Kyiv National University of Trade and Economics
Banking department

FINAL QUALIFYING PAPER
on the topic:

PROTECTION OF THE RIGHT OF CONSUMERS OF NON-STATE PENSION FUNDS SERVICES

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CONTENT

INTRODUCTION

Recently, the protection of consumers of financial services has become one of the main tasks for governments in different countries. The Financial Crisis of 2008 revealed the unprecedented fragility of financial services consumers, particularly those with low income and low financial education. Rapid changes and technological innovation taking place in financial markets have created more choices and opportunities to access financial products and services.

The non-state pension system is needed to prevent poverty, stabilize consumption and protect against risks during work and old age.

Actuality of theme. The development and expansion of a range of non-banking financial services create the conditions for active involvement in the markets of such consumer services, which usually do not have sufficient information and the necessary knowledge about the features and consumer characteristics of financial services.

Since its inception, the non-state pension system has not achieved much success. There are several issues affecting pension provision in Ukraine: the aging population, a large proportion of the shadow economy, mass migration of workers abroad, and financial constraints that exacerbate the pressure on the solidarity compulsory state pension insurance. The private pension system has 855 300 participants, which is only 5% of the Ukrainian labor market by the 2018.

The pension reform passed in October 2017 determines that the government spends ten-fifteen years developing a fair, balanced, financially viable pension system.

The main source of income for most retirees in Ukraine is the solidarity system, but its payments are not enough to provide a decent standard of living for retirement. In 2019, the average pension was 2 646 UAH or 95$ and cost of living was 1 853 UAH.

The researces of non-state pension funds were held by foreigh authors such as P. Antolin [11], who studied privately managed pension funds in the 23 countries. D. Amaglobeli [50] and H. Chai [50] worked on defining the role of NPF's, investigated how impending demographic shifts and the design of pension systems could influence future national saving. R. Clark and A. Monk [15] studied the problems of NPF. J. W. Wilson [9] and others.

Purpose of the study. To study the experience of NPFs in developed countries, to analyze the situation in Ukraine, and to put forward proposals for improving the protection of consumers of non-state pension funds services.

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

- Make a review of the literature and substantiate the need and substance of the protection of consumers of non-state pension funds services;
- Conduct an analysis of main indicators of work of NPFs;
- Develop recommendations on improving the protection of Non-state pension funds of Ukraine.

Object of the study. Non-State Pension Funds in the world and in Ukraine.

The subject of the study. Protection of consumers rights of NPF in Ukraine.

Research methods. The methods of scientific research (comprehensive, reliable study of the object, structure and connections) are applied in the work. In this work were also used metods such as analysis and synthesis, induction and deduction, observation and comparison.

The novelty the results obtained are as follows:

improved: methodological provisions for improving protection of consumers in non-state pension funds.

Scientific base include laws of Ukraine, reports from Ukrainian (National Securities and Stock Market Commission, National Commission for the State Regulation of Financial Services Markets, UAIB) and foreign authority (OECD, IMF), monographic research and scientific publications on the problem under study.

The practical significance of the results obtained. The theoretical findings and conclusions of this study are of practical importance in the process of improving the mechanism of financial support for the system of social protection of the population.

Master's personal contribution. The master's study substantiates a set of provisions characterized by scientific novelty and testifies to the author's personal contribution to the development of economic science, which is to deepen theoretical provisions and substantiate methodological approaches to the development of pension insurance in Ukraine as an effective component of pension provision for the public

Structure of work. Work consist 48 pages, 3 parts, introduction, conclusion. And include 10 pictures, 11 tables, 64 references, 5 appendixes.

PART 1
DEFINITION, ESSENCE, AND ROLE OF PROTECTION OF CONSUMERS RIGHTS IN NON-STATE PENSION FUNDS SERVICES

The complexity of private pensions and the ensuing risks, affecting the achievement of individuals' retirement goals, place responsibility on the government and pension industry to protect the savers and beneficiaries. This justifies increased attention to consumer protection and the role that governmental authorities, particularly pension supervisors, are playing in this respect.

Saving patterns typically change with age: the young borrow, prime working age individuals save, and the old dissave after retirement. Aging is thus likely to depress private saving as the percentage of elderly people in the population rises, and longer lifespans mean that people might need to save more for retirement throughout their working lives. The impact of demographic changes on private saving decisions will depend, among other factors, on the design of government pensions and social safety nets. Variation in the availability, structure, and coverage of pension systems around the world could influence individuals' saving decisions. For instance, lack of development and coverage of pension systems could cause households to save too little for retirement, particularly if financial markets do not offer appropriate saving instruments. However, insufficient coverage could also encourage excessive precautionary saving. On the other hand, overly generous pension regimes featuring early retirement provisions could create disincentives to work and affect saving behavior [50].

Private Pension Funds are a force to be reckoned with when governments seek to manage interest rates currency exchange rates. And they are an increasingly powerful voice in corporate governance and domestic public policy. Just thirty years ago pension assets were relatively modest compared to individuals' savings deposits, and just twenty years ago large pension funds tended to be sleepy institutions commonly equated with insurance companies rather than the global finance companies many have come to emulate.

The rise and significance of pension funds has been described in various ways. Drucker (1979) thought that their growth presaged an era of "pension fund socialism": because pension plans own large tranches of corporate equities workers now own the means of production by virtue of their status as the beneficiaries of pension plans. This is an intriguing idea, one that re-appears every so often in debates about the proper scope pension fund investments [23].

It is difficult to ascertain precisely when pension plans first came into being. Military pensions were certainly available at the time of the Roman Empire, and guilds dating back to at least the 14th century are recorded as having provided pensions for their members.

More than two thousand years ago, the fall of the Roman republic and the rise of the empire were inextricably linked to the payment, or rather the nonpayment, of military pensions. During the American Revolution army pensions became such a sensitive issue that only the personal intervention of George Washington prevented a mutiny of Continental troops over their promised pension payments. The American colonies provided pensions to disabled men who were injured defending the colonists and their property from native uprisings. Following the rise of military pensions, retirement plans were extended to state and local employees much later in the 19th century, and many public workers were not offered pensions until after World War I.

After 1850, several large cities began providing disability and retirement benefits to employees in their police and fire departments. America's first formal, nonmilitary, employer-provided pension plan was created by the American Express Corporation in 1875. By the turn of the century, only a handful of private companies had adopted retirement pension plans—primarily railroads, public utilities, and financial institutions [9, p. 12]. Civil service schemes were formalized in Britain, for example, in the Superannuation Act of 1834.

In post-war Europe in particular, most of the infrastructure was owned and controlled by state institutions. Since the 1980s, the trend has reversed as many pieces of infrastructure have been privatised in the face of stretched public finances.

Institutions offering funded and private pensions represent a special segment of the financial market. Private pensions, combining social features due to their increasing role in retirement provision and by nature being long-term financial contracts which involve a series of complex transactions, are not easy to understand and engage with. Individuals joining a pension scheme or concluding a contract with a pension provider are becoming consumers of private pension services and products. Governments have a challenging role to help ensure that individuals will receive an adequate stream of income in retirement. The current environment of prolonged low interest rates makesthis task even more challenging.

Table 1.1

Difference way to define "Non-State Pension Funds" *

Sourse	Definition
Law of Ukraine on Non-State Pension Insurance	Non-State Pension Funds are non-profit organizations that carry out exclusive activities on non-state pension provision to accumulate pension contributions for the benefit of their participants with the further management of pension assets and the implementation of pension payments.
Vitka Y. V.	Non-State Pension Funds – the aggregate of assets, which are participants' cash raised as contributions to retirement accounts and which are invested to increase the value of assets for paying pensions to participants; secondly – a legal entity that collects and invests funds intended to pay pensions to pension fund members who have reached retirement age.
Mykhailov A. V.	Is a legal entity having the status of a social security organization that is created and operates solely for the purpose of accumulating pension contributions of fund members, as well as making payments to fund participants in the event of they have pension grounds, on the terms and in the amounts specified in the pension contracts.

Cont. of Table 1.1

Dmitrenko G.	The Non-State Pension System is a mechanism designed to provide citizens with an adequate level of pension. This system makes it possible to differentiate pensions depending on the level of income of citizens and their participation in non-state pension provision.

* Developed by author by source [2, 3, 6, 28]

Two types of post-retirement pension plans existed [31, p. 83-84]. Defined contribution (DC) plans had a set amount paid into a fund on a regular basis by employers, and often employees, and no promise was given with respect to an end amount the employee would have for retirement. Ideally, a trustee administers the plan and contributions were invested according to the contributors' risk tolerance. This type of plan did not have an undue burden on the company and the payments formed part of the remuneration package.

Defined-benefit (DB) plan, specified the amount an employee would be paid from the day they retired until death. Funds were paid to a trustee in accordance with actuarial projections based on factors such as mortality rates, employee turnover, average salary, etc. These plans were very expensive because the payout formula was typically based on years of service. The longer an employee stayed with the organization the higher the pension when they retired.

Clark and Monk [15] found defined-benefit pension plans in the U.S. and the U.K. were either curtailed or significantly changed in the last 30 years. As recently as 2005, they found the existence of private sector defined-benefit pension plans restricted to a small percentage of unionized employees in certain industries.

Professional asset management activity in the part of pension assets – professional activity related to the management of pension assets of the Cumulative Fund in order to preserve their value and obtain investment income for the benefit of insured persons.

The need for the introduction of private pension system has been proofed by most countries today, many have begun to see the introduction of the non-state pension system as a necessary component of public pension policy. In recent years, the protection of users of financial services has become one of the pressing issues governmental authorities around the world need to address. The Financial Crisis of 2008 revealed the unprecedented fragility of financial services consumers, particularly those with low income and low financial education [4, p.6].

The pension system in Ukraine consists of three levels (Table 1.2).

Table 1.2

Levels of pension system in Ukraine*

Level	Characteristic
1st level	Is a solidarity system of compulsory state pension insurance, based on the principles of solidarity and subsidization and payment of pensions and provision of social services at the expense of the Pension Fund under the conditions and in the manner provided by this Law.
2nd level	Is the cumulative system of obligatory state pension insurance, which is based on the principles of accumulation of funds of insured persons in the Cumulative Fund or in the corresponding NPF - subjects of the 2nd level of pension provision system and implementation for payment of life insurance contracts and lump sum payments under the conditions and in the manner provided by law.
3rd level	Is the cumulative system of obligatory state pension insurance, which is based on the principles of accumulation of funds of insured persons in the Cumulative Fund or in the corresponding non-state pension funds - subjects of the second level of pension provision system and implementation for payment of life insurance contracts and lump sum payments under the conditions and in the manner provided by law.

* Developed by author by source [27]

The system of non-state pension insurance is an integral part of the system of cumulative pension insurance, which is based on the principles of voluntary participation of individuals and legal entities in the formation of pension savings in order to obtain supplementary to the obligatory state pension insurance of pension contributions by participants of non-state pension insurance.

Private pensions are playing an increasing role in securing retirement income and may involve the use of complex and risky financial instruments. Any major failures in the accumulation and decumulation stages can lead to a reduced or insufficient income and a deterioration of quality of life at retirement. This represents a major policy concern and translates into assigning pension supervisory authorities with more responsibilities and powers in the area of pension consumer protection.

Ukrainian Law divide NPF in 3 groups (Figure 1.1)

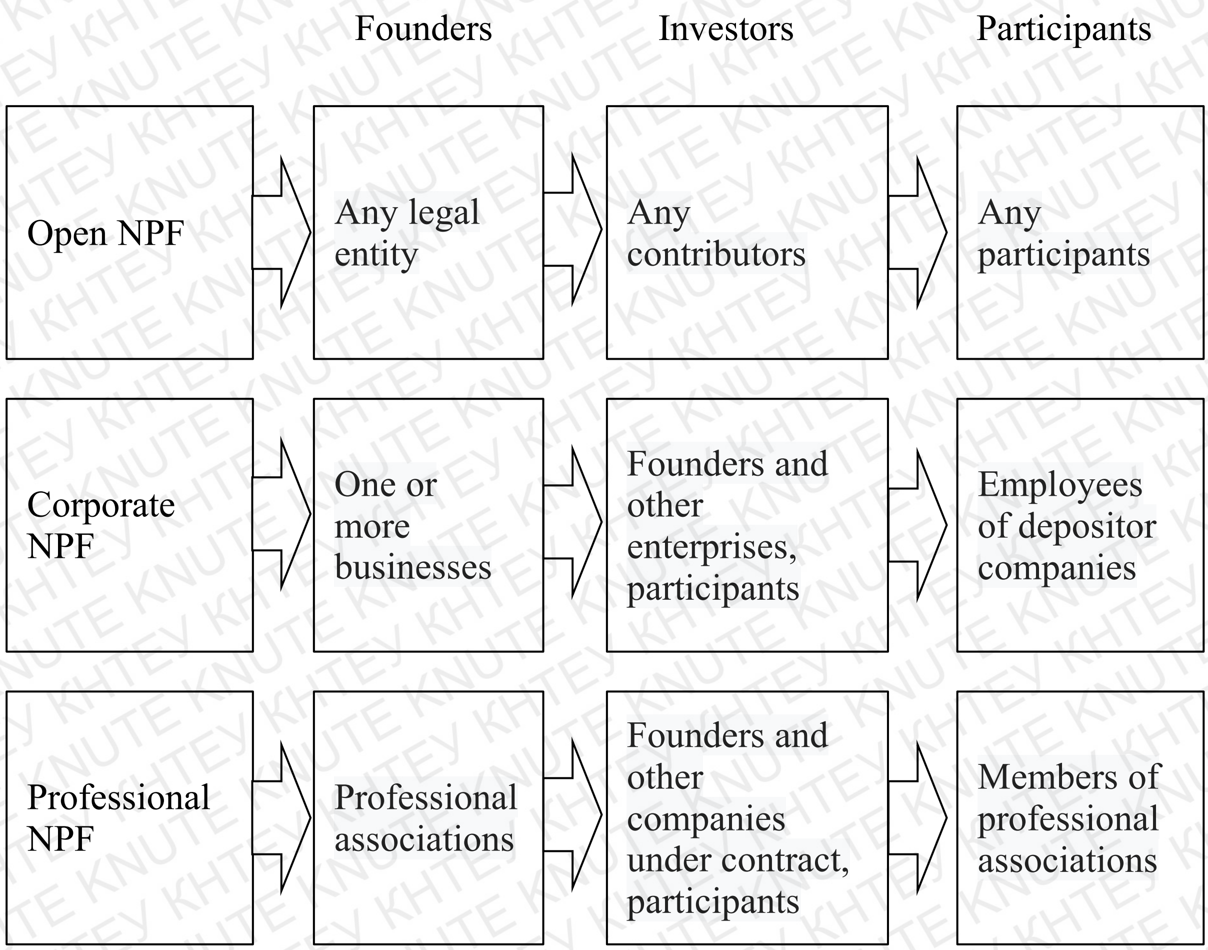


Figure 1.1 Characteristics of types of non-state pension funds [28]

Consumer protection for financial services is systemic activities to which the supervision of compliance by financial institutions with the provisions of consumer protection legislation, monitoring of compliance with the voluntary codes of conduct of financial market participants, consumer awareness of the consumer properties of financial services, dispute resolution between providers and consumers.

The development and expansion of a range of non-banking financial services create the conditions for active involvement in the markets of such consumer services, which usually do not have sufficient information and the necessary knowledge about the features and consumer characteristics of financial services. When choosing a service, they may not always be able to assess the level of risk and the potential consequences of acquiring additional financial obligations and compare the terms and conditions of service offered by non-bank financial institutions. Experience from other countries shows that the rapid development of financial services market offerings in an imperfect legal framework and consequently insufficient protection of consumer rights can lead to distrust of such markets and, as a consequence, diminish demand for their services.

Documents which control protection of consumers rights in NPF in Ukraine:

- Law of Ukraine of May 12, 1991 “On Consumer Protection”.
- Law of Ukraine “On Consumer Lending” of 15.11.2016.
- Order of the Cabinet of Ministers of Ukraine of 29.03.2017 “On approval of the Concept of state policy in the field of consumer rights protection for the period up to 2020”.
- Order of the Cabinet of Ministers of Ukraine dated 27.12.2017 “On approving a plan of measures to implement the Concept of state policy in the field of consumer rights protection for the period up to 2020”.

The system of private pensions is based and operates on principles other than the state pension system, which gives it a number of significant advantages [28]:

- Participation in the private pension system is voluntary.
- Non-state pension does not deprive from the right of a state pension and does not depend on seniority and salary.

- Paid pension accumulations and received investment income are registered on individual pension accounts of the participants, which ensures their right to receive accumulated amounts in full size.
- A participant has the right to choose the size of pension contributions and benefits. The amount of non-state pension is not limited by legislation.
- A participant has the right to set retirement age.
- In order to increase investment income and the size of pension payments pension funds are invested in profitable financial instruments.
- Pension contributions are not imposed to the tax on personal income, the amount of paid pension contributions may be included to the tax credit.
- NPF participant has the right to transfer pension savings to another NPF, insurance company or bank retirement savings account.
- NPF participant maysuspend making pension contributions or terminate the pension contract, herewith already accumulated pension funds will remain his property and will be paid in case of reaching the retirement age.

The OECD Core Principles of Private Pension Regulation can help countries to strengthen private pension systems and improve their complementary role in ensuring that retirement income is adequate.

Table 1.3

Core Principles of Non-state pension funds regulations*

Principle	Definition
Conditions for effective regulation	Private pension systems should have clear and well-defined objectives regarding coverage, adequacy, security, efficiency and sustainability.
Establishment of pension plans, funds, and entities	Pension plans, funds, and entities should be subject to an adequate, transparent and coherent set of legal, accounting, technical, financial, managerial and governance requirements, without imposing an excessive administrative burden.

Cont. of Table 1.3

Governance	The governance structure of pension funds and pension entities should ensure an appropriate division of operational and oversight responsibilities, and the accountability and suitability of those with such responsibilities.
Investment and risk management	Investments should be aligned with the specific attributes and liabilities of the pension plan and the institutional and market environment in which it operates.
Plan design, pension benefits, disclosure, and redress	Proper design of private pension plans should be promoted, especially when these schemes play a public role, through substitution of or substantial complementarity to public schemes, when they are mandatory, and when members face choices between plans or within the pension plan
Supervision	Private pension supervision should promote the stability, security and good governance of pension funds, pension entities and/or pension plans with the aim of protecting the interests of plan members and beneficiaries.
Occupational pension plan liabilities and insurance	The adequacy of funding should be protected through funding rules, winding-up provisions, insurance or other types of accepted guarantees.
Access, vesting, and portability of occupational pension plans	Non-discriminatory access should be granted to occupational pension plans. Regulation should aim to prevent exclusions based on age, salary, gender and civil status. Agreement between labour and management might be considered in regard to period of service, terms of employment and part-time employment.

* Developed by author by source [39]

The successful establishment of private pension systems requires clear objectives regarding their role in the provision of retirement income. These objectives should reflect developments in the broader environment, such as economic, financial, market and demographic developments and the functioning of the financial sector, as well as factors specific to pensions, such as the role of public pension plans in retirement income provision, tax treatment and labour market regulations. In this way, a complete view of the pension system is achieved, putting private pensions in a clear context [39].

The life insurance company is obliged to offer the member of the accumulative pension insurance system the following types of lifelong pensions: a fixed-term life pension, a life-long stipulated pension, and a spouse's lifelong pension [28].

The supreme governing body of the Pension Fund is the Board. The Board of the Pension Fund is formed on the basis of parity of representatives of the state, insured persons and employers. The Board of the Pension Fund shall consist of five representatives from the State, insured persons and employers.

Management of pension assets is carried out by asset management companies (AMC) designated by the Board of the Cumulative Fund by the results of the competition, with which the Pension Fund has concluded contracts. Asset management companies are elected for a period of five years with the possibility of extending the contract to two years.

A system for protecting the rights of consumers of financial services place of the following elements [1]:

- the legislatively mandated powers of state bodies to enforce the regulation of protection of the rights of consumers of financial services;
- compliance of the legislation of Ukraine in the sphere of protection of the rights of consumers of financial services with the European legislation;
- disclosure of information to financial institutions; free choice of the consumer at the conclusion of the agreement on financial services;
- an effective mechanism for pre-trial resolution of financial services conflicts; compensation mechanisms in the financial services market;
- awareness and knowledge of consumers of financial services;

- standards of protection of personal data of consumers of financial services;
- independent subdivisions of protection of the rights of consumers of financial services in state regulatory institutions.

The main arguments for consumer protection regulations arise from market failures (both traditional and behavioural). Another important argument for the use of consumer protection regulation relates to distributional considerations – it is argued that unregulated markets may lead to a situation where even well-informed consumers will suffer detriment.

The banking system crisis in Ukraine in 2014 proved that Ukrainians need basic financial literacy. Consumer protection in pension systems is also critical. Institutions offering funded and private pensions represent a special segment of the financial market.

As the proportion of retirement income provided by private pensions becomes increasingly important, the quality and effectiveness of their supervision becomes more and more crucial.

Rapid changes and technological innovation taking place in financial markets have created more choices and opportunities to access financial products and services. But they also favoured the development of very complex products, carrying significant risks, which are difficult to assess and understand for retail consumers.

PART 2
PRACTICE OF PROTECTION OF THE RIGHTS OF CONSUMERS OF NPF SERVICES IN THE WORLD AND IN UKRAINE

2.1. Comparison of protection of consumers rights of NPF in the world

The pension funds are integral part of the state social policy in each country, which largely characterizes the state's implementation of its social purpose and largely determines the level of stability in society. Pension systems of all countries of the world are in a state of constant reformation due to the need to solve problems arising as a result of a number of contradictions in the theory and practice of social protection of the population, imbalance of development of major institutions and resource sectors of society, and changes in the socio-demographic structure of the population.

Countries now also include automatic links between pension benefits and demographics, including changes in life expectancy or in the size of the workforce. This goes beyond built-in adjustments in defined contribution – funded or not – schemes and extends to some defined benefit or point schemes [40].

During the last 10 years, the fastest growing pension markets have been Hong Kong (7.8%), Australia (6.9%) and Chile (6.8%) when measured in USD terms [21].

France and Spain have had the slowest rates of growth in USD terms since 2006 (-0.8% and -0.1% respectively).

Many countries are increasing their retirement age. This can both enhance financial sustainability and – if translated into higher effective retirement ages – pension adequacy. Raising the retirement age tends to improve financial balances by boosting contributions and lowering total pension expenditure due to the shorter retirement period implied by the measure.

The highest effective retirement age in Korea (Appendix A): for men - 72 years, for women - 72,2 years (life expectancy 79,8 and 85,8 years, in Mexico: for men - 71,6, for women - 67,5 (life expectancy 72,2 and 77,9 years), in Chile: for men - 71,3, for women - 67,7 (life expectancy 77,7 and 82,4 years).

The highest normal retirement age in Iceland: for men - 67, for women – 67 (life expectancy 81,4 and 84,4 years), in Israel: for men - 67, for women - 62 (life expectancy 81,2 and 84,4), in Italy: for men - 66,6, for women - 65,6 (life expectancy 81,2 and 85,8). In OECD countries effective retirement age for men 65,1, for women - 63,6; normal retirement age - 64,3 and 63,4 respectively. The normal retirement age is the age at which an individual is eligible for full retirement benefits from all mandatory components, without reduction, assuming full career and labour market entry at age 20.

The replacement rate is one measure of retirement income adequacy. The replacement rate is equal to the ratio of the pension entitlement to lifetime average earnings. Assuming that individual earnings grow in line with average earnings, lifetime average earnings are equal to the last earnings for full- career workers. Gross replacement rates for mandatory pensions range from 22% in the United Kingdom to 97% in the Netherlands. In countries with significant coverage from voluntary private pensions – Belgium, Canada, Germany, Ireland, Japan, New Zealand, the United Kingdom, the United States and South Africa – being covered by a voluntary pension boosts future replacement rates by 26% on average for average earners. South Africa has a very low gross replacement rate (16% for average earners) from the mandatory component. By contrast, projected gross replacement rates are 72%, 76% and 87% in Argentina, China and India, respectively. However, including the voluntary pension boosts the replacement rate for South Africa (49% across earnings levels for a full career).

The highest Net pension replacement rates (Figure 2.1) in Croatia (129%), Turkey (102.1%), Netherlands (100.6%), Italy (93.2%) and Argentina (91.8%). The lowes in South Africa (17%), United Kingdom (29%), Mexico (30%) and Poland (38.6%).

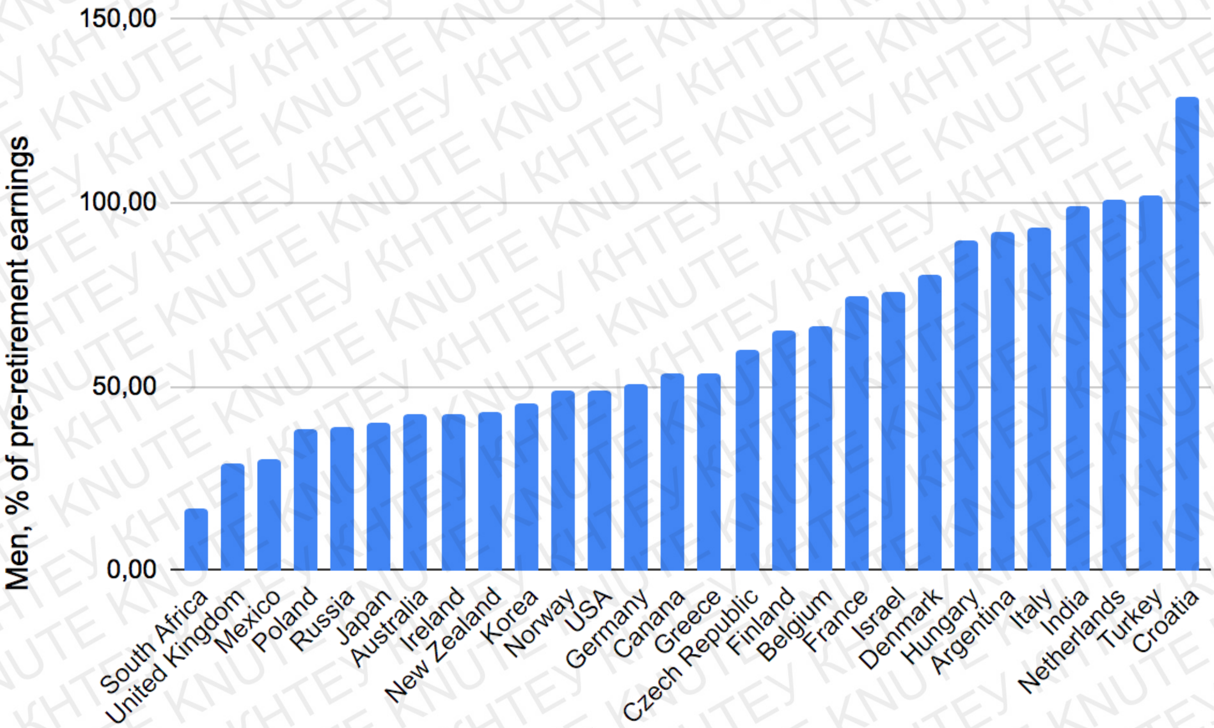


Figure 2.1 Net pension replacement rates in 2016 [62]

Pension wealth is affected by indexation rules at a given initial replacement rate level. Germany, Ireland, Luxembourg and the United Kingdom, for example, link their, basic, defined benefit or point systems to average earnings. Since earnings tend to grow faster than prices pension wealth is higher with wage than price indexation, for a given level of replacement rate.

Net pension wealth at individual earnings equal to average worker earnings is highest in Luxembourg at 22.4 times annual individual net earnings for men and 24.5 times for women. The lowest pension wealth is found in Mexico at 5.3 times for both men and women, due to low replacement rates.

Higher individual replacement rates and the increased tax allowance for many pensioners mean that net pension wealth relative to individual net earnings tends to be higher for low earners than for average earners as well, at least as the estimations here abstract from differences in life expectancy across income levels.

When investment returns are relatively low, a pension plan may perceive that it is not getting enough income from its portfolio. By taking on riskier assets, plan managers are attempting to make up for the lost income. As a result, the plans financial projections are boosted by saying it expects higher future investment returns.

The lowest investment rates of return (Figure 2.2) were observed in Hong Kong (China) (-11.6%), Poland (-11.6%) and Turkey (-11.3%). Ukraine has positive replacement rate – 4.1%.

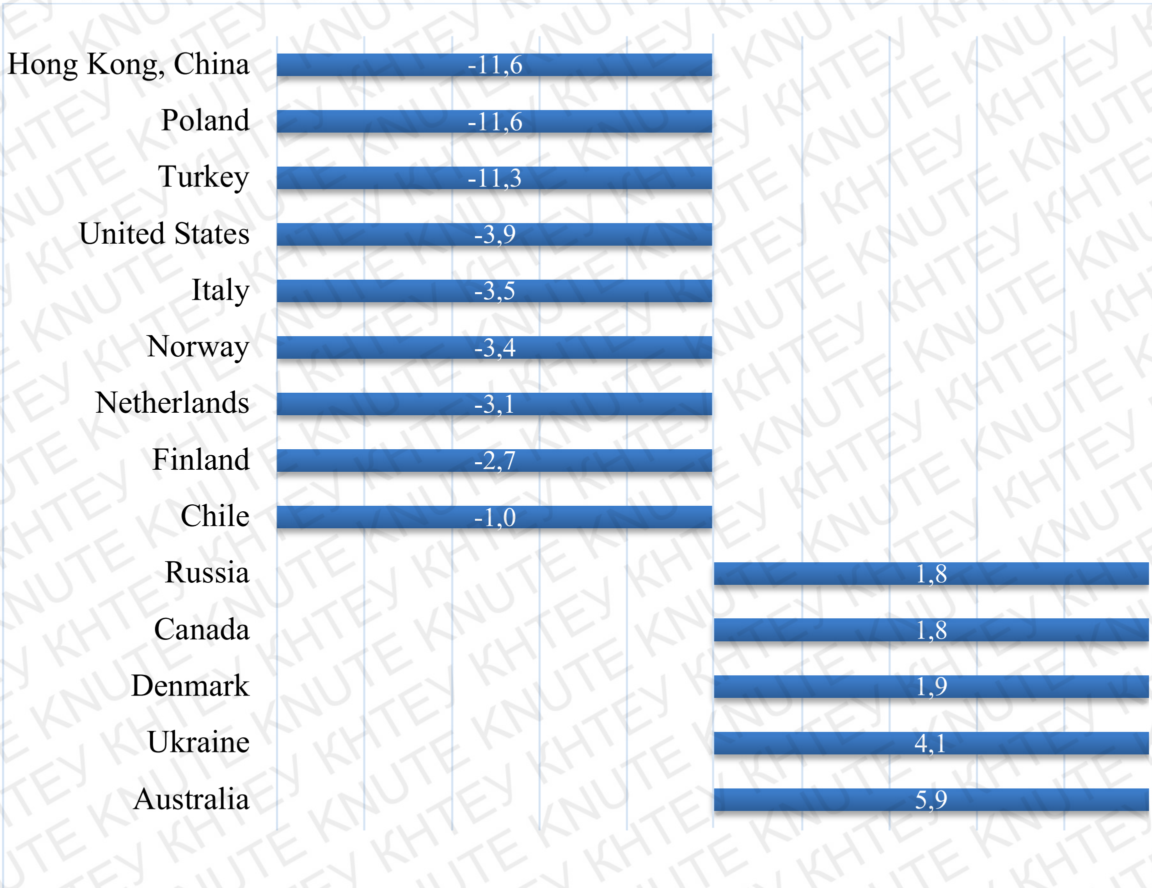


Figure 2.2. Real investment rates of return of pension funds, 2017-2018 [17]

There is a large variety of pension arrangements across countries (Appendix B). For example, pension provision through privately managed pension plans could be mandatory or voluntary, pension plans could be linked an employment relationship, making them occupational pension plans, or be personal plans. In Australia, Hong Kong, Netherlands and Sweden occupational mandatory NPFs exist, in Argentina, Chile, Colombia, Estonia, Mexico, Poland – personal mandatory NPFs. Voluntary NPFs are popular in Brazil, Canada, Hungary, UK, USA.

Moreover, pension provision could be organised through defined contribution or defined benefit arrangements. One of the oldest NPF was in UK (1834), DB plans in priviladge (79%). DB pland also popular in Japan (99%), Sweden (90%), Canada (84%) and USA (71%) [11].

The seven countries with assets in excess of USD 1 trillion, held more than 90% of pension assets in the OECD area in 2017 (Figure 2.3). The largest amount of pension assets among OECD countries was held in the United States in 2017 (64.9% of the total assets in the OECD area, with USD 28.2 trillion of assets), followed by the United Kingdom (6.7%, USD 2.9 trillion), Canada (6.1%, USD 2.6 trillion), Australia (4.1%, USD 1.8 trillion), the Netherlands (3.7%, USD 1.6 trillion), Japan (3.2%, USD 1.4 trillion) and Switzerland (2.3%, USD 1.0 trillion). The other 29 OECD jurisdictions shared the remaining 9.0% of assets (or USD 3.9 trillion).

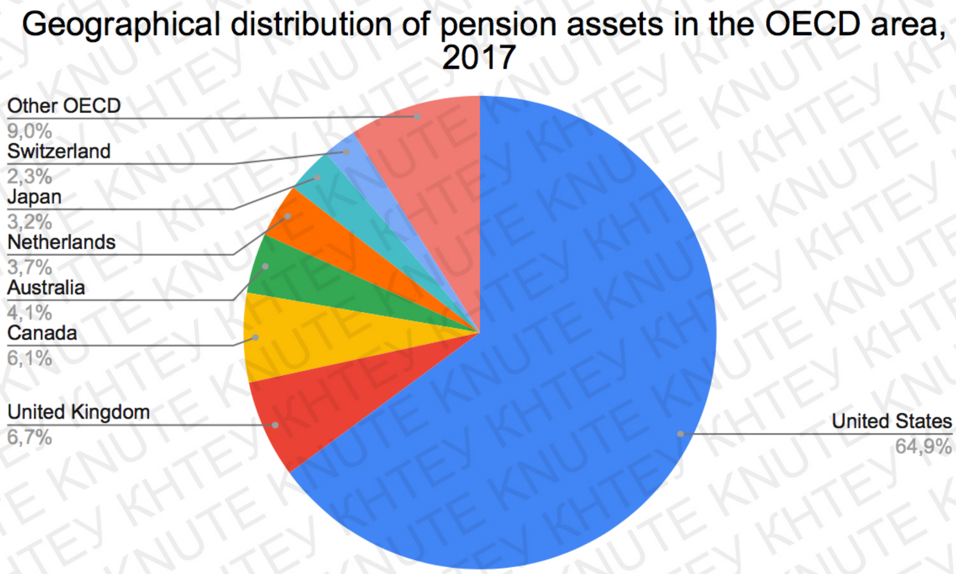


Figure 2.3 Geographical distribution of pension assets in the OECD area in 2017 [63]

Pension fund assets remained mostly invested in bills, bonds and equities in most jurisdictions. These instruments accounted for more than 75% of pension fund investments.

Equities remained the main investment of pension funds in Poland (85%), Australia (45%), Netherlands (44%) in 2018 (figure 2.4). The proportion of equities in the asset mix of pension funds remained high in Belgium, Finland, Lithuania among OECD countries and in Malawi, Pakistan, Papua New Guinea and Peru among non-

OECD jurisdictions where they represented between 40% and 50% of their investments.

Bills and bonds predominate in Maldives (90,5%), Serbia (83,4%), Mexico (80,5%) and Nigeria (80,2%).

Countries with the highest level of cash and deposits in assets allocation in NPF are Ukraine (36,9%), Egypt (24,9%), Czech Republic (20,5%) and Turkey (19,3%).

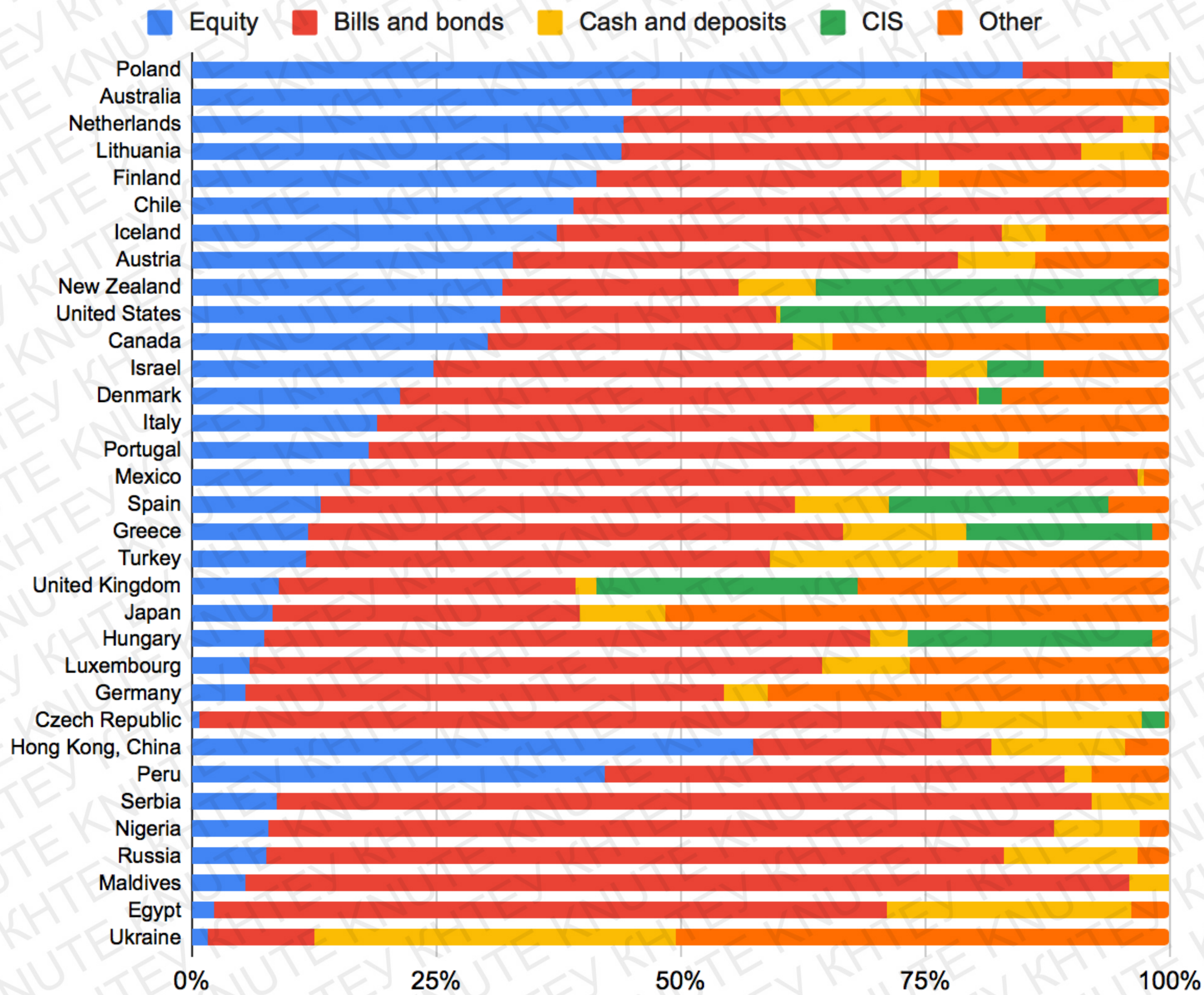


Figure 2.4 Asset allocation of pension funds in selected investment categories in 2018, % [34]

In some countries, the presence or absence of a significant amount of NPF assets invested abroad may be conditioned by the state of the securities market [5]. This issue is partially addressed by legislation by limiting the proportion of assets of funds that can be invested abroad. The restriction refers to the share that can be invested in assets of a particular class, or the category of investment or exchange on which the stock is traded.

In Australia, Canada, UK, USA there no restriction on investment pension funds in assets (Table 2.1). In Germany exist Pensionskassen and Pensionfonds and the limits for each type are different. In Japan is forbidden to invest pension funds in real estate and loans.

Table 2.1

Portfolio Limits on Pension Fund Investment in Selected Asset Categories, %*

Country	Funds / Plans	Equity	Real Estate	Bills& Bonds (state)	Bonds (Priv.se ctor)	Priv. Investme nt funds	Loans	Bank deposit s
Australia	Occupational trustee	100	100	100	100	100	100	100
Canada	Occupation registered pension plans	100	100	100	100	100	100	100
Germany	Pensionskassen	35	25	50	50	7.5	50	50
Germany	Pensionsfonds	100	100	100	100	100	100	100
Korea	Personal pension insurance	100	25	100	100	100	100	100
Korea	Defined benefit (DB)	30	0	100	100	30	0	100
United Kingdom	Occupational pension plans	100	100	100	100	100	100	100
United States	Private PP State and local govern. retirem. Funds Federal govern. retirem.funds	100	100	100	100	100	100	100

Cont. of Table 2.1

Russian Federa-tion	Mandatory funded pillar, default option Mandatory funded pillar, term annuities portfolio	0	0	100	100	0	0	80
Russian Federa-tion	Mandatory funded pillar NPF	40	0	100	100	0	0	40
Ukraine			10		40			50

* Developed by author by source [40].

In most countries, there are no restrictions on foreign investment. In Chile, the share of such investments does not exceed 80% of the total and depends on the type of fund selected by the participant. In Colombia, the corresponding figure is 40%, in Mexico - 20, while in Brazil - only 2-3%. At the present stage of development, restrictions also apply in some EU countries. In Slovakia, only EU countries are allowed to invest. In Finland, investing in non-EU countries is only possible if they are OECD members, and the proportion of such investments does not exceed 10% [40].

Portfolio regulation for privately managed pension funds can follow the prudent person principle or be based on quantitative portfolio restrictions (or a combination of the two). The prudent person focuses on regulating the decision-making process and behavior of investment managers rather than imposing specific restrictions on permissible investments or limits by investment category [24].

The Netherlands and Denmark have the best pensions systems in the world, according to a global study that shines a light on how nations are preparing aging populations for retirement [56].

The Dutch pension system, one of the world's most comprehensive, provides an ideal environment to examine funds' investment performance. The system is largely pre-funded and the 268 pension funds have around 1.3 trillion euro assets under management.

International experience also shows that pension funds' spending on services is often opaque, hidden and incomprehensible to ordinary investors. Even in developed countries, many investors do not know what part of their pension disappears in spending. For example, a 2016 Transparency Working Group study in the UK found that pension funds have more than 100 different types of costs and rewards that are regularly applied to pensions and investments, many of which are hidden from consumers [26].

2.2. Analysis of protection of consumers rights in Ukraine

Today, we have a catastrophic demographic situation in Ukraine, on the one hand, and problems with providing state pensions to Ukrainian citizens. The deal is that in previous years, the age structure resembled a pyramid, as the number of people decreased significantly with increasing age.

The main source of retirement income for 11.4 million pensioners (63% of whom are women) is a state-owned solidarity pension system administered by the Pension Fund of Ukraine. As of January 1, 2019, the average monthly pension from level 1 equaled 2 646 UAH ($ 95), or 42% of the net average wage from which contributions were paid (UAH 6,282) last year. This amount is not enough to ensure a decent standard of living after retirement [38].

As of early 2018, 12 officially employed Ukrainians were providing pensions to 11 retirees [25].

According to them, the State Register of Financial Institutions as of 30.06.2019 contained information on 63 non-state pension funds and 22 NPF administrators (as of 30.06.2018 there were 62 NPF and 22 administrators in the State Register [54].

Non-state pension funds are registered in 8 regions of Ukraine (Figure 2.5). The largest number of NPFs is concentrated in Kyiv - 44 (71%). 6 NPFs (9,7%) concentrate in Donetsk region, 4 (6,5%) - in Dnipropetrovsk, 2 (3,2%) - in Lviv, Ivano-Frankivsk and Kharkiv, and 1 (1,6%) - in Odesa and Kherson.

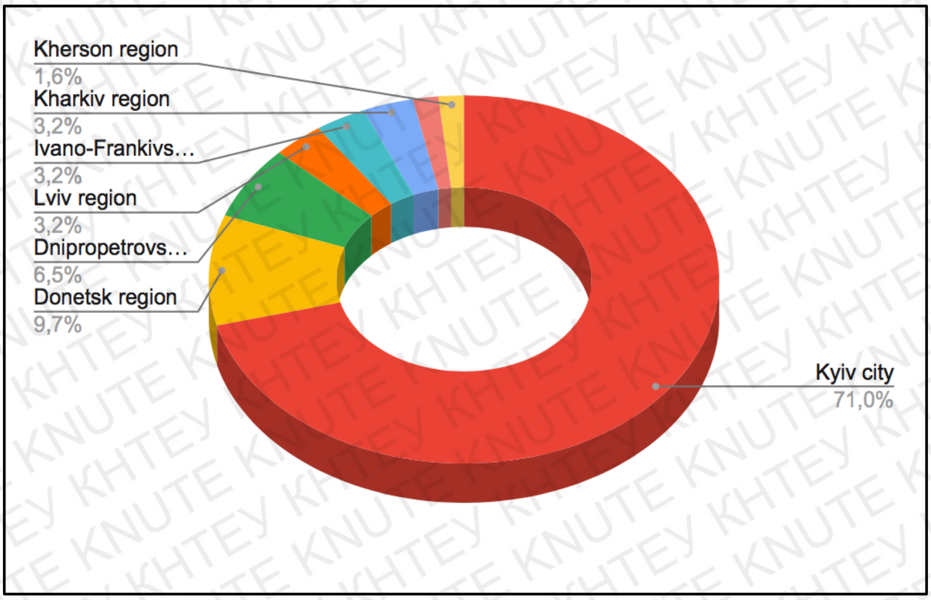


Figure 2.5 Territorial distribution of NPFs in 2018 [55].

Open type of NPFs predominate in Ukraine (Table 2.2). In 2018-2019 the amount was 79%. Corporate and Professional NPFs – 10%. The total assets of the NPF were managed by 33 AMCs in 2019.

Table 2.2

Number of NPFs under AMC management by fund types in Q1 2019*

NPF type	31.03.2018	31.12.2018	31.03.2019	Q1 2019 change	Annual change
Open	46	45	45	0.0%	-2.2%
Corporate	6	7	7	0.0%	16.7%
Professional	6	6	6	0.0%	0.0%
Total	58	58	58	0.0%	0.0%

* Developed by author by source [10].

Examples of corporate NPFs are the NBU, Ukreximbank and Ukrposhta. The example of professional NPF is “Magistral”, created by the Professional Union of Railways and transport builders of Ukraine.

Number of consulted contracts in 2017 compared to 2016 increased by 9,56%, but in 2018 compared to 2017 decline by 4,21%. The total number of NPF participants increased during analysing period from 831,2 thousand people in 2016 to 846,2 in 2018. We can oversee constant growth of total value of NPF assets: in 2017 compared to 2016 it increased by 12,42%, in 2018 compared to 2017 it increased by 12,81%.

In 2016 the total number of participant of NPF was 831,2 thousand people (Figure 2.6), in 2017 - 838 thousand people and in 2018 - 846,2 thousand people.

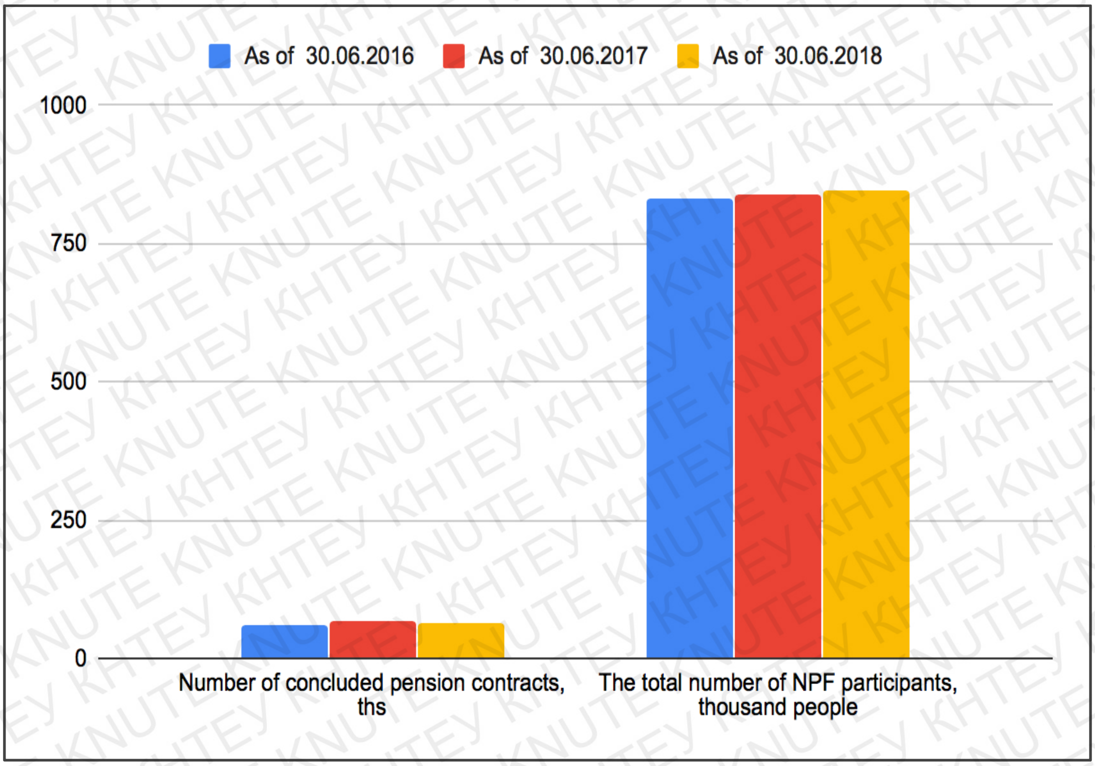


Figure 2.6 Comparison number of pension contracts and NPF participants in 2016-2018 [34]

The vast majority of NPF participants (57,9%) were individuals aged 25 to 50 years and persons aged 50 to 60 years (26,3%). The share of NPF participants in the age group over 60 years was equal to 15%, and the age group up to 25 years - 0.8%. In each age group, the majority were men, and in the age group over 60, their number exceeded women by 2 times.

In 2016 amount of pension contributions was 1847,8 million UAH, in 2017 - 1945,6 million UAH (grow by 5,29%), in 2018 - 1937,7 UAH (decline for 0,41%).

Legal entities have 1763,9 mln UAH pension contributions it’s 95,5% of total amount in 2016 (Figure 2.7). Contribution to NPF from individuals was 83 mln UAH (4,5%), from individual entrepreneurs - 0,2 mln UAH (less than 1%).

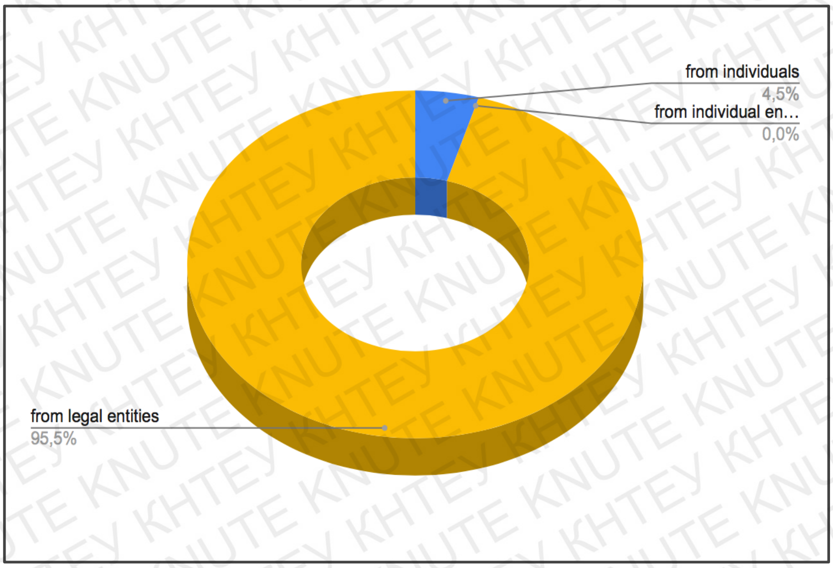


Figure 2.7. Distribution of pension contributions by payers in 2016 [55].

In 2018 (Figure 2.8) in comparison with 2016 total amount of pension contribution reduced to 92,6% (-3,2%) and was 1793,4 mln UAH. Pension contracts were concluded with 67.1 thousand depositors, of which 2.1 thousand (or 3.1%) are legal entities and 65 thousand or 96.9% are real persons. The number of NPF contributors as of 30.06.2019 increased by 16.9% compared to the same date of 2018.

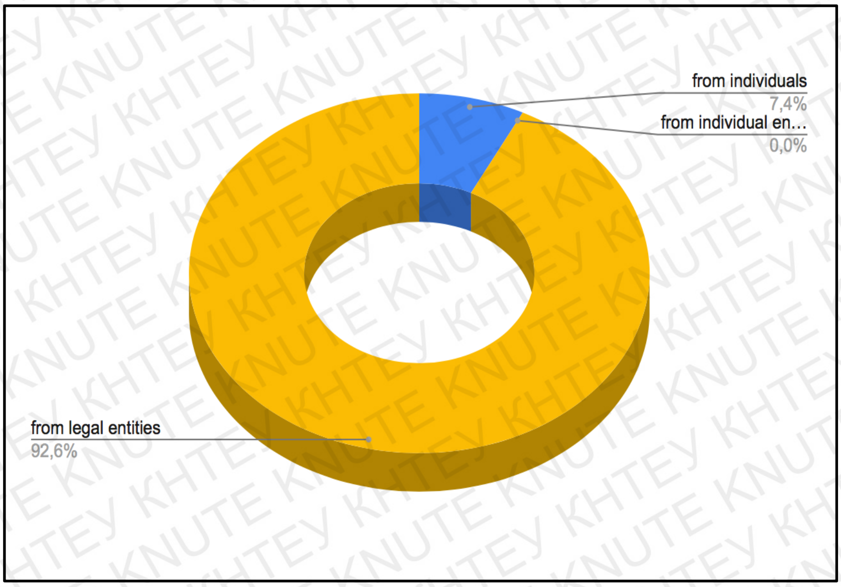


Figure 2.8. Distribution of pension contributions by payers in 2018 [55].

For NPFs, it is typical to form a portfolio that includes investment assets with a minimum degree of risk. Therefore, it is of particular importance to choose investment instruments, using which NPFs will be able to protect the population's money from inflationary processes while obtaining a certain capital increase.

The Law of Ukraine "On Non-State Pension Provision" provides for general quantitative restrictions on investment activity with NPF assets - shares of specific types of assets. The most severe restrictions apply to real estate, banking metals and shares of Ukrainian issuers that are not admitted to trading on the stock exchange.

Table 2.3

Limitation of financial investments of NPFs in Ukraine*

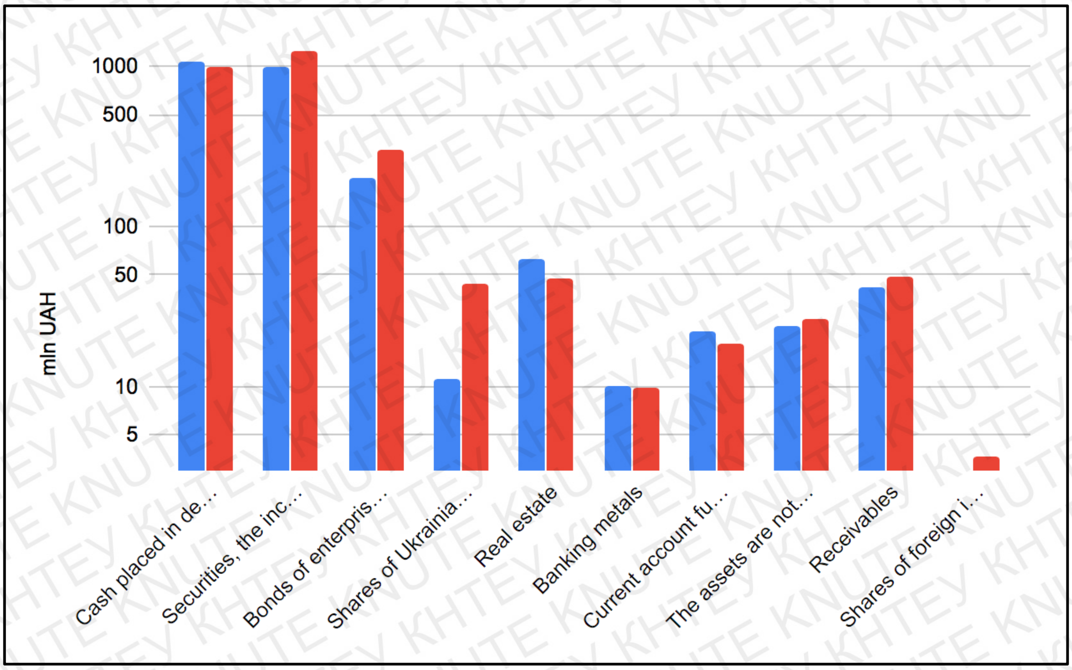
Financial instruments that carry out the activities of the NPF	Restrictions under current Ukrainian legislation
- Securities of one issuer - Other assets not prohibited by the legislation of Ukraine - Securities issued by the founder of the NPF	≤ 5% of the total value of the pension assets of the pension fund
- Bank deposit accounts and savings certificates of one bank - Real estate objects - Banking metals - Securities the issuer of which is the founder of the fund during the first five years since the beginning of the foundation of the NPF	≤ 10% of the total value of the pension assets of the pension fund
- Securities, guaranteed by the Council of Ministers of the ARC, and local loan bonds - Securities of foreign issuers	≤ 20% of the total value of the pension assets of the pension fund
- Bonds of enterprises issued by residents of Ukraine - Shares of Ukrainian issuers	≤ 40% of the total value of the pension assets of the pension fund Banks certificates

Cont. of Table 2.3

- Bank deposit accounts and savings certificates of banks - Securities, the income of which is guaranteed by the CMU	≤ 50% of the total value of retirement assets

* Developed by author by source [8].

Pension funds should invest their money in different assets for receiving profit. In 2017 the main assets (Appendix E) was Cash placed in deposit bank accounts (1 083,3 mln UAH) and Securities, the income of which is guaranteed by the Cabinet of Ministers of Ukraine (1 004,9 mln UAH). In 2018 Securities, the income of which is guaranteed by the CMU increased for 25% and was 1 263,5 mln UAH. The highest level of increasing in amount observe in Shares of Ukrainian issuers: in 2017 - 11,3 mln UAH, in 2018 - 43,8 mln UAH (287,6%).



Pic. 2.9 Dynamics of the structure of invested pension assets in 2017 and 2018 years, mln UAH [34]

Total value of assets in 2017 was 2 465,6 mln UAH, in 2018 – it increased for 11,3% and was 2 754,2 mln UAH. Total assets of all NPFs, including the NBU CNPF, for the first quarter of 2019 increased by 5.3% to 2 829.8 mln. UAH compared to end of 2018. This happened due to an increase of the number of NPFs' participants by 0.4% for the quarter and of the amount of investment income - by 5.6%. The number of pension contracts also increased - by 2.3%. Ascending dynamics of pension assets was restrained, as before, by the growth of pension payments in comparison with contributions (+4.0% versus +1.8%).

Assets of open NPFs in the 1-st quarter of 2019 showed the largest quarterly growth among sectors by types of pension funds under AMC management - by 4.9% (after +3.2%). Thus, at the end of March 2019, their market share by pension assets under management (excluding the NBU CNPF) increased from 72.7% to 73.0%. As at 31.03.2019 assets of these NPF for the first time exceeded the mark of UAH 1 bln. and reached UAH 1,093.8 mln [10].

Assets of corporate NPFs under management (excluding the NBU CNPF) for this quarter increased by 4.1% (after +0.9%) and in March amounted to UAH 249.6 mln.

Assets of professional pension funds under management in the first quarter of 2019 rose the lowest - by 1.9%, but virtually maintained the pace of the previous quarter (+2.0%). Their volume as at March 31, 2019 amounted to UAH 135.3 mln.

According to the National Financial Services Commission, at the end of 2018, the largest assets among the non-government pension funds were the corporate NPF NBU (UAH 1.33 billion), Ukreximbank NPF (UAH 238 million), Emerit Ukraine NPF (UAH 162 million), the pension fund PrivatFund (UAH 144 million), OTP Pension Fund (UAH 133 million) [57].

The purpose of investing pension assets is, first and foremost, to preserve citizens' retirement savings. The strategy of investing in private pension funds is more conservative than that of other financial institutions.

Total income received from investing pension assets amounted to 1 767.7 mln UAH as of December 31, 2018, an increase of 312.2 mln UAH or 21.4% compared to December 31, 2017.

Expenditures reimbursed from retirement assets as of December 31, 2018 increased by 20.5% compared to the same period of 2017, and as a whole during the existence of pension funds amounted to UAH 327.2 million, or 11.9% of total value of NPF asset [34].

According to the report by the National Commission for Financial Services [34], in 2018 NPF expenses constituted UAH 55.7 million (on average, 2.14% of NPF assets per year). Without taking into account the NBU pension fund, the expenses of the remaining ones constitute an average of 4% per year.

The report of the “Financial Sector Transformation” project shows that the real profitability of the NPF between 2013 and 2018 was negative: -8.09% in five years, -3.51% in three years and -2.29% in the 2018.

Since the non-state pension scheme was introduced not too long ago (since 2005), it took too little time to accumulate capital sufficient to purchase a life annuity. As a result, out of 81 300 Level 3 participants, the vast majority (about 95%) received small lump sum payments that averaged several thousand hryvnias, or about $ 250 (Table 2.4).

Table 2.4

Distribution of pension payments as of December 31, 2018*

Types of pension payments	Beneficiaries (from the beginning of implementation)		Payments		
			Total		Avr for 1 person, UAH
	people	%	mln UAH	%	
One-time payments	77 130	94,50%	545,5	68,60%	7 072
Periodic payments	4 170	5,50%	264,4	31,40%	63 405
Total	81 300	100,00%	809,8	100,00%	9 960

* Developed by author by source [38].

At the end of 2018, only in the Corporate NPF of the NBU and two open NPFs: the Ukrainian Pension Fund and the Pharmaceutical, the average amount of accumulated assets per participant exceeded the minimum amount of funds required for a life pension (UAH 89 820). These funds made periodic payments to participants.

Thus, the NBU Corporate Fund made periodic payments to 2 850 participants (69% of recipients of level 3 payments), with the average payment amounting to UAH 1 825 ($ 65) per month [34].

Number of requests to the National Financial Services Commission in 2016-2018 for NPFs were 1%, whereas for insurance companies - 68-75%, or for financial companies - 7-10%.

Over the past eight years, not a single government authority in Ukraine has enforced the protection of financial service consumers' rights. As a result, the NBU received over 13,000 complaints from disgruntled users of financial services in 2018 alone. In September 2019 was approved the Law of Ukraine On Amendments to Certain Laws of Ukraine Regarding Protection of Consumer Rights in Financial Services.

This makes Ukraine the world's 120th country to protect the rights of financial service consumers. The NBU will in turn become the world's 98th central bank to fulfill this function.

High levels of fraud, driven by poor regulation, poor disclosure and poor enforcement (enforcement), have significantly undermined public confidence in the NPF. In 2015, the KNPF NBU was the victim of fraudulent activities, the assets of which exceeded 50% of the size of the entire NPF market [52]. Two former investment managers of the fund allegedly placed assets in insolvent banks' deposit accounts and in the bonds of companies that were declared insolvent for unlawful reward. Agreements were concluded under which the CNPF NBU assumed responsibility for the risks of non-repayment of loans, which were issued at the expense of the pension assets of the fund placed on bank deposits. The NBU KNPF lost pension assets by UAH 900 million, which then equaled about 40% of all assets of the non-state pension system.

For the period from 2013 to 2016, all at once with the assets in the national currency, the insurance policy was signed, as they sold the insurance policy of the pension security. More than 2016, the National Service Committee rejected the offer of Ukrainian citizens for 2,000 insurance benefits [36]. The regulator does not know the Garant-Life insurance company for the address provided in the registration documents, and nine thousand people spent more than 200 million UAH [52].

PART 3
RECOMMENDATIONS ON DEVELOPMENT OF NPF'S IN UKRAINE

3.1. Legislative regulation of non-state pension funds

The non-state pension funds appear to lead the financial and the retirement insurance systems of many countries and function as both the social and investment institutions [48]. Their social function is major one in those countries, where the state retirement insurance is not available or its role too low. The investment function may be important for all countries as the non-state pension funds are able to accumulate considerable financial resources and ensure investment. Private pension system in Ukraine just developing and have couple problems (Table 3.1).

Table 3.1

Main Problems of Non-State Pension Funds in Ukraine*

Insufficient level	consumer awareness about non-banking financial services, the risks that accompany them, and their own rights.
	protection of personal data of consumers, which is especially important in the conditions of development of e-commerce.
	clear delineation of powers of state authorities in the field of consumer rights protection.
	prevention of abuse by non-banking financial institutions, which take precedence over consumers in terms of possessing the necessary information and legal capacity when concluding contracts for the provision of non-banking financial services.
Absence	an effective mechanism for pre-trial conflict resolution.
	consistent steps to promote the business practices of the developed financial services markets, which make it easier to address disputes between consumers and non-banking financial institutions.

Cont. of Table 3.1

	the institutional (administrative) capacity of the bodies that carry out state regulation of financial services markets.
	state support of public consumer associations, state policy on the development of self-regulatory organizations and professional associations of financial services market participants, their role in protecting consumer rights, in particular in implementing standards for the provision of services by non-banking financial institutions.
Imperfection of the mechanism	legal support for the protection of consumer rights in the part of the conclusion of contracts, including the statement of their terms in a clear, simple and understandable language, and bringing their content to the attention of consumers.
	disclosure of information to consumers.
	compensation for material losses caused to consumers in financial services markets.
	interaction of public authorities, including bodies that carry out state regulation of financial services markets, with law enforcement agencies in the process of consumer rights protection.

* Developed by author by source [16].

Development of the non-state pension system has been implemented since 2004 after the Law of Ukraine "On Non-State Pension Provision" came into force. Despite the fact that Ukraine is actively carrying out the reforms of its pension system, positive results in the field of non-governmental pension insurance are practically unnoticeable[45].

Pension reform in the West understand transformation from solidarity pension system (when all working people pay money into one basket, which at the same time paying pensions current retirees) to cumulative. The accumulation of pension is that each person defers to his old age, on his own retirement account. Then, when that person gets older, he will receive retirement benefits from his account. In Ukraine, part of the reform that is responsible for the second level - its own accumulation - has not yet worked, so we have accrued pensions only in the form of non-state pension funds[25].

In Ukraine there is no effective centralized agency for the protection of consumers of financial services; there is no financial ombudsman, is authorized to protect the rights of financial consumers; there are no non-governmental organizations specializing in consumer protection and financial education [7]. Four state authority are responsible for controlling functions of, objects and investment efficiency of participants of non-state pension insurance, in accordance with their competence. In particular are State Commission on Securities and Stock Market, National Bank of Ukraine, Antimonopoly Committee of Ukraine.

The Rada of Ukraine sign of the Law on “Split” (Law of Ukraine “On Amendments to Certain Legislative Acts of Ukraine on Improving Functions in State Regulation of Financial Services Markets”). “Split” involves transferring regulatory and supervisory functions to 63 non-state pension funds (NPFs) and 22 NPF administrators. The total number of contributors to these funds is currently 860.8 thousand. The total value of assets formed by NPF for depositors' money as of 30.06.2019 amounted to UAH 2.9 billion.

In solving problems of social protection improving of advanced age people, non-state pension insurance is called to play a significant role. Joint system of obligatory retirement insurance permits to form state pension based at continuous years of insurance and salary (income). Accumulative forms of retirement insurance enable to generate pension-plan assets depending on the wished amount.

According to statistics (Table 3.2) less than 5% of economically active population participate in NPF. The system is not conducive to attracting new members and has not been distributed. At the beginning of 2019, 855,3 thousand people were members of the system, or only 5% of the officially employed population.

Table 3.2

The attitude of NPF participants to the economically active population*

Indicators	As of 30.06.2016	As of 30.06.2017	As of 30.06.2018
The total number of NPF participants, thousand people	831,2	838,0	846,2
Economically active population (EAP), thousand people	17955,1	17854,4	17939,5
Share of NPFs participants from EAP, %	4,6	4,7	4,7

* Developed by author by source [34, 53].

The majority (54%) of Level 3 participants are concentrated in only two NPFs: in the professional NPF "Magistral" of the Professional Union of Railway and Transport Builders of the State Administration of Railway Transport of Ukraine (326 467 persons, or 38% of all Level 3 participants, as of at the end of 2018) and in the open NPF "Europe" (133 790 people, or 16% of all participants). On the account of one participant of NPF "Magistral" on average only 118 UAH, and NPF "Europe" - 215 UAH (as of 31.12.2018) [38].

Ensuring that consumers can easily access or receive essential information relating to private pensions is one of the primary tasks of supervisory authorities. The survey of the International Organisation of Pension Supervisors (IOPS) Members' practices has shown that increasingly, efforts are being made by supervisors to require the provision of key information to members or the public in a simplified and standardised format to assist them in making informed decisions about their retirement planning and savings. Over half of the responding jurisdictions introduced such a requirement for the information to be disclosed [61].

The Presidend of Ukraine has recently sign the Law "On Amendments to Certain Legislative Acts of Ukraine on Improving the Functions of State Regulation of

Financial Services Markets" and the Law "On Amendments to Certain Legislative Acts of Ukraine on the Protection of Consumers of Financial Services".

The Law proposes to solve the following problems:

- determining the responsibilities of members of the board of the NPF and establishing requirements for the persons elected to the board of the NPF;
- improvement of the functions of the administrator of the NPF, persons managing assets and the custodian;
- centralization of storage of information about NPF participants and assets of the NPF;
- regulation of investment activity with pension assets of NPF, namely strategic allocation of pension assets, main directions and limitations of pension assets, methods of measuring investment risks and management processes;
- publication of information on activities in the field of private pension insurance;
- establishment of features regarding the prohibition or restriction of the functioning of non-state pension funds;
- introduction of risk management function and determination of the procedure of internal audit in pension institutions.

The "Comprehensive Program for Development of the Financial Sector of Ukraine until 2020" another law that was created to protect rights of consumers in financial sector (Table 3.3).

The overarching goal of the "Comprehensive Program for the Development of the Ukrainian Financial Sector by 2020" is to create a financial system capable of ensuring sustainable economic development through the efficient redistribution of financial resources in the economy by building a fully fledged market competitive environment in line with EU standards.

Table 3.3

Goals in "Comprehensive Program for Development of the Financial Sector of Ukraine until 2020" *

Increase financial literacy, culture and inclusion of the population	Develop a national financial literacy strategy that include: -the strategic framework for improving financial literacy; -a plan of action to identify financial literacy tools and channels for different target audiences; - methodology for assessing the effectiveness of the national financial literacy strategy.
	Introduce a mechanism for monitoring the level of financial literacy of citizens on an ongoing basis.
To increase the efficiency of the system of realization of investors' rights	Introduce a mechanism to protect the rights of minority shareholders, including through the introduction of squeeze-out and sell-out shares from shareholders, and the institution of a corporate agreement (shareholder agreement).
	Provide legislative solution to the problem of "sleeping shareholders" who do not fulfill the obligations stipulated by the legislation of Ukraine.
	Introduce new mechanisms for protecting the rights of bondholders, including through legal regulation of the relationship between the issuer and the investor.

* Developed by author by source [42].

It is essential that industry innovation, and a degree of commerciality, builds people's trust in pensions. It is also essential that commercial organisations' use of dashboard information is adequately regulated so as to maintain a high standard of conduct among all participating firms. With this in place, the consumer will have a clear form of redress if a firm should fall below this standar.

Narrow outreach of NPFs, low trust to them and inferior results are not characteristics of NPFs as a tool but a reflection of economic and political conditions in which they function. The absence of major scandals and financial meltdowns, in contrast to the banking sector, tells about the stability of these financial institutions. Perhaps, the reason is that the existing NPFs do not fit well with the new concept of the pension reform considered by the World Bank. The model that the draft law on pensions entails stipulates the creation of the governmental pension fund. Economies of scale allow to reduce the administration and management fees of such a fund. The projected fees of 0.6% are not commensurable with the 3.5% level foreseen for NPFs participating in the fully funded plan.

It is proposed to introduce mechanisms for stimulating investment of joint investment institutions in innovative and infrastructural projects, to expand the composition of assets for investing NPF funds in reliable financial instruments, for the development of funded pension provision. environmental bonds, bonds of international financial institutions, infrastructure bonds, municipal securities and derivatives and more.

Supports UAIB and the development of online financial services, including electronic remote verification and customer identification, facilitating access to the private pension market through the introduction of digital technologies, including: conclusion of contracts of purchase/sale of securities of pension contracts using qualified electronic signature.

3.2. Ways to improve the protection of consumers rights non-state pension funds

The main indicator for people when choosing a non-state pension fund is its reliability. The evaluation of the reliability of the NPF in a strict sense should be understood as establishing the conformity of the parameter system to the specified criteria on the basis of certain principles using the necessary tools.

In order to assess the reliability of the NPF as a socio-economic system, it is necessary to analyze such parameters as:

- availability of public trust in the fund;
- the ability of the fund to repay the funds and the financial position of the fund.

If the fund's financial condition and ability to pay can be quantified, then the trust / no confidence parameter is difficult to quantify, so it needs to be evaluated using qualitative characteristics.

According to a survey conducted by the USAID Financial Sector Transformation Project in 2017 [46], only 6% of respondents said they were well aware of Level 3 of pension system and 34% were somewhat aware of such a system. Most (53%) – knew almost nothing about this system. This low level of awareness of the non-state pension system was observed in all groups of respondents. It reflects the lack of interest of Ukrainian citizens in saving retirement funds and the lack of a successful advertising / information campaign by the NPF.

Due to low income most respondents (57%) said they were unable to save for retirement, including 62% of female respondents and 52% of male respondents. Only 24% of respondents said they had savings. The most famous way of saving is to save cash in UAH (80% of respondents), in second place – to save in cash in foreign currency (71% of respondents).

An important indicator to increase to people's belief in the NPF is the availability of information of this policy, rational construction of which will increase the number of contributors and NPF’s participants. NPF Information Policy is based on certain principles and aims at achievement of realization of depositors' rights, participation.

To reduce costs and improve overall performance of NPFs, it is necessary to increase the level of disclosure, introduce securities pricing regulation and make structural decisions for the whole market.

NPFs in Ukraine are very expensive for participants, as they charge on average more than 4% of the accumulated retirement capital each year. Let's compare: large mutual funds in the United States (Fidelity, Vanguard) today offer zero-fee securities to investors. In Ukraine, however, these costs are not disclosed to participants properly and in a clear form [38].

In Ukraine, it is necessary to increase the number of participants in additional funded pension systems. But there are suggestions for creating a compulsory cumulative system with mandatory contributions in of NPF are erroneous. Ukrainian

NPFs are too expensive for participants, do not inspire confidence in the population and are little known to the average citizen of Ukraine to be a reliable foundation for Level 3.

For comprehensive development of non-state pension funds as socioeconomic systems, some parameters should be revised: the level of trust and financial stability. Each of the parameters can be improved with a reasonable and effective information policy of the fund through expanding of investment range in retirement savings and establishing legal responsibility asset management company for saving and increase in NPF funds.

Today, the problem developing of non-state pension insurance is in the lack of information. Citizens are not aware of innovations and simply pension programs. It also adversely affects the activities of the non-state fund that in its structure and principles it resembles credit and insurance companies. The low level of trust among the population of Ukraine today also causes serious obstacles on the way of development.

In order to facilitate the development of non-state pension insurance in Ukraine, a system of guarantees related to the provision of control and supervision by the state has been introduced at the legislative level. The focus is also on mutual control between financial entities that invest in the structure of the non-state pension fund and maintain information transparency of the funds. Based on the above, today the working population.

Recommendations for improving Private Pension system [58, p.36]:

1. Improvements in governance.

Improved recognition of return on governance feeds through in increased attention and growing focus on performance from all sources; more talent attracted to Chief Investment Officer role at funds.

In September the main role of controlling NPF transferred to The National Securities and Stock Market Commission. It’s step in right way to improve NPF’s.

But NPF contributors remain unprotected in the event of a fund failure in Ukraine. There are two types of financial guarantees in the pension system – the guarantees of profitability (minimum and maximum) and guarantees of the minimum pension (in state pensions).

Both types are most widely used in the mandatory funded pension system, as the government is more responsible for ensuring that the system is as secure as possible, given its scale and breadth of coverage. And in voluntary private pension insurance guarantees are rarely present – usually only in defined benefit pension plans (DB).

Minimum yield guarantees vary widely across countries. In most developed OECD countries, where private retirement savings programs are still voluntary, there is no minimum return requirement, even if pension funds offer defined contribution plans where investment risk lies with employees. One of the few exceptions is Australia, where there are minimum minimum rate of return financial guarantees in third-level voluntary private pension schemes with defined contributions. In the US, state guarantees only cover corporate plans with DC.

However, a guaranteed minimum yield can also be expressed as a nominal or real indicator. For example, Argentinean pension funds are required to provide a result at 70% of the average nominal yield on the system. Such guarantees are usually backed by reserve funds and the capital of asset management companies.

2. Risk management focus

Funds' focus on risk intensifies, with two separate groups: those where the appetite for risk is trimmed from previous levels, and those needing risk for their situation.

Non-state pension funds are too expensive and do not provide the required level of return. The cost ceiling set by the regulator is 7%, very high, and the real profitability of the system over the past five years is lower than inflation.

Guarantees of annual returns do not take into account periods of decline in the stock market and therefore, if taken for a long period, mean guarantees of yields are above the average market level. In the end, such guarantees are either financially unreasonable or they have to be provided with higher contributions to the guarantee fund.

By reaching break-even levels, maintenance companies will aim for a maximum legislative limit of 7%.

This is due to high licensing requirements for professional participants (asset management companies, administrators, custodian banks) and small assets of NPFs in Ukraine. The aggregate assets of all non-governmental funds at the beginning of 2019 amounted to only UAH 2 745.2 million or about USD 100 million.

The cost of NPF is 3-7%. Tariff reductions below 3%, taking into account contingent fixed costs of UAH 3 million, are possible after the fund has reached over UAH 100 million, which confirms the revision of tariffs in 2019 by the funds that reached this figure. In Ukraine, such funds are only 6 of the 62 available in the registry.

3. Pension design, towards a DC model. Developing DB pension plans as another variant for NPF's.

DC becomes the dominant global model with its attendant risk transfer causing tension in the balance of ownership and control.

4. Pressure for talent

   Strong competition for talent among funds, particularly on the leadership level, despite the reduced short- term demands as a result of the financial crisis.

5. New value chain

   A more effective "value chain" will emerge, where expense on various activities has a better value proposition than exists today. The use of passive approaches and smart betas is leading to modest fee compression.

6. ESG and stranded assets

   The move towards more integrated approaches to managing ESG (Environment, Social and Governance) factors and better stewardship exercised over ownership is gathering pace; this will require the support of increased disclosure, measurement and analysis of extra-financial factors.

Table 3.4 outlines the basic principles which must be followed in forming and implementation of information policy of non-states pension funds, as well as rules and regulations providing information to depositors, participants and other stakeholders. In addition, in it you need to reflect the specifics of working with information that constitutes confidential information bridge foundation.

Table 3.4

Principles of information policy formation as a tool for investors protection

Principles	The essense of the principle/method
The principle of regularity	The NPF regularly provides its contributors, partners and other interested parties with information about its activities.
Information openness	Free and open access to all important information
Confidentiality	Confidential information held by officials and employees of the Fund, except in cases provided by the law of the country is non-disclosurable
Caution	It deals with the disclosure of investment information, according to this principle, the results of investing in the past do not determine future income
Authenticity	The NPF shall provide its contributors, participants, other interested parties with truthful information and all information about the NPF must be documented
Completeness	NPF should provide sufficient and comprehensive information to the contributors, participants and other interested parties on emerging issues
Balance	The NPF reasonably balances information openness on the one hand and privacy on the other
Equality	NPF provides equal rights and opportunities in obtaining and accessing information to all contributors and participants
Security	NPF applies the law of the country to the methods and means of protection of confidential information

* Developed by author by source [64].

Recently popular retirement plans have become popular in many countries, with the automatic entry into the funded pension system and the possibility of withdrawing from such a system. Typically, such plans provide for automatic enrollment of people into a retirement plan or fund and allow them to voluntarily withdraw from the plan or fund after some time and under certain conditions and offer various incentives (equal contribution from the employer and / or government contribution).

The level of contributions varies, and in most countries the amount of the mandatory contributions is periodically increased to a level that can provide for sufficient retirement assets to be created before retirement.

Introduced in Turkey in 2017, the auto-enrollment system aimed at increasing the amount of savings in private pension plans, which now account for about 2.5% of the country's GDP. With this reform, the total number of participants in the non-state pension system has increased from 6.6 million in 2016 to 11.9 million in 2018.

The Cabinet of Ministers could also create new government-funded inflation-protected financial instruments, the denomination of which is adjusted according to the Consumer Price Index (CPI). Inflation-protected government securities could be issued electronically for up to 5, 10 and 20 years and offered in denominations of 1,000 UAH. Anyone could purchase, dispose of, and pay for electronic government bonds (OVDPs) directly from a website available 24 hours a day, 7 days a week.

For employers, employees, and individuals alike, new incentives must be introduced to meet today's realities. In addition, pension fund assets are a "long" economic resource used in developed countries for economic development. Therefore, it is necessary to introduce new financial instruments that will allow the consumer (state, producer) and the resource provider (NPF) to enter the stock market. At the same time, this tool should ensure the retention and return of retirement assets, as well as profitability is not lower than inflation.

State structures see NPF’s as competitors of the state pension. So they don’t support spreading the information about private pension services via differend communicational channel.

CONCLUSIONS

The pension system of Ukraine in its current form has been operating since 2004 and formally consists of three levels of pension provision. It is anticipated that pension payments to future retirees will come from three independent sources, which will help balance the pension system and raise the standard of living for older Ukrainians.

There are two types of post-retirement pension plans existed in the modern world. Defined contribution plans had a set amount paid into a fund on a regular basis by employers, and often employees, and no promise was given with respect to an end amount the employee would have for retirement. Defined-benefit plan, specified the amount an employee would be paid from the day they retired until death.

Occupational pension plans are dominant in Western Europe, North America, Asia-Pacific countries and Brazil. These plans are voluntary in the United Kingdom and the United States, mandatory in Australia and quasi-mandatory in the Netherlands. Latin American and Central and Eastern European countries, on the other hand, rely mainly in mandatory personal pension plans.

The seven countries with assets in excess of USD 1 trillion, held more than 90% of pension assets in the OECD area in 2017 (Pic. 2.3). The largest amount of pension assets among OECD countries was held in the United States in 2017 64.9%.

Non-state pension funds are registered in 8 regions of Ukraine. The largest number of NPFs is concentrated in Kyiv - 44 (71%). In some region NFP not presented and that’s the problem of unequal covering of private pension funds.

In 2018 in comparison with 2016 total amount of pension contribution reduced to 92,6% (-3,2%) and was 1793,4 mln UAH. Pension contracts were concluded with 67.1 thousand depositors, of which 2.1 thousand (or 3.1%) are legal entities and 65 thousand or 96.9% are real persons. The number of NPF contributors as of 30.06.2019 increased by 16.9% compared to the same date of 2018.

NPFs in Ukraine are very expensive for participants, as they charge on average more than 4% of the accumulated retirement capital each year. To reduce costs and improve overall performance of NPFs, it is necessary to increase the level of disclosure, introduce securities pricing regulation and make structural decisions for the whole market.

More than half Ukrainians knew nothing about 3rd Level of Pension System. Only 6% of respondents said they were well aware of Level 3 of pension system and 34% were somewhat aware of such a system. 57% of respondents said they were unable to save for retirement, including 62% of female and 52% of male. Only 24% of respondents said they had savings. We can make a conclusion that low level of knowledge about NPF's in one of the main reasons why people don't trust 3rd private pension funds.

In order to facilitate the development of non-state pension insurance in Ukraine, a system of guarantees related to the provision of control and supervision by the state has been introduced at the legislative level. The focus is also on mutual control between financial entities that invest in the structure of the non-state pension fund and maintain information transparency of the funds. Based on the above, today the working population.

Six main steps to improving Private Pension system:

- Improvements in governance,
- Risk management focus,
- Pension design, towards a DC model,
- Pressure for talent,
- New value chain,
- ESG and stranded assets.

The government should review the variant for guaranting the minimum pension of NPF. And support promotion of NPF's in different communication channels (tv, newspapers, Internet).

REFERENCES

1. Аванесова І. А. Постулати захисту прав споживачів фінансових послуг / І. А. Аванесова // Вісник Київського національного торговельно-економічного університету. - 2012. - № 1. - С. 56-65.
2. Вітка Ю.В. Недержавні пенсійні фонди: особливості цивільно-правового статусу: Автореф. дис. ... канд. юрид. наук: 12.00.03[Текст] / Львів. нац. ун-т ім. І. Франка. – Л., 2018. – 16 с
3. Дмитренко Г. В. Проблеми захисту прав споживачів фінансового ринку / Г. В. Дмитренко // Економіка та держава. - 2013. - № 11. - С. 90-93. - Режим доступу: http://nbuv.gov.ua/UJRN/ecde_2013_11_23
4. Зубик С.П. Розвиток недержавного пенсійного забезпечення в Україні / С.П. Зубик // Економіка і прогнозування. - 2017. - № 3. - С. 31–50.
5. Кузнєцова А. Я. Місце і роль недержавних пенсійних фондів на фондовому ринку України / А. Я. Кузнєцова // Вісник Української академії банківської справи. –
2009. – No 2. – С. 7–13.
6. Михайлов А. В. Недержавні пенсійні фонди: сьогоднішній погляд у майбутнє / А. В. Михайлов, О. Й. Ткач. – К.: СПД Савчина, 2012. – С. 244.
7. Романовська Ю.А. Фінансова грамотність населення в Україні / Ю.А. Романовська, Економічний вісник Запорізької державної інженерної академії. - №2-2 (08). - 201.
8. Свиридовська А. О. Інвестиційна діяльність недержавних пенсійних фондів в Україні / А. О. Свиридовська // Наукові праці НДФІ. - 2016. - Вип. 4. - С. 148-157. - Режим доступу: http://nbuv.gov.ua/UJRN/Npndfi_2016_4_14.
9. A History of Public Sector Pensions in the United States / Robert L. Clark, Lee A. Craig, and Jack W. Wilson, - University of Pennsylvania, 2005
10. Analytical Review of the Asset Management Market in Ukraine Non-State Pension Funds [Electronic resource]. - Access mode: http://www.uaib.com.ua/eng/analituaib/publ_ici_quart/278928.html

11. Antolin, P. Pension Fund Performance / OECD Working Papers on Insurance and Private Pensions, № 20, OECD publishing. - 2008.

12. Antolin, P. and Fuentes O., 2012, Communicating Pension Risk to DC Plan Members, OECD; IOPS/OECD International Seminar, held on 26 February 2016 in Rome, www.iopsweb.org. - 2012.

13. Annual Survey of large pension funds and public pension reserve funds. Report on pension funds' long-term investments. – 2013 [Electronic resource]. - Access mode: http://www.oecd.org/daf/fin/private-pensions/LargestPensionFunds2012Survey.pdf.

14. Chai, H., and J. Kim. 2018. "Demographics, Pension Systems, and the Saving-Investment Balance." IMF Working Paper 18/265 [Electronic resource]. - Access mode: https://www.imf.org/en/Publications/WP/Issues/2018/12/07/Demographics-Pension- Systems-and-the-Saving-Investment-Balance-46384 15.

15. Clark G.L. and Monk A.H.B., The "crisis" in defined-benefit corporate pension liabilities Part I: scope of the problem. Pensions: An International Journal, 12(1), 43-54, 2006.

16. Concept of Protecting the rights of non-banking consumers financial services in Ukraine from September 3, 2009 № 1026-р.

17. Demographics, Pension Systems and the Saving- Investment Balance / Hua Chai and Jun II. Kim. – 2018. – P.21.

18. Department for Work & Pensions, Better workplace pensions: Further measures for savers / March 2014. [Electronic resource]. - Access mode: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/298436/better-workplace-pensions-march-2014.pdf

19. Department for Work & Pensions, Pensions Dashboards / December 2018. [Electronic resource]. - Access mode: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/760659/pensions-dashboards-working-together-for-the-consumer.pdf

20. Finserraas, H. Jakobsson, N., Does information about the pension system affect knowledge and retirement plans? Evidence from a survey experiment / Journal of Pension Economics and Finance, - № 13 (03), - 2014, P. 250-271.

21. Global Pension Assets Study 2019 / Willis Towers Watson [Electronic resource]. - Access mode: https://www.next-finance.net/IMG/pdf/global-pensions-asset-study-2019.pdf

22. Gonzalez T.A. Pension fund equity performance: patience, activity or both? / T.A. Gonzalez, I.V. Lelyveld and K. Lucivjanska // № 606. - 2018. - p.32.

23. Gordon L Clark Pension Fund Capitalism: A causual analysis Pension Assets Study 2019 / Willis Towers Watson [Electronic resource]. - Access mode: https://ora.ox.ac.uk/catalog/uuid:be2bf2f2-596d-4e46-bd31-c42448833292/download_file?file_format=pdf&safe_filename=PFC.pdf&type_of_work=Journal+article

24. Hinz R. Evaluating the Financial Performance of Pension Funds / R. Hinz, H. P. Rudolph, P. Antolín, and J. Yermo [Electronic resource]. - Access mode: https://openknowledge.worldbank.org/bitstream/handle/10986/2405/527090PUB0pens101Official0Use0only1.pdf?sequence=1

25. How to accumulate a pension or what is a non-state pension fund. - 2019 / [Electronic resource]. - Access mode: https://hromadske.ua/posts/yak-nakopichiti-pensiyu-abo-sho-take-nederzhavnij-pensijnij-fond

26. John C. Bogle, The Little Book of Common Sense Investing: The Only Way to Guarantee Your Fair Share of Stock Market Returns, John Wiley & Sons, Inc., 2007, p. 41.

27. Law of Ukraine On Mandatory State Pension Insurance, on the basis - 2427-VIII, 2476-VIII, from 2003.

28. Law of Ukraine On Non-State Pension Provision, on the basis - 2581-VIII, from 2003.

29. Law of Ukraine On Pension Provision, on the basis - va02p710-19, from 1992.

30. Life Expectancy by Country 2019 / World Population Review [Electronic resource]. - Access mode: http://worldpopulationreview.com/countries/life-expectancy-by-country/

31. Lightstone K. Defined-benefit Pension Plans: Are They as Good as They Seem? / K. Lightstone, T. McFadden, L. Kocum / Universal Journal of Accounting and Finance 6(3): 83-91, 2018.

32. National Association of Non-State Pension Funds of Ukraine and Administrators of Non-State Pension Funds [Electronic resource]. - Access mode: https://www.napfa.com.ua.

33. National Bank of Ukraine [Electronic resource]. - Access mode: https://www.bank.gov.ua

34. National Commission for the State Regulation of Financial Services Markets [Electronic resource]. - Access mode: https://www.nfp.gov.ua.

35. National Securities and Stock Market Commission (NSSMC) [Electronic resource]. - Access mode: https://www.nssmc.gov.ua.

36. New capital: Ukrainian insurers want to regain confidence, 2017 - [Electronic resource]. - Access mode: https://www.dw.com/uk/новий-капітал-українським-страховикам-хочуть-повернути-довіру/a-37585805.

37. Non-Governmental Pension Funds. Yes or No / Vox Ukraine. - 2019 [Electronic resource]. - Access mode: https://voxukraine.org/en/non-governmental-pension-funds-yes-or-no/

38. Non-State Pension Insurance in Ukraine 2019 [Electronic resource]. - Access mode: http://www.fst-ua.info/wp-content/uploads/2019/07/Voluntary_Private_Pensions_in_Ukraine-Assessment_jul2019_ua.pdf.

39. OECD Core Principles of Private Pension Regulation [Electronic resource]. - Access mode: http://www.oecd.org/pensions/Core-Principles-Private-Pension-Regulation.pdf.

40. OECD Pensions at a Glance 2017 [Electronic resource]. - Access mode: https://www.oecd-ilibrary.org/social-issues-migration-health/pensions-at-a-glance-2017_pension_glance-2017-en;jsessionid=Kb5Z1dgPFMbIWNvJwlyynzlB.ip-10-240-5-54.

41. Order of the Cabinet of Ministers of Ukraine of 29.03.2017 “On approval of the Concept of state policy in the field of consumer rights protection for the period up to 2020”.

42. Order of the National Bank of Ukraine of 18.06.2015 № 391 “On approval of the Comprehensive Program for Development of the Financial Sector of Ukraine until 2020”.

43. Palkina N. The role of supervision related to consumer protection in private pension funds / N. Palkina // IOPS Working Papers. – 2016. – p. 67.

44. Pension Funds of Ukraine [Electronic resource]. - Access mode: https://www.pfu.gov.ua/

45. Ptashchenko, L.O., Topol, V.V. Document Formation of a balanced model of ukrainian nongovernment pension insurance system, Problems of Economics, 155 (5). – 2014. – p. 528-537.

46. Public Opinion, Retirement Reform and Attitudes to Retirement in Ukraine, USAID Project Financial Sector Transformation. – 2018.

47. Regulation EU №1286/2014 of the European Parliament and of the Council. - November 2014.

48. Sabitova N. Non-State Pension Funds in the Retirement Insurance System of the Russian Federation: Trends and Prospects / N. Sabitova, S. Kulakova I. Sharafutdinova // Procedia Economics and Finance. - № 27, 2015, P. 224-229.

49. The DB landscape 2018 [Electronic resource]. - Access mode: https://www.thepensionsregulator.gov.uk/-/media/thepensionsregulator/files/import/pdf/db-pensions-landscape-2018.ashx.

50. The Future of Saving: The Role of Pension System Design in an Aging World // D. Amaglobeli, H. Chai, E. Dabla-Norris, K. Dybczak, M. Soto, and A.F. Tieman. – 2019. – p.47.

51. The International Monetary Fund (IMF) [Electronic resource]. - Access mode: https://www.imf.org/en/

52. The old schemes. Where did the NBU Pension Fund money go? - 2016 - [Electronic resource]. - Access mode: https://finance.liga.net/bank/interview/starye-shemy-kuda-propali-dengi-pensionnogo-fonda-nbu.

53. The State Statistics Service of Ukraine [Electronic resource]. - Access mode: http://www.ukrstat.gov.ua.

54. The UAIB Board approved the proposals for the Strategy development of the financial sector by 2025 [Electronic resource]. - Access mode: http://www.uaib.com.ua/news/weekly_news/278888.html

55. The Ukrainian Association of Investment Business (UAIB) [Electronic resource]. - Access mode: http://www.uaib.com.ua/.

56. These Are the World's Best (and Worst) Pension Systems [Electronic resource]. - Access mode: https://www.bloomberg.com/news/articles/2019-10-20/these-are-the-world-s-best-and-worst-pension-systems

57. TOP 25 NPF by assets [Electronic resource]. - Access mode: http://finbalance.com.ua/news/top-25-nederzhavnikh-pensiynikh-fondiv-za-obsyahom-aktiviv.

58. Willis Towers Watson (2017). Global Pension Asset Study / 2017. – p. 19 [Electronic resource]. - Access mode: http://www.next-finance.net/IMG/pdf/global-pensions-asset-study-2017.pdf.

59. World Bank Group. Good Practices for Financial Consumer Protection, 2017. [Electronic resource]. - Access mode: https://www.worldbank.org/en/topic/financialinclusion/brief/2017-good-practices-for-financial-consumer-protection

60. World Economic Outlook Database [Electronic resource]. - Access mode: https://www.imf.org/en/Publications/SPROLLs/world-economic-outlook-databases#sort=%40imfdate%20descending.

61. NEST's golden rules of communication, 2018 FCA.

62. Net pension replacement rates [Electronic resource]. - Access mode: https://data.oecd.org/pension/net-pension-replacement-rates.htm.

63. Pension Markets in Focus 2018 [Electronic resource]. - Access mode: http://www.oecd.org/daf/fin/private-pensions/Pension-Markets-in-Focus-2018.pdf.

64. Руснак С.О. Удосконалення розвитку недержавних пенсійних фондів як соціально-економічної системи / С.О. Руснак, - Агросвіт, №24, - 2015.

APPENDICES

Appendix A

Average effective age of labour-market exit and normal pensionable age in 2016*

	Men		Women	
	Effective	**Normal**	**Effective**	**Normal**
Korea	72	61	72,2	61
Mexico	71,6	65	67,5	65
Chile	71,3	65	67,7	60
Japan	70,2	65	68,8	65
Iceland	69,7	67	67,2	67
Israel	69,3	67	66,5	62
Portugal	69	66,2	64,9	66,2
New Zealand	68,4	65	66,4	65
Ireland	66,9	66	63,5	66
United States	66,8	66	65,4	66
Norway	66,2	67	64,4	67
Turkey	66,1	60	66,3	58
Switzerland	66	65	64,3	64
Canada	65,9	65	63,1	65
Sweden	65,8	65	64,6	65
Australia	65,2	65	63,6	65
OECD	65,1	64,3	63,6	63,4
Estonia	64,8	63	65,3	63
United Kingdom	64,6	65	63,2	63
Denmark	63,7	65	63,1	65
Hungary	63,6	63	60,7	60
Netherlands	63,5	65,5	62,3	65,5
Germany	63,3	65	63,2	65
Finland	63,2	65	62,5	65
Poland	62,6	66	59,8	61
Czech Republic	62,5	63	60,8	62,3
Spain	62,2	65	62,6	65

Continuation of *Appendix A*

Italy	62,1	66,6	61,3	65,6
Austria	62	65	60,6	60
Belgium	61,3	65	59,7	65
France	60	61,6	60,3	61,6

* Developed by author by source [40].

Appendix B

Non-state pension funds by country and form of provision

Country	Year of foundation	Mandatory		Voluntary		DB vs. DC	
		Occupational	Personal	Occupational	Personal	% DB	% DC
Argentina	1994		√			0%	100%
Australia	1992	√				10%	90%
Bolivia	1997		√			0%	100%
Brazil	1977			√		0%	100%
Canada	1965			√		84%	16%
Chile	1981		√			0%	100%
Colombia	1994		√			0%	100%
Costa Rica	2001		√		√	0%	100%
Czech Republic	1994				√	0%	100%
El Salvador	1998		√			0%	100%
Estonia	2002		√			0%	100%
Hong Kong	2000	√				0%	100%
Hungary	1998		√		√	0%	100%
Japan	1944			√		99%	1%
Kazakhstan	1998		√			0%	100%
Mexico	1998		√			0%	100%
Netherlands	1952	√				95%	5%
Peru	1993		√			0%	100%
Poland	1999		√			0%	100%
Sweden	1967/2000	√		√		90%	5%
Ukraine	2003			√		0%	100%
United Kingdom	1834			√		79%	21%
United States	1947			√		71%	29%
Uruguay	1996		√			0%	100%

* Developed by author by source [11].

Appendix C

Asset allocation of pension funds in selected investment categories in 2018*

	Equity	Bills and bonds	Cash and deposits	CIS	Other
Poland	85	9,2	5,7	0	0,1
Hong Kong, China	57,5	24,3	13,6	0	4,7
Australia	44,9	15,3	14,2	0	25,6
Netherlands	44,1	51,1	3,2	0	1,6
Lithuania	43,9	46,9	7,3	0	1,8
Peru	42,3	46,9	2,8	0	8
Finland	41,4	31,1	4	0	23,5
Chile	39	60,9	0,3	0	0
Iceland	37,3	45,5	4,3	0	12,8
Austria	32,9	45,4	7,9	0	13,8
New Zealand	31,8	24,2	7,9	35	1,2
United States	31,6	28,1	0,5	27,1	12,8
Canada	30,2	31,3	4,1	0	34,4
Israel	24,7	50,5	6,1	5,8	12,9
Denmark	21,3	59	0,2	2,2	17,3
Italy	18,9	44,6	5,8	0	30,7
Portugal	18,1	59,5	6,9	0	15,6
Mexico	16,1	80,5	0,7	0	2,6
Spain	13,1	48,5	9,7	22,3	6,4
Greece	11,9	54,7	12,6	19,1	1,8
Turkey	11,7	47,4	19,3	0	21,6
United Kingdom	9	30,2	2,2	26,6	31,9
Serbia	8,6	83,4	7,9	0	0
Japan	8,2	31,5	8,7	0	51,6
Nigeria	7,9	80,2	8,6	0	3,2

Continuation of *Appendix C*

Russia	7,7	75,3	13,6	0	3,3
Hungary	7,5	61,8	3,8	25,1	1,8
Luxembourg	6	58,4	9	0	26,6
Germany	5,4	49,1	4,4	0	41,1
Maldives	5,4	90,5	4,1	0	0
Egypt	2,2	68,9	24,9	0	4
Ukraine	1,6	10,9	36,9	0	50,6
Czech Republic	0,7	75,9	20,5	2,3	0,6

Appendix D

Analytics of NPF in Ukraine in 2016-2018 years*

Indicators	As of 30.06.2016	As of 30.06.2017	As of 30.06.2018	Growth rates 2017/2016, %	Growth rates 2018/2017, %
Number of concluded pension contracts, thousand	60,7	66,5	63,7	9,6	-4,2
The total number of NPF participants, thousand people	831,2	838,0	846,2	0,8	1,0
Total value of NPF assets, mln. UAH	2000,3	2248,7	2536,7	12,4	12,8
Pension contributions, total, mln. UAH	1847,8	1945,6	1937,7	5,3	-0,4
including:					
- from individuals	83,0	110,0	143,6	32,5	30,6
- from individual entrepreneurs	0,2	0,2	0,2	0,0	0,0
- from legal entities	1763,9	1834,6	1793,4	4,0	-2,3
Pension paymentsmln., UAH	580,2	685,2	753,4	18,1	10,0
Number of participants receiving retirement benefits, thousand people	79,7	83,2	80,2	4,4	-3,6

The amount of investment income, mln. UAH	917,6	1227,3	1536,0	33,8	25,2
Income from investing in assets of a NPF, mln. UAH	698,0	956,4	1240,0	37,0	29,7
Amount of expenses reimbursed from retirement assets, mln. UAH	219,6	270,9	296,8	23,4	9,6
Economically active population (EAP), thousand people	17955,1	17854,4	17939,5	-0,6	0,5
Share of NPFs participants from EAP	4,6	4,7	4,7	-	-

* Developed by author by source [34].

Appendix E

Comparison assets of Non-State Pension Funds in Ukraine in 2017-2018 years, mln UAH*

Assets	31.12.2017	31.12.2018	Specific weight in 2017, (%)	Specific weight in 2018, (%)	Increase as of 31.12.2018/ as of 31.12.2017, (%)
Cash placed in deposit (deposit) bank accounts	1 083,30	985,5	43,9	35,9	-9
Securities, the income of which is guaranteed by the CMU	1 004,90	1 263,50	40,8	46,0	25,7
Bonds of enterprises issued by residents of Ukraine	202,4	298,6	8,2	10,9	47,5
Shares of Ukrainian issuers	11,3	43,8	0,5	1,6	287,6
Real estate	62,6	47,3	2,5	1,7	-24,4
Banking metals	10,1	9,8	0,4	0,4	-3
Current account funds	22,2	18,5	0,9	0,7	-16,7
The assets are not prohibited by the legislation of Ukraine	24	26,2	1,0	0,9	9,2
Receivables	41,8	48,3	1,7	1,8	15,5
Shares of foreign issuers	3	3,7	0,1	0,1	23,3
Total value of assets	2 465,60	2 745,20	100,0	100,0	11,3

* Developed by author by source [34].