

THE ECONOMIC CONSEQUENCES OF CHANGES IN THE FUNCTIONING OF OPEN PENSION FUNDS

JACEK RODZINKA¹ ALEKSANDRA WOJNAROWSKA-DYGDON² KAROLINA PALIMAKA³

Abstract

The size of the public debt is now one of the main areas of interest of the entire society. As the size of the debt increases with time, one should consider possible ways of reducing it. Decision makers focus both on ways to reduce the increase in public debt and on ways to reduce its size. State expenditure connected with retirement pensions for citizens is one of the most important expenditure problems in the public sector. Retirement security of citizens is the constitutional duty of the state whereas the security of pension systems and protection of the insured are the most important tasks of the government. Thus, one of the most important factors determining the condition of public finances is the efficiency of solutions in the area of pension funds. This article presents the economic consequences of changes in the functioning of pension funds. It was based on the literature and available data on the website of the Ministry of Finance and the website of the Polish Social Insurance Institution.

JEL classification: E60

Keywords: polish pension system, public debt, pension reform

Received: 12.03.2015

Accepted: 20.03.2015

¹ University of Information Technology and Management in Rzeszow, e-mail: jrodzinka@wsiz.rzeszow.pl.

² University of Information Technology and Management in Rzeszow, e-mail: awojnarowska@wsiz.rzeszow.pl.

³ Student of University of Information Technology and Management in Rzeszow, e-mail: kpalimaka@wsiz.rzeszow.pl.

INTRODUCTION

One of the main areas of interest for economists, politicians, entrepreneurs and all of society is the size of the public debt. Its size has been growing rapidly in Poland for a long time, therefore, there are many questions about how to reduce it. Every day the mass media provide lots of information on the actual situation of the country, which shows us that this problem concerns the whole of society, and obviously, the cost of the public debt is borne by all citizens.

Decision makers are also focused on ways of reducing the increase in debt and its size. While the first of these issues seems to be very difficult to achieve, the latter appears to be virtually impossible. However, there are some ways in which one can considerably reduce the level of public debt.

This article presents a mechanism by which the day-to-day amount of Polish public debt declined in February 2014 by approx. 9% of GDP and it describes the path leading to the final solutions and their short-term and long-term effects.

DEFINITION OF PUBLIC DEBT

Public debt is defined as the sum of nominal liabilities of entities from the public finance sector after eliminating mutual obligations (Act of August 27, 2009 on Public Finance, Journal of Laws 2013.0.885 art. 73 paragraph 1).

Thus, the public debt consists of all liabilities incurred by the Treasury and by public finance sector institutions representing the Treasury, including local government budgets. In accordance with the Public Finance Act (Act of August 27, 2009 on Public Finance, Journal of Laws 2013.0.885 art. 72 paragraph 1) public debt consists of liabilities arising from:

- 1) issued securities amounting to cash receivables,
- 2) loans and credits,
- 3) accepted deposits,
- 4) due liabilities.

The data on the amount of public debt are reported on a quarterly basis by the Ministry of Finance according to these two valid definitions:

1) the Polish definition of public debt - the so-called state public debt (SPD) - it includes real commitments, which are true public debt, and potential liabilities arising from guarantees and granted loans (Owsiak, 2006, p. 633).

2) the EU definition of the public debt means the debt of general government institutions, calculated uniformly in all European Union countries (including Poland). These are total liabilities of the government sector by denomination less those liabilities of the public sector that are both assets of other public sector entities.

In Table 1 the size of the state public debt and the debt of general government institutions is compared.

Table 1. Comparison of state public debt and the debt of general government institutions

| Year | Public debt | Public debt, % GDP | General government debt | General government debt, % PKB |
|------|-------------|--------------------|-------------------------|--------------------------------|
| 2002 | 352,40 | 43,60 | 340,90 | 42,20 |
| 2003 | 408,30 | 48,40 | 396,70 | 47,10 |
| 2004 | 431,40 | 46,70 | 422,40 | 45,70 |
| 2005 | 466,60 | 47,50 | 463,00 | 47,10 |
| 2006 | 506,30 | 47,80 | 506,00 | 47,70 |
| 2007 | 527,40 | 44,80 | 529,40 | 45,00 |
| 2008 | 597,80 | 46,90 | 600,80 | 47,10 |
| 2009 | 669,90 | 49,80 | 684,10 | 50,90 |
| 2010 | 747,90 | 52,80 | 776,80 | 54,80 |
| 2011 | 815,30 | 53,40 | 859,10 | 56,20 |
| 2012 | 840,50 | 52,60 | 886,90 | 55,60 |
| 2013 | 882,30 | 53,90 | 934,60 | 57,10 |

Source: Ministry of Finance, Public debt - Annual Report 2013

The analysis of the data indicates that public debt as defined by Polish and EU definitions is most often significantly different. The general government debt is growing much faster than the public debt. It may also be noted that since 2007 the debt of the general government exceeded the public debt.

The public debt is presented either as the amount of due liabilities or as a percentage of GDP. The debt-to-GDP ratio is the basis for the assessment of the size of the public debt in order to make international comparisons and observe changes over time (Wernik, 2011, s.109). In the analysed period there was a significant increase - more than 15 percent, in the size of the general government debt relative to GDP, with the increase of about 10 percent in the public debt.

There is a remarkable period of stabilization of the public debt in relation to GDP in the years 2003-2006. The year 2007 is only a temporary decline in this ratio during the analysed period, while in 2008-2011 there is again a soaring ratio of public debt in relation to GDP. This re-growth is primarily due to the economic crisis and significantly large borrowing needs of the country.

In the Polish constitution there are so-called prudential thresholds concerning the relation of public debt to GDP. Exceeding the debt of 50, 55 and 60% results in further and further sanctions on still growing public debt and enforces taking specific actions to reduce the size of its growth.

In 2012, Poland exceeded the second prudential threshold, so a thorough amendment to the budget law should then have been made, however, Sejm (the lower

chamber of the parliament of Poland) suspended the operation of safety thresholds for the period of amending the budget for 2013 and the work on the budget for the year 2014.

In October 2013 a bill providing for the introduction of the new expenditure rule, also known as a stabilizing expenditure rule, was approved.

ANALYSIS OF THE STRUCTURE OF POLISH PUBLIC DEBT

The most important part of the public debt is the debt of the Treasury, which includes the nominal Treasury debt. The changes in the size of public debt in the years 2002-2013 resulted primarily from changes in the amount of Treasury debt. Thus, the increase in debt from one year to another was due to higher and higher borrowing needs of the state.

So far, the analysis has shown that Polish public debt has continued to grow for several years. Analyzing the structure of this debt in 2002 and 2012, it can be concluded that the share of Polish Treasury debt in the country's public debt decreased in comparison with 2002 from 92.7% to 91.5%. Also, the share of local government debt and the debt of other sectors decreased, whereas the share of social security sector debt increased more than three times.

The share of social security debt in the public debt of the country increased by 5.4 percent (almost three times) in 10 years, which indicates that borrowing needs of the sector became bigger.

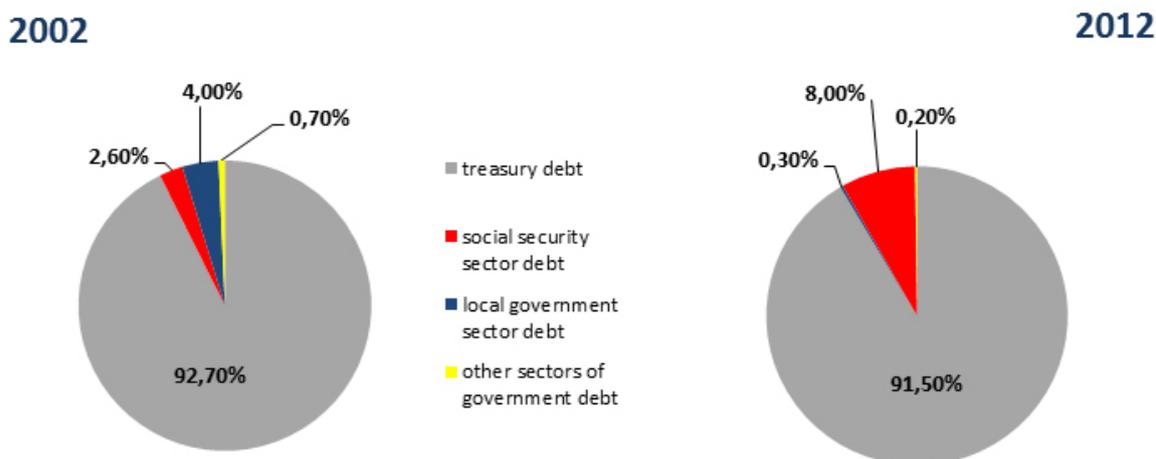


Chart 1. Public debt by sub-sector in 2002 and 2012

Source: Ministry of Finance, Public debt - Annual Report 2013

BUDGET DEFICIT - A MAJOR FACTOR IN THE GROWTH OF PUBLIC DEBT

The imbalance of planned revenue and public expenditure, i.e. the occurrence of the budget deficit is the main cause of incurring public debt. The amount of the debt which has to be incurred to balance budget revenues and expenditures is referred to as the borrowing needs of the budget (Malinowska-Misiąg, Misiąg, 2007, p. 647).

The main reason for the increasing national debt is a recurring annual budget deficit.

One of the main Polish state budget expenditures is the subsidy for the social insurance fund. This subsidy amounts to about 30 to 40 billion PLN per year. Its share in total budgetary expenditure is from 10 to almost 13%. These are huge amounts if they are compared to the expenditure on higher education, research and development, or national defense. Referring to the SIF to the budget deficit can be observed that in the analysed period, the ratio of grants to the Social Insurance Fund deficit does not fall below 55%, and for five of the eleven years of its height was higher than the deficit.

Table 2. The revenue and expenditure of the state budget, the subsidy for the Social Insurance Fund (SIF), the state budget deficit, the share of subsidies for SIF in expenditure and the share of subsidies for SIF in the deficit in the following years:

| Year | State budget revenues (in billion PLN) | State budget expenditures (in billion PLN) | Subsidies for Social Insurance Fund (in billion PLN) | Budget deficit (in billion PLN) | Share of subsidies to Social Insurance Funding expenditure | Share of subsidies to Social Insurance Funding deficit [§] |
|--------|--|--|--|---------------------------------|--|---|
| A | B | C | D | E | F | G |
| 2003 | 152176,0 | 189165,2 | 28277,0 | -36989,2 | 14,9% | 40,6% |
| 2004 | 156290,2 | 197794,7 | 22959,2 | -41504,5 | 11,6% | 36,5% |
| 2005 | 179801,6 | 208360,8 | 20112,1 | -28559,2 | 9,6% | 51,5% |
| 2006 | 197673,5 | 222757,6 | 24483,4 | -25084,1 | 11,0% | 59,5% |
| 2007 | 235976,5 | 252898,2 | 23893,0 | -16921,7 | 9,4% | 86,8% |
| 2008 | 254083,8 | 278674,3 | 33230,0 | -24590,5 | 11,9% | 60,5% |
| 2009 | 274366,6 | 298156,6 | 30503,3 | -23790,0 | 10,2% | 66,0% |
| 2010 | 250302,4 | 294893,7 | 38111,7 | -44591,3 | 12,9% | 33,5% |
| 2011 | 277568,3 | 302681,2 | 37513,4 | -25112,9 | 12,4% | 60,2% |
| 2012 | 287594,6 | 318001,8 | 39520,8 | -30407,2 | 12,4% | 51,2% |
| 2013 | 279151,2 | 321342,9 | 37113,9 | -42191,7 | 11,5% | 37,6% |
| 2014* | 277782,2 | 325287,4 | 30362,8 | -47505,1 | 9,3% | 33,9% |
| 2015** | 297253,0 | 343332,9 | 42065,6 | -46080,0 | 12,2% | 34,9% |

[§] Volumes reported in column G are formed from dividing the volumes in column D via volumes in column E.

* The forecast complies with the budget projects included in the project of the bill for 2015 and in the budget law for 2014.

** The forecast complies with the budget projects included in the project of the bill for 2015 and in the budget law for 2014.

Source: Own work

This means that the amount of the subsidy makes a significant contribution to the formation of the state budget deficit. Incurring expenses associated with SIF funding are a direct result of the implementation of Article 2, act 3 of the Law on Social Insurance System:

„Solvency of social security benefits is guaranteed by the state.” The state budget must complement the deficiencies arising from the Social Insurance Fund revenues which are too low in relation to the expenditure.

EXPENDITURE ON SOCIAL INSURANCE FINANCED FROM THE STATE BUDGET

The budget of the Polish social security system has been operating for many years in the conditions of a deficit. But it was not always so. Back in the 1970s it was doing very well in terms of funding. The amount of the premium for all social insurance benefits paid by taxpayers was 15.5% of the basis of contributions. This was enough to cover all expenditure costs connected with payment of benefits. In the 1980s, however, financial problems started, and thus insurance premium increases were required. At the end of the previous century these increases reached up to 45% in connection with huge financial problems.

Despite the high premium SIF was not able to cover very high costs. At the end of the twentieth century the contributions financed about 80% of the expenditure, yet the financial situation of the social insurance fund began to deteriorate in the coming years. The worst years in terms of financing expenditure from contributions were years 2009 and 2010, when the contributions financed just over 55% of the expenditure of SIF. Then things began to slightly improve. The Social Insurance Institution periodically prepares a report which presents a forecast of revenue and expenditure for the Social Insurance Fund for selected years. The last report was made in November 2014. It presented three options of forecasts: option 1 - neutral, option 2 - pessimistic and option 3 - optimistic. The below table shows the calculated results for option 1.

Table 3. Expenditures, revenues from contributions and derivative dues, the balance between expenses and revenues from SIF contributions in the following years.

| Year | Public debt | Public debt, % GDP | General government debt | General government debt, % PKB |
|-------------------|-------------|--------------------|-------------------------|--------------------------------|
| 1998 | 70,1 | 62,8 | 89,6 | 42,20 |
| 1999 | 77,1 | 64,1 | 83,1 | 47,10 |
| 2000 | 82,4 | 65,6 | 79,6 | 45,70 |
| 2001 | 92,5 | 69,9 | 75,6 | 47,10 |
| 2002 | 95,4 | 68,2 | 71,5 | 47,70 |
| 2003 | 98,6 | 70,3 | 71,3 | 45,00 |
| 2004 | 104,1 | 74,0 | 71,2 | 47,10 |
| 2005 | 107,5 | 78,2 | 72,8 | 50,90 |
| 2006 | 115,7 | 81,3 | 70,3 | 54,80 |
| 2007 | 121,1 | 89,4 | 73,8 | 56,20 |
| 2008 | 135,4 | 82,7 | 61,1 | 55,60 |
| 2009 | 151,2 | 86,5 | 57,2 | 57,10 |
| 2010 | 160,6 | 89,4 | 55,7 | 55,7 |
| 2011 | 166,4 | 102,5 | 61,6 | 61,6 |
| 2012 | 174,6 | 121,1 | 69,4 | 69,4 |
| 2013 | 183,5 | 122,9 | 67,0 | 67,0 |
| 2014 ¹ | 176,2 | 123,9 | 70,3 | 70,3 |
| 2015 ¹ | 180,4 | 127,9 | 70,9 | 70,9 |
| 2016 ² | 200,9 | 148,7 | 74,0 | 74,0 |
| 2017 ² | 206,8 | 153,9 | 74,4 | 74,4 |
| 2018 ² | 212,6 | 159,0 | 74,7 | 74,7 |
| 2019 ² | 218,7 | 164,7 | 75,3 | 75,3 |
| 2020 ² | 224,7 | 170,5 | 75,9 | 75,9 |

¹ Forecast of the revenue and expenditure of the Social Insurance Fund for the years 2014 to 2018, Social Insurance Institution, July 2012. Forecast of the revenues, expenses and the annual balance of the Social Insurance Fund in the amounts discounted for 2011.

² Estimate of the revenue and expenditure of the Social Insurance Fund for the years 2016 - 2020, Social Insurance Institution, November 2014. Forecast of the revenues, expenses and the annual balance of Social Insurance Fund in the amounts discounted for 2013.

Source: Own calculations based on data from the Social Insurance Institution

Although it is expected that the ratio of balance between SIF expenses and its insurance premiums will slightly increase compared with the level observed at present, it will fluctuate in the coming years in the vicinity of 75%, which indicates a repeated and constant deficit of SIF that will need to be covered with subsidies from the state budget. In this way, the SIF deficit will contribute to the increase in financial needs of the country budget.

ANALYSIS OF SIF FINANCIAL CONDITION

The Social Insurance Institution is a state organization with a legal personality, responsible for collecting social security contributions, for the health of citizens and the distribution of benefits in the amount and on the terms set out in the regulations generally applicable. The Social Insurance Institution administers the Social Insurance Fund, whose parts are the following funds:

- 1) pension fund, which finances the payment of pensions,
- 2) incapacity fund, which finances payment of pensions in respect of incapacity for work, training pensions, survivor’s pensions, family pensions, family supplements to pensions for orphans, care allowance, funeral benefits, the pensions financed from the country budget, yet paid by this fund, and finally, the expenditure on prevention of disability,

- 3) illness fund, which finances benefits set out in separate regulations,
- 4) accident fund, which finances the benefits set out in separate regulations, as well as accident prevention costs specified in separate regulations,
- 5) reserve funds for:
 - a. pension and sickness insurance,
 - b. accident insurance.

The basic principle for the first four funds is the fact that the financial resources they have collected cannot be transferred between them.

The table below presents the revenues from contributions, the amount of benefits paid and the balance of the four main funds each year.

The analysis of the data in the above table shows that the pension fund has the greatest financial problems with balancing the income from contributions and benefits. The balance of this fund was constantly closing with a deficit of a few dozen billion PLN in last ten years. The incapacity fund recorded a deficit roughly four times lower than the pension fund. Although in 2007, it reported a positive balance, this positive perspective from the financial point of view of SIF was nullified by the reduction of the amount of contributions for this fund (it was reduced July 1, 2007 from 13 to 10% and then January 1, 2008 to 6%).

Table 4. Contributions, benefits and the balance of the funds operating in the framework of the Social Insurance Fund (million PLN)

| Year | Contributions to the fund | | | | Benefits from the fund | | | | Balance of the fund | | | |
|------|---------------------------|--------------------|---------|----------|------------------------|--------------------|---------|----------|---------------------|--------------------|---------|----------|
| | pension | incapacity to work | illness | accident | pension | incapacity to work | illness | accident | pension | incapacity to work | illness | accident |
| 2001 | 33066,4 | 28862,2 | 5437,1 | 3637,1 | 46136,9 | 36985,3 | 4714,7 | 4095,5 | -13070,4 | -8123,1 | 722,4 | -458,4 |
| 2002 | 32422,8 | 28640,7 | 5422,7 | 3627,3 | 48973,3 | 37290,5 | 4929,6 | 4183,2 | -16550,5 | -8649,8 | 493,1 | -555,8 |
| 2003 | 33512,0 | 29265,4 | 5547,9 | 3867,3 | 52937,1 | 37951,0 | 4910,5 | 4246,7 | -19425,2 | -8685,6 | 637,4 | -379,5 |
| 2004 | 33914,7 | 30068,5 | 5764,5 | 4033,1 | 58002,4 | 37408,0 | 4747,8 | 4207,0 | -24087,7 | -7339,5 | 1016,7 | -173,8 |
| 2005 | 36232,1 | 32001,7 | 6147,2 | 4307,6 | 61015,5 | 37263,8 | 4949,0 | 4165,2 | -24783,4 | -5262,1 | 1198,2 | 142,4 |
| 2006 | 37653,2 | 34173,5 | 6598,3 | 4281,8 | 69159,3 | 37229,5 | 5163,8 | 4350,5 | -31506,1 | -3056,1 | 1434,5 | -68,7 |
| 2007 | 40970,8 | 34884,9 | 7486,5 | 4631,6 | 73696,3 | 34113,6 | 5825,2 | 4374,1 | -32725,5 | 771,3 | 1661,2 | 257,5 |
| 2008 | 46334,0 | 21748,0 | 8705,8 | 5374,1 | 84119,0 | 35991,1 | 7347,8 | 4717,9 | -37785,1 | -14243,2 | 1358,0 | 656,2 |
| 2009 | 49562,0 | 22204,1 | 9166,3 | 5519,3 | 95340,6 | 37778,3 | 9821,1 | 4950,6 | -45778,5 | -15574,2 | -654,8 | 568,7 |
| 2010 | 49562,0 | 22204,1 | 9166,3 | 5519,3 | 95340,6 | 37778,3 | 9821,1 | 4950,6 | -45778,5 | -15574,2 | -654,8 | 568,7 |
| 2011 | 51424,6 | 23061,0 | 9472,9 | 5803,5 | 101689,5 | 39544,4 | 10589,0 | 5070,5 | -50264,9 | -16483,5 | -1116,1 | 733,0 |
| 2012 | 73182,2 | 32387,3 | 10369,1 | 6211,2 | 111117,7 | 42083,6 | 12504,0 | 5203,0 | -37935,5 | -9696,3 | -2134,9 | 1008,3 |
| 2013 | 75688,7 | 35608,6 | 10626,3 | 6309,2 | 116987,2 | 43904,4 | 14037,5 | 5237,6 | -41298,5 | -8295,8 | -3411,3 | 1071,6 |

Source: Own calculations based on Financial Statements of the Social Insurance Fund for the years 2002 - 2013

The situation slightly improved in 2012 as from January 1, 2012 the contribution was increased to 8%.

The situation is slightly better in the illness fund, although the last five years mean its growing deficit, which is due to the economic situation of our country. The economic crisis makes workers go on sick leave to escape redundancies in the workplace.

The accident fund has definitely the best financial situation, which is due to the fundamental reform of the rules relating to the contributions for this fund, introduced in 2003, which now depend on a real risk of an accident at work. The change of the definition of an accident at work has effectively reduced the number of accidents and had a positive impact on the financial position of the fund.

Taking managerial decisions we should be aware that in income tax putting incomes forward to future years cannot always be optimal due to both the progression

effect in progressive scales and the non-tax interest effect in proportional scales.

Even if three of the four funds included in the SIF suffer from chronic deficits, the biggest problem for the country's finances is the pension fund where deficits are about four times higher than in all the other funds. Therefore, changes in the rules for this fund seem to be the most necessary and they might ensure maximum efficiency from the point of view of the financial health of this Fund, of the Social Insurance Fund and of the country budget.

Low income from pension fund contributions in previous years was due to the structure of the pension system, which required the Social Insurance Institution to transfer parts of its funds to open pension funds. The following diagram illustrates the flow of pension contributions.

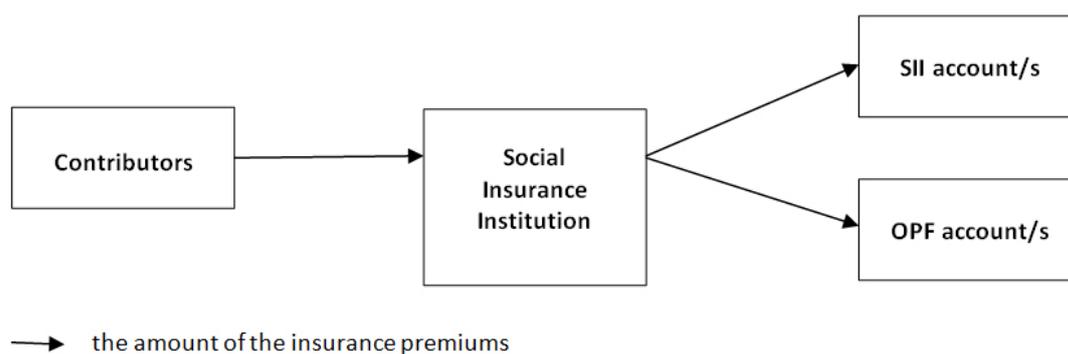


Figure 1. The flow of the amounts of pension contributions

Source: Own calculations based on data from the Social Insurance Institution

Contributors transfer to the account of the Social Insurance Institution the amounts resulting from the provisions of the Act on the social insurance system. Social security includes:

- 1) pension insurance,
- 2) incapacity insurance,
- 3) sickness and maternity insurance,
- 4) insurance against accidents at work and occupational diseases.

Contributions to the retirement pension amount to 19.52% of the basis of the insurance. Upon receipt of funds, the Social Insurance Institution records part of the amount on its contributors account/s, but in the case of those who are members of open funds, it has to transfer

part of the received contributions to these funds. The amount of transferred amounts depends on the number of people who belong to pension funds and the amount of the contribution, which has to be transferred to the open pension funds (see Chart 2).

CHARACTERISTICS OF THE POLISH PENSION SYSTEM

Until the end of 1998 there was a pay-as-you-go pension system in Poland. However, it proved to be inefficient, so radical changes were necessary¹. It was decided to reform the old system, which did not comply with the changing conditions at the time. The main aims and objectives of the pension reform were as follows:

¹ More about the reasons for the introduction of the new pension system in Poland: Rodzinka, J., Hady, J., Hospod, E. (2007). *Reasons for the reform of the pension system in Poland*, e-Finanse, No. 3.

- 1) ensuring for future generations the highest possible level of inflation-protected benefits which would be adequate to the resources previously gathered by each individual,
- 2) the pension should give a sense of security in old age,
- 3) the amount of the pension would depend on the amount of contributions paid by each employee and the length of time, not on changing regulations,
- 4) the system was to ensure diversification of pensions, and hence stimulate the capital market,
- 5) the system was not meant to require funding from the country budget, and it was intended to support

the economic development of Poland,
 6) it had to accelerate the pace of economic growth.

On January 1, 1999 Poland began to apply the new pension system based on revolutionary principles at that time. The system is based on three pillars - a reformed Social Insurance Institution, Open Pension Funds and individual pension insurance.

The division of pension payments for three pillars was to relieve in the future the Social Insurance Institution and, consequently, relieve the country budget from having to subsidize pension benefits.

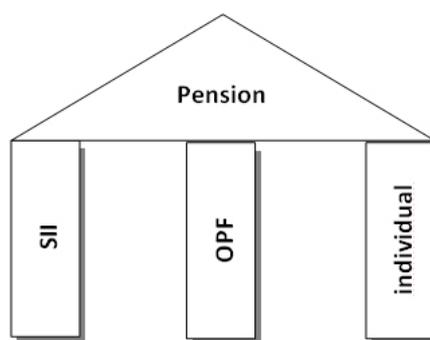


Figure 2. Diagram of the new pension system in Poland

Source: Own work

The Polish pension system is an equity and PAYG system consisting of three parts. The first one is administered by a reformed Social Insurance Institution. It is part of the PAYG system, which means that the funds transferred to Social Security are then paid as current pension benefits to pensioners. This pillar is based on individual accounts of the insured.

The financial resources of each person transferred to Social Security are recorded on her/his individual account (under the old system, there was no such solution). This pillar has a guarantee of the Treasury, stipulated in the law on the social insurance system², which means that in the event of any budget deficit of the system, the state is obliged to provide to the SIF grants to cover it.

Table 5. The principles of operation of the new pension system in the period 01.01.1999 - 31.07.2014

| I PILLAR | II PILLAR | III PILLAR |
|-------------------------------|--|--|
| Compulsory | Compulsory | Voluntary |
| The reformed Social Insurance | Open pension funds managed by private companies | Employee Pension Plan, investment funds, mutual insurance companies, insurance companies |
| PAYG | Equity | Equity |
| Individual accounts | Individual accounts | Individual accounts |
| State guarantee | State Supervision Authority (Financial Supervision Commission) | State Supervision Authority (Financial Supervision Commission) |

Source: Own work

²Journal of Laws 1998 No. 137, Item. 887, Art. 2. Par.3.

The functioning of this key principle has not changed since the beginning of the new pension system.

The second pillar is completely new to the Polish pension system. It is the equity part of the system. The essence of the activities of the Open Pension Funds is to collect and invest funds of their members for the purpose of payment of benefits to them when they reach retirement age. Open pension funds are separate entities which have a legal personality. They are created, managed and represented in dealings with third parties by Pension Companies - private entities acting as joint stock companies. Both of these entities are subject to the supervision of the state (Financial Supervision Commission). Open Pension Funds record the capital held by their members on their individual accounts. The second pillar operated in Poland in the manner described above in the period from 1999 to 2014.

The third pillar is voluntary. It consists of Employee

Pension Plans, Individual Retirement Accounts, Individual Retirement Security Accounts and any other voluntary forms of saving for future retirement. The insured can decide when, where and what financial measures to put aside for future pension.

CHANGES IN THE POLISH PENSION SYSTEM

Throughout the fifteen years of operation of the new pension system in Poland many changes have been introduced, but they haven't had a major impact on the idea of the whole system. Its basic assumptions have remained unchanged.

The first signs indicating the possibility of making fundamental changes in the system arose from the reduction of the amount of the contributions paid by the Social Insurance Institution to Open Pension Funds, which took place in 2010.

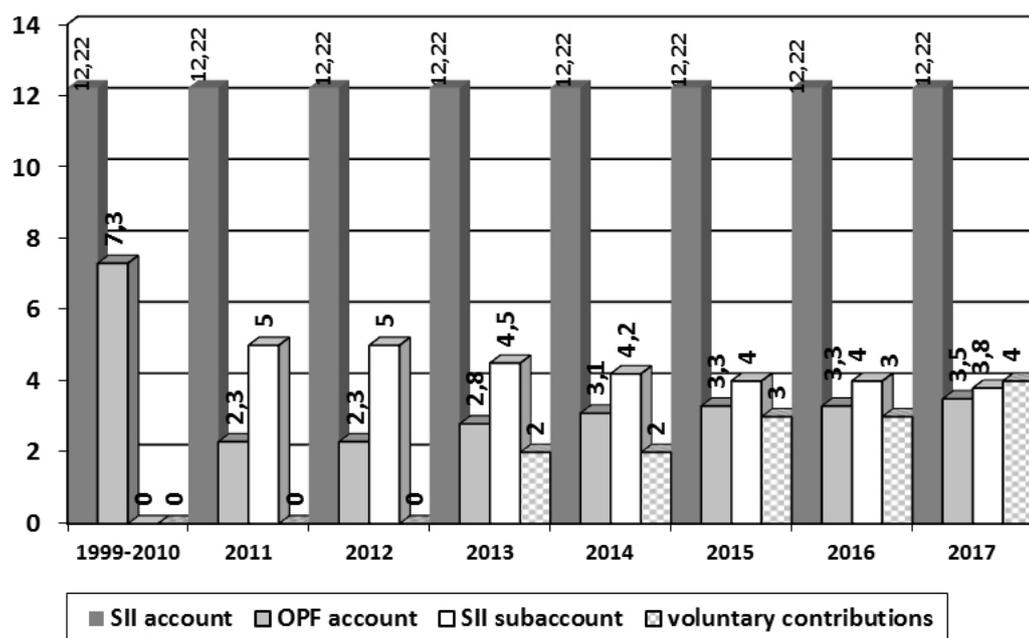


Chart 2. The amount of pension contributions transferred to individual accounts by the Social Insurance Institution and to Open Pension Funds, resulting from changes introduced in 2010

Source: Own work

The country budget compensates to the SII (Social Insurance Institution) the size of contribution it has to pay to OPF (Open Pension Funds), so in order to reduce these amounts, the rate of mandatory contributions transferred to pension funds has been reduced from 7.3% to 2.3% since 2011. In subsequent years, the size of this contribution is to increase to reach the value of 3.5% in 2017. In addition, the limits of investments in shares

were also changed, allowing the OPF to invest more in these securities.

Other changes in the pension system that took place before 2014 included: exclusion of the armed forces from the system in 2004, the reduction in the fees charged by the pension funds in 2004 and 2010, or the restoration of pension benefits for miners in 2005.

These changes had an impact on cash flows and some additional privileges for certain professional groups, but overall, the system still remains a three-pillar equity and PAYG (two mandatory pillars and one voluntary).

However, the most recent reform passed by the Polish parliament at the end of 2013 introduced radical changes that may lead to a complete annihilation of the equity part of the Polish pension system. These changes were introduced because all economic events occurring in the economy can be recorded either on a cash basis or an accrual basis. In fact, government debt is recorded partly on a cash basis and partly on an accrual basis. Securities issued by the State (state treasury bonds, loans taken at banks) are recognized on an accrual basis. Therefore, this type of debt is included in the official statistics of public sector debt, regardless of when it is paid. The accrual method is applied in the EU and it consists in registering income and expenses at the time of the transaction, regardless of the actual cash flow. All liabilities of the Treasury to Polish citizens such as future pensions and financing of medical treatment are recorded on a cash basis in the budget for the year in which they are to be paid. Cash is a generally accepted method of calculating public debt in Poland and it is based on income and expenditure recorded upon the actual financial flow, i.e. the inflow and outflow of funds. Therefore, the required changes in the adjustment of the national method to ESA95/2010 are the following:

- 1) the exclusion from the public finance sector of:
 - a. Open Pension Funds,
 - b. Agricultural Market Agency,
 - c. R&D units.
- 2) methodological adjustment:
 - a. Transaction adjustments
 - b. Recognition of the accrual method.

The implementation of item 1a, i.e. the exclusion from the budget deficit of OPF, where there were huge amounts of money, is a relatively simple and effective way of gradually reducing the level of public debt. In addition, policy makers also wanted to diminish the role of OPF in the future by redirecting the stream of future pension contributions from the OPF to SII, which should also have a positive impact on the deficit.

These assumptions have been achieved through the introduction since 2014 of the following changes in the second pillar of the pension insurance system.

- 1) the reduction in the fees charged by pension funds,
- 2) a gradual transfer of assets from the OPF to SII within the so-called safety slider,
- 3) the introduction of the so-called voluntary affiliation to pension funds, with the possibility to only opt for the Social Insurance Institution,
- 4) the prohibition of investment in Treasury bonds,
- 5) introduction of a transitional period for the minimum level of investment in shares,
- 6) no advertising,
- 7) transfer of 51.5% of the assets of each OPF to the Social Insurance Fund. On February 3, 2014 OPF transferred to the Social Insurance Institution the assets of 153,151.2 million.

The Polish pension system, considered by experts to be one of the best acting in the world, has been changed because it had a negative impact on the functioning of public finances and it stimulated the formation of public debt. The basic changes that were introduced struck the operation of the second pillar of the system.

While introducing the new pension system in 1999, it was considered that the contribution fee (distribution fee) would be a value by which the OPFs would compete with each other, and for this reason the amount of the fee was not specified. Taking advantage of this, OPFs charged their customers even double-digit fees. Voluntary determination of the amount of these fees was abolished in 2004 when the upper limit fee was set at 7%, then from 2010 it was reduced to 3.5%, and finally it was set in 2014 at a maximum of 1.75%. In this way, the Pension Companies couldn't collect from their members higher amounts.

The slider system works in the following way: ten years before retirement the funds collected by members of OPFs will be transferred every month to the Social Insurance Institution, so as to prevent the risk of a sudden collapse of market rates in the period immediately preceding the retirement of the insured. Therefore, the use of the slider system will slowly deplete funds held by pension funds.

The introduction of a voluntary second pillar has completely destroyed the basic principle of operation of the system. Poles were forced to make a choice as to whether to remain in an OPF or return to the Social Insurance Institution.

If a person did not fill in a suitable declaration form within due date and decided if she/he wants to stay with an OPF or go back to SII, she/he was automatically transferred to the Social Insurance Institution. The transfer to SII meant that no pension contributions would be transferred to OPF. At the end of July 2014, 18,673,615 people were members of an OPF, but it was the last month of obligatory belonging to the second pillar. Since August 1 only those who properly completed a declaration form and handed it in to SII, i.e. 2,564,072 people, still can belong to OPFs.

Before the reform OPF had certain investment limits imposed on them, which obliged them not to invest funds in a very risky way. The basic limitation connected the number of shares held in the portfolio, the share of which could not exceed 40%, but there were no limitations when it comes to owning bonds. These solutions meant that OPFs held more than 50% of Polish Treasury bonds in their investment portfolios. Since 2014 these funds cannot invest their money in Treasury bonds. The vast majority of their assets is invested in shares, thus reducing portfolio diversification, and causing a significant increase in the risk for retirement saving investments. This changes the nature of the functioning of OPFs from secure funds to venture capital funds.

The reform also introduced a ban on advertising OPFs, thereby silencing the most interested who were no longer able to effectively reach out to the broad masses of their customers through commercials.

However, the most discussed and controversial solution was the decision to transfer 51.5% of pension fund assets invested in Treasury bonds to the Social Insurance Institution. On February 3, 2014 OPFs transferred to Social Security the assets of 153,151.2 million PLN. Face value of these securities totaled 146,054.2 million PLN, including:

1) 130,187.6 million PLN - government securities,

2) 15,614.2 million PLN - bonds issued by Bank GospodarstwaKrajowego (BGK) for the National Road Fund, guaranteed by the Treasury,

3) 252.5 million PLN - other securities amounting to cash benefits guaranteed by the Treasury,

4) 1862.2 million PLN in cash.

As a result of this operation (cancellation of treasury securities) Polish public debt decreased by 134.2 billion. It fell less than the value of transferred funds, as bonds issued by BGK for the National Road Fund, guaranteed by the Treasury were not included in the debt.

SUMMARY

The pension reforms introduced in the previous few years were to improve the financial situation of SIF, but looking at their impact on the rules and their effects, they were rather cosmetic. It was not until the reform, which entered into force in 2014 that the basic standards relied on by the Polish pension system were definitely thrown away. This reform had two main objectives:

1) reduce the overall level of debt,

2) bring current financial savings due to the reduction of the amounts transferred to OPFs regularly.

The first objective was achieved because the debt was reduced by 134.2 billion PLN as a result of the transfer of bonds from OPFs to SII whereas the funds transferred from SII to OPFs only contributed to a continuous increase in public debt.

The differences shown in Graph 3, however, do not result from the devastating effects exerted by OPFs. They are a result of the methodology used to calculate public debt. Although the transfer of bonds from OPFs to SII reduced public debt, it did not affect the amount of hidden debt, which includes financial liabilities of the state which are not included its budget reports.

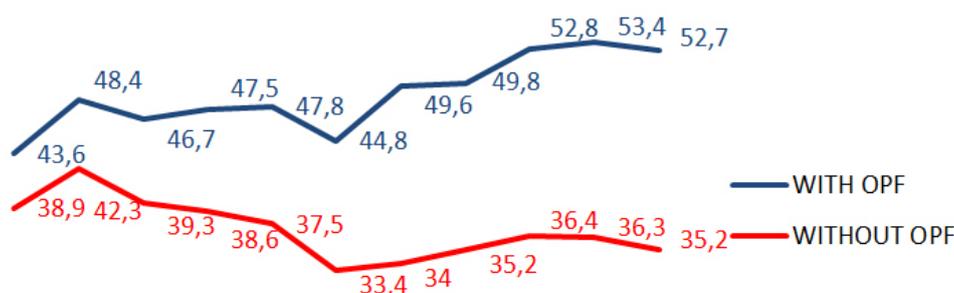


Chart 3. The public debt with OPFs and without OPFs (% of GDP)

Source: Own work

The main source of hidden debt are future financial commitments of the state, including payment of pensions, unemployment benefits and health care system.

The transfer of 134.2 billion PLN is only an accounting operation which does not affect the amount of future pension commitments towards citizens. This operation temporarily reduced the amount of debt, but over a longer period of time it may turn out to be quite ineffective because Eurostat recommends counting hidden debt, and so the transferred 134.2 billion PLN is going to be included in the debt of our country.

The second objective has also been achieved as OPFs get smaller funds because the rate of a contribution transferred by SII to OPF has been reduced. The effect of these measures is presented in Table 6.

Until 2010, the amount of the contributions paid to pension funds had been growing steadily, which was due to the increasing number of pension fund members, as well as the rise of the average base. Since 2010 the amount of these contributions has been much lower, because the percentage rate of the contributions transferred to OPFs was reduced.

Table 6. Amount of contributions (in PLN), the number of contributions (pcs.), the average premium (in PLN) and the average base (in PLN) in the following years:

| Year | Amount of contributions | Number of contributions | Average contribution | Average contribution base |
|--------------|-------------------------|-------------------------|----------------------|---------------------------|
| Total | 199 971 275 072,62 | 2 092 340 873 | 95,57 | 1 526,85 |
| 1999 | 2 262 672 022,30 | 23 346 432 | 96,92 | 1 327,63 |
| 2000 | 7 586 389 864,10 | 70 517 118 | 107,58 | 1 473,73 |
| 2001 | 8 652 943 742,47 | 74 927 415 | 115,48 | 1 581,98 |
| 2002 | 9 490 364 008,64 | 102 316 093 | 92,76 | 1 270,62 |
| 2003 | 10 140 515 707,17 | 124 140 099 | 81,69 | 1 118,99 |
| 2004 | 11 219 497 959,88 | 133 474 286 | 84,06 | 1 151,47 |
| 2005 | 13 405 816 868,03 | 149 643 399 | 89,59 | 1 227,19 |
| 2006 | 15 592 622 105,68 | 157 493 125 | 99,01 | 1 356,23 |
| 2007 | 17 142 753 485,87 | 165 736 024 | 103,43 | 1 416,91 |
| 2008 | 20 030 877 536,23 | 158 612 572 | 126,29 | 1 729,97 |
| 2009 | 20 859 905 819,19 | 147 551 834 | 141,37 | 1 936,62 |
| 2010 | 22 244 578 267,72 | 159 921 340 | 139,10 | 1 905,44 |
| 2011 | 14 981 105 395,17 | 160 276 718 | 94,64 | 1 937,17 |
| 2012 | 7 966 632 851,01 | 163 441 141 | 46,50 | 1 966,97 |
| 2013 | 10 227 492 593,83 | 175 950 112 | 57,61 | 2 092,89 |
| 2014 | 8 163 717 697,10 | 124 861 041 | 53,13 | 1 701,77 |

Source: Own elaboration based on data from the Social Insurance Institution

Until 2010, the amount of the contributions paid to pension funds had been growing steadily, which was due to the increasing number of pension fund members, as well as the rise of the average base. Since 2010 the amount of these contributions has been much lower, because the percentage rate of the contributions transferred to OPFs was reduced. However, the real revolution took place in August 2014. The low average contribution rate and the reduction of the number of pension fund members (OPFs only receive a contribution of just over 2.5 million insured) reduce the amount of transferred funds, so it can be assumed that, since 2015 SII will be transferring the amounts of 3-4 billion dollars per year to OPFs.

The slider system also began to work at the end of 2014 and it is already generating additional revenue for SIF. For example, in November 2014 OPFs transferred to the Social Insurance Institution funds in the amount of 3.3 billion PLN. In total OPFs sent to Social Insurance Institution funds from the accounts of about 1.3 million members. Given the demographic situation it can be assumed that these amounts will not be reduced in the future.

It is estimated that the changes in the pension system in the years 2014-17 discussed above, will help reduce the borrowing needs of the state of about 20-25 billion PLN each year. These changes were supposed to bring a radical improvement in the financial situation

of the Social Insurance Fund as early as 2015 and multibillion transfers of fund shad to effectively reduce the deficit in the pension fund. The reality, however, seems to be completely different. According to the Budget Act of 2015 the state budget will have to pay the Social Insurance Institution a record amount of more than 42 billion PLN! The primary reason for this situation is the fact that SIF finances are directly influenced by unfavorable demographic changes and by the economic crisis in Poland. An unfavorable demographic situation will affect the SSF for a long period of time. It is estimated that the worst situation will happen in the twenties of the twenty-first century, when the pension will have to be paid to those born during the baby boom (in the 1950 about 800 thousand Poles were born every year). After this period, there is a chance that the situation will slightly improve. As for the economic crisis, it is hard to predict when it ends. Development forecasts for the Polish economy since 2015 onwards are relatively optimistic, so maybe Poland will not be threatened by such a big budget deficit and the deficit of SIF.

Public debt is considered to be one of the greatest threats to modern economies, which can considerably limit economic activity. It definitely has to be fought, but certainly not with all available methods. The Polish pension system had a chance to get out of the collapse by shifting some of the responsibility for the payment of

future pensions to private institutions (OPFs), so that the public system would be relieved. Departure from the mandatory equity system meant that the future of the Polish pension system depends again only on the Social Insurance Institution.

Although the changes introduced in 2014 did not improve the financial situation of the Social Insurance Fund (it is going to become worse), they led to multibillion savings. Huge financial resources remain in Social Security rather than go to open pension funds, so the budget of the state will be balanced. If these changes had not been made, Polish public debt would have exceeded the prudential limits stipulated in the law on public finances. This would result in far-reaching changes in the budgets of central and local governments. It should be noted, however, that the changes had no effect on the amount of the so-called hidden debt. Total State obligations towards future retirees will continue to grow, and the current situation is just the result of making use of the opportunity to blackout the situation, it does not have anything to do with the actual healing of Polish public finances. Retirement debt is the same as it used to be, it is constantly growing, and whether it is recorded in the accounts of SII or OPFs, it will have to be accounted for in the future, in other words, all due benefits will have to be paid to future pensioners.

REFERENCES

- Dobrowolski, P. (2009). *Prawdziwe zadłużenie Polski wynosi ponad 200% PKB*. Warszawa: Instytut Sobieskiego.
- Kozioł, J., *Dług publiczny i jego konsekwencje ekonomiczno- społeczne*, Rocznik Żyrardowski, Tom VIII.
- Malinowska-Misiąg, E., Misiąg, W. (2007). *Finanse publiczne w Polsce*. Warszawa: LexisNexis.
- Ministry of Finance, Public debt - Annual Report 2013.
- Owsiak, S. (2006). *Finanse publiczne. Teoria i praktyka*. Warszawa: Wydawnictwo Naukowe PWN.
- Prognoza wpływów i wydatków Funduszu Ubezpieczeń Społecznych na lata 2014 – 2018, ZUS, Lipiec 2012.
- Prognoza wpływów i wydatków Funduszu Ubezpieczeń Społecznych na lata 2016 – 2020, ZUS, Listopad 2014.
- Rodzinka, J., Hady, J., Hospod, E. (2007). *Przyczyny wprowadzenia reformy systemu emerytalnego w Polsce*. e-Finanse, No. 3.
- Siekmann, H., *The Burden of an Ageing Society as a Public Debt*, Third Conference of the Monetary Stability Foundation, Frankfurt am Main.
- Sprawozdania finansowe Funduszu Ubezpieczeń Społecznych za lata 2002 – 2013.
- Ustawa budżetowa na rok 2014, (Dz. U. z 2014 r., poz. 162).
- Ustawa z dnia 13 października 1998 r. o systemie ubezpieczeń społecznych, Dz.U. 1998 nr 137 poz. 887, art. 2 ust. 3.
- Ustawa z dnia 28 sierpnia 1997 r. o organizacji i funkcjonowaniu funduszy emerytalnych, Dz.U. 1997 nr 139 poz. 934.
- Wernik, A. (2011). *Finanse publiczne*. Warszawa: Polskie Wydawnictwo Ekonomiczne.