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Formation of Pension Savings from Pension Insurers: Comparative Analysis and Efficiency Assessment

I.V. Terentieva, A.V. Svistunov

Murom Institute (branch) of the Vladimir State University named after A.G. and N.G. Stoletovs, Murom, Russia

ABSTRACT

The subject of the research is the formation of pension savings on compulsory pension insurance by public and private pension insurers. The paper's **relevance** comes from the lack of a conclusive solution in contemporary research to the dilemma of selecting between maintaining competition in the pension market and centralizing pension savings. **The purpose of the research** is to assess the effectiveness of the formation of pension savings for mandatory pension insurance in private pension funds in comparison with the Pension Fund of Russia, both from the point of view of the interests of insured persons and society as a whole. Research **methods** include comparative analysis and logical generalization, economic-mathematical and statistical methods, methods of financial mathematics. The information base of the study is data from the official websites of the Pension Fund of Russia, the Central Bank of Russia, the Federal State Statistics Service, the Deposit Insurance Agency, the Moscow Stock Exchange, VEB.RF, etc. The effectiveness of the formation of pension savings from public and private pension insurers was assessed by a number of criteria: from the standpoint of the interests of insured persons – these include the profitability of pension savings the reliability of the pension insurer, the possibility of choosing investment strategies; from the standpoint of the interests of society – the evaluation criterion is the use of pension savings as a long-term investment resource for economic development. As a result, it is **concluded** that the Pension Fund of Russia manages the pension savings of citizens more effectively than private pension funds. This raises the question of whether private pension funds should participate in compulsory pension insurance.

Keywords: pension savings; pension insurers; state pension fund; private pension funds

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INTRODUCTION

Despite the fact that since 2014 pension savings are not replenished with insurance contributions, their total amount is about 5 trn rubles. Based on the dynamics of savings and the number of insured persons among pension insurers, the population prefers Non-State Pension Funds (further — NPF) rather than the Pension Fund of the Russian Federation (further — PFR), hoping for higher returns. Does the public insurer really give way to private funds in terms of the efficiency of management of pension savings?

There are a number of studies in the scientific literature devoted to this issue. The papers [1, 2] notes the increasing role of state pension funds in the formation of pension savings. In other papers [3, 4], private funds are seen as a viable alternative to the public pension system. However, the paper [5] notes that this requires fully formed financial markets, adequate knowledge of and confidence in these markets.

Domestic studies compared the effectiveness of the formation of pension savings in NPFs and management companies that entered into contracts with the PFR. The cumulative return on investment of pension savings is used as a criterion for comparative analysis [6, 7]. In some papers [8, 9], the Sharpe ratio or the return/risk ratio is used. The paper [10] uses a criterion such as the reliability of management of pension savings.

However, the NPF — is a pension insurer whose activities are more logical to compare with other insurers — PFR. At the same time, it is advisable to expand the criteria for comparative analysis of pension insurers. It is also necessary to improve the validity of the findings on the return on pension savings by covering all savings intervals for the maximum possible period of analysis. All this determines the relevance and practical significance of further research in the specified subject area.

The purpose of the research — is to determine the effectiveness of formation of pension savings on compulsory pension

insurance (further — CPI) in the NPF compared to the state insurer (PFR).

As assessment criteria reflecting the interests of the insured person, the following are defined:

- return on pension savings;
- reliability of the pension insurer;
- selection of investment strategies.

The evaluation criterion that reflects the interests of society — is the use of pension savings as a long-term investment resource for the development of the economy.

PENSION INCOME

Return — is the most important indicator of the effectiveness of the formation of pension savings from the point of view of the insured person, because it shows the relative increase of pension funds of citizens.

Compare the return on pension savings of PFR [pension investors — State management company “Vnesheconombank” (VEB), as well as private management companies (PMC)] and NPF.

Consider the return on investment of pension savings (return before deduction of fund management remuneration, contributions to the CPI reserve and to the pension savings guarantee fund) starting in 2008 due to the lack of data on the NPF for earlier years. The yields of the NPF and PMC were calculated as weighted averages, i.e. taking into account the amount of pension savings. 100% NPF and PMC are covered.

The accumulated return on investment for all pension investors exceeds inflation (see Fig. 1) with the exception of NPF since 2008 (at 98.62% by the end of 2020, while accrued inflation was 147.08%). In all periods of savings, NPFs are inferior in yield, both VEB and PMC. In certain periods, their accumulated returns are slightly higher than inflation. The best indicators are shown by PMC.

Return on pension investors is often compared with such benchmarks as the asset indices of pension savings of the Moscow Stock

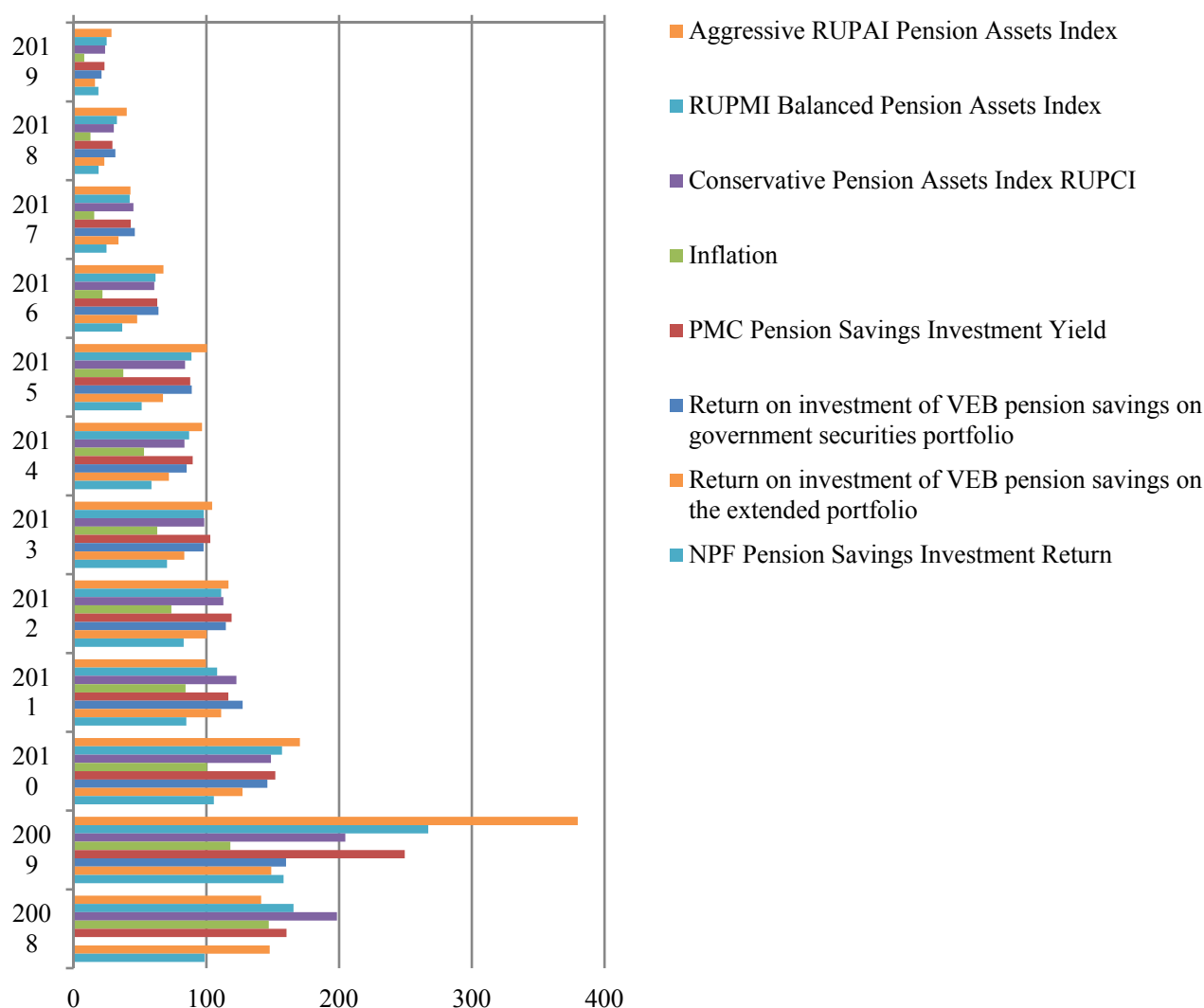


Fig. 1. Accumulated Investment Return on Pension Savings by the End of 2020, %

Source: The author's calculations are based on data from the Pension Fund of Russia, the Bank of Russia, the Federal State Statistics Service, the Moscow Stock Exchange, and the Investfunds information portal.

Exchange. The analysis presented in *Table 1* showed that VEB implements a conservative investment strategy in both portfolios (funds are invested in bonds, including Federal Loan Bonds (further – FLB), and PMC and NPF – are a balanced investment strategy (along with bonds funds are investment in shares, but their share is about 10%). At the same time, NPF is significantly lower for all savings periods to the balanced RUPMI index, and the expanded VEB portfolio to the conservative RUPCI index. PMC and the portfolio of government securities show accumulated returns at the level of the indices, RUPMI and RUPCI, respectively, in individual periods

exceeding their values. The aggressive strategy of increasing the share in the investment portfolio (up to 40%) is not implemented either by PMC or NPF, we consider due to its increased risk.

Consider the accrued effectiveness of pension savings (return after deduction of fund management remuneration, contributions to the CPI reserve and to the pension guarantee fund), which is of greatest interest to insured persons, since it shows the relative increase of pension saving directly on pension accounts.

NPF and PMC returns were calculated as weighted averages. PMCs are fully covered.

Table 1

Correlation Coefficient Between the Accumulated Returns of Pension Investors and Pension Indexes

Accumulated return on investment of pension funds	RUPCI	RUPMI	RUPAI
NPF	0.951	0.982	0.926
VEB by expanded portfolio	0.985	0.919	0.782
VEB on the portfolio of state-owned securities	0.973	0.902	0.807
PMC	0.960	0.996	0.946

Source: Authors' calculations.

The average NPF coverage of the share of total pension savings was 97% (the minimum was 92% in 2005).

The accumulated accrued return of all pension investors exceeds inflation in savings periods from 2009 and 2015–2019 (*Fig. 2*). At the same time, the maximum values are shown by PMC (except for the periods from 2017 and 2018, when VEB led), and the minimum values — NPF (excluding the period from 2009). In the savings period from 2010–2014, only NPF's accrued returns were inferior to inflation, i.e. the increase in pension savings on the accounts of insured persons did not even compensate for the inflationary depreciation of money.

In the savings period from 2005–2008, not all pension investors were able to cover inflation through accrued returns (except for PMC in the periods from 2005 and from 2008). In other words, almost all citizens who have formed pension savings over the past 12 to 15 years have not generated any investment income on their pension accounts. Moreover, by the end of 2020, annual accrued returns could not even cover the inflationary depreciation of pension savings.

NFPs, behind PRFs in yields, still have a high cost of managing pension savings. There is no remuneration for the fund for the management of pension savings for the PRF. In NPF, remuneration exists even with negative outcomes of investment of pension savings. *Table 2* shows the costs of the insured

persons of both insurers, which are further increased by contributions to the CPI reserve fund, and contributions in the pension savings guarantee fund.

Analysis of reports on investment results of pension savings funds presented on the website of the Bank of Russia shows that VEB remuneration is less than 1% of the investment return on the expanded portfolio and less than 3% on the portfolio of government securities (at the threshold value of 10%). PMC remuneration — is from 0 to 10%, and there is no excess of the standard. At the same time, the variable part of the remuneration in 2019–2020 exceeded the threshold level of 15% of the investment income, for example, in 2019 in NPF “MIF named by V. V. Livanova” (18.12%), NPF “Rostech” (19.98%), in 2020 in NPF “GAZFOND pension saving” (19.63%), INPF “Bolshoi” (20.89%), NPF “Professional” (25.64%).¹ The updated standard of remuneration exceeded a number of NPFs and until 2018,² for example, NPF “Education” (28.66% in 2012), NPF “SAFMAR” (25.86% in 2017). In the case of individual NPFs, remuneration standards for management companies were exceeded almost

¹ Calculated by authors according to the Bank of Russia. URL: https://cbr.ru/finmarket/supervision/sv_coll/ops_npf/2020y/ (accessed on 05.12.2021).

² By 2018, the system of remuneration of NFPs was different — not more than 15% of investment income after deduction of reward to managing companies (up to 10% of the investment income) and payment of special depository services (up to 0.1% of the value of net assets).

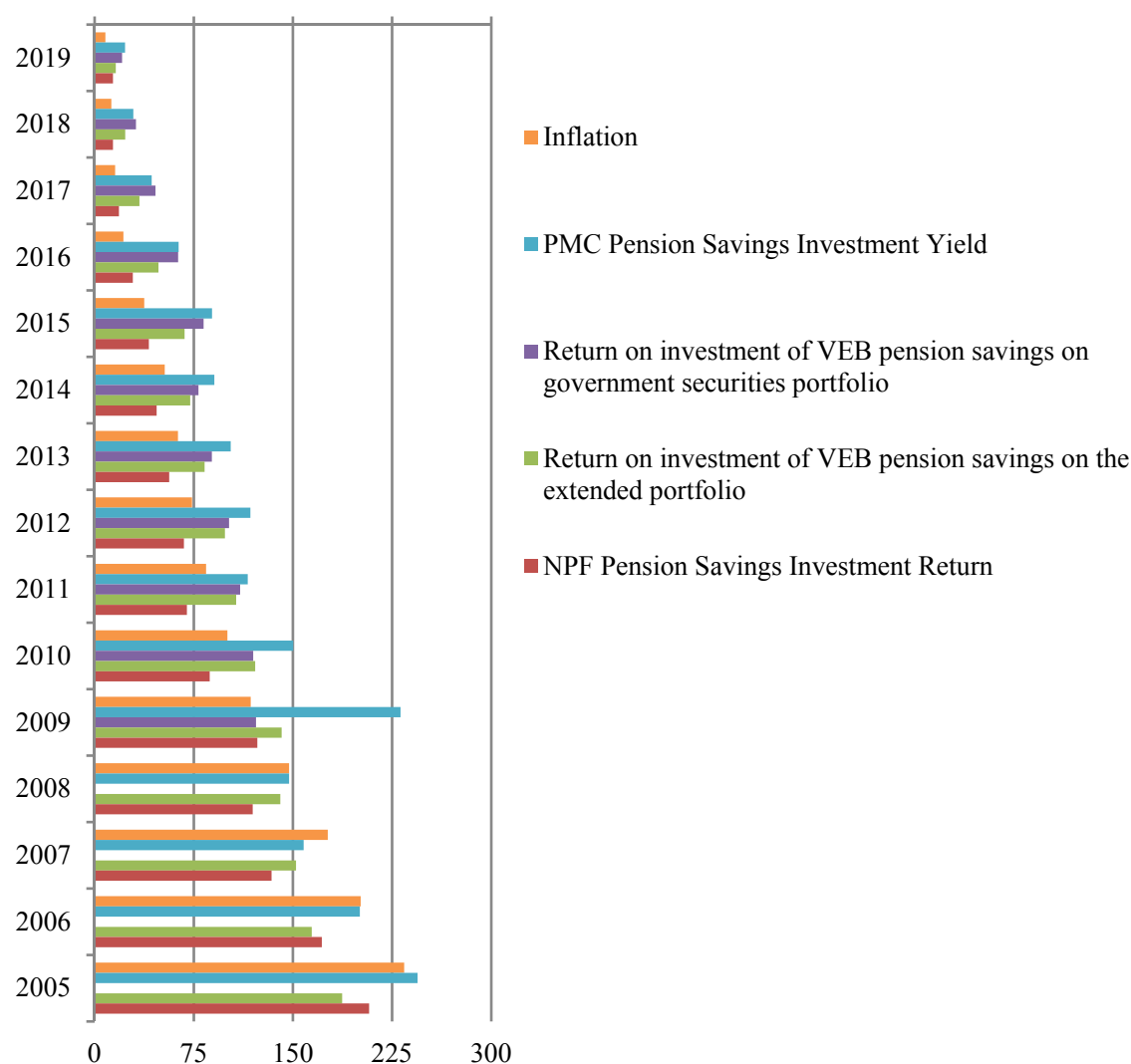


Fig. 2. Accumulated Net Return on Pension Savings by the End of 2020, %

Source: The authors' calculations are based on data from the Pension Fund of Russia, the Bank of Russia, the Federal State Statistics Service, Vnesheconombank, publications of Pension and Actuarial consultations, NPF sites, information portals "NPF-Broker.RU" and "PensiaMarket".

annually. Thus, in 2012 the remuneration of managing companies NPF KIT Finance was 100%, NPF "ZERICH" — 111.4% (!) of investment income received in the reporting year. Payment of special depository services for some NPFs exceeded the standard by 2–3 times.

The indicator of costs of insured persons is the difference between investment and calculated return on pension savings. Table 3 shows that the relative level of costs in the NPF is tens of times higher than the level of expenses in the PFR, and the amount of accrued return of the NPF is lower than that of the state insurer.

PROPERTY OF PENSION INSURANCE

In accordance with the Federal Law No. 167 from 15.12.2001, PFR is the state insurer for PFR in Russia, and the state bears subsidiary responsibility for the obligations of PFR to insured persons, which is understood as "the obligation of the State to ensure the fulfilment of social-insurance obligations by transferring to the budget of the insurer the necessary funds" [11].

NPF — these are commercial organizations that operate in the form of joint-stock companies and operate under CPI on the basis of a license. The participation of the NPF contributed to

Table 2

Costs of Insured Persons in the Compulsory Pension Insurance System

Pension Fund of Russia	NPFs
Fund remuneration not provided	Fixed part of remuneration – not more than 0.75% of the value of net assets
	Variable part of remuneration – not more than 15% of investment income
Payment of management company expenses – not more than 1.1% of the value of net assets under management	From these funds, NPFs pay remuneration to management companies and the special depository, and also pay the costs of management companies
The remuneration of the managing companies is not more than 10% of the investment income (not paid if losses have been received)	

Source: Federal Law No. 111 from 24 July 2002, Federal Law No. 75 from 7 May 1998.

Table 3

The Relative Level of Costs of Insured Persons from Pension Insurers

Indicators	2016	2018	2019	2020
NPF				
Investment capacity, %	9.55	0.11	10.70	7.20
Calculated returns, %	8.81	0.07	8.22	5.20
Costs of insured persons, %	0.74	0.04	2.48	2.00
PFR				
Expanded VEB portfolio				
Investment capacity, %	10.53	6.07	8.7	6.87
Calculated returns, %	10.74	6.14	8.63	6.77
Costs of insured persons, %	-0.21	-0.07	0.07	0.10
VEB State Securities Portfolio				
Investment capacity, %	12.20	8.65	12.14	7.95
Calculated returns, %	11.69	8.74	12.08	7.77
Costs of insured persons, %	0.51	-0.09	0.06	0.18
PMC				
Investment capacity, %	13.94	4.90	13.93	8.18
Calculated returns, %	14.21	5.01	13.91	8.06
Costs of insured persons, %	-0.27	-0.11	0.02	0.12

Source: Authors' calculations. The analysis period corresponds to 100% coverage of NPFs.

increased transparency of the funds, in particular obliging them to disclose the structure of fund owners. Furthermore, the Bank of Russia was entrusted with regulating the activities of the NFP, which has tightened the requirements for NFP in terms of the capital size of the funds, the quality of their assets and the risk assessment system. At the same time, a system of guaranteeing the rights of insured persons has been established, providing for the possibility to carry out CPI only to NFPs — members of the system that meet certain criteria. This suggests that the reliability of NFPs in the field of COI has improved. However, the commercial nature of the activities of the NFP, which is focused on “earning” profit for shareholders and paying them dividends, is generally in conflict with the interests of insured citizens.

The safety of pension savings of citizens of Russia is guaranteed by the Federal Law No. 422 from 28.12.2013. The rights of insured persons in the CPI system are protected at two levels: 1) PFR or NPF at the expense of the CPI reserve; 2) Deposit Insurance Agency (further — DIA) at the expense of the pension savings guarantee fund.

In the event of the withdrawal of the license and (or) bankruptcy of the NPF, the guarantee compensation only compensates the nominal amount of the contributions for the funded pension, and the investment income is not guaranteed (to those who have not yet received the pension). Investment income is included in the register of creditor claims and is replenished by the sale of the assets of the fund included in the insolvency estate to insured persons after the claims of the DIA are satisfied.

As at 31.12.2020, liquidation proceedings were conducted by DIA for 28 NFPs not included in the insured rights guarantee scheme and were fully completed in 6 NFPs.³

The average duration of liquidation procedures is 5.3 years, although according to

the requirements of the Bank of Russia should not exceed 3 years.

According to DIA, the estimated value of assets of liquidated NFPs, which constitute funds of pension savings, is 31.9 bln rubles, which corresponds to only 36% of their book value.⁴ This is due to the poor quality of the assets liquidated by NFPs and the write-off of assets that are not realizable and recoverable. Taking into account another 1 bln rubles of the estimated value of the competitive mass, which can be used to cover liabilities in the absence of funds of pension savings and reserves, 32.9 bln is the maximum that insured persons of liquidated NFPs can count on to reimburse investment income, and after meeting the requirements of the Bank of Russia.⁵

The main settlements with creditors were made in 2016–2018, but the amounts of satisfied claims are insignificant and are predominantly directed to settlement with the Bank of Russia (the main lender, whose share in aggregate claims is 70–80%) (*Fig. 3*). In total, as at 31.12.2020, 27.89 billion rubles were allocated to settlements with creditors at the expense of pension savings. Thus, the amount of creditors' claims significantly (approximately 2.5 times) exceeds both actual and potential cash revenues from the assets of the liquidated NFPs, which constitute pension savings.

According to the DIA data in NFPs where liquidation procedures have been completed,

⁴ According to DIA's annual reports. URL: <https://www.asv.org.ru> (accessed on 10.12.2021).

⁵ In accordance with the Federal Law No. 422 from 28.12.2013 “On guaranteeing the rights of insured persons in the system of compulsory pension insurance of the Russian Federation in the formation and investment of funds of pension savings, establishment and implementation of payments at the expense of pensions savings” in the case of enforced liquidation of NPF, which is not a fund — a participant in the insurance system of guarantees of rights of persons, the reimbursement of retirement savings in the amount of contributions made is carried out by the Bank of Russia and is transferred to the PF. In accordance with the Federal Law No. 127 from 26.10.2002 “On Insolvency (Bankruptcy)”, the insured person's claim shall not be satisfied until the Bank of Russia's claims in respect of the insurance person have been fully satisfied.

³ DIA website. URL: <https://www.asv.org.ru/pension-funds?category=npf-liquidation-in-process> (accessed on 10.12.2021).

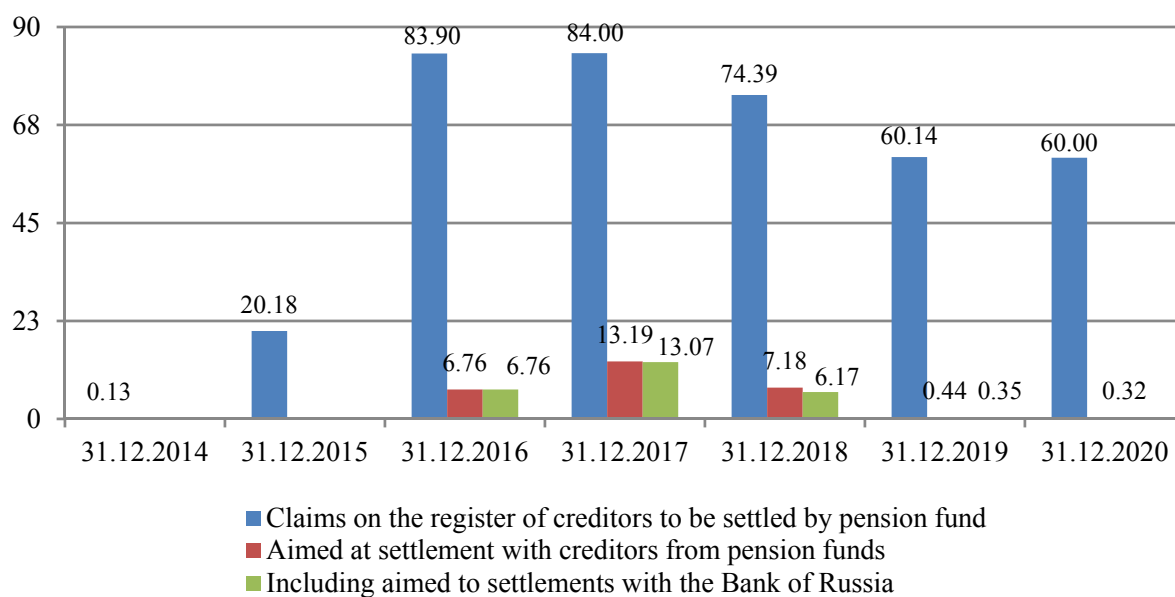


Fig. 3. Creditors' Claims to be Satisfied at the Expense of Pension Savings, and Settlements on them, Billion Rubles

Source: Compiled by the authors on the basis of the annual reports of the Deposit Insurance Agency.

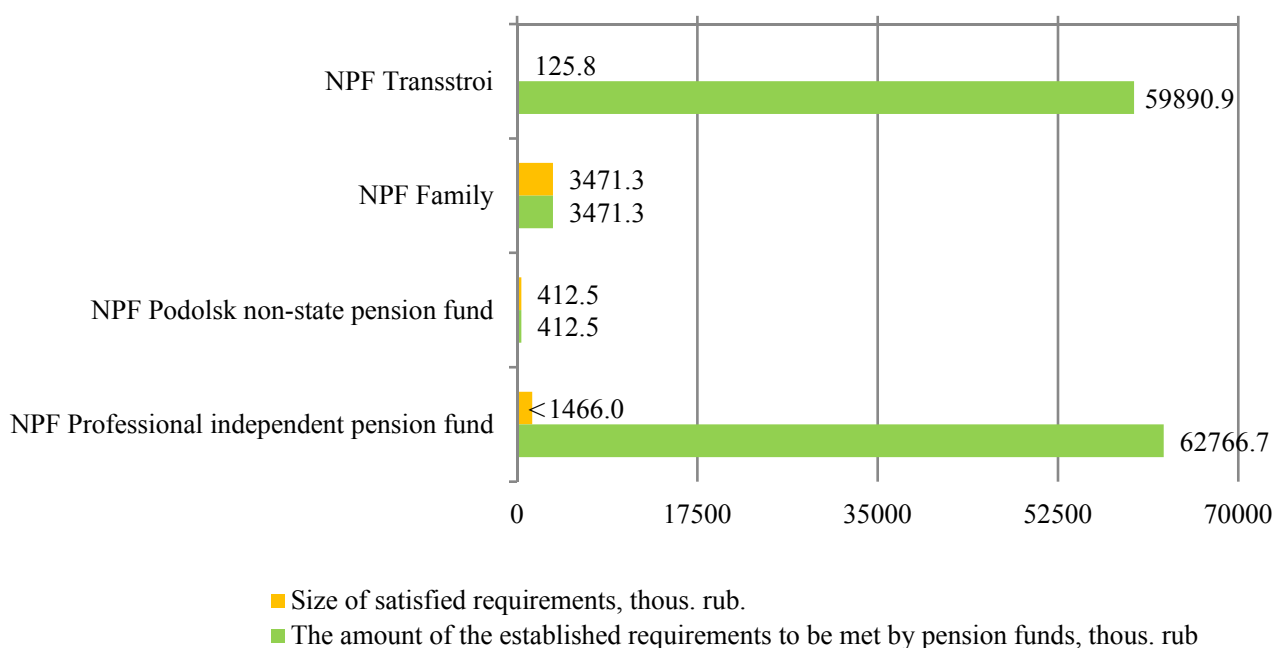


Fig. 4. Satisfaction of Creditors' Claims of NPFs in which Bankruptcy Proceedings Have Been Completed

Source: Compiled by the authors on the basis of reports on the results of bankruptcy proceedings for funds.

creditors' claims to be satisfied from pension savings funds have been satisfied by only 4% (Fig. 4).⁶

⁶ DIA Annual Report for 2020. URL: https://www.asv.org.ru/upload/agency/annual/2020/page5_4.html (accessed on 20.01.2022).

It follows that, most likely, more than 90% of the investment income will not be reimbursed to insured persons who have formed their pension savings in liquid able NPFs. They are reimbursed only the number of contributions to accumulative pensions,

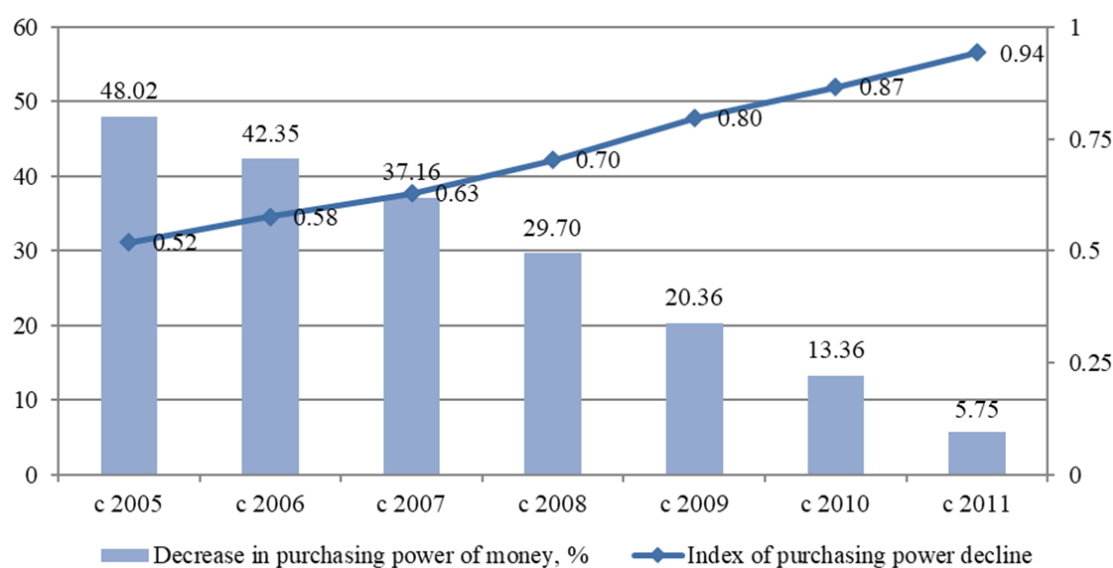


Fig. 5. The Change in the Purchasing Power of Money from the Beginning of the Formation of Pension Savings Until the Revocation of the License from the NPF "Semeinyi"

Source: Compiled by the authors on the basis of data from the Federal State Statistics Service and the Deposit Insurance Agency.

and in nominal terms, excluding inflation. However, the decline in the purchasing power of money can be very significant, as illustrated in Fig. 5 on the example of the family fund. Pension savings in it were formed since 2005, and the license was revoked 02.08.2012. The Bank of Russia is obliged to transfer the nominal of contributions under the CPI to the PFR, i.e. in 2012 in the formation of pension savings, for example, from 2005 until the revocation of the license, the index of purchasing power decline was 0.52, i.e. by 2012 every 100 thous. rubles. pensions savings became equivalent to 52 thous. rubles. The decrease in the purchasing power of money was 48%. Given the high level of inflation for the entire savings period prior to the massive withdrawal of NFP licenses in 2015–2016, the losses from the inflationary depreciation of pension savings in insured persons may be significant and are not compensable. Thus, those who have formed pension savings in liquidated NFPs are unlikely to receive neither investment income nor the real equivalent of their insurance contributions.

Despite the higher reliability of the NFPs included in the system of guaranteeing the rights of insured persons, in case of

deprivation of the fund of the license DIA will compensate also only the nominal contributions to the accumulative pension.

CHOICE OF INVESTMENT STRATEGIES

Investment of pension savings is carried out by management companies with which pension insurers enter into trust management agreements of savings funds. An investment declaration is an integral part of the contract, which must comply with the legislative requirements for the assets in which pension savings may be placed, as well as the structure of the investment portfolio.

In NPF, insured persons do not have the possibility to choose the strategy of investment of pension savings, it is possible to change it only by switching to another NPF. However, this can be done without loss of investment income not earlier than after five years of formation of savings in this NPF.

The PFR has entered into a trust agreement with VEB for the funds of pension savings selected by the PMC competition. VEB can invest pension savings in an expanded portfolio and a portfolio of government securities. Both portfolios reflect a conservative approach to investment, as they

mainly include government securities and bonds of reliable issuers. A wider list of assets for investment, including shares of Russian issuers, is included in PMC investment declarations, in which the maximum shares for individual asset types differ. Moreover, some management companies offer the option of selecting a specific portfolio. For example, “AGANA” offers “Balanced” and “Conservative” portfolios, while “BCS” offers the “Profitable” and the “Balanced”. Thus, if the insurer is PFR, the insured persons have the option of choosing the strategy of investing their pension savings, which are offered by VEB and PMC. At the same time, you can change the management company or investment portfolio annually without losing investment income.

USE OF PENSION SAVINGS FOR THE DEVELOPMENT OF THE ECONOMY

The needs of the Russian economy for long-term sources of financing cannot be met by bank loans alone. Collective investors, including pension funds, also have significant investment potential. They are capable of transforming citizens’ pension savings into an investment resource necessary for the development of the real economy. This demonstrates the socially beneficial effect of the formation of pension savings.

Analysis of the structure of investment of pension savings in pension insurers does not give an opportunity to assess their contribution to the development of the real sector of the economy (Fig. 6). Investments in public securities are not considered a source of financing for the real economy, as public loans are used to finance budget deficits, repay debt liabilities and replenish budget balances. Cash and deposits can be seen as investments in the financial sector rather than in the real sector of the economy. Of course, financial institutions lend real-sector enterprises, but their use as an intermediary in the investment process leads to an increase in the financial resources needed for the

development of enterprises. Thus, equity investments and corporate bonds may be indicators of investment of pension savings in the real economy. By the end of 2020, their total share in the investment portfolio of PFR was 44%, or 0.9 trn rubles, and NPF was 59.1%, or 1.8 trn rubles. It should be noted that the management company with which PFR works, VEB, is not entitled to invest pension savings in shares and could not invest in corporate bonds until 2009. But even these figures do not give an idea of the scale of investment by pension insurers in the real sector of the economy, as some of them are invested in shares and bonds of credit institutions.

According to the Bank of Russia, the investment of NPF pension savings in the real sector of the economy amounted to 39% on 31.12.2020 (public sector — 33%, financial sector — 22%, others — 6%).⁷ Unfortunately, no such statistics are provided for the PFR. The Bank of Russia only points out that the real sector dominates the VEB portfolio, ahead of the public sector, while the financial sector accounted for 9.4% of the portfolio.

The industrial structure of NPF investments in the real sector of economy is dominated by the oil and gas industry, engineering and transport,⁸ and the VEB — transport, road construction, oil and gas industry, electricity.⁹

The economy needs long-term investments. And pension savings, which involve a long period of formation, obviously should be the source of such investments. However, in NPF bond sub-portfolios, long-term debt securities with a duration (effective before maturity) of more than 5 years are less than 11%, including longer than 10 years — 1.7%. At the same time,

⁷ Review of key indicators of the NPF. Information and analytical material No. 4, 2020. URL: <http://www.all-pf.com/upload/iblock/e32/Klyuchevye-pokazateli-NPF-za-2020-god.pdf> (accessed on 27.02.2022).

⁸ NPF Market Trends. Quarter 3 of 2020. URL: https://cbr.ru/Collection/Collection/File/31565/NPF_market_trends_2020-q3.pdf (accessed on 27.02.2022).

⁹ Kuznetsov E. Silence of Money: Where the VEB invested the pension savings of Russians. URL: <https://iz.ru/1280719/evgenii-kuznetsov/molchanie-denzhat-kuda-veb-vlozhit-pensionnye-nakopleniia-rossiian> (accessed on 27.02.2022).

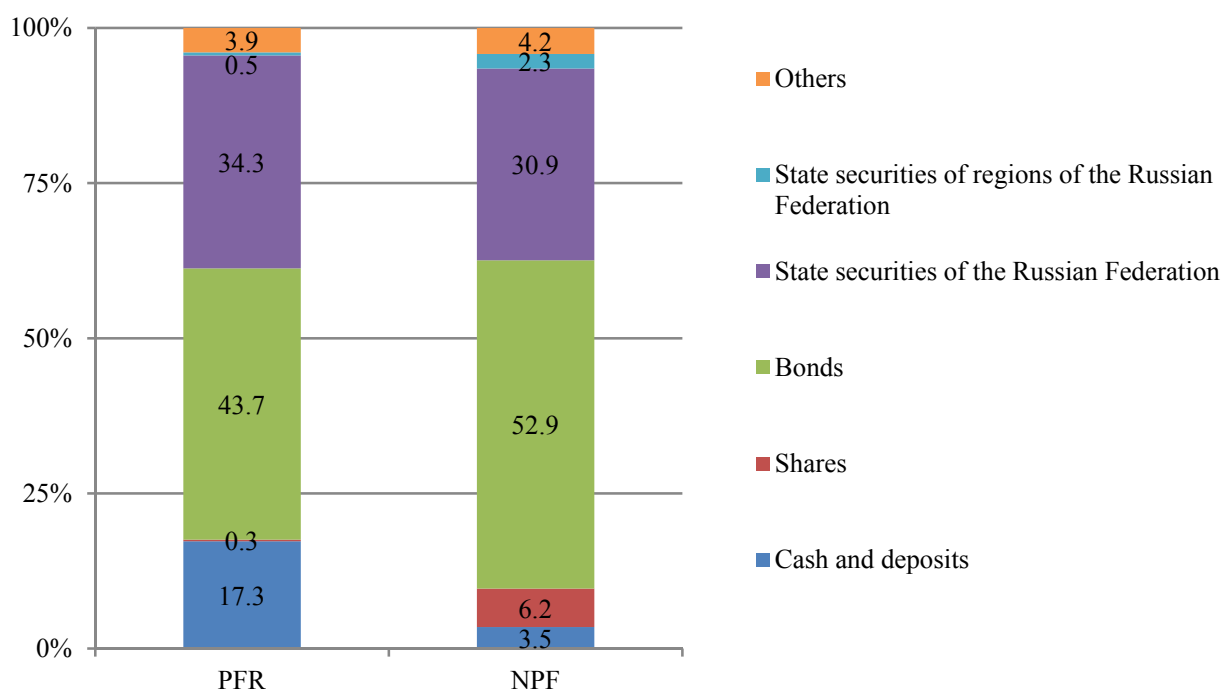


Fig. 6. Structure of the Investment Portfolio of Pension Savings as of 31.12.2020

Source: Compiled by the authors on the basis of data from the Bank of Russia.

the share of bonds with duration from one to 3 years prevails.¹⁰ Experts associate this with the market deficit of long-term financial instruments of reliable issuers and the high risk of long investments in the conditions of volatility of the Russian market. Regarding the PFR, this information was unfortunately not found.

It is also known that VEB invests pension savings in long-term bonds of the largest Russian companies with state participation, for example, Russian Railway with a term of 20 years, Russian Post — 15 years, PJSC “ROSSETI” — 30 years, PJSC “KAMAZ” — 15 years,¹¹ as well as in non-permanent bonds Russian railway.

Prospective investments for pension funds are investments in infrastructure bonds that provide future pensioners with

incomes that exceed inflation, while at the same time providing a source of financing for the construction of roads, stations, airports, railway infrastructure, social facilities, urban infrastructure and ecology. Not all of the NPFs are going to be on the spot yet. The largest interest in infrastructure investments is shown by NPF “Gazfond pension savings”, NPF “VTB Pension Fund”, NPF “Open”, NPF “Future”. Pension savings of the NPF are invested in such projects as: part of the motorway Moscow — St. Petersburg, section of the Moscow — Minsk route by passing Odintsovo, three fitness and wellness complexes, municipal solid waste processing facilities in the Nizhny Novgorod region, etc.¹² VEB, as a state development agency, actively invests pension savings in infrastructure projects related to the construction of affordable housing, roads in cities and regions of Russia, the development of the Moscow

¹⁰ Pronin K. V. State of the NPF market. 20.08.2020. URL: <http://pensionobserver.ru/files/213559/%D0%9F%D1%80%D0%BE%D0%BD%D0%B8%D0%BD.pdf> (accessed on 27.02.2022).

¹¹ VEB clarified the structure of investment in pension savings bonds. URL: <https://ria.ru/20150528/1067015275.html> (accessed on 27.02.2022).

¹² The future of the pension market: pension funds have become strategic investors. URL: <http://pensionreform.ru/files/111993/823191c5afd669a18e16bc5.pdf> (accessed on 01.03.2022).

transport hub, the energy infrastructure of the Far East and Siberia, the renewal of railway infrastructure, etc.¹³ Since a number of infrastructure bonds are not allocated to a separate asset class and are not reflected in the accounts of funds, it is difficult to estimate the value of investment of pension savings in infrastructure.

CONCLUSION

In general, it can be concluded that PFR is more efficient in saving citizens' pension savings than private pension funds. It is therefore logical to raise the question of the continued feasibility of NPF participation in the CPI system. After all, "the participation of a financial intermediary is economically justified if it creates added value, i.e. increases profitability or reduces costs" [9]. But, as the research shows, this is not observed. Furthermore, the status of the CPI insurer in relation to NPF is questionable in the scientific community [12].

Similar conclusions have been described in a number of other researches. For example,

in the paper [8] based on a comparison of investment results of public and private pension funds in six countries, the authors come to the conclusion about the feasibility of transferring compulsory pension savings in Russia to a single state fund. The paper [13], which included 10 sovereign, 11 public and 73 private pension funds and plans, concluded that, in terms of real yields, private funds ceded to sovereign and public funds over the nine-year period of analysis, with private-owned funds at higher risk levels than government funds. The papers [14, 15], as well as a report prepared by a group of IMF staff,¹⁴ on the example of Russia, Hungary and Poland, found that competition in the pension market does not lead to an improvement in the quality of investment of pension savings.

In a number of states, centralization of pension savings has already been implemented at the state level, for example in Singapore, Malaysia, Kazakhstan. In our view, it is advisable to study their experience and determine the conditions for the effective management of pension savings by the State.

¹³ How Savings «Silent» Work in the Real Economy. URL: <https://pensiya.vsb.ru/pensiya-v-jekonomike/kak-nakoplenija-molchunov-rabotajut-v-realnoj-jekonomike/> (accessed on 01.03.2022).

¹⁴ Republic of Poland: Financial Sector Assessment Program—Technical Note—Competition and Performance in the Polish Second Pillar. IMF Country Report. 2007;(07/104).

REFERENCES

1. Megginson W.L., Lopez D., Malik A.I. The rise of state-owned investors: Sovereign wealth funds and public pension funds. *Annual Review of Financial Economics*. 2021;13:247–270. DOI: 10.1146/annurev-financial-110420-090352
2. Rozanov A. Public pension fund management: Best practice and international experience. *Asian Economic Policy Review*. 2015;10(2):275–295. DOI: 10.1111/aepr.12106
3. Mangra M.G., Stanciu M., Sirbu M. The mandatory pension funds managed by private structures — a viable alternative to the public pension system. *Scientific Bulletin of the Nicolae Balcescu Land Forces Academy*. 2009;(3):264–268.
4. Dymnich O., Stetsyuk T., Gamankov, D., Parcheta L. Participation of the population in private pension funds: Problems and motivation. *Financial and Credit Activity — Problems of Theory and Practice*. 2021;1(36):515–521. DOI: 10.18371/fcaptp.v1i36.228116
5. Barr N.A. The pension puzzle: Prerequisites and policy choices in pension design. Washington, DC: International Monetary Fund; 2002. 28 p. DOI: 10.5089/9781589061507.051
6. Spasskaya N.V., Tokmakova E.V., Stetsenko A.V. Pension savings investing by private pension funds as a factor of enhancing the pension system's efficiency in the Russian Federation. *Finansy i kredit = Finance and Credit*. 2015;(35):36–44. (In Russ.).
7. Fatkhislamova G.F. Research of the investment results of pension savings. *Upravlenie = Management (Russia)*. 2018;6(4):40–46. (In Russ.). DOI: 10.26425/2309-3633-2018-4-40-46

8. Tumanyants K.A., Antonenko I.V., Antosik L.V., Shlevkova T.V. Pension savings investments: Government or private sector? *Nauchno-issledovatel'skii finansovyi institut. Finansovyi zhurnal = Financial Research Institute. Financial journal*. 2017;(1):91–102. (In Russ.).
9. Boldyreva N.B., Reshetnikova L.G. Effectiveness of investment activities of managers in the mandatory pension insurance system. *Vestnik Sankt-Peterburgskogo universiteta. Ekonomika = St Petersburg University Journal of Economic Studies*. 2020;36(3):483–513. (In Russ.). DOI: 10.21638/spbu05.2020.306
10. Fedotov D. Yu. Pension accumulation: Choice of way of management. *Finansy i kredit = Finance and Credit*. 2013;19(38):34–51. (In Russ.).
11. Kurchenko A.S. Supplementary responsibility of the state in Russian statutory pension insurance scheme. *Izvestiya vysshikh uchebnykh zavedenii. Pravovedenie = Proceedings of Higher Educational Institutions. Pravovedenie*. 2010;(2):81–91. (In Russ.).
12. Tulenty D.S., Ermolaeva A.S., Raba P.G. Pension insurance in Russia: Current state and transformation opportunities. *Finance: Theory and Practice*. 2021;25(3):102–126. DOI: 10.26794/2587–5671–2021–25–3–102–126
13. Abramov A., Radygin A., Chernova M., Akshentseva K. Effectiveness of pension saving management: Theoretical and empirical aspects. *Voprosy ekonomiki*. 2015;(7):26–44. (In Russ.).
14. Tumanyants K.A., Timofeeva G.V., Timofeev Yu.V. The impact of investment performance on the competition of Russian pension market. *Vestnik NGUEU = Vestnik NSUEM*. 2015;(3):39–55. (In Russ.).
15. Impavido G., Rocha R. Competition and performance in the Hungarian second pillar. World Bank Policy Research Working Paper. 2006;(3876). DOI: 10.1596/1813–9450–3876

ABOUT THE AUTHORS



Irina V. Terentieva — Cand. Sci. (Econ.), Assoc. Prof., Department of Economics, Tourism and Mass Communications, Murom Institute (branch), Vladimir State University named after A.G. and N.G. Stoletovs, Murom, Russia
<https://orcid.org/0000-0002-8541-9411>
 Corresponding author:
 terentieva-murom@yandex.ru



Andrey V. Svistunov — Cand. Sci. (Econ.), Assoc. Prof., Department of Economics, Tourism and Mass Communications, Murom Institute (branch), Vladimir State University named after A.G. and N.G. Stoletovs, Murom, Russia
<https://orcid.org/0000-0003-1592-5703>
 svistunov-murom@yandex.ru

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