

## THE SCOPE OF PROTECTION AND FINANCING OF SOCIAL RISK IN POLAND ON THE EXAMPLE OF THE SOCIAL SECURITY ADMINISTRATION

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**Abstract:** Social risks are an unusual type of risks occurring in insurance. Their specific feature is the implementation of risk in the sphere of social life of a person with special regard to the work environment. Social risks are an element of research in economics and law and in social policy. The author of the paper shows that the structure of the Polish social insurance system is not optimal and requires radical reform. This paper contains, among others, characteristics of the scope of protection of social risks identified in Poland by Social Security Administration and the basis for financing benefits from this system. The summary of the paper presents opinions on improving the financial efficiency of this system.

**Keywords:** social risk, insurance, security system, financial system effectiveness, Social Security Administration.

### 1. INTRODUCTION

In the sphere of social security, the Polish state guarantees its citizens a minimum subsistence in situations where they cannot provide for themselves the means to survive. One way of ensuring the livelihood of citizens should be a properly structured social security system. Its construction and the applied parametric solutions are decided by the legislative and executive bodies of the state. Currently, these bodies are facing new challenges in terms of reducing negative social phenomena, such as a reduction in the number of births and an ageing population. The solutions adopted in 1999 introduced by the reform of the social security system turned out to be inappropriate, and the developing negative demographic processes will result in permanent involvement of the state in reducing the financial deficit of the Social Security Administration. The scale of this shortfall, for the reasons indicated above, will progressively increase and will lead to the insolvency of the institution in the near future. In order to counteract this process, it is necessary to make changes in the social security system. The aim of this article is to present the scope of applied social protection in the Polish social security system, the principles of its financing and to indicate actions allowing for the reduction of the existing financial deficit. According to the author, it is necessary to make non-systemic, systemic and parametric changes in

order to balance state subsidies to the Social Security Administration. In the research conducted by the author, the analysis of documents and economic analysis of ZUS' receipts and expenditures were used as a research method.

## 2. METHODOLOGY OF RESEARCH

The basic assumption of the study was a thesis that there is a possibility of improving the financial efficiency of the Social Security Administration through the reconstruction of the social insurance system. Such reconstruction should be based on systemic and parametric changes in social insurance supported by possible economic and social changes (so-called non-systemic) in the national economy. In order to diagnose the existing state of affairs, a measure of the financial effectiveness of the system was used as a research tool.

Using the above mentioned measure of financial effectiveness, the study adopted the rule that expenditures are the sum of financial resources accumulated in the system, and the effects are the sum of all benefits paid to eligible persons according to the criteria defined by the system's creator. The financial effectiveness of the social insurance system (as well as of the examined entity, i.e. the Social Security Administration) should be based on an actuarial account, which means it requires the application of the principle that the incurred outlays (premiums) balance, or exceed the incurred effects-paid benefits.

To achieve this equity it is necessary to balance the system incomings and expenditure, i.e. discounted value of all contributions paid into the fund each month throughout the insurance lifecycle (per year) increased by a reserve, if any (or system initial debt) must equal to the discounted value of all benefits currently paid. It can be expressed by the following equation:

$$R_0 + \frac{1}{(1+r)^n} \sum_{i=1}^m \sum_{j=1}^n C_{ij} = \frac{1}{(1+r)^{n+s}} \sum_{k=1}^p \sum_{l=1}^s b_{kl} \quad (1)$$

where:

$R_0$  – reserves or initial debt upon system implementation,

$C_{ij}$  – value of the contribution paid in by a payer  $i$  in the period  $j$ ,

$b_{kl}$  – value of the benefit paid to the person  $k$  in the period  $l$ ,

$r$  – rate of return (depending on the system, a rate of return of the investment or a rate of increase of the payroll budget),

$m$  – number of contribution payers,

$n$  – number of contribution payment periods ,

$p$  – number of beneficiaries receiving benefits,

$s$  – number of benefit collection periods („Safety Thanks to Diversity”, 1997).

The ratio of income (contributions) to expenditure (benefits and administrative costs) in the social insurance system presented in the above formula is an optimal eventuality, however, the actual statement of these variables is presented by so-called financial effectiveness of the social insurance system. The formula for the financial efficiency of the social security system can be defined as follows:

$$\left\{ \begin{array}{l} \text{for } S_k \geq S_w + K f(S_e) \geq 1 \text{ effective (insurance) system} \\ \text{for } S_k < S_w + K f(S_e) < 1 \text{ ineffective (insurance + provision = hybrid) system} \end{array} \right.$$

where:

$f$  (Se) – financial efficiency of the social security system,

$S_k$  – social security contributions,

$S_w$  – benefits paid out of the scheme,

$K$  – administrative costs (Garbiec, 2013).

A given social security system may be considered financially effective if it reaches the value of a measure equal to unity. Any results below this value will indicate a need for systemic or parametric changes. Systemic changes mean these activities of legislative and executive bodies that change the scope of protection of social risks, or re-organise them. Parametric changes, on the other hand, consist in changes of the rules of collecting contributions or paying social benefits due by virtue of the execution of a given social risk.

### 3. RESULTS

Social security systems that guarantee a minimum subsistence for the citizens of a given country are financed by various techniques. It is the state that defines the catalogue of social risks and the techniques of its financing. Financing techniques include an insurance-based technique (based on the principle of benefits payment only to persons who have been paying premiums), a provision technique based on the principle of benefit payment without paying any premiums, and assistance (care) where benefits are paid to persons who do not pay premiums but meet certain income criteria. In Poland, social risks covered by protection at the Social Security Administration are financed with the use of the insurance-based method. As indicated by the data below, this financing is not sufficient and the scale of shortages is significant, which results in the need for the state to supplement the ZUS deficit. Taking into account unfavorable demographic trends, which cannot be avoided by Poland in the years 2025-2050, this deficit (currently corrected by ad hoc legislative changes) will grow dramatically. The financial efficiency of the social security system before and after the system reform in Poland is presented in the Table 1.

Table 1

Financial efficiency of the social security system before and after the system reform in 1999

Year	State subsidies to Social Security Administration (ZUS) in million PLN	State budget revenues in million PLN	Share of State subsidies to Social Security Administration (ZUS) in total state budget revenues (in %)	Financial efficiency of the Social Security Administration
Before the reform				
1991	881.9	210881	10.56	0.8063
1992	4950.8	31277	13.23	0.7790
1993	6605.2	45900	10.92	0.7968
1994	8296.9	63124	12.58	0.7658
1995	6000.0	83722	7.13	0.8549
1996	6031.4	99674	5.86	0.8858
1997	7000.0	119771	6.70	0.8741
1998	8792.8	126559	6.35	0.8895

After the reform				
1999	9459.0	125922	23.66	0.6884
2000	20082.5	135664	14.80	0.7323
2001	25743.6	140527	18.31	0.6902
2002	30617.1	143520	21.33	0.6875
2003	31935.6	152111	20.99	0.6882
2004	33535.0	156281	21.45	0.7039
2005	32893.60	179772	18.29	0.6821
2006	37904.5	197640	19.17	0.7375
2007	31859.0	236368	13.47	0.6115
2008	52694.8	253547	20.78	0.5712
2009	64948.8	274183	23.68	0.5556
2010	71463.6	250303	28.55	0.6153
2011	64118.3	277557	23.10	0.6973
2012	52928.9	287595	18.40	0.6689
2013	60843.8	279151	21.79	0.6689
2014	60607.7 <sup>1</sup>	283543	21.37	0.6838
2015	56199.6 <sup>1</sup>	289137	19.43	0.7182
2016	53269.9 <sup>1</sup>	314684	16.92	0.7406
2017	40 978.7 <sup>1</sup>	<b>350,499</b>	11.69	0.7840

Source: In-house study based on [www.zus.pl](http://www.zus.pl) and the Statistical Yearbook of the Republic of Poland for the years 1990-2017; [https://www.mf.gov.pl/ministerstwo-finansow/activity/public-finance/public-budgets/execution-budzet-government/asset\\_publisher/i1EC/content/estimated-data-o-execution-budzet-government-w-2017-r](https://www.mf.gov.pl/ministerstwo-finansow/activity/public-finance/public-budgets/execution-budzet-government/asset_publisher/i1EC/content/estimated-data-o-execution-budzet-government-w-2017-r).

1 - This year there was a reduction in subsidies due to changes in the second pension pillar (Pillar II) (taking over a part of the funds by ZUS from the Open Pension Fund (OFE), conversion of the obligatory participation into voluntary participation, etc.).

The necessity to supplement a deficit in the budget of the Social Security Administration by the state budget results from legal acts which stipulate that the state is the guarantor of current payments of ZUS benefits. Unfortunately, budgetary resources are spent on the current consumption of certain social groups and not on investments that will ensure further development to the state. The less funds will be allocated from the state budget for subsidies to the Social Security Administration (ZUS), the more funds will be allocated for pro-development investments. The reform of the social security system in Poland carried out in 1999, instead of improving its financial effectiveness, has significantly worsened it, and the upcoming demographic changes will result in a further decrease in this effectiveness. The growing number of benefit recipients resulting from longer life expectancy and the decreasing number of people paying contributions (covered by social insurance) due to falling number of babies born will result in a systematic increase in state subsidies to the Social Security Administration. A permanent increase of state subsidies to the social security system may lead to a collapse of public finances in the near future. It is therefore necessary to take actions as soon as possible in order to change the principles of the system's functioning. In the next few years, forecasts as to the size of ZUS deficit confirm the current negative trends in this respect, and the least favourable years in terms of demographics (and financial efficiency, as well) will start in a few years' time. The deficit forecast for the coming years is presented in the Table 2.

Table 2

Forecast of a deficit of the Social Security Administration for 2018-2022

Year	Receipts in mln PLN	Expenditures in mln PLN	Financial effectiveness
Moderate variant			
2018	176 135	232 494	0.7575
2019	185 543	245 294	0.7564
2020	195 971	259 529	0.7551
2021	206 564	274 952	0.7512
2022	217 704	290 988	0.7481
Pessimistic variant			
2018	169 460	234 558	0.7224
2019	175 474	247 450	0.7091
2020	181 699	261 306	0.6953
2021	187 582	275 832	0.6875
2022	193 754	290 330	0.6673
Optimistic variant			
2018	181 426	229 871	0.7892
2019	192 820	242 285	0.7958
2020	205 399	256 206	0.8016
2021	218 545	271 489	0.8049
2022	232 579	287 641	0.8085

Source: In-house study based on [http://www.zus.pl/documents/10182/24106/Prognoza\\_FUS\\_2018\\_2022.pdf/2cc8d322-f9f2-4bb4-98d2-faef1618a9b9](http://www.zus.pl/documents/10182/24106/Prognoza_FUS_2018_2022.pdf/2cc8d322-f9f2-4bb4-98d2-faef1618a9b9); [www.zus.pl](http://www.zus.pl)

#### 4. DISCUSSION

The analysis of social risks applied in social policy is, in most cases, based on their definition and specification of a catalogue of risks. The International Labour Organisation Social Security (Minimum Standards) Convention No. 102 defined the following social risks to fall within the realm of 'social security':

- 1) The need for medical care.
- 2) Temporary incapacity for work (sickness cash benefit).
- 3) Unemployment.
- 4) Old age.
- 5) Work accident and occupational disease.
- 6) The responsibility for the maintenance of children (family benefits).
- 7) Maternity.
- 8) Long-term incapacity for work (invalidity).
- 9) Death of breadwinner (survivor's benefit) (Nickles and Siedl, 2004).

In the opinion of G. Uścińska the basic legal act taken into account in such an analysis is the concept of social risk given in Convention No 102, which links social risks to a specific benefit, namely:

- 1) Sickness – this risk is complex and inhomogeneous, it is designed to compensate for a loss of earnings as a result of illness and includes healthcare (medical) services and/or sickness cash benefits.
- 2) Unemployment – a loss of earnings where a protected individual is still fit for work but cannot find a proper job.
- 3) Old age – provision of cash benefits to anyone reaching the prescribed age (which should not be more than 65).

- 4) Work-related accident or injury, work-related disease – a complex risk, defined in a wide and precise manner).
- 5) Family and parenting support – provision of cash and/or in-kind support for low-income families raising children.
- 6) Maternity – cash support and healthcare (medical) services for a protected female in relation to a loss of earnings during pregnancy, delivery, and in the postpartum period, and to a need for healthcare services in these periods.
- 7) Disability – inability to perform any physical labor to a degree specified after a disability assessment, if it is total and presumably permanent or persistent and causes a loss of earning.
- 8) Death of the breadwinner – a loss of support suffered by a widowed person or a child as the result of death of the breadwinner (Uścińska, 2005).

The catalogue of all protected social risks in Poland is comprised in the elements of social protection, which include: social insurance, health insurance, insurance against job loss, benefits for the disabled, social assistance, pro-family benefits, social protection of uniformed services and social protection of farmers.

The subject of this study is the Polish social security system and the risks protected by it, namely: the risk of old age covered by the pension insurance; the risk of long-term inability to work (disability risk) and the risk of death of the breadwinner covered by the disability insurance; the risk of short-term inability to work (sickness risk) and maternity covered by the sickness insurance and the risk of accidents at work and occupational diseases covered by the accident insurance. In accordance with the provisions of Regulation of the European Council No. 883 of 2004 on the coordination of social security systems in the European Union, a rule of autonomous decision of each Member State is applied as to what kind of social risk and how it is protected in it. Therefore, in Poland, according to this rule, these risks are financed with the insurance-based method and serviced by the Social Security Administration (SSA). Acceptance of the existing state of affairs and further passivity in the face of negative processes affecting the financing of the social security system inevitably leads to the collapse of public finances and, as a consequence, the bankruptcy of the Polish state. Undertaking ad hoc measures not supported by a structural reform of the whole system is a short-sighted measure which does not ensure the self-financing of the Polish social security system.

## **5. CONCLUSION**

Unavoidable demographic changes and an increase in state subsidies to the social security system require urgent changes, both outside the system, as well as systemic and parametric ones. The changes outside the system include, first of all, an increase in the amount of income earned by insured persons. The low level of salaries results in lower contributions and in the future hunger pension benefits (currently the lowest pension paid by the Social Security Administration amounts to PLN 0.04 per month!). Possible demographic changes (increasing the birth rate) would also improve the system's revenue, unfortunately, the effects of such measures will have to wait at least 20-25 years. Certainly, economic activation of older people (60+) would have a significant impact on improving the financial efficiency of the system, which would not only increase income to the system, but would also ensure an improvement in the living standards of pensioners.

In the short term, however, systemic changes, such as these shown below, would be much more effective;

- a change in the scope of protected social risks in Social Security Administration by including unemployment risk in the system;
- changing the scope of protected social risks in the Social Security Administration by including a risk of "limitation of a person's physical functioning or mobility" into the system (by means of a care insurance separated from the pension insurance);
- introduction of a uniform system of social insurance without privileges for specific socio-professional groups such as miners, farmers, officers of uniformed services;
- creation of an Individual Social Security Account, acting in accordance with the "combined vessels" principle, in which unused contributions for particular types of disability, sickness and unemployment benefits would increase the pension capital (Garbiec, 2017).

The necessary parametric changes in the scope of social benefits paid include:

- harmonisation of sickness benefits,
- unification of the amount of pension benefits,
- a change in the rules of calculating pension benefits (Garbiec, 2018).

The introduction of all systemic and parametric changes requires another reform of the system. It is difficult to predict whether this implementation will be possible in the upcoming years, but abandoning changes in the social security system at all will result in a collapse of public finances, which will lead, among other things, to a reduction in the amount of social benefits and salaries in the so-called budgetary sphere, a reduction in the standard of living of citizens, a reduction in Poland's GDP, and even to social unrest, such as strikes and riots. Let us hope that this type of situation will not happen.

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