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Redakcja wydawnicza: Jadwiga Marcinek
Redakcja techniczna: Barbara Łopusiewicz
Korekta: Justyna Mroczkowska
Łamanie: Agata Wiszniowska
Projekt okładki: Beata Dębska

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tel./fax 71 36 80 602; e-mail: econbook@ue.wroc.pl
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Spis treści

Wstęp

Ubezpieczenie jako urządzenie gospodarcze funkcjonuje od bardzo dawna. We współczesnych czasach w wielu krajach w ramach rynków finansowych działają rozwinięte w różnym stopniu rynki ubezpieczeniowe. Ryzyko, które towarzyszy człowiekowi od zarania dziejów i które dało początek zorganizowania instytucji ubezpieczenia, występuje ciągle i jednocześnie na skutek rozwoju cywilizacyjnego, rozwoju technologicznego oraz zmieniających się procesów demograficznych. Pojawiają się nowe kategorie ryzyka, które mogą być przedmiotem ubezpieczenia. Wobec zmieniającego się otoczenia rynek ubezpieczeniowy dostosowuje się i proponuje nowe produkty ubezpieczeniowe. Jednocześnie zakłady ubezpieczeń z obowiązku muszą dbać o bezpieczeństwo finansowe swoich klientów, aby nie podważyć podstawowej zasady realności ochrony ubezpieczeniowej. Wszystkie te zjawiska można zaliczyć do obszarów badawczych środowiska akademickiego zajmującego się problematyką ubezpieczeniową. Ponadto nowe tendencje, które pojawiają się w systemach emerytalnych, wywołane starzeniem się społeczeństw i niewydolnością repartycyjnego systemu emerytalnego, a równocześnie pojawiającymi się kryzysami na rynkach finansowych, generują cały szereg problemów badawczych, które są również w zasięgu zainteresowań wielu środowisk akademickich. Funkcjonujący w Polsce od kilkunastu lat nowy system emerytalny budzi różne kontrowersyjne dyskusje i skłania do wstępnej oceny, a zagadnienia te wiążą się z funkcjonowaniem systemu ubezpieczeń społecznych, w tym również z finansowaniem ochrony zdrowia.

Jak widać, tematyka badawcza obejmująca bardzo szeroko rozumiane ubezpieczenia od strony teoretycznej, jak również praktyki ubezpieczeniowej, jest niezwykle obszerna. Wszystkie te problemy są zawarte w przygotowanej pracy.

Zbiór zawiera artykuły, zaprezentowane na IX Międzynarodowej Konferencji „Ubezpieczenia wobec wyzwań XXI wieku”, która odbyła się w maju 2015 r. w Rydzynie. Konferencja jest organizowana z inicjatywy i w wyniku współpracy Uniwersytetu Ekonomicznego w Poznaniu i Uniwersytetu Ekonomicznego we Wrocławiu. Biorą w niej udział osoby reprezentujące wszystkie czołowe krajowe środowiska akademickie zajmujące się problematyką ubezpieczeniową oraz przedstawiciele praktyki ubezpieczeniowej. Od kilku lat przyjeżdżają również uczestnicy z zagranicy, z takich państw, jak: Rosja, Ukraina, Białoruś, Słowacja, Czechy i Niemcy. Tematyka badawcza prezentowana na obradach koncentruje się wokół następujących zagadnień:

- Funkcjonowanie rynku ubezpieczeniowego w Polsce i w świecie
- Zarządzanie ryzykiem w ubezpieczeniach
- Gospodarka finansowa ubezpieczycieli

- Zastosowanie metod ilościowych w ubezpieczeniach
- Problematyka prawna w ubezpieczeniach

Artykuły opublikowane w tym opracowaniu dotyczą powyższych zagadnień.

Pragniemy wszystkim Autorom serdecznie podziękować za przygotowanie interesujących artykułów poruszających wiele ważnych, aktualnych problemów i mamy nadzieję, że publikacja ta wzbogaci literaturę ubezpieczeniową i będzie inspiracją do dalszych badań.

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Wanda Ronka-Chmielowiec
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Roman Garbiec
Czestochowa University of Technology
e-mail: romangarbiec@wp.pl

FINANCIAL EFFECTS OF SOCIAL SECURITY SYSTEM REFORMS IN SELECTED COUNTRIES OF THE EUROPEAN COMMUNITY

EFEKTY FINANSOWE REFORM PUBLICZNYCH SYSTEMÓW UBEZPIECZEŃ SPOŁECZNYCH W WYBRANYCH PAŃSTWACH UNII EUROPEJSKIEJ

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Summary: The paper presents financial effects of social security system reforms in selected countries of the European Community. The main purpose of the study was to answer the following question: how (if at all) the systemic and parametric reforms implemented in Poland, Germany, Sweden and the United Kingdom improved financial effectiveness of public social security systems in these countries? The assessment of financial effects of the systemic and parametric reforms for social security systems in the target countries included reforms implemented at the end of the 20th and the beginning of the 21st century. As a research tool, the study uses a quantitative index, hereinafter referred to as an index of system financial effectiveness, calculated as a quotient of the total compulsory insurance contributions and the amount of the payable social benefits.

Keywords: financial effects, social security, systemic and parametric reforms, insurance contributions, social benefits, costs.

Streszczenie: Artykuł opisuje efektywność finansową publicznych systemów ubezpieczeń społecznych w niektórych państwach Unii Europejskiej. Celem zasadniczym przeprowadzonego badania było znalezienie odpowiedzi na pytanie: w jaki sposób przeprowadzone reformy systemowe i parametryczne wpłynęły na efektywność finansową publicznych systemów ubezpieczeń społecznych w Polsce, Niemczech, Szwecji i Wielkiej Brytanii. Analiza skutków finansowych reform systemowych i parametrycznych w systemach ubezpieczeń społecznych w badanych państwach europejskich obejmuje reformy przeprowadzone na przełomie XX i XXI wieku. W niniejszym opracowaniu jako narzędzie badawcze zastosowany został wskaźnik ilościowy nazwany wskaźnikiem efektywności finansowej systemu, będący ilorazem składek opłacanych przez podmioty zobowiązane do ich opłacania i wysokości wypłacanych świadczeń.

Słowa kluczowe: efekty finansowe, ubezpieczenie społeczne, systemowe i parametryczne reformy, składki ubezpieczeniowe, świadczenia społeczne, koszty.

1. Introduction

All countries in the world, regardless of their level of economic development, face the same serious problem of social security financing. These countries decide which elements of social security should be financed from compulsory insurance contributions (dedicated payroll tax, obligatory technique) and which by public (central or local) funds and taxes (facultative, case-based assistance). A decision to finance an element of social security system through dedicated payroll tax (or a hybrid technique, i.e. obligatory insurance contributions combined with public funds) results in certain consequences for the management of public funds. One of these consequences is a necessity of reforming or amending the systems/subsystems[1] so that they become as much self-sufficient as possible or requires only small funding from public resources. When analyzing any social security system, we must remember that it forms a part of public funds in which transferring money from the state to authorized beneficiaries is an essential and sometimes even destructive element in management thereof. Thus this study is an attempt to assess if the implementation of systemic or parametric reforms in the selected European countries reduced the percentage of government funds in financing social security systems[2].

The main purpose of the study was to answer the following question: how (if at all) the systemic and parametric reforms implemented in Poland, Germany, Sweden and the United Kingdom improved financial effectiveness of public social security systems in these countries? The assessment of financial effects of the systemic and parametric reforms for social security systems in the target countries[3] included the reforms implemented at the end of the 20th and the beginning of the 21st century.

As a research tool, the study uses a quantitative index, hereinafter referred to as an index of system financial effectiveness, calculated as a quotient of the total compulsory insurance contributions and the amount of the payable social benefits. The situation where insurance contributions are at least equal to the payable benefits could be regarded as optimal as no government resources are required either to create social policy (arrangement of the management and legal foundations of social security

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[1] Subsystem means each type of insurance (separated as a part of the system in relation to the risk) and defined by a separate contribution.

[2] Surveys tracking and evaluating the efficiency and effectiveness of public expenditures using qualitative indices on the basis of the performance of this sector. This method of evaluating the efficiency and effectiveness was presented by the European Central Bank where the authors used the following indices: Public Sector Performance – PSP and Public Sector Efficiency – PSE. Public Sector Performance was measured with respect to the performance of the following fields: opportunities and chances given to citizens (through expenditures for administration, education, health care and public infrastructure); traditional indices proposed by Richard A. Musgrave (resource allocation, income redistribution and macroeconomic stabilization) [Afonso, Schuknecht, Tanzi 2003].

[3] The European countries presented in the comparative analysis were selected on the basis of the modified social policy breakdown by G. Esping-Andersen [Souza 2005].

systems) or in financial aspect (to contribute additional funds for payment of the due benefits). If the contribution-benefit ratio is lower than 1, then either the contributions must be increased or benefits reduced. A common alternative of this unpopular solution is the contribution of additional funds from the state budget. However, if the ratio is equal to or higher than 1, the compulsory contributions can be decreased or benefits increased[4]. System effectiveness index can be either gross or net. Gross index, apart from the cost of benefits, also includes management (administration) expenses whereas net index shows only the contribution/benefit ratio.

2. Structural and parametric reforms in selected countries of the European Union

Systemic and parametric changes are required because of continuous deterioration of both demographic and economic indices. The formulas applied in the social security systems to calculate the benefits are being amended on account of the increasing insufficiency of public budgets, and very rarely or never on account of declining actual value of the paid benefits. It is predicted that in future the old-age pension replacement rate in public systems (most often advance funded defined contributions) will gradually decrease. In order to improve the public finance condition and adequate quality of life to the beneficiaries in old age (as well as in other cases of execution of social risk), other reforms are (or should be) undertaken.

Poland is one of the European countries that has started the implementation of major systemic and parametric reforms after recent economic transformation. Similar (but smaller-scale) changes resulting from strong recommendations of the World Bank were made in several countries of Central and Eastern Europe. Among other countries in the remaining parts of Europe, only Sweden (and Italy, but to a lesser extent) decided to start systemic and parametric reforms. In Sweden the decision was mostly caused by collapsing of the idea of "welfare state" and increasingly higher rate of financing of the social security system from the public budget. Reforms in the Italian system were triggered by huge decentralization and predictable demographic changes. However, major changes in these countries were built upon totally different ground. Both in Sweden and in Italy the economic system has not changed or required fundamental amendments for many years. Post-communist countries which started the implementation of systemic and parametric reforms followed (as advised by the World Bank) the patterns of recently implemented reforms encompassing funded benefit schemes in the countries of South America.

[4] The theory of activity effectiveness indices was defined by W. Kieżun (who referred to it as economic effectiveness) and W. Gasparski who defined it as a relationship of effects against costs where the relationship was defined as "effective" (if the outcome exceeded one), neutral (if the outcome was one) and ineffective (if the result was lower than one) [Kieżun 1997; Gasparski 1983].

Table 1. Countries where pension scheme systemic and parametric reforms were implemented in the years 1995-2005.

Retirement Age	Contribution Rate	Contribution Requirement	Pension Formula
Austria	Czech Rep.	Austria	Austria
Belgium	Denmark	Belgium	Belgium
Cyprus	Finland	Czech Rep.	Czech Rep.
Czech Rep.	Germany	Denmark	Finland
Denmark	Hungary	Finland	France
Estonia	Ireland	France	Greece
Finland	Italy	Germany	Hungary
Germany	Latvia	Ireland	Italy
Greece	Lithuania	Italy	Luxembourg
Hungary	Malta	Slovak Rep.	Portugal
Italy	Netherlands	Slovenia	Slovak Rep.
Latvia	Portugal	Spain	Slovenia
Lithuania	Slovak Rep.	Poland	Spain
Portugal	United Kingdom		United Kingdom
Slovak Rep.	Poland		Poland
United Kingdom			

Source: in-house study on the basis of [Zaidi, Marin, Fuchs 2006].

Major changes in the Polish social security system made at the end of the 20th and at the beginning of the 21st century included: establishing funded pension pillars, amending the formula applied in the calculation of the retirement benefit in the advance funded defined contribution system, dividing the structure of the general contribution into four types of payments related to different social risks, allowing some groups of the insured to pay facultative contributions allocated for different social insurance types, encompassing benefits in kind by separate health insurance, parametric changes of sickness and work-injury benefits.

Polish experiences in this area are not exceptional in the European Community. Over the last few years a lot of Member States modified their social security systems. Apart from changes of the sickness benefits matched with the disability benefits (in Sweden), changes of work unfitness assessment procedure (in Germany) and changes in the field of disability benefit and allowance payment (in the United Kingdom), all other changes were generally related to pension schemes.

In Germany an important pension reform was carried out in 2001 as a response to the problem of the increasing number of elderly citizens in the society, ineffectiveness of the social security system and economic crisis. The changes that were adopted at that time provided for: reduction of compulsory pension contribution rate to 20% by 2020 and to 22% by 2030, decrease of the average replacement rate from present 70% to 67% by 2030, some financial advantages including subsidized contributions withdrawn for the purpose of the second pillar for citizens who could not handle payment themselves, incentive plan for employees encouraging them to save and voluntarily invest 4% of their gross income in private or occupational pension schemes, access to additional two pension schemes (defined benefit plans, defined contribution plans) [*The history of*... 2009]. Another pension reform enacted by the German government in 2005 raised the statutory retirement age (effective from 2012) by adding one month per year to the target age of 67 entitling to full retirement benefit. In 2008 a resolution designed to increase coverage of privately-funded pensions (so called Riester pension scheme) to 4% by 2014 was enacted [*Rentenversicherung in Zeitreihen*… 2011]. In 1999 a resolution reforming a disability pension scheme and introducing equal entitlement to disability benefits regardless of qualifications was adopted. The act was to cut classification of disability pensions into total unfitness to work for medical reasons and unfitness to work in a particular occupation[5]. One type of disability pension, referred to as "a disability pension due to temporary working disability" was instituted (only young people under 40 years of age were covered by these changes[6]). This act provides for the classification of unfitness for work into three categories: people unable to work for more than 3 hours per day, people able to work between 3 and 6 hours per day and people capable of working for 6 or more hours per day [Golinowska 2001]. In 2012 a step-wise increase of the age entitling beneficiaries to receive family pensions been initiated so that it would reach the age of 47 by the year 2029 [Mutual information… 2009]. As far as health (medical) care insurance is concerned, in 2009 an act of competition enhancement was adopted providing for establishing the Health Fund (in January 2012) funded by contributions at a rate of 15.5% of the gross income from 31st June 2009 and of 14.9% since 1st July that year [*Rentenversicherung in Zeitreihen*. 2011]. Care insurance was modified through differentiating the rate of contribution. In 2005 a decision was made to raise the rate of the contributions withdrawn from people having no children. Before new legislation was enacted, the contribution had been withdrawn according to the rule 50/50 (employer/insured person). The act increased the rate of the statutory contribution payable by employees with no children by 0.25% [Mutual information…].

The United Kingdom has a social security system that provides a basic (not comprehensive) package of health services to every citizen as everybody can afford paying contributions[7]. Widespread pension reform process taken up in the Great Britain in the 1990s aimed to decrease public pension spending, which is lower in comparison to other countries. The amendments implemented under the Pension Act of 1995 (that came into force in April 1997) highly contributed to the reduction of pension expenditures; these were, for example: gradual increase of the retirement age of women, reduction of the pension rate payable from SERPS – The

[5] Occupation Gould not be protected by the disability pension system as a consequence of it [Golinowska 2001].

[6] A category of disability benefit paid on the grounds of unfitness for the job will be continued in the population over 40 years of age [Golinowska 2001].

[7] In the past a basic pension collected under the State Security System was not supposed to guarantee full-level income to the elderly people [Johnson, Rake 1997].

State Earnings-Related Pension Scheme, according to a very complicated formula, abandoning the plans of funding partial revaluation of defined-benefit occupational pensions that were to replace SERPS. In 1999 SERPS was abolished and replaced (in April 2002) by a new state scheme − The State Second Pension (SSP)[8]. The SSP was initially an earnings-related scheme (pensions for people with lower earnings were calculated using a higher index), however, since April 2007 it has been a flat-rate benefit (although contributions are still related to the earnings). Other changes (implemented by the acts adopted in 1995 and 1999) promote and improve conditions for the development of private funded pension schemes via age-related subsidies to PPS − Personal Public Service members; since April 1997 the defined-benefit occupational pension schemes that replaced SERPS have not been required to provide pensions at the level of at least GMP – Guarantee Minimum Pension[9]; a new system of private funded pensions, so called Stakeholder Pensions Schemes (SPS), addressed to those with middle and high income, was instituted in October 2001. The objective of PPS was to replace SSP. In October 2003 the Guarantee Minimum Pension was replaced by Pension Credit (PC). Low-income pensioners can claim for social assistance, so called Income Support, in particular for Pension Credit funded from taxes [Pieńkowska 2007]. Parametric changes in the United Kingdom have included an increase of retirement age of women from 60 to 65 which will be gradually implemented in the years 2010-2020. As a result of incapacity benefit (contribution) changes in the United Kingdom a short-term Employment and Support Allowance (ESA) was introduced on 27th October 2008 [Mutual information… 2009]. It replaced disability benefits by a range of work incapability benefits and social financial support [Wright 2011].

Reforms of the pension system in Sweden generally encompassed the following issues: dependence of the pension benefit on the earnings and rate of contributions which ruled out an equal basic pension payable to every Swedish citizen or resident after spending at least three years in Sweden; establishing a private funded pension scheme as a part of the public pension system via payment of 2% of the contribution to private pension accounts. Furthermore, parametric changes with respect to the rate of medical care insurance contribution were undertaken, as a consequence of which the contributions were first increased and then gradually reduced[10].

The presented changes implemented in some selected countries of the European Community were both systemic and parametric. All the reforms improved financial effectiveness of the systems. The financial outcomes will be analyzed in the next chapter of the study.

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[8] It is advantageous for people with relatively low earnings [Pieńkowska 2007].

[9] Also referred to as MIG − Minimum Income Guarantee.

[10] The rate of contribution withdrawn exclusively from employers for the account of this insurance was 8.5% in 2000, 8.8% in the years 2001-2002, 11.08% in the years 2003-2004, 10.15% in 2005, 8.64%, in 2006, 9.61% in the years 2007-2009. The rate of contribution withdrawn from self-employed people for the account of this insurance was 9.23% in 2000, 9.53% in the years 2001-2002, 11.81% in the years 2003-2004, 11.12% in 2005, 9.61% in the years 2006-2009.

3. Financial effectiveness of social security systems

Implementation of a structural or parametric reform not always leads to a decrease of the government share in funding public social security systems. Sometimes reforms can increase the percentage of public funds in the social security due to, for example, some erroneous assumptions adopted at the stage of development of system changes or starting a transition period at the time when a temporary deficit of financial resources is observed. Listing out all indices of financial efficiency of social security system enables defining the extent of such shortage and impact of the reforms on the system. It also gives grounds to specify reasonable corrections and adjustments required in the system in future.

Within the analysed period of time the indexes of financial effectiveness of Polish social security system, expressed in net and gross values, were decreasing constantly up to 2012 when their slight increase may have been observed. Despite it, their level indicates a significant share of the state support – 30 up to 40% when expenditures in the system's financing are analysed. The indexes of financial effectiveness of German social security system, also presented in gross and net values, were reaching similar values between 2000 and 2012. That may lead us to an assumption that the system is stable and the level of the state's support for the system may be valued for 18 up to 32%. In case of British social security system the gross and net indexes should be indicated as optimal ones. In this system its revenues are equable to its incomes (in form of premiums). Small amounts of the governmental support, ranging from a few up to 10%, were sporadic and they occurred only in case of gross effectiveness of the system. When the Swedish system is analysed it may also be assumed that the indexes indicate its stability and their slight fluctuations result in the necessity of the state's support at the level of a few up to dozen or so percent.

The shortfall faced by state pension schemes is common, and a few exceptions confirm the rule. Thus it is imperative to use a method of benefit funding that would not require substantial assistance from the government. X. Scheil-Adlung described such a cost-effective method[11], where benefits paid out of NDC – notional defined contribution model, are linked to contributions withdrawn from the insured. The implementation of this model supported by a link between contribution rate and eventual pension benefits (based upon actual account) could maximally reduce or even quite eliminate a necessity to finance social benefits by the state. This activity can be understood as privatization of the system, however, on a micro-scale, where each insured person has an obligatory social account out of which all his/her benefits are funded.

[11] *Building Social Security: The Challenge of Privatization*, ed. X. Scheil Adlung, Transaction Publisher, New Brunswick-London 2001, pp.63-82; Brunner L., Colarelli S.M., 2004, *Individual unemployment accounts,* The Independent Review, Vol. VIII, No. 4, pp.569-585.

Table 2. Indicators of financial effectiveness of social security systems in the Member States included in the study

Country	Structure of funds and effectiveness of system funding	Year												
		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Poland [1]	Contributions	65601,5	70406,7	68217,1	70271,8	74032,7	78181,9	81328,5	89515,8	82955,0	86537,7	89378,7	102549,0	121908,5
	Benefits – total	81777,2	92108,2	95417,5	100074,9	104381,0	107397,6	115908,5	118013,2	132180,8	147896,4	156898,7	163721,2	170913,4
	Expenditures – total	85684,0	96150,3	98834,2	102207,4	107567,7	111075,5	119233,0	121374,8	135649,8	151486,5	160842,3	166667,3	174837,4
	Costs	3906,8	4042,3	3416,7	2132,5	3186,7	3677,9	3324,5	3361,6	3469,0	3590,1	3943,6	2946,1	3924,0
	Total system – net	0.8022	0.7644	0.7149	0.7022	0.7093	0.7280	0.7017	0.7585	0.6276	0.5851	0.5696	0.6264	0.7133
	Total system – gross	0.7656	0.7323	0.6902	0.6875	0.6882	0.7039	0.6821	0.7375	0.6115	0.5712	0.5556	0.6153	0.6973
Germany[2]	Contributions	359294	361274	366510	371285	372020	372377	337867	341910	349972	339029	359131	376445	388670
	Benefits -total	413233	428826	447034	461534	452588	474199	435336	436258	443973	470563	476477	476176	474122
	Expenditures -total	457569	470916	490324	498998	495138	517705	458091	457811	469253	497879	504625	503503	510486
	Costs	43336	42090	43290	37468	42550	43506	22755	21553	25280	27316	28148	27327	36364
	Total system– net	0.8695	0.8425	0.8199	0.8045	0.8280	0.7853	0.7761	0.7837	0.7883	0.7204	0.7537	0.7906	0.8198
	Total system – gross	0.7852	0.7672	0.7475	0.7441	0.7513	0.7193	0.7376	0.7468	0.7458	0.68,09	0.7116	0.7477	0.7614
United Kingdom[3,4]	Contributions	51852	55627	58050	59658	59827	62863	67786	69599	77224	74453	73817	74181	78423
	Benefits -total	50026	50960	54201	56255	58572	61304	63695	67443	72366	70487	75410	77799	82357

Table 2. cd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Expenditures – total	51297	52574	55795	59443	62433	65847	69161	72027	76549	74594	79793	82252	86323
	Costs	1271	1614	1592	3194	3861	4543	5466	4584	4183	1326	1401	1419	1125
	Total system – net	1.0365	1.0915	1.0710	1.0604	1.0214	1.0254	1.0642	1.0319	1.0671	1.0562	0.9788	0.9535	0.9522
	Total system – gross	1.0108	1.0580	1.0404	1.0035	0.9582	0.9546	0.9801	0.9662	1.0088	0.9981	0.9251	0.9019	0.9085
Sweden[5]	Contributions	302881	328330	341964	362774	374476	385499	384046	397140	405775	395659	207274	201616	208519
	Benefits -total	280389	296047	312379	341838	353532	359268	365260	351371	450075	471262	203234	201306	204940
	Expenditures – total	334184	352747	381124	414485	427625	435279	436386	440282	459812	480973	210646	208882	214297
	Costs	53795	56700	68745	72647	74093	76011	71126	88911	9737	9711	7406	7577	8161
	Total system – net	1.0802	1.1090	1.0947	1.0612	1.0592	1.0730	1.0514	1.1303	0,9016	0.8396	1.0199	1.0015	1.0175
	Total system – gross	0.9063	0.9308	0.8973	0.8752	0.8757	0.8856	0.8801	0.9020	0.8825	0.8226	0.9840	0.9652	0.9730

[1] in PLN,

[2] in EURO,

[3] in GBP,

[4] Data from the reporting period from 01.04 of the preceding year to 31.03 of the year in the table. It does not include data regarding unemployment from sources other than social security system,

[5] in SEK.

Source: In-house study on the basis of *Statistisches Jahrbuch 2003, fűr Bundesrepublik Deutschland*, 2003, Statistisches Bundesamt, Wiesbaden, p. 470; *Statistisches Jahrbuch 2004, fűr Bundesrepublik Deutschland*, 2004, Statistisches Bundesamt, Wiesbaden, p. 188; *Statistisches Jahrbuch 2006, fűr Bundesrepublik Deutschland*, 2006, Statistisches Bundesamt, Wiesbaden, p. 196; *Statistisches Jahrbuch 2007, fűr Bundesrepublik Deutschland*, 2007, Statistisches Bundesamt, Wiesbaden, p. 197; *Statistisches Jahrbuch 2008, fűr Bundesrepublik Deutschland*, 2009, Statistisches Bundesamt, Wiesbaden, p. 201; *Statistisches Jahrbuch 2010, fűr Bundesrepublik Deutschland*, 2010, Statistisches Bundesamt, Wiesbaden, p. 203; *Statistisches Jahrbuch 2011, fűr Bundesrepublik Deutschland*, 2011, Statistisches Bundesamt, Wiesbaden, p. 205; *Statistisches Jahrbuch 2012, fűr Bundesrepublik Deutschland*, 2012, Statistisches Bundesamt, Wiesbaden, p. 226; *Statistisches Jahrbuch 2013, fűr Bundesrepublik Deutschland*, 2013, Statistisches Bundesamt, Wiesbaden, p. 220; *Statistisches Jahrbuch 2014, fűr Bundesrepublik Deutschland*, 2014, Statistisches Bundesamt, Wiesbaden, p. 224; *Statistisches Jahrbuch 2015, fűr Bundesrepublik Deutschland*, 2015, Statistisches Bundesamt, Wiesbaden, p. 226; *Annual Abstract of Statistics*, 2009, Office for National Statistics, No. 145 p. 145, *Annual Abstract of Statistics*, 2010, Office for National Statistics, No.146, p. 161; http://www.ons.gov.uk/ons/search/index.html?newquery=social+protection+chapter+10+in+annual+abstract+of+statistics+2011+united+kingdom, 1.12.2012.; https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/ 372964/43499_GB_NIF_ Accounts_2013_accessible.pdf,https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/269301/National_Insurance_Fund_Account_2012-13_Great_Britain.pdf; https://www.gov.uk/government/uploads/ system/uploads/ attachment_data/ file/229082/1107.pdf; *Social Insurance in Sweden 2001*, 2001, Försäkringskassan, Stockholm, p. 7; *Social Insurance in Sweden 2002*, 2002, Försäkringskassan, Stockholm, p. 7; *Social Insurance in Sweden 2003*, 2003, Försäkringskassan, Stockholm, p. 83; *Social Insurance in Sweden 2004*, 2004, Försäkringskassan, Stockholm, p. 123, *Social Insurance in Sweden 2005*, 2005, Försäkringskassan, Stockholm, p.148; *Social Insurance in Sweden 2006*, 2006, Försäkringskassan, Stockholm, p. 147; *Scope and Financing of Social Insurance in Sweden 2002-2005*, 2006, Försäkringsdivisionen, Stockholm, pp. 17, 22, 28, 31; *The Scope and Financing of Social Insurance in Sweden 2005-2008*, 2007, Försäkringsdivisionen, Stockholm, pp.27, 45-56; *Social Insurance in Figures*, 2009, Försäkringskassan, Stockholm, p. 13; *Social Insurance in Figures*, 2010, Försäkringskassan, Stockholm, p. 13; *Social Insurance in Figures 2011*, 2011, Försäkringskassan, Stockholm, p. 13; *Statistik årsbok 2012*, 2012, rebro, 2012, p. 363; *Social Insurance in Figures*, 2009, Försäkringskassan, Stockholm, p. 9; *Rocznik Statystyczny ubezpieczeń społecznych − system pozarolniczy 1999-2002*, 2004, Zakład Ubezpieczeń Społecznych, Warszawa, pp. 13-14; *Rocznik Statystyczny ubezpieczeń społecznych − system pozarolniczy 2003-2005*, 2007, Zakład Ubezpieczeń Społecznych, Warszawa, p.43; *Rocznik Statystyczny ubezpieczeń społecznych 2006-2008*, 2009, Zakład Ubezpieczeń Społecznych, Warszawa, pp. 17-18; www:zus.pl.

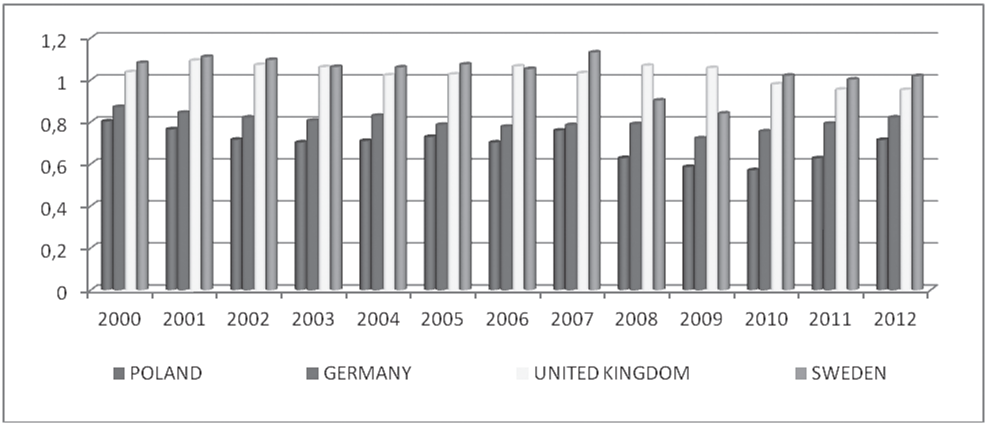

Figure 1. Indicators of financial effectiveness of social security systems in the Member States included in the study. Total system net

Source: In-house study on the basis of Table 2.

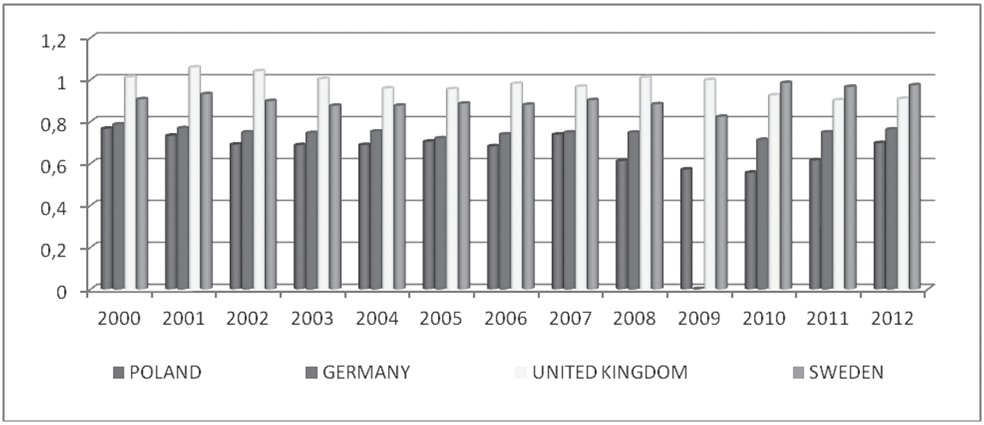

Figure 2. Indicators of financial effectiveness of social security systems in the Member States included in the study. Total system gross

Source: In-house study on the basis of Table 2.

4. Conclusions

The process of changes of social security systems in various countries is now inevitable. Every structural or parametric reform has been triggered first of all by demographic and conceptual changes (e.g. abandoning the ideas of a welfare state) which are closely related to difficulties in funding benefits payable to the entitled beneficiaries. The initiators of social security schemes reforms are driven by both economic and social demands. They strive for matching the expectations in these two areas that are very often contrary to each other. A sound argument for changes is the deterioration of the cost-effectiveness of the current system presented in form of efficacy indices (gross and net). However, the very implementation of reforms will never cause a rapid rise of the index, but on the contrary, it results in its decrease.

Summing up, there is a continued need for social security system reforms that should now aim to harmonize and coordinate them by the creation of a social account on which all the funds gathered within the system through savings would be correlated to actual risk measurement instead of being used for current benefits. The funds should be maintained for the benefit of the insured to provide old-age pension to them. This model of social security system would guarantee self-funding of the system with no need to be supported by the state (i.e. tax-payers).

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