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**PERSPECTIVES OF KAZAKHSTAN'S
PENSION SYSTEM DEVELOPMENT**

Abstract. In this study, the theoretical and methodological aspects of the functioning of the pension system in modern conditions, the basic models of pension provision and pension schemes, taking into account the world experience, are analyzed, the main trends in the development and reform of the pension system in the Republic of Kazakhstan with an assessment of the main performance indicators of the Unified Accumulative Pension Fund. The main problems in the development of the pension system of Kazakhstan are revealed, the efficiency of managing pension assets is estimated from the perspective of the safety of pension savings and ensuring their profitability through investing in financial instruments. Areas of improvement of strategic investment management of pension savings in the context of the need to fulfill social obligations to participants in the pension system of the Republic of Kazakhstan were defined. Based on the results of the study, measures are proposed to stimulate the activity of the population in the funded pension system, taking into account the current demographic trends, the results of the forecast of the structure of pension incomes are presented depending on the size of the solidarity, base and accumulation components in realistic scenario implementation.

Keywords: pension provision, pension insurance, pension fund, pension savings, investment.

Currently, many countries of the world community are adapting the pension system to changing conditions. In turn, in the Republic of Kazakhstan, the pension system was reformed and its basic elements were modernized. Accumulation and distribution pension systems have become mutually complementary. In his Message to the People of Kazakhstan “New Opportunities for Development in the Conditions of the Fourth Industrial Revolution” dated January 10, 2018, the President of the Republic of Kazakhstan noted the particular importance of creating a fair social security system and enhancing the relationship between work experience and the size of benefits.

The pension system in the Republic of Kazakhstan occupies a leading place in the system of social protection of the population and affects the interests of more than 1.5 million pensioners and about 8 million participants in the country's accumulative pension system. At the same time, a number of problems remain, the solution of which will allow creating a stable economic, organizational, regulatory environment for the further improvement of the pension system, ensuring the implementation of its most important principles.

In this regard, there is a need to improve the pension system of the Republic of Kazakhstan, its institutional framework, as well as the transition to the formation of long-term targets for the development of pensions.

Understanding that in the modern period of economic development the role of the state in the functioning of the country's pension system is increasing in the context of significant changes in demographic, economic and other factors is the key to the stability and well-being of the social sphere. Organizing and ensuring the effective functioning of the pension system is the object of active research in connection with the need to reform and improve it.

Various aspects of the problem were considered in the works of domestic and foreign scientists, which will be the scientific and methodological basis for developing the topic, achieving the goal and objectives of the study.

Problems of ensuring the stability of the pension system in conditions of increasing life expectancy of the population are investigated in the works of Simonovits Andras (2015)[1], Knell Markus (2018)[2].

Issues of post-crisis modification of the pension systems of countries and the impact on the size of pensions of various factors are examined in the studies of Chybalski Filip (2013)[3], Chlon-Dominczak Agnieszka (2018)[4] and others.

A study of the methods of forming the state pension, the efficiency and sustainability of pension systems based on the state pension is presented in the works of Budko S. A., Fedotov D.Yu. (2017)[5], Cordoba-Bueno M., Fernandez-Aviles G., Garcia-Centeno M.C. (2016)[6].

The article of Modrakova Eva, Hetes Jozef and Soltes Michal (2014) [7] discusses the advantages and disadvantages of the third level of the pension system - pension insurance. In turn, the study of Pandurics Anett, Szalai Peter (2017) [8] analyzes the role of voluntary professional and voluntary pension contributions in a multilevel pension system, substantiates the need to encourage annuity products. The definition of the main determinants of pension contributions based on an empirical analysis of data from 53 countries was carried out in the works of Tuesta David (2014) [9].

The study of pension insurance modeling systems with separate proposals for their optimization was carried out in the works of Mitchell Olivia S. (2015) [10], Geczy Christopher C. (2015) [11]. Separate areas for improving the system of financial regulation of pensions based on the use of a matrix combining experimental and statistical data were proposed in the study Tanaka Shuji (2016) [12]. Challengz-Bedoya Luis (2017) [13] explored the issues of risk reduction during the accumulation of pension assets based on the assessment of various scenarios for the development of the pension system.

The socio-economic content of the concept of "pension system", is considered in detail by M.L. Zakharov. (2016) [14], Kutsenko V.V. (2013) [15], Tuchkova E.S. (2013) [16] etc. Features of the development and reform of the pension system of Kazakhstan are investigated in the works of M. Amanbayev. (2010) [17], A.T. Mergenbaeva (2016) [18], Zhantaeva A.A. (2016) [19], A. Bakhtgaliyeva et al. [20]

It should be noted that at the present stage of development of scientific thought in Kazakhstan, fundamental research of an integrated nature is needed. The investigation of the issues of improving the pension system is fairly new both for theory and for the practice of socio-economic development of the Republic of Kazakhstan.

Based on the study of theoretical aspects and the generalization of various approaches to the consideration of the concept of "pension system", it is possible to give the following definition. The pension system, in our opinion, is a set of socio-economic relations about the formation, management and use of special funds of funds intended for the payment of pensions to people who have reached a pension return or have lost their ability to work.

In most countries of the world, pensions are built on the basis of a combination of two models: government distribution (joint) and non-government (funded). The fundamental difference between these pension schemes is in the methods of financing them.

In the distribution system, the size of the pension is directly dependent on the length of work experience and the average salary. In each country, the requirements for the minimum length of service or the procedure for determining the average wage are different. The pension is paid in the form of life annuity with full or partial indexation (which depends on the legislation of the country).

It can be noted that the advantage of the distributive method of financing pensions is a certain ease of management. In addition, due to the operational mechanism of the use of funds, this pension scheme is not affected by inflation and other external factors. There is no need for additional costs for the preservation and maintenance of the pension capital, as well as the risk of its full or partial loss or reduction of its real value.

At the same time, the use of this model has several disadvantages: the difficulty of providing stability of the system in the face of declining number of employed population in relation to pensioners, elements of equalization are present, there is no principle of election, the possible development of social dependency, etc. Therefore, it is impossible to create an equitable system for calculating accrued pension rights and, accordingly, the calculation of an adequate amount of long-term state pension obligations in the form of a life-long pension.

Traditional distribution systems play a dominant role in the pensions of most Western European countries. Thus, in Belgium, such a system covers about 70% of pensioners. In Germany - 82% of employees. Moreover, 63% of the funds required for the operation of distribution mechanisms come from insurance contributions, and 37% from the state budget. In France, the distribution system accounts for 89% of the total expenditure on pensions [21, p. 50].

The system of pension deductions from current income has another internal disadvantage, especially evident in recent decades - it cannot cross borders. The world every day becomes more mobile, which is especially important for Europe, where it assumes the existence of a single labor market, and the further isolation of national pension programs becomes an obstacle [17, p.57].

Considering the funded model of the pension system, it should be noted that its activity is based on the payment of pensions from the accumulated monetary fund created specifically for this purpose. In the accumulative pension system, the rights of investors are taken into account more strictly than the rights of claim in the general traditional distribution systems, their formation is more transparent, and the risks are, as a rule, more diversified. The participant of the accumulative pension system at any time can receive information on the total amount of their contributions and accrued interest. This increases the fairness in the pension insurance process, since the future pension will reflect the personal contribution of a citizen to the formation of his capital and rights.

However, in the operation of this system, especially based on fixed contributions, the insured himself bears the risks of a wrong choice of the company, investment portfolio, erroneous ideas about the level and prospects of employment, income levels and others. The influence of external factors on the functioning of a funded pension system, such as the level of economic development, its growth rate, investment climate, inflation rate and others, is increasing. This model of pension provision is relatively complex in organization, it requires precise and accurate regulation.

The concept of a funded pension system became widespread in the 1980s of the 20th century in the countries of Latin America and a number of developing countries from other continents. Chile is the first country in the world to introduce a system of mandatory individual retirement savings. Formed since 1981, it proved its sustainability and viability during crisis shocks [22, p. 38]. The Chilean pension system, consisting of two components - the accumulation of pension savings and the payment of pensions, was significantly upgraded with the introduction of the SCOMP electronic database [23, p. 391]. The basis of reforming the pension system of Kazakhstan was taken by the experience of Chile in the formation of pension savings.

Thus, the distribution and savings pension models have their own advantages and disadvantages. None of the systems can be recognized as uniquely effective for achieving the main objectives of the pension policy in modern conditions. In many countries, funded pension systems complement distributional and voluntary programs.

According to the World Bank, the most preferred is a multi-pillar pension system with the introduction of mandatory savings elements. It implies the existence of several levels of social protection of the population: social assistance to the poor at the expense of the state budget, the state mandatory pension plan (with fixed payments or conditionally funded), the mandatory corporate or personal pension plan, the voluntary corporate or personal pension plan, access to informal (family)) support, other formal social programs [24].

It can be agreed that, within the framework of a mixed pension system, the state pension provision financed according to the distribution principle solves the problem of protecting the elderly from poverty by guaranteeing a minimum pension. On the other hand, the main is the second, cumulative level, which allows pensioners to maintain a decent standard of living after retirement. The possibility of voluntary savings allows an individual to independently determine the desired amount of consumption in old age and form the corresponding savings.

The main advantage of a multi-level system is the diversification of risks. This system reduces risks arising from uncertainties in the economy and politics (government or market crises, changes in relative prices of labor and capital) by diversifying management types (public and private), funding sources (capital and labor), and investment strategies (equity, bonds, international and domestic investments).

The current state of the pension system was laid down with the adoption of the Law of the Republic of Kazakhstan "On Pension Security in the Republic of Kazakhstan" dated June 20, 1997 [25]. The main

thing in the pension reform was the gradual transition from a distributive pension system based on the solidarity of generations to a funded pension system, which provides for individual pension savings in accumulative pension funds. The pension system began to be based on three levels: the preservation of the solidarity system, the formation of individual pension savings by each citizen due to the transfer of pension contributions held in a mandatory manner in the amount of 10% of salary, and the possibility of voluntary and voluntary professional pension contributions to form an additional pension.

In order to modernize the pension sphere of Kazakhstan and solve existing problems, in 2018 significant changes were made to the pension system. The functioning of the accumulative pension system of the republic in accordance with the innovations can be reflected in the form of the following scheme (Figure 1).

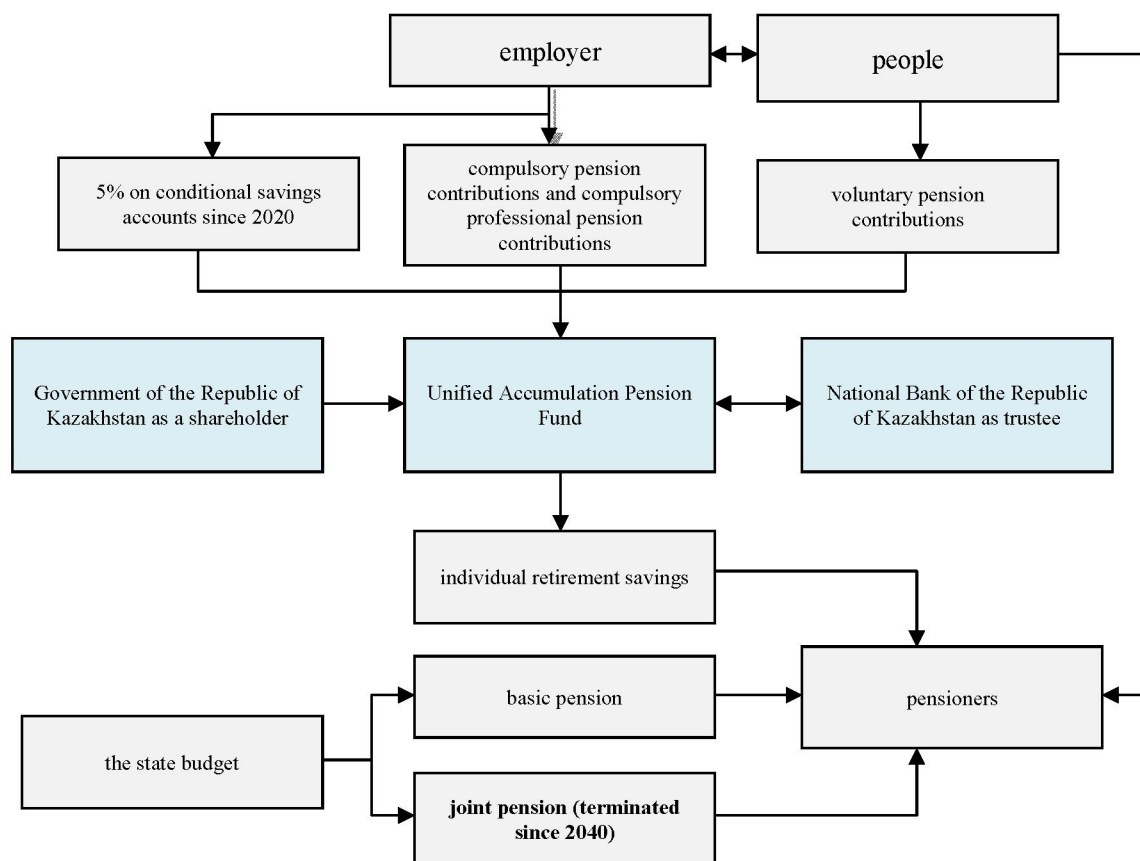


Figure 1 - Formation of a cumulative pension provision in Kazakhstan.

Note - compiled by the authors

In order to reduce poverty among pensioners and stimulate citizen participation in the pension system, the mechanism for assigning state basic pensions has been improved. The pension return of women has been increased to 63 years, with a phased increase from 2018 to 2072 (every six months). The frequency and procedure for calculating pension payments from the UAPF has been changed. Starting from 2020, another component will be added to the pension scheme - conditionally-cumulative, which assumes that all employees, without exception, regardless of their working conditions, will be paid by the employer 5% to the conditional-cumulative accounts of workers.

Thus, an adequate pension will consist of three components: payments from the state, the employer, and individual pension savings.

Currently, in Kazakhstan, the only organization engaged in attracting mandatory pension contributions, mandatory professional pension contributions and voluntary pension contributions is the Unified Accumulation Pension Fund (UAPF). The equity capital of the UAPF as of 01/01/2019 amounted to KZT 134.2 billion [26].

For the period 2016-2018 there is an increase in the number of accounts of contributors (recipients) on compulsory pension contributions - on 378543 accounts, on voluntary pension contributions - on 8758 accounts, on mandatory professional pension contributions - on 106637 accounts (Table 1).

Table 1 - Dynamics of pension savings of depositors in the UAPF

Indicator	01.01.2016	01.01.2017	01.01.2018	01.01.2019	Change (+,-)
on mandatory pension contributions:					
- number of depositors accounts	9474689	9380059	9431422	9853232	+378543
- pension savings, billion tenge	5762,0	6582,9	7636,6	9178,3	+3416,3
on voluntary pension contributions:					
- number of depositors accounts	39045	36517	35473	47803	+8758
- pension savings, billion tenge	1,7	1,7	1,7	1,8	+0,1
for mandatory professional pension contributions:					
- number of depositors accounts	372889	400427	431888	479526	+106637
- pension savings, billion tenge	64,5	100,7	142,4	197,4	+132,9
Note - compiled on the basis of statistical data of the NB RK [27, 28]					

Analyzing the amount of pension savings for the period 2016-2018, it should be noted their positive dynamics. The total amount of pension savings, an increase over the period 2016-2018. by 33.5%, as of January 1, 2019 amounted to 9377.6 billion tenge. Including the total receipt of pension contributions increased by 29.8% to KZT 6440.5 billion. Net investment income (minus commissions) from investing pension assets credited to the accounts of contributors (beneficiaries) as of the beginning of 2019 amounted to KZT 3,521.7 billion.

The structure of pension savings of contributors to the UAPF is shown in Figure 2.



Figure 2 - Structure of pension savings, contributions and "net" investment income of contributors (beneficiaries) of the UAPF

Analyzing the amount of pension payments, it should be noted that they as of 01.12.2018 amounted to KZT1207.5 billion, having increased by 61.8% compared with the beginning of 2016. Transfer of pension savings of beneficiaries to insurance organizations in accordance with the pension agreement annuity implemented for a total of 192.2 billion tenge at the beginning of December 2018, i.e. there was an increase of 42.3% over the analyzed period.

The share of pension savings in GDP by the beginning of 2018 reached 14.7% against 14.1% as of 01.01.2016, the share of pension contributions in GDP was 11.0%, increasing by 0.4%, and the ratio "Net" investment income to GDP was 5.4%, an increase of 1.2%. In general, the overall positive trend allows us to predict a significant increase in the investment role of the pension sector in the near future.

The investment policy of the UAPF own assets is quite conservative and has strict requirements for issuer ratings, restrictions on the amount of investments in financial instruments of one issuer. As a result, the safety of own capital of UAPF is ensured. The list of authorized financial instruments for the purchase is limited and mainly consists of Kazakhstani state and foreign securities, bonds of national holdings and deposits in the National Bank of Kazakhstan. In accordance with the trust management agreement, the investment management of the UAPF's own portfolio is carried out by the National Bank of the Republic of Kazakhstan.

In accordance with the structure of the cumulative investment portfolio of the UAPF, the largest share falls on government securities of the Republic of Kazakhstan - 46.2%, the current value of which amounted to 3.6 trillion. tenge In second place in terms of the amount of invested pension assets are bonds of second-tier banks of the Republic of Kazakhstan, whose share in the UAPF portfolio is 16.03%. The current value of these bonds amounted to 1.24 trillion. tenge In third place in terms of volume are government securities of foreign countries. Their cost amounted to 948.84 billion tenge, and the share in the portfolio - 12.2%.

The results of the analysis of the current state of the pension system in the Republic of Kazakhstan can be presented in the form of a SWOT analysis (Table 2).

Table 2 - SWOT-analysis of the pension system of the Republic of Kazakhstan

Strengths	Weak
<ul style="list-style-type: none"> - the creation of a multi-level pension system, including both joint and accumulative component; - provision of guaranteed basic pension; - state guarantee, ensuring the safety of pension contributions and their profitability at a level not lower than inflation; - preservation of benefits for a certain category of citizens; - accrual of basic pension depending on the length of service, taking into account pension contributions; - reducing the amount of commission from pension assets due to a reduction in administrative and other expenses of the UAPF; - reduction of bad debts on investment activities of UAPF; - the distribution of pension assets is carried out in accordance with the UAPF Investment Declaration 	<ul style="list-style-type: none"> - irregular participation of citizens in the accumulative pension system (self-employed, rural population, and other categories); - low investment return on pension savings; - insufficient level of development of the system of voluntary pension savings; - lack of attractive financial instruments for investing pension funds; - the lack of mechanisms for the influence of investors on the investment policy of the Unified Accumulating Pension Fund; - placing most of the pension assets in government securities of the Republic of Kazakhstan, which indicates a low rate of return on pension investments
Opportunities	Threats
<ul style="list-style-type: none"> - introduction of a conditional accumulation system; - growth of pension savings of the population on individual pension accounts; - creation of new conditions for providing the economy with long-term resources; - Increasing the transparency of the UAPF activities will contribute to increasing public confidence in the pension system. - modification of the internal control and risk management system will increase the efficiency of UAPF activities 	<ul style="list-style-type: none"> - decrease in the yield of the accumulative pension system; - social tension in society; - reducing the motivation of the population to form pension savings; - pension savings may not be sufficient to receive a normal pension in the future; - the concentration of pension assets in the UAPF does not contribute to risk diversification
Note - compiled by the authors	

One of the central problems of the pension system is the problem of reducing the average level of pensions. At present, the average level of pensions in Kazakhstan can be estimated as close to the lower

limit of the level recommended by the International Labor Organization, which is 40% for developing countries. It should be noted that each new generation of pensioners in Kazakhstan is retiring with lower and lower (relative to salaries) pensions. Thus, the average pension of new retirees in 2017 is 12% lower than the average pension retired until 2017. This trend may further determine the social instability of the country's pension system.

The tendency to reduce the relative level of pensions is determined mainly by three factors:

- reduction of work experience (until 1998) for new generations of pensioners, which leads to a decrease in "pre-reform" pensions;
- binding of the maximum level of the "pre-reform" pension to the MCI, which is linked to the rate of inflation;
- binding of the basic pension to the minimum subsistence level, also linked to inflation [19, p. 195].

Payments from the funded component of the pension system do not yet compensate for the decrease in the average level of pensions, since the amount of pension savings is insignificant, and besides, the majority of retirees withdraw their accumulated funds immediately and simultaneously. Consequently, the funded component does not yet make a significant contribution to the formation of regular retirement income.

Interesting is Singapore's experience in solving the issues of improving the pension system of the population. In 2009, in order to increase the income of citizens after retirement, the government introduced the Lifelong Income For the Elderly (LIFE) scheme, which provides for the possibility of adapting and modifying the parameters of the pension system when socio-economic conditions change [29, p. 25].

Another serious problem of the pension system is the low level of coverage of the pension system of the working-age population. Currently, only 53% of the working-age population, or 67% of all employed, pay contributions to the pension system. According to this indicator, the Republic of Kazakhstan is at an average level for its region, but significantly lags behind developed countries.

To calculate the pension with regard to the base component, the program of the forecast UAPF pension calculator [30] was used. The input parameters for calculating the forecast are: the average wage is 148 thousand tenge, the average work experience until 1998 is 15 years with an annual decrease, the average work experience in a funded pension system is 7 years with an annual increase, the average amount of pension savings is 1 million. tenge with an annual increase of 10% of the average wage, voluntary pension contributions were not taken into account.

The obtained forecast values of pension incomes in the implementation of a realistic scenario are presented in table 3.

Table 3 - Projected values of pension income, taking into account the multi-level pension system of Kazakhstan

Indicators	Retirement year							tenge
	since 2018	since 2020	since 2022	since 2024	since 2026	since 2028	since 2030	
Value of the joint pension	49783	46465	43146	39827	36508	33189	26551	
The value of the basic pension	22062	23193	24324	25456	26587	27718	28284	
The value of the pension from the UAPF	15273	15273	17717	22794	28306	34712	41901	
The number of years until the accumulation of savings in ENPF	5 лет	8 лет	11 лет	13 лет	15 лет	15 лет	16 лет	
Total retirement income	87118	84931	85187	88077	94401	95619	96736	
Substitution rate,%	58,7	56,7	56,3	57,6	59,2	57,2	57,3	
Note - compiled according to calculations of the projected retirement calculator program								

In accordance with the calculated forecast values, the following can be noted: the value of pension income by 2030, subject to the specified conditions, will reach KZT96736 per month. At the same time, in the structure of pension income, the main share by the specified date will be occupied by pension payments from the UAPF (about 43% of the amount of pension income). The number of years until the accumulation of savings in the UAPF from 5 to 16 years also increases. The joint pension for the analyzed period will be reduced from 49,783 tenge to 26,551 tenge per month, which will amount to 27.4% of the total pension income. The value of the basic pension will gradually increase and will amount to 28284 tenge or 29.2% of retirement income by 2030. It is necessary to take into account the replacement rate, which varies within 57.2-59.2% of the salary.

The forecast values of the structure of pension incomes are presented in Figure 3, according to which the reduction in the size of the joint component of pension incomes and the increase in the funded component by 2030 can be noted.

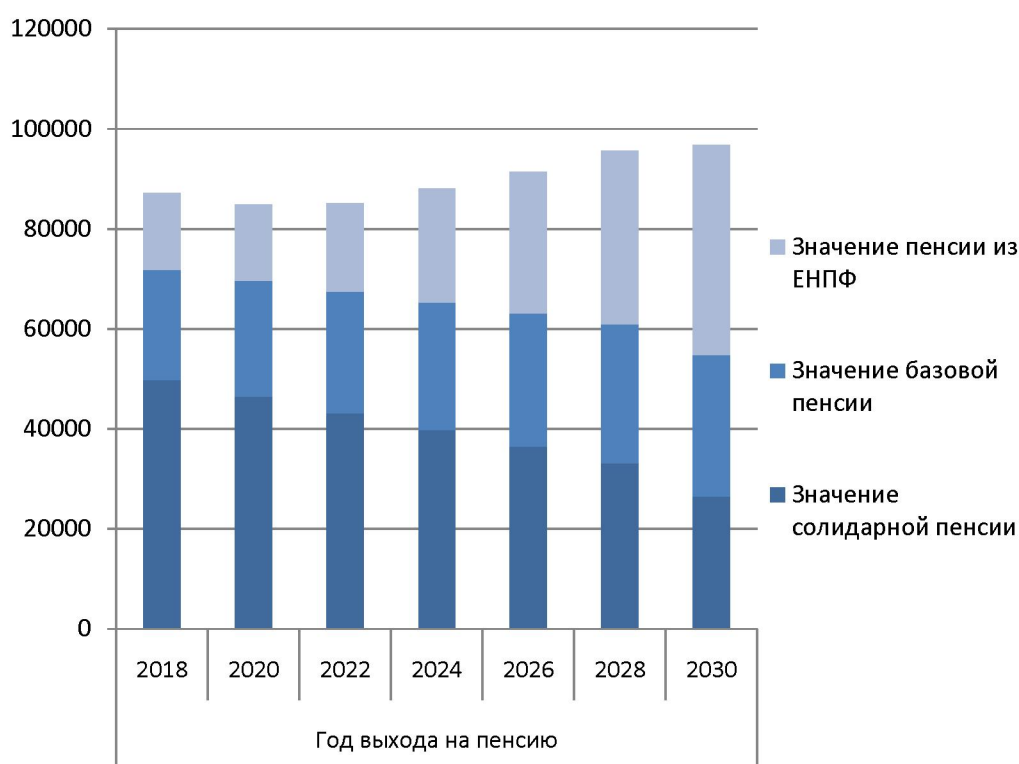


Figure 3 - Predicted values of the structure of pension income

The main factor ensuring the growth and subsequent stabilization of pensions at an adequate level is the absence of a limit on the size of pensions in the new funded component. For low and middle income groups, an important factor is also the support of the basic pension at a constant level relative to wages. Such a policy, combined with the adjustment of the base pension from other components, will ensure a sufficient degree of redistribution from high to low income groups.

Thus, one of the most important tasks of the pension system is to ensure a decent level of pensions and financial sustainability of the pension sphere, which is possible through the creation of a well-functioning pension system, gradually rethought with the introduction of certain changes. At present, developed countries are characterized by the achievement of target replacement rates, which suggests that natural restrictions have been formed on further accelerated increases in pensions amid certain financial difficulties, aggravated by unfavorable demographic trends. This necessitates the formulation of requirements for the pension system, which will ultimately determine its final configuration. At the same time, it is necessary to take into account that the pension system mechanisms are focused on solving long-term development tasks and do not require regular reconfiguration that causes tension in society.

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ҚАЗАҚСТАННЫҢ ЗЕЙНЕТАҚЫ ЖҮЙЕСІН ДАМУ ТУ ПЕРСПЕКТИВАЛАРЫ

Аннотация. Зерттеу барысында қазіргі заманғы жағдайларда зейнетақы жүйесінің жұмыс істеуінің теориялық және әдістемелік аспектілері, зейнетақымен қамсыздандыру және зейнетақымен қамсыздандырудың негізгі модельдері, әлемдік тәжірибені ескере отырып, Бірыңғай жинақтаушы зейнетақы қорының негізгі көрсеткіштерін бағалаумен Қазақстан Республикасында зейнетақы жүйесін дамыту мен реформалаудың негізгі үрдістері талданады. Қазақстанның зейнетақы жүйесін дамытудың негізгі проблемалары анықталды, зейнетақы активтерін басқарудың тиімділігі зейнетақы жинақтарының сақталуы және олардың қаржы құралдарына инвестициялау арқылы олардың кірістілігін қамтамасыз ету тұрғысынан бағаланады. Қазақстан Республикасының зейнетақы жүйесіне қатысушыларға әлеуметтік міндеттемелерді орындау қажеттілігі тұрғысынан жинақталған зейнетақы қаражатын стратегиялық инвестициялық басқаруды жетілдіру бағыттары анықталды. Зерттеу нәтижелері бойынша халықтың зейнетақы жүйесіндегі қазіргі заманғы демографиялық үрдістерді есепке ала отырып, халықтың қызметін ынталандыру бойынша шаралар ұсынылып, зейнетақы кірістерінің құрылымын болжау нәтижелері шынайы сценарийді іске асыруда ынтымақтастық, базалық және жинақтаушы компоненттердің мөлшеріне байланысты ұсынылады.

Түйін сөздер: зейнетақымен қамсыздандыру, зейнетақылық сақтандыру, зейнетақы қоры, зейнетақы жинақтары, инвестициялар

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ПЕРСПЕКТИВЫ РАЗВИТИЯ ПЕНСИОННОЙ СИСТЕМЫ КАЗАХСТАНА

Аннотация. В данном исследовании рассмотрены теоретическо-методологические аспекты функционирования пенсионной системы в современных условиях, основные модели пенсионного обеспечения и пенсионные схемы с учетом мирового опыта, проанализированы основные тенденции развития и реформирования пенсионной системы в Республике Казахстан с оценкой основных показателей деятельности Единого накопительного пенсионного фонда. Выявлены основные проблемы в развитии пенсионной системы Казахстана, дана оценка эффективности управления пенсионными активами с позиции сохранности пенсионных накоплений и обеспечения их доходности через инвестирование в финансовые инструменты. Определены направления совершенствования стратегического инвестиционного управления пенсионными накоплениями в условиях необходимости исполнения социальных обязательств перед участниками пенсионной системы Республики Казахстан. По результатам исследования предложены меры в области стимулирования активности населения в накопительной пенсионной системе с учетом современных демографических тенденций, представлены результаты прогноза структуры пенсионных доходов в зависимости от размеров солидарного, базового и накопительного компонентов при реализации реалистичного сценария.

Ключевые слова: пенсионное обеспечение, пенсионное страхование, пенсионный фонд, пенсионные накопления, инвестирование

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