF. As a result of assigning the NPF a key place in the functioning of the second level, the NPF will be transformed from the subjects of supplementary pension provision into the basic institutions of the accumulative pension provision of citizens.			

^{*}Compiled by the author based on the source [25]

AppendixC

Functions of entities serving the private pension fund*

Subject	Functions
NPF Council (is the only governing body	Concluding agreements with
of NPF in the number of at least 5 people)	theadministrator, asset management company, custodian and auditor; hearing reports on the activities of these entities; approval of information on the financial condition of the fund; control of the intended use of pension assets
Administrator of a private pension fund	Attracting depositors, concluding pension contracts, maintaining individual pension accounts, accounting for pension contributions, calculating pension benefits, making pension benefits
Asset Management Company (AMC)	Аналіз ринку фінансових інструментів, розміщення активів згідно з інвестиційною декларацією НПФ, забезпечення прибутковості вкладень пенсійного капіталу
Custodian bank	Enrollment of pension contributions, execution of orders of the administrator and AMC, accounting of securities, control of activity of AMC and administrator
Independent auditor	Audit of the pension fund, administrator, AMC, custodian bank is carried out at least once a year at the expense of the audited entity

^{*}Compiled by the author based on the source [29]

 ${\it Appendix \, D}$ Dynamics of the main indicators of non-state pension funds (as of 31.12.2020)*

	J KHIT	EKHI	TE KY	Growth	rates,%
Indexes	As of 31.12.2018	As of 31.12.2019	As of 31.12.2020	as of 31.12.2019 / as of 31.12.2018	аѕ of на 31.12.2020/ аѕ of на 31.12.2019
Number of concluded pension contracts, thousand units	68,8	77,1	87,8	12,1	13,9
The total number of NPF participants, thousand people	855,3	874,6	883,0	2,3	1,0
Total value of NPF assets, UAH million.	2 745,2	3 143,3	3 563,7	14,5	13,4
Pension contributions, total, UAH million including:	2 000,5	2 160,8	2 377,9	8,0	10,0
- from individuals	172,1	222,7	300,7	29,4	35,0
- from persons- entrepreneurs	0,2	0,2	0,3	0,0	50,0
- from legal entities	1 827,7	1 937,3	2 075,5	6,0	7,1
Pension payments, UAH million	809,9	947,4	1 107,4	17,0	16,9
Number of participants who received / receive pension benefits, thousand people	81,3	83,9	87,0	3,2	3,7
Amount of investment income, UAH million	1 767,7	2 200,0	2 635,7	24,5	19,8
Income from investing the assets of a private pension fund, UAH mln	1 440,5	1 810,9	2 179,5	25,7	20,4
Amount of expenses reimbursed from pension assets, UAH million	327,2	389,1	456,1	18,9	17,2

^{*} Compiled by the author based on [32]

Appendix E

Dynamics of the number of concluded pension contracts and the number of depositors of non-state pension funds (as of 31.12.2020)*

	KNUTE	3 KMD	EXM	Growth	n rates,%
Indexes	As of 31.12.2018	As of 31.12.2019	As of 31.12.2020	as of 31.12.2019 / as of 31.12.2018	аѕ of на 31.12.2020/ аѕ of на 31.12.2019
Number of depositors of legal entities, thousand people	1,8	2,2	2,1	22,2	-4,5
Number of individual depositors, thousand people	60,6	77,9	79,8	28,5	2,4
Total number of depositors, thousand people	62,4	80,1	81,9	28,4	2,2
Number of concluded pension contracts with legal entities, thousand units	6,8	6,8	6,7	0,0	-1,5
Number of concluded pension contracts with natural personsentrepreneurs, thousand pcs.	0,1	0,1	0,1	0,0	0,0
Number of concluded pension contracts with individuals, thousand units	61,9	70,2	81,0	13,4	15,4
Total number of concluded pension contracts, thousand units	68,8	77,1	87,8	12,1	13,9

^{*} Compiled by the author based on [32]

 $\label{eq:Appendix} \textit{Appendix F}$ Dynamics of the structure of reimbursable expenses due to pension assets*

Expenses	Units of measure-	As	s of	Devi	ation	Specific weight, (%)
	ment	31.12.2019	31.12.2020	млн. грн.	%*	weight, (%)
Remuneration for the provision of NPF asset management services	UAH million	219,1	252,6	33,5	15,3	55,4
Payment for custodian services	UAH million	22,7	27,7	5,0	22,0	6,1
Payment for services for scheduled audits of NPFs	UAH million	6,9	8,6	1,7	24,6	1,9
Payment for services related to transactions with pension assets provided by third parties	UAH million	4,8	5,5	0,7	14,6	1,2
Payment for other services provided by the current legislation on private pension provision (including NPF administration services)	UAH million	135,6	161,7	26,1	19,2	35,4
The total amount of expenses reimbursed from pension assets	UAH million.	389,1	456,1	67,0	17,2	100,0

^{*} Compiled by the author based on [32]

 ${\it AppendixG}$ Dynamics of assets of NPF «OTP Pension» for the period 2015-2019*

JIEY KI	UT	c %)	KH	c %)	Y	c (%)	TE	c %)	NU	c (%)	Deviat 2019/2	
Assets	2015	Specific weight. (%)	2016	Specific weight. (%)	2017	Specific weight. (%)	2018	Specific weight. (%)	2019	Specific weight, (%)	Absolute, thousand UAH	Relative ,%
Money and their equivalents, thousand UAH	17941,89	37,91	39737,84	44,19	48747,00	44,84	51980,00	39,19	84451,00	46,89	32471,00	62,47
Accounts receivable according to the calculations of accrued income,	254,30	0,54	2443,04	2,72	2765,00	2,54	1492,00	1,12	3913,00	2,17	2421,00	162,27
Current financial investments, thousand UAH	29133,41	61,55	47739,26	53,09	57191,00	52,61	79168,00	59,69	91746,00	50,94	12578,00	15,89
Total	47329,60	100,00	89920,14	100,00	108703,00	100,00	132640,00	100,00	180110,00	100,00	47470,00	35,79

^{*} Compiled by the author based on [40]

Calculation of return on assets and factors influencing changes in these indicators NPF«OTP Pension» for 2018-2019*

Article	2019	2010
	2018	2019
Profit (loss) from investing NPF assets, thousand UAH	11422,13	27517,67
Total assets, thousand UAH	132640,00	180110,00
Return on assets,%	8,61	15,28

^{*} Compiled by the author based on [40]

Calculation:

Return on assets = Total assets /Profit from investing NPF assets *100%

Return on assets₁= Profit from investing NPF assets₁ / Assets₁ * 100%

Return on assets₀= Profit from investing NPF assets₀ / Assets₀ * 100%

Return on assets' = Profit from investing NPF assets₁ / Assets₀ * 100%

 Δ Return on assets(due to changes in profits)= Return on assets' - Return on assets₀

 Δ Return on assets(due to changes in assets) = Return on assets₁- Return on assets'

Then,

Return on assets₁=27517,67/180110,00*100%=15,28%

Return on assets₀=11422,13/132640,00*100%=8,61%

Return on assets' =27517,67/132640,00*100%=20,75%

 Δ Return on assets(due to changes in profits)=20,75%-8,61%=12,14%

 Δ Return on assets(due to changes in assets) = 15,28%-20,75%=-5,47%

Appendix I

Assessment of compliance with the requirements of the investment declaration of NPF «OTP Pension» as of December 31, 2019*

№	Object of investment of NPF assets	Actual book value of assets, thousand UAH	in the object of in total value of per	nt of pension assets vestment from the asion assets of the d,%
	I KI TE KY TE	KHITE	max.	act.
1	Bank deposit accounts and savings certificates of banks	84129,10	50	46,71
2	Securities whose income is guaranteed by the Cabinet of Ministers of Ukraine	75958,96	50	42,17
3	Bonds of enterprises issued by residents of Ukraine	7446,24	40	4,13
4	Shares of Ukrainian issuers	8340,71	40	4,63
5	Receivables	3913,00	OTEY KNUT	EYKHUTE
6	Current accounts in banks, thousand UAH	331,44	5	0,18
17	Total (total cost)	180119,45	EVNOTE	100

^{*} Compiled by the author based on [40]

Number of NPF participants as of 31.12.2020 The average amount of net asset value of NPFs per 1 participant*

No॒	NPF	Number of participants (persons)	Net asset value, UAH	Amount of assets per participant , UAH	
1	Trunk	326 449	53 188 533,15	162,93	
2	Europe	133 664	34 824 222,85	260,54	
3	Emerit-Ukraine	70 011	206 036789,88	2 942,92	
4	OTP Pension	56 726	245 255338,58	4 323,51	
5	ALL	55 061	78 926 199,45	1433,43	
6	PrivatFund	50 490	234 018448,79	4634,95	
7	Dynasty	40 588	96 122 636,59	2 368,25	
8	Power engineers of Ukraine	36 073	93 843 831,63	2 601,50	
9	European choice	18 455	9 921 063,09	537,58	
10	Social perspective	14 586	35 217 664,06	2 414,48	
11	NBU	12 694	1 602 022 701,79	126203,14	
12	Golden autumn	10 132	51 972 582,31	5 129,55	
13	Ukreximbank	5 785	320 149 109,05	55 341,25	
14	Art	5 156	27 359 424,21	5 306,33	
15	Involvement	4 660	30 008 117,10	6 439,51	
16	Ukraine	4 495	58 810 576,50	13 083,55	
17	Social standard	4 301	48 400 777,88	11 253,38	
18	Nick	3 351	12 573 012,07	3 752,02	
19	Prykarpattia	2 952	3 252 694,26	1 101,86	
20	Capital reserve	2 510	6 057 730,61	2 413,44	
21	Reliable prospect	2 195	6 536 205,73	2 977,77	
22	Ukrainian pension capital	1 784	17 018 798,78	9 539,69	
23	FreeFlight	1 655	11 288 740,33	6 820,99	
24	National	1 535	1 062 040,54	691,88	
25	Cover	1 373	5 128 102,03	3 734,96	
26	Dniester	1 368	2 646 168,37	1 934,33	
27	Reserve of Rivne region	1 363	6 773 159,11	4 969,30	
28	Pharmaceutical	1 363	165 094 235,51	121125,63	
29	Guarantor pension	1 349	1 325 975,33	982,93	
30	Social guarantees	1 190	10 171 644,27	8 547,60	
31	Mutual assistance	1 039	3 766 074,94	3 624,71	
32	Bread	1 010	37 334,41	36,96	
33	Mining and metallurgical PPF	925	904 758,77	978,12	
34	Laurus	871	17 310 594,31	19 874,39	
35	CCI of Ukraine	745	3 253 319,63	4 366,87	

End of Appendix J

No	NPF	Number of participants (persons)	Net asset value, UAH	Amount of assets per participant , UAH
36	Pension capital	648	2 435 472,86	3 758,45
37	Trust-Ukraine	517	477 162,60	922,95
38	Social support	509	833 695,77	1 637,91
39	Ukrainian Pension Union	463	2 584 367,91	5 581,79
40	Ukrainian Pension Fund	427	35 779 915,09	83 793,71
41	The first trade union	335	638 735,22	1 906,67
42	Golden age	168	177 730,63	1 057,92
43	Pension Savings Fund	142	816 266,75	5 748,36
44	Hope	125	2 818 076,25	22 544,61
45	Miner	102	3 222 076,20	31 588,98
46	Ukrainian pension contract	44	426 447,60	9 691,99
47	Constant	39	312 744,35	8 019,09
48	Source	37	208 280,34	5 629,20
49	All-Ukrainian Pension Fund	32	70 506,89	2 203,34
50	Ukrainian Pension Foundation	23	330 444,55	14 367,15
51	Care	20	430 726,01	21 536,30
52	Initiative	13	159 961,01	12 304,69
53	Flint	9	204497,09	22721,9
54	Styrene	N. H. L	934,86	934,86
55	Decent life	0	0	0
56	IFD Capital	- KRUTE	YNTE V	Note
57	Concord	KIL	E KHITE	KHIT
58	Pension guardianship	The KND	1 948 539,48	'MD.
59	The first accumulative	0	0	0
60	Reserve	0	70,57	0
61	Maritime transport workers		0.	0
62	Ukrainian Union of Industrialists and Entrepreneurs	KNUTE	KHUTE KH	STEY
63	Ukrainian savings treasury	1 6,11	49 166,86	MITE-

^{*} Compiled by the author based on [33]

Appendix K

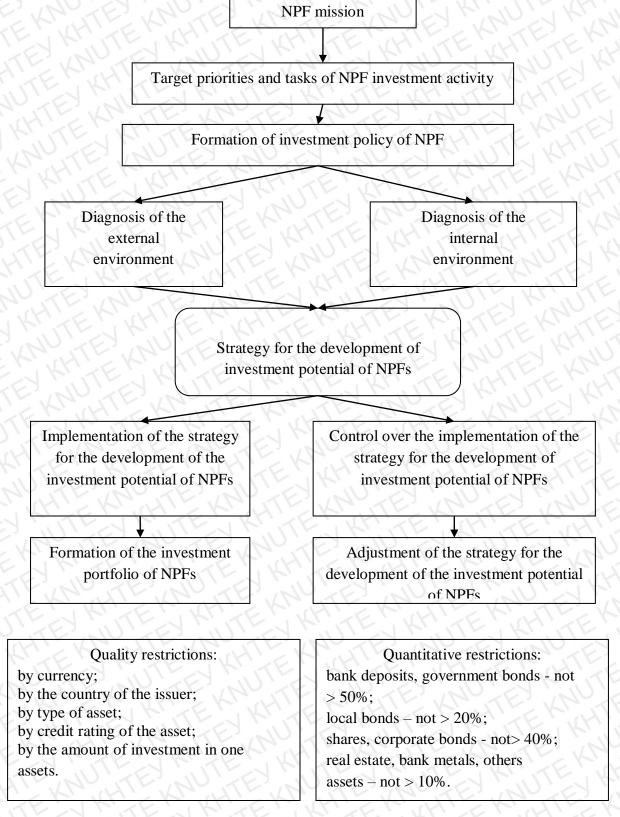


Fig. K.3.1. Structural and logical scheme of formation and implementation of the strategy of development of investment potential of NPF*

^{*} Compiled by the author based on [56]

Appendix L

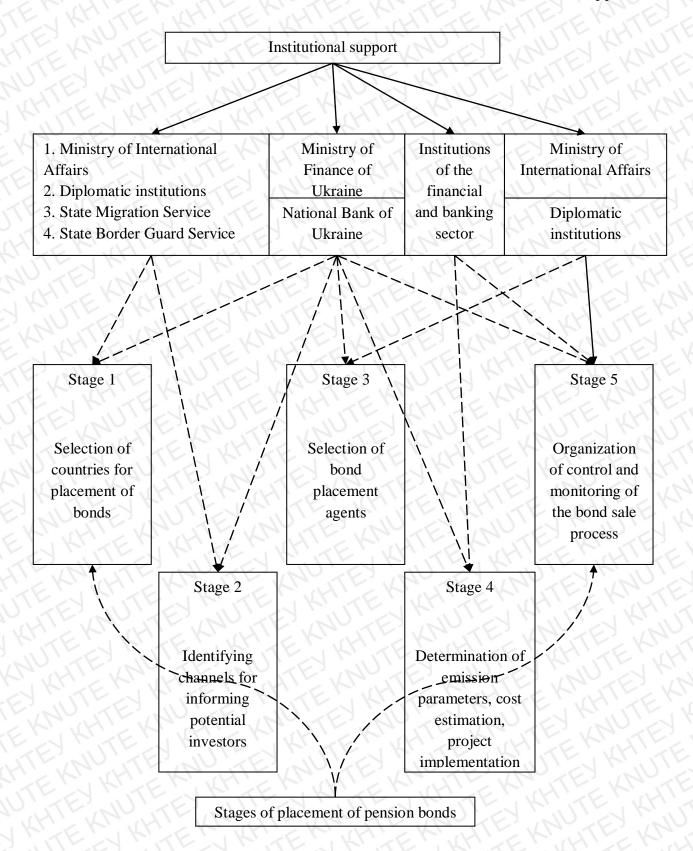


Fig. I.3.1. The process of placing special pension bonds for migrant workers*

* Compiled by the author based on [57]

Appendix M

Financial statements of NPF «OTP Pension» as of December 31, 2019*

thousand UAH

WIENKUTEN KUTE KY	TE	At the	At the end of	
Assets	Line code	beginning of the reporting period	the reporting period	
KRUTE KRITE, KRITE	2	3	4.10	
I. Non-current assets	17	EKIT	- KIN	
Intangible assets	1000	0	0	
initial value	1001	~ C 0	0	
accumulated depreciation	1002	0	0	
Incomplete capital investments	1005	0	~ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
Fixed assets	1010	0	0	
initial value	1011	0	0	
accumulated depreciation	1012	0	0	
Investment Property	1015	0	0	
Long-term biological assets	1020	0.10	0	
Long-term financial investments:	KILL	E KINT	C' KN	
which are accounted for using the equity method	1030	JEY KM	JTE KH	
of other enterprises other financial investments	1025	0	0	
	1035	0	0	
Long-term receivables	1040	0	0	
Deferred tax assets	1045	0	0	
Other non-current assets	1090	0	0	
Total for section I	1095	0	0	
II. Current assets Stocks	1100			
	1100	0	0	
Current biological assets	1110	0	0	
Accounts receivable for products, goods, works, services	1125	0	0 4	
Accounts receivable by calculations: on issued advances	1130	0	0	
with a budget	1135	0	0	
including income tax	1136	0	0	
Accounts receivable according to the calculations of accrued income	1140	1492	3913	
Other current receivables	1155	0	0	
Current financial investments	1160	79168	91746	
Money and their equivalents	1165	51980	84451	
Deferred expenses	1170	0	0	
Other current assets	1190	0	0	
Total for section II	1195	132640	180110	
III. Non-current assets held for sale and disposal groups	1200	0	0	
Balance	1300	132640	1800110	

End of Appendix M

thousand UAH

Liabilities	Line code	At the beginning of the reporting period	At the end of the reporting period
MINISTER HOLLING	2	3	4
I. Equity	JOHEN	VOLE	0
Registered (share) capital	1400		U
Capital in revaluations	1405	0	0
Additional capital	1410	0	0
Reserve capital	1415	0	0
Retained earnings (uncovered loss)	1420	0	0
Unpaid capital	1425	0	0
Withdrawn capital	1430	0 1	0
Total for section I	1495	0	0
II. Long-term liabilities and collateral Deferred tax liabilities	1500	0	0
long-term bank credits	1510	0	0
Other long-term liabilities	1515	0	0
Long-term security	1520	0	0
Targeted financing	1525	0	- CO.
Total for section II	1595	0	0
III. Current liabilities and collateral		0	0
Short-term bank loans	1600		
Current accounts payable for:	175	101	24
long-term liabilities	1610		
goods, works, services	1615	516	757
calculations with the budget	1620	0	0
including income tax	1621	0	0
insurance calculations	1625	0	6 0 1
payroll calculations	1630	1 CO K	0
Current supplies	1660	0	0
Deferred income	1665	0	0
Other current commitments	1690	0	0
Total for section III	1695	617	781
IV. Liabilities related to non-current assets, held for sale, and disposal groups	1700	1 0	0
V. Net asset value of a private pension fund	1800	132923	179329
Balance	1900	132640	180110

^{*}Copied from the source [40]

