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"SECURITY THROUGH DIVERSITY": PORTFOLIO DIVERSIFICATION OF PRIVATE PENSION FUNDS[1]

Krzysztof Kompa
Katedra Ekonometrii i Statystyki, SGGW w Warszawie
e-mail: krzysztof_kompa@sggw.pl
Tomasz Wiśniewski
Giełda Papierów Wartościowych w Warszawie
e-mail: tomasz.wisniewski@gpw.pl

Abstract: The program for pension system reform, launched at the beginning of 1997 in Poland, was called by its authors "Security through Diversity". This title emphasizes that pension reform, which is designed to guarantee security for the insured, has to combine pay-as-you-go pillar together with mandatory, fully funded pillar as well as voluntary, funded pillar. This paper discusses consequences of the changes implemented in the year 2013 and consequently analyzes the changes in the composition of the pension funds' portfolio, in particular the prohibition of investing in debt securities issued and guaranteed by the State Treasury.

Keywords: open pension funds (OFE), pension system reform, portfolio effectivity, investment strategies

INTRODUCTION

Reform of the pension system in Poland, which took place in 1999, was a symptom of new and complex thinking about social policy and economy as integrity instead of treating them as opposing issues. The original reform replaced the one-pillar – pay as you go system (PAYG), by the three-pillars funded system, based on the general rule that expected discounted sum of withdrawals from the system equals discounted sum of payments enlarged by the return on capital. Such

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system intends to provide pensioners adequate income compared with the level of wages, which they had been obtained during their activity in the labor market. This program of the pension system reform was called by its authors “Security through Diversity” [Security 1997].

Under the system introduced in 1999, pension benefits consist of three pillars. The first and second pillars are universal and mandatory, and the third one voluntary. The first pillar remained to be pay-as-you-go financed, whereas the second and third pillars are to be funded. In fact PAYG system was downsized and converted to a “notional defined-contribution” system, forming the new first pillar. In both the first and the second, funded pillar, contributions are registered in individual accounts, and the pension benefit depends on contributions paid, not contributions that were due[2].

The second pillar is the base for the creation of Open Pension Funds (OFE in Polish: Otwarty Fundusz Emerytalny). Each participant is allowed to choose its fund, and is also able to change funds with no charge or penalty after a statutory minimum of 12-month period of contribution to a fund. Each person can select only one fund. There is free choice between the funds which means that pension funds are not permitted to reject entry or restrict the right to transfer to another funds, either directly or indirectly, through the imposition of fees. Pension funds operate like other open mutual funds. However their effectiveness is evaluated due to the average return of all pension funds.

The first manipulation in original pension reform was made in 2011 when the contribution to pension funds was reduced from 7.3% to 2.3% of monthly wages. The new law, which went into affect in February 2014, shifts 51.5% of the assets, held by the OFEs (about 150 billions PLN) to the state-run PAYG pension system i.e., to the Social Insurance Institution (ZUS), including all debt securities issued and guaranteed by the State Treasury. According to the new regulations, pension funds are no longer obligatory and each employed person has four months every four years to decide whether 2.92 percent of their income goes to a chosen private fund or to ZUS. The overhaul of the pension system also concerns changes in the OFEs’ investment portfolio since private pension funds are no longer allowed to invest in government bonds[3]. That leaves the pension funds with most of their assets held in shares of companies listed on the Warsaw Stock Exchange and give them an increasingly peripheral role in the future retirement benefits of Polish citizens.

Therefore, the aim of this research is to analyze the consequences of the introduced changes in the pension funds’ portfolio composition, especially the

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[2] Detailed description of the pension reform can be found in [Góra, Rutkowski 2000], [Hausner, 2002] among others.

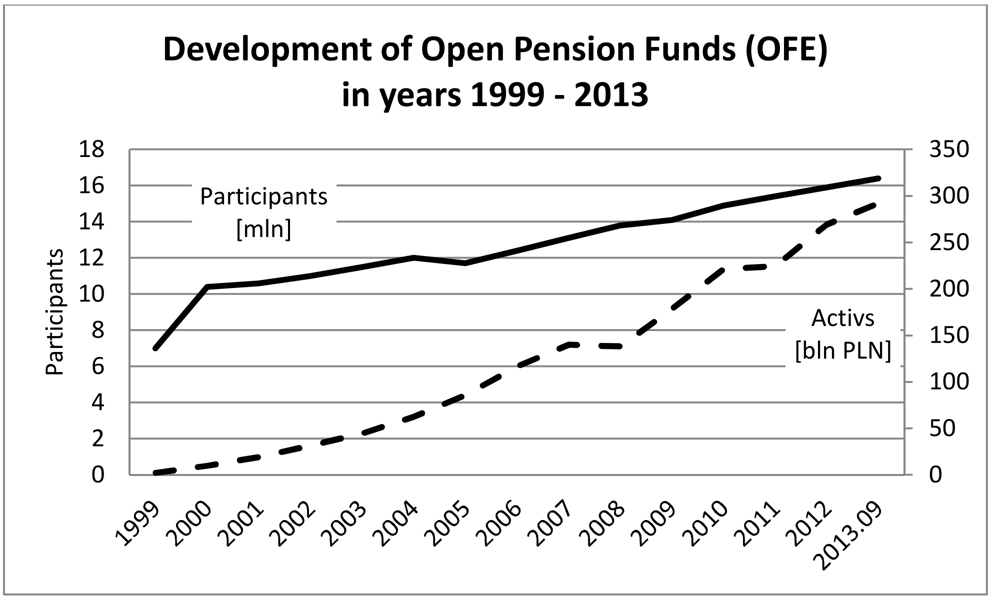
[3] It is worth mentioning that however President Bronisław Komorowski signed the bill introducing changes to Poland's pension system, he also asked the Constitutional Tribunal to review the regulation [President 2013].

prohibition of investing in debt securities issued and guaranteed by the State Treasury.

OPEN PENSION FUNDS OPERATING IN POLAND

Pension funds started to operate in Poland in 1999 creating the second mandatory pillar of the "new" pension system. At the beginning, there were 21 OFEs (Open Pension Funds, in Polish: Otwarty Fundusz Emerytalny) but at the end of 2013, only 13 open pension funds were operating in the Polish market. In the years 1999-2013 the number of participants and the value of assets were growing steadily. According to the Polish Financial Supervision Authority at the end of September 2013, there were more than 16.3 millions participants and the value of OFEs' assets was higher than 292 billion PLN. The development of open pension funds in Poland is presented in Figure 1.

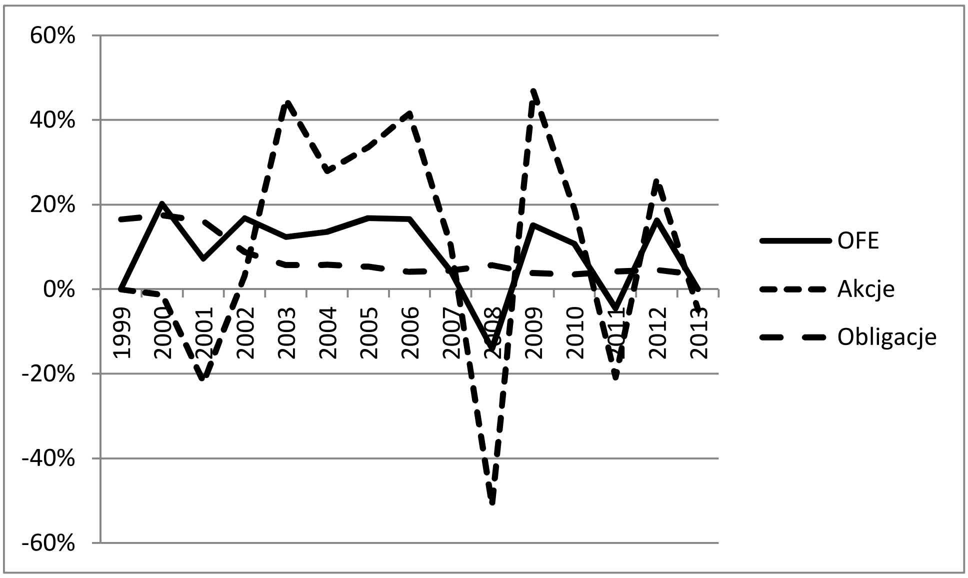
Figure 1. Development of Open Pension Funds in Poland in years 1999 - 2013



Source: own elaboration; data: Polish Financial Supervision Authority

The performance of investment portfolio is determined not only by management of the fund but also by the market conditions. The period 1999-2013 was characterized by different economic and financial situation in Poland. Thus we may distinguish bull and bear markets at the Warsaw Stock Exchange that affect returns from investment. Figure 2 shows the rates of returns of bonds, stocks and OFE for the years 1999-2013. Rates of return from debt instruments are established as average of reference interest rate weighted by the period when it was obligatory,[4] and returns from the equity market are the value of stock index WIG.[5]

Figure 2. The rate of return of bonds, stocks and Open Pension Fund in years 1999-2013



Source: own calculations; data source: Polish Financial Supervision Authority, Warsaw Stock Exchange

Open Pension Funds have been subject to conservative investment restrictions[6] (for example: investment in derivatives is forbidden and their foreign investment is restricted to 5% of their assets). Thus, their losses were not as great as those of pension funds in other countries, that were more affected by the subprime crisis and its consequences. However, Poland was affected by other serious problems during the period of the financial crisis. First, Open Pension Funds lost a major part of the profits earned for their members before the crisis. Second, slower GDP growth led to an increase of public deficit and public debt as percentage of GDP. As a result, Poland was no longer in line with the Maastricht criteria.

The private funds hold assets worth nearly $92 billion, i.e. more than one-fifth of Poland’s gross domestic product, and are among the biggest investors on the Warsaw Stock Exchange [Bilefsky, Zurawik 2013]. Moreover, due to high market concentration, there is a lack of price and investment competition between

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[4] Por. „Płynność sektora bankowego. Instrumenty polityki pieniężnej NBP”, serwis NBP, http://www.nbp.pl/ publikacje/operacje_or/2012/raport2012.pdf

[5] *Market Data. Analysis and Statistics* (2013), Warsaw Stock Exchange (GPW) website, http://www.gpw.pl/analizy_i_statystyki_ pelna_wersja (in Polish)

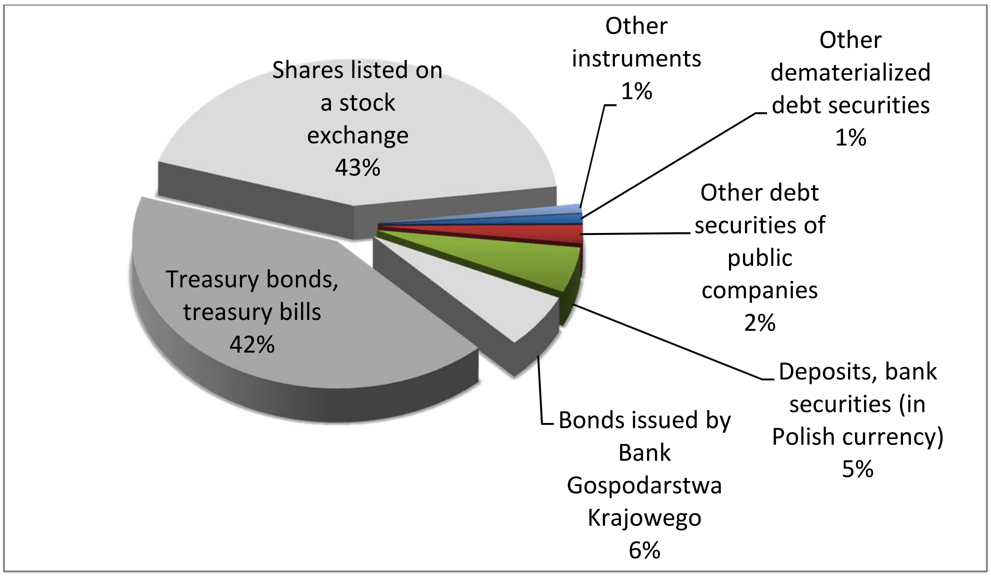
[5] See [Pelc 2010].

Open Pension Funds. In 2011 the OFEs' commissions equaled 553 millions PLN while management wages totaled 981 million PLN[7]. Such situations led to a broad critique of the pension funds in Poland. In response to this critique the Polish government introduced the new pension law. It is estimated that the transfer of 51.5% of OFEs' assets will lead to a decrease of public debt in Poland from around 55% to 47% of GDP. This is the main short-term purpose of the reform, rather than providing improved financial security for retirees (see, for example, [Mrowiec, Mruk-Zawirski, 2014]).

ANALYSIS OF THE PENSION FUNDS' INVESTMENT STRUCTURE

The reform will also lead to a change in the composition of asset portfolios managed by OFEs not only due to the forced transfer of assets to ZUS, but also due to new rules applicable to OFE investment activities. The structure of OFEs portfolios, according to the Polish Financial Supervision Authority as of November 2013, is presented in the following chart (Figure 3). Note that the shares of treasury bonds and equity instruments in the OFE portfolios had the largest share among all instruments and both were nearly equal.

Figure 3. The structure of OFEs portfolio in November 2013



Source: own elaboration based on data from Polish Financial Supervision Authority website

7 See *Emerytura kapitałowa 2011? 94 zł miesięcznie*, Forbes.pl, 28-03-2012, http://www.forbes.pl/artykuly/sekcje/wydarzenia/emerytura-kapitalowa-2011-94-zl-miesiecznie,25588,1

This paper evaluates the impact of the prohibition of investment in government’s securities by simulating the performance of the portfolios containing treasury bonds and shares. Therefore, we construct hypothetical OFE portfolios characterized by different structure of shares listed on the Warsaw Stock Exchange and debt securities issued by the State Treasury (see Table 1). We assume that the portfolio structure is the same in the whole analyzed period i.e., in the years 1999-2013. We also assume that superannuation in the first year equaled 5,000 PLN and it was rising by 4% annually. Transaction costs are ommited.

Table 1. Structure of constructed portfolios

Symbol of portfolio	Percentage share of		Symbol of portfolio	Percentage share of	
	shares listed on the Warsaw Stock Exchange	debt securities issued and guaranteed by the State Treasury		shares listed on the Warsaw Stock Exchange	debt securities issued and guaranteed by the State Treasury
100-0	100	0	40-60	40	60
90-10	90	10	30-70	30	70
80-20	80	20	20-80	20	80
70-30	70	30	10-90	10	90
60-40	60	40	0-10	0	100
50-50	50	50			

Source: Own elaboration

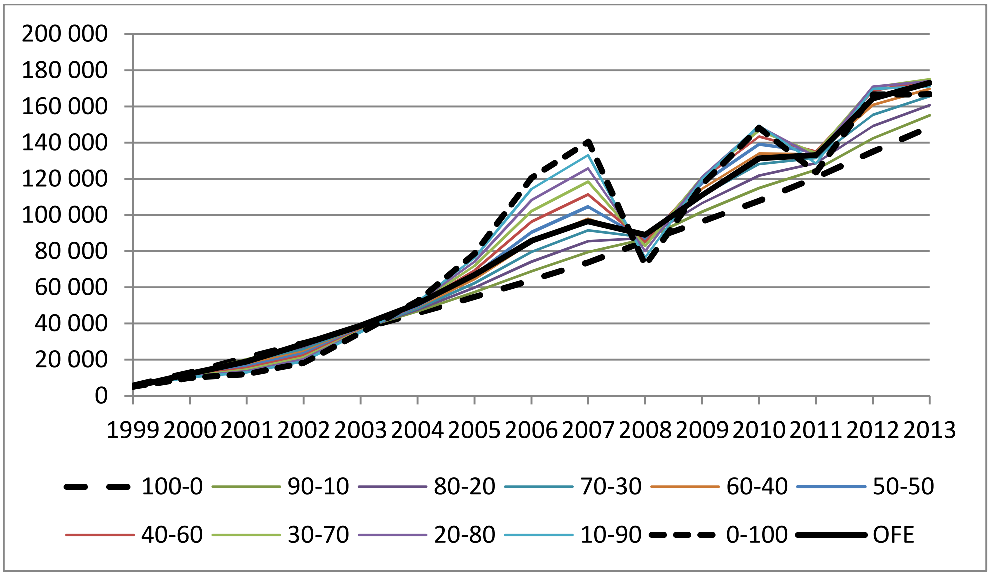
Simulation of the returns for the whole period of investigation includes different market tendencies observed in Poland. Figures 4 and 5 contain comparisons of simulated results obtained by hypothetical portfolios and OFE.

The results demonstrates that neither portfolio containing 100% of debt instruments nor the one including only shares generate the best financial performance. It is also visible that the rates of return from “average” Open Pension Fund are worse than returns from hypothetical portfolios i.e., OFEs could have generated better results. The portfolio containing 30% of treasury bonds and 70% of shares obtains the best result, and the fund containing 40% of bonds and 60% of equity instruments is only slightly worse.

CONCLUSION

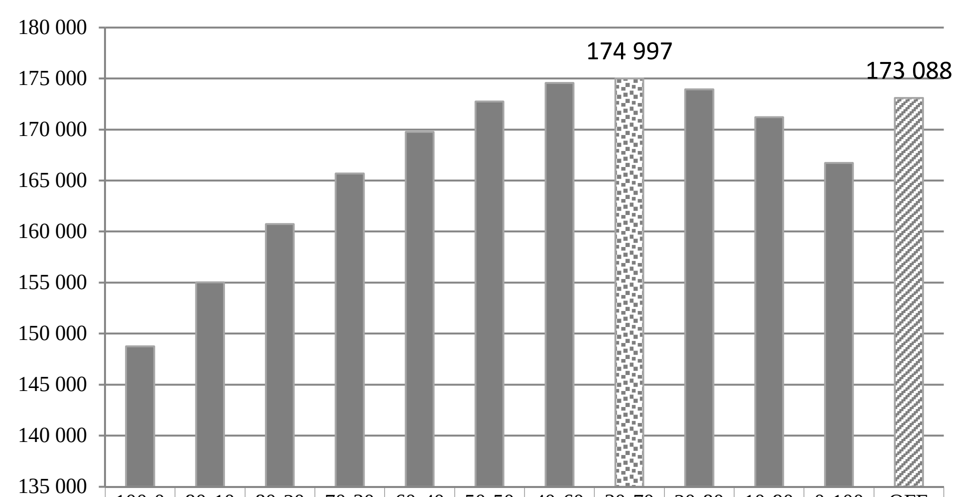
Presented analysis is biased by the assumptions that are made to provide the simulation experiments. Although we use real data, we also assume that the portfolio structure is constant during the whole period of investigation, and the stable increase of superannuation. It is worth mentioning that situation in Poland, observed in the years 1999-2013, was characterized by essential changes. Thus, our simulations cover all types of possible tendencies of the Polish capital market. The conclusion from the simulations indicates that changes in the program and law is required to achive higher returns to the most vulnerable part of the society i.e., pensioners’’.

Figure 3. Cumulative return on OFE hypothetical portfolios in years 1999-2013



Source: own calculation

Figure 4. Cumulative return on OFE hypothetical portfolios; investment period 1999-2013



	100-0	90-10	80-20	70-30	60-40	50-50	40-60	30-70	20-80	10-90	0-100	OFE
portfel	148 74	155 04	160 74	165 69	169 75	172 76	174 55	174 99	173 92	171 21	166 73	173 08

Source: own calculation

Therefore taking into account the new Polish government regulations and the results of our simulations we state that the prohibition of investment in government’s debt by Open Pension Funds in Poland is unacceptable. It leads to an increase of risk and decrease of the efficiency of investments made by pension funds. The watchword “Security through Diversity” has been still valid also in construction of OFEs’ portfolios and the new government regulations seem to be contrary to future interest of the Polish pensioners’. This paper calls for reform in line with the results of this research. At the end all Poles will become pensioners.

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