



The Pension System and its Financing as an Important Part of Public Finances in the Slovak Republic

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ABSTRACT

Spread of the Slovak pension system to several pillars significantly increased the deficit of the predominantly ongoing pension system administered by the Social Insurance Fund. At the same time, the transformation costs have increased, which exacerbate the public finance deficit and the financial sustainability of the pension system, especially in the short term. The private pension system, which was built on a voluntary basis in the initial phase, gained a significant position in retirement provision as well as in popularity among citizens of the Slovak Republic thanks to mass promotion. Despite several unsuccessful government attempts to return citizens to a purely ongoing system due to the inefficiency of being a private pension savings scheme, the National Council of the Slovak Republic has come to weaken old-age pension savings through a set of measures.

Keywords: Deficit of Public Finances, Sustainability of the Pension System, Retirement Pension Savings, Retirement Age

JEL Classifications: G23, J45, J38

1. INTRODUCTION

As the priority area within the public policies of the EU member states is to ensure sustainable and adequate old-age pensions, while there are differences in the growth rate of the post-productive population among the states, alternative solutions are sought in wider use of private wealth to support the reduction of real values of public well-being. An increasing ratio of retirees is a burden on Europe's already indebted public budgets. Solutions that are based on tax increases and the willingness of future generations to be burdened with additional taxes are not always acceptable.

Existing ongoing pension funding systems put increasing demands on taxpayers and are becoming increasingly burdensome for state budgets, also due to the fact that some countries have too large pension schemes, and their reform efforts focus only on strengthening the merit in the ongoing pillar and prolongation of productive age. According to ongoing analyses, public expenditure on pensions in the EU27 is projected to increase by 2.5% points by 2060, equivalent to an increase of 23% in public expenditure on pensions and some in some Member States.

The goal of the paper is to specify the pension system implemented in the Slovak Republic in the context of the weight of retirement pension savings, point out the issue of sustainability of the pension system in terms of public finances and demographic trends, as well as identify measures contributing to the financial stabilization of the pension system.

The pension system and its financing is an important part of public finances and therefore has a significant impact on its sustainability. The theory of the retirement economy points to the fact that pension systems require regular regulatory interventions due to the cyclical behaviour of the economy.

The problem of the economic aspect of aging and the pension system is addressed by a number of important experts, as well as professional studies and statutes. Rutarová and Slavík (2005) pointed out that many times as the most significant problem of the financial unsustainability of the pension reform is referred to in particular the aging of the population, which is projected in the continuous pension system. Kubiček (2008) argues that it does not matter whether the pension system will be entirely built on a

private basis or only with parts. So, whether it will be necessary for economically active citizens to impose taxes that would have to be imposed on them in the case of a balanced continuous pension system. Sivák et al. (2011) argue that each pension system is based on the transfer of income from the productive to the non-productive part of the population. Recipients of retirement benefits can therefore only consume from how much they are actually produced at that time Fiala and Langham (2013). Point out that the gap between social security budget revenues and expenditures will continue to rise, which will subsequently exert pressure to increase premiums and raise employment.

All EU countries are solving questions how to secure financing of mandatory pension schemes. The risks of financial burden and the risks decreasing the functionality of the pension system are a challenge for fundamental changes. Pension systems developed especially after the Second World War and based on an ongoing financing system are getting into financial crises, putting increasing demands on taxpayers or economically active population (Rievajová et al., 2012. p. 476). Changes taking place in individual states have their specific and historical differences. While in the countries of Western Europe there are changes in the pension systems under the pressure of mainly demographic development, in the countries of Eastern Europe there are much more radical reforms caused not only by the pressure of demographic development, but also by political and economic changes in these countries. However, the reform steps undertaken in the conditions of the Slovak Republic, where there is a three-pillar pension system, require constant changes and correction in accordance with the social-economic development.

2. STATEMENT OF A PROBLEM

2.1. The Role of Social Security in the Social System of the Society

According to professional literature, a social security system can be defined by a group of social events or risks for which appropriate political and administrative apparatuses are mobilized. These risks and events include, in particular, sickness, old age, childhood, unemployment, loss of life, disability, maternity and poverty (Karpíš - Ďurana - Ďurana – Jelenčiak, 2006).

Social security is a tool for implementing goals and tasks of the social policy and represents the core of the social policy. It concentrates on people's living conditions, the development of man, his essential, creative forces, the development of personality and individuality.

In the Slovak Republic it consists of three subsystems, which are social insurance, state social support, and social aid.

Social insurance is defined in the law on social insurance as Sickness insurance, retirement insurance, accident insurance, guarantee insurance, and unemployment insurance. This means that it serves to protect mainly economically active population in case of foreseeable social events. Social insurance is managed by the Social Insurance Company as a public institution. The Social Insurance Company carries out pursuant to the Law

no. 43/2004 Coll. on retirement pension savings also activities linked to the execution of retirement pension savings. In the saving stage, it collects contributions, forwards them to retirement management companies, and also registers contracts on retirement pension savings. In the payment stage, it is managing the central information offer system, which registers and processes applications for retirement pension from retirement pension savings, generates and sends offers from these retirement pensions, registers contracts closed between clients and life insurance companies and retirement management companies, including the payment of individual pensions.

The pension reform significantly altered and weakened the state's status as the main social security subject and brought a new private entity into the system through the privatization of a part of the pension system and the capitalization of funds in stock markets.

The system of state social support is financed mainly through the state budget, where the state takes on the role of participating in solving some of the life situations recognized by the state, with the goal of preventing the undesirable decline of standard of living of families taking care of dependent children (Sika and Španková, 2013. p. 155).

Social aid is one of the components of social protection, fulfilling the function of the protective mechanism of an individual and families in case of adverse social events (Husáková, 2014. p. 51). Social aid expresses the fact that the citizen got into a situation, where he or she is not capable to take care of him or herself, even with the help of his or her family. It differs from insurance and state support in its individualized application conditioned by social need, dependency, current or sudden need, and conditionality of the possibilities of the social subject providing aid.

2.2. Typology of Basic Pension Social Models

Throughout the world, various pension systems have crystallized, evolving from the different development stages of each country. The basic typology is based on the definition of Esping-Andersen (1990), which distinguishes the liberal, conservative and social-democratic social model. This scale complements the neoliberal model that has developed since the 1990s, using the Bovenberg and Ewijk (2012) typology.

The basis of the liberal pension model is the voluntary provision according to the individual (and therefore selective) needs of individuals or families, while the socio-democratic model considers the optimum comprehensive mandatory, universal basis of public pension provision. The conservative model is based on compulsory and yet segmented (selective) retirement provision, but the neoliberal model optimally complies, as far as possible, with a versatile voluntary system (Vostatek, 2016. p. 1).

2.2.1. Liberal pension models

Classical liberal models are based on the maximum freedom of the individual as well as the rejection of public old-age pensions as well as mandatory private pensions or state subsidies for pension products. The ideal liberal pension system is fully voluntary private security, according to the individual needs and interests

of individuals. The modern liberal pension model uses public pensions in the form of both universal and retirement pensions, which are financed through taxes without the existence of pension insurance. The modern liberal model is today significantly modified, but its “solidarity pension pillar” is gaining momentum.

2.2.2. Conservative pension models

Conservative retirement models place emphasis on performance and equity. There are different methods of retirement financing. The basic scheme of the conservative model consists of three pension pillars:

- Public pensions
- Occupational pensions
- Personal pensions.

2.2.3. Socio-democratic retirement models

The basic nature of the socio-democratic model is based on universal benefits. An essential component of the pension system is also the solidarity pillar, unlike the conservative pension model. Public pensions play a key role here. The meaning of personal pensions is rather symbolic here. The basic scheme of the Social Democratic Retirement Model consists of two pension pillars supplemented by private pensions (Vostatek, 2016. p. 39).

- Public pensions of a dual kind of
- Universal social insurance
- Social pensions
- Quasi-voluntary and voluntary occupational pensions
- Personal pensions.

2.2.4. Neoliberal pension models

The basic nature of the neoliberal model is based on public pensions in the form of dual-type social pensions A tested or universal pension. In addition to public pensions, there is a private pension saving built on funded, defined-contribution products with investment risk borne by the client.

3. FINANCIAL BALANCE OF THE SLOVAK PENSION SYSTEM

Retirement insurance has the largest deficits among all social insurance funds. This status is long-term, since it was caused primarily by unfavourable demographic trends, prolonging life expectancy, decrease of the number of economically active citizens caused by high unemployment rate, and also by the introduction of retirement pension savings with a high percentage of the levy in favour of the private pension system. The lack of pension funds also causes an increasing amount of evasions from contributions due to globalization or higher work force mobility (Vidová 2006, p. 14).

Despite carrying out several reforms, the main goal of which was to decrease the deficit of retirement insurance, it was not possible to solve the deficits burdening public finance system-wise and long-term Chart 1.

The Social Insurance Company, in accordance with the Law on Social Insurance, improves the financial sustainability of retirement

insurance by transferring resources from other profitable funds of social insurance, but without considering the interests of the citizens in the form of retirement pension benefits, which we definitely consider a non-systemic element in social insurance Table 1.

From a long-term perspective, each country has several tools at its disposal to keep financial balance of the pension system within acceptable borders, whereby most frequently used tools include increasing the retirement age, changing the appreciation mechanism of retirement pension benefits, and incorporating automatic stabilizers. In addition to financial sustainability it is necessary to take into account also the adequacy of retirement pension benefits.

The transition to a three-pillar pension system has shown increased transformation costs that were mitigated by opening the system several times, but mainly by changing the percentage contribution into the second capitalization pillar from 9% to 4%, which weakened the second pillar and politically strengthened the first pillar. Political interventions into the pensions system occur irrespective of the actual or potential economic performance Table 2.

These costs will continue to increase, since in 2017 the mandatory contribution rate increases by 0.25% annually to a total of 6% by 2024. These costs will continue to increase as in 2017 the mandatory contribution rate increased by 0.25% per year to a total of 6% by 2024 Chart 2.

The Government of the Slovak Republic recognized the urgency of sustainability of the pension system, but also the adequacy of retirement pension, and therefore it adopted changes of the pension system, the goal of which was to improve negative trends. The most important parametric changes include:

- Linking the retirement age to the development of life expectancy¹,
- Linking the valorization mechanism to retirement inflation²,
- Strengthening solidarity in awarding retirement pension benefits from the ongoing pillar³,
- Changes in the II. pillar of the pension system⁴.

According to the initial projections from the beginning of 2012 the deficit of the system should have deepened from the current 3% to 9% gross domestic product (GDP) by 2060, i.e., 6% points. The 2012 pension reform significantly improves this status and reinforces the long-term sustainability of public finances. After this reform, the deficit of the system should reach about 5% GDP by 2060, which means an improvement of the public finance balance by 4% points Ministry of Finance of the Slovak Republic.

3.1. Impact of Introducing Voluntary Entry into the Second Pillar

The retirement pension saving system is defined contribution-wise and financed by contributions paid to personal pension accounts (Rievajová et al., 2008. p. 100).

1 § 65a of the Law no. 461/2003 Coll. on Social Insurance as amended.

2 § 82 of the Law no. 461/2003 Coll. on Social Insurance as amended.

3 § 63 of the Law no. 461/2003 Coll. on Social Insurance as amended.

4 § 22 of the Law no. 43/2004 Coll. on Retirement pension saving and on the amendment of certain laws as amended.

The introduction of voluntary entry into the second pension pillar that took place in 2008 with certain deviations of this voluntary nature caused that only 30% of newcomers to the labor market joined the pillar. This legislative change caused increased incomes of social insurance managed by the Social Insurance Company, but it also increased future expenses of social insurance. Insurers with higher income and higher education show increased interest in the private pension system. In terms of age, the largest share of clients joining the pillar were 25 years old. The current legislature allows to postpone joining the second pillar until the client is 35. If they don't use this option, they can participate only in the first pillar managed by the Social Insurance Company.

Around 47% of all clients of the Social Insurance Company opted to use the services of private pension companies. The most numerous group are the 35 year-olds, whose share is up to 75% of this age category. Older age groups have lower participation, when they remained insurers only in the first pillar, which is understandable given the short insurance period and high risk of turbulence in the financial markets Table 3.

Low financial literacy of Slovak citizens or high caution has led to the fact that up to 82.74% of insurers use bond guaranteed pension funds and only 10.89% of insurers opted for index non-guaranteed pension funds Table 4.

The higher age groups decision to postpone the decision on joining the second pillar causes shorter time to capitalize financial resources on capital markets, which is then reflected in lower accumulated savings and lower annuities. In short-term, this phenomenon causes increased incomes of the state pension system, but in long-term, it will generate increased future expenses that will be difficult to fund under current demographic development Chart 3.

For given period deflation of about 1% was recorded and average salary growth for given period reached about 10%

In terms of salary valuation, higher-paid employed persons join the second capitalization pillar. Their salary is 28% higher than the salary of a person, who is not a participant of the second pillar. This fact is justified also by the fact that the first pillar uses the principle of reducing the average personal salary point that is applied to insurers, whose salary exceeds 1.25 times the average personal point. This reduction is not applied in the second pillar, which consequently increases their future retirement pension benefits.

4. DISCUSSION

4.1. Factors Affecting the Amount of Retirement Pension Benefits in Retirement Pension Saving

In January 2015 the amendment to the Act on Retirement Pension Saving (so-called annuity amendment) entered force that allowed the payment of the first pensions from the second capitalization pillar. As of 31. December 2016, 3,100 insurers could have applied for a pension from the II. pillar. As of that date, only 1,555 insurers applied, but only 707 closed a contract or an agreement of paying the programmed payment. This was caused by that fact that life insurance companies offered the clients very low retirement

pension benefits, to which the insurers did not react and expect higher pensions in the future, since there is no need to close a contract with the life insurance company. The average amount of the retirement pension benefit paid by the life insurance company in the form of a lifetime pension in 2016 was 25.71 €.

There are following forms of pensions from the II. pillar, specifically

- Lifetime pension - paid by the life insurance company to each client until his or her death, except for insurers with a so-called small saved sum (i.e., a sum so small that the life insurance companies cannot offer a lifetime pension for this sum. In the retirement insurance contract the insurer closes with the life insurance company it is possible to cover survivor's coverage and increase of the pension, but this significantly decreases the amount of the pension. In addition to this form of pension payment, the insurer can also receive temporary retirement pension benefit and programmed payment.
- Temporary pension - paid by the life insurance company to the recipient of this pension during the period agreed in the retirement insurance contract. This contract is closed between the consumer and the life insurance company.
- Programmed payment - paid by the retirement management company to the recipient of the pension based on the agreement with the retirement management company, where the insurer agrees on the monthly amount of the pension or on the payment period of programmed payment.

The amount of the retirement pension benefit paid from the II. pillar is affected by several factors, specifically Retirement age, saving duration, paid amount of contributions to the RMC, chosen method of receiving the pension benefit, and valorization rate of the contributions Table 5.

The old age is not only a physiological change of the human organism, but also a very significant social change for each individual. Old age is usually linked to the end of active social life and transition into retirement. With this transition into retirement, the person loses his or her social status, but also income he or she was used to during his or her work (Matlák et al., 2009. p. 145, 146).

The retirement age for 2017 in Slovakia is set for 62 years and 76 days. The retirement age is set in Slovakia for 62 years and 139 days in 2018. According to the Long-term sustainability of the pension system in the Slovak Republic published by the Ministry of Labor, Social Affairs, and family of the SR, by 2060 life expectancy of men is assumed to increase by 10.6 years and 8.6 years for women. Slovak society will age faster than the EU. Today, for 100 Slovaks in active age 15-64 there are 22 people older than 65, by 2066 this number will be almost 60 Chart 4.

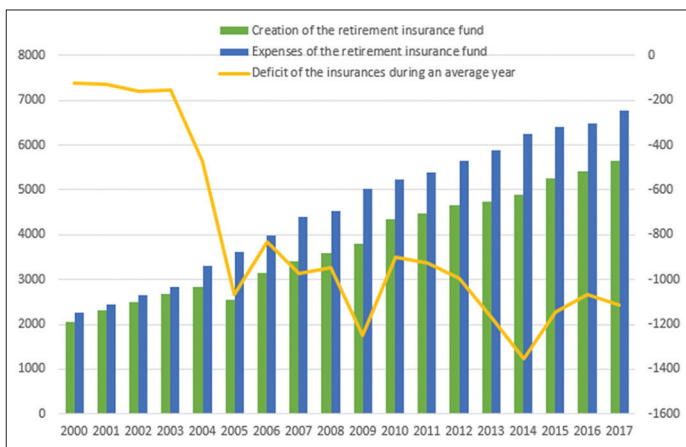
International research has concluded that increasing retirement age in the universal public pension system is not limited by health considerations. If in some professions it is not possible to continue working after reaching the age of, for example, 60 or 65 years, this is a problem of a given profession or department, solvable, for example, in the form of occupational pensions (Vostatek, 2016. p. 180) Chart 5.

From the labour market point of view, the measure will result in the permanent loss of the proportion of the population that could continue to be active on the labour market due to the increase in life expectancy (additional years of health). The decline in the labour force by the retirement of most of the population after reaching the age of 65 in inactivity during the most aging times is reflected in a slowdown in potential economic growth of 0.2-0.3 p.p. In 2066, potential GDP would be 6.2% lower and in 2080 by 9.6%. An increase in pension system expenditures as a result of

the increase in the number of pensioners, coupled with a reduction in the economic growth potential, will exacerbate the pension system deficit and will negatively affect the government balance. Between 2038 and 2066, the negative impact on the balance will gradually increase to 1.1% of GDP per year. Given the assumption of a prolongation of the mean life expectancy, the negative impacts will continue to increase beyond this horizon. By 2080, under current demographic assumptions, they could rise to 1.7% of GDP.

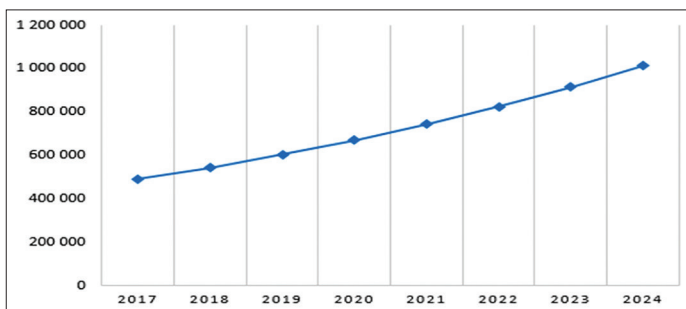
Following a worsening public administration deficit, public debt will increase by 22.5% of GDP in 2066 and by 45% of GDP in 2080 Chart 6.

Chart 1: Deficit of retirement insurance during an average year between 2004 and 2017 (in mil. €)



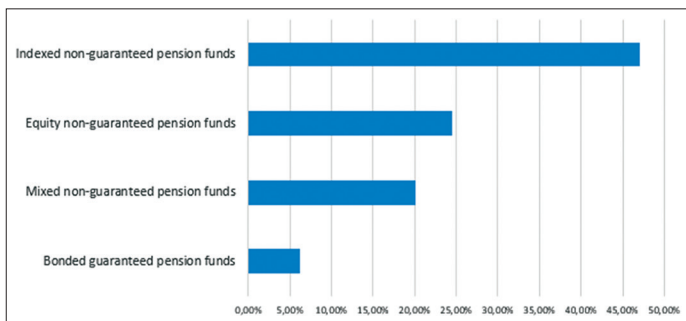
Source: (Self processing based on the Social Insurance Company data)

Chart 2: Impacts of accelerating the rate of mandatory contributions to the II. pillar by 0.25% annually to a maximum of 6%



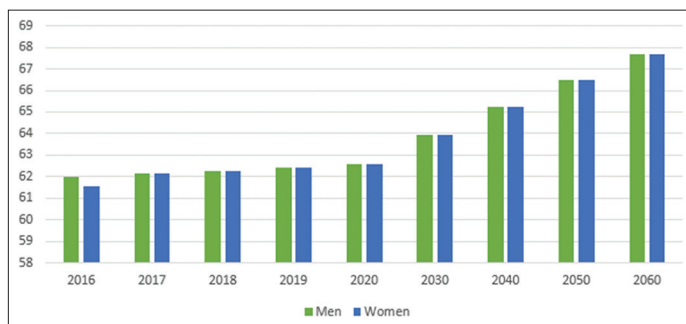
Source: Ministry of Labor, Social Affairs, and Family of the Slovak Republic

Chart 3: Average performance of funds (in %) for April 2013 to December 2016



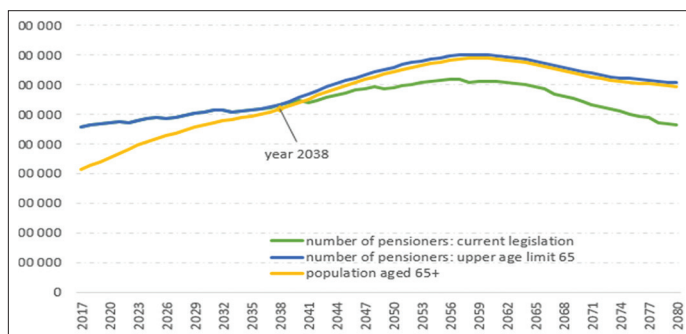
Source: Own processing according to Ministry of Labor, Social Affairs, and Family of the Slovak Republic data.

Chart 4: Retirement age according to the mean lifetime



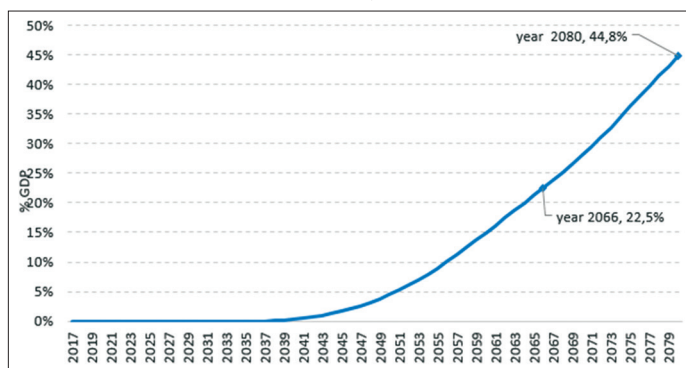
Source: Budget accountability board

Chart 5: The number of people over 65 and the number of old-age pensioners



Source: Self processing based on the Ministry of Labor, Social Affairs, and Family of the Slovak Republic

Chart 6: Impact of expenditure on pensions on public debt (in % GDP)



Source: Self processing based on the ministry of labor, social affairs, and Family of the Slovak Republic

Table 1: Overview of the retirement insurance balance during an average year for 2005 – 2016

in mil. €	2005	2010	2015	2016
Retirement insurance income (cleared with transfer from SB/SFA and income from opening the second pillar)	2558.7	2827.1	4251.1	4880.4
Expenses of retirement insurance	3627.9	5244.9	6414.5	6485.4
Balance of the pension system during an average year	-1069.2	-2417.8	-2163.3	-1604.9
Transfers from other funds	1100.7	803.5	1357.6	-
Transfers from SB/SFA	0.0	1517.2	453.0	635.0
SIC income from opening the II. pillar	0.0	0.0	566.9	0.0

Source: Ministry of Labor, Social Affairs, and Family of the Slovak Republic

Table 2: Overview of contributions forwarded to the second pillar

in mil. €	2005	2007	2008	2009	2010	2011
Forwarded contributions RMC 2005-2015	304.7	749.8	815.2	780.4	800.2	848.3
SIC incomes from opening the II. pillar	0.0	0.0	132.3	108.8	0.0	0.0
Forwarded contributions cleared from incomes from opening the II. pillar in mil. €	304.7	749.8	682.9	671.6	800.2	848.3
Forwarded contributions RMC 2005-2015	804.9	413.6	438.0	444.6	465.4	7470.8
SIC incomes from opening the II. pillar	44.2	239.7	0.1	566.9	0.0	1 092.0
Forwarded contributions cleared from incomes from opening the II. pillar	760.7	173.9	437.9	-122.3	465.4	6378.8

Source: Ministry of Labor, Social Affairs, and Family of the Slovak Republic

Table 3: Number of insurers by age

Age limit	Number of insurers	% share
Up to 25 years	72,161	5.20
From 26 years up to 35 years	436,650	31.70
From 36 years up to 45 years	540,642	39.30
From 46 years up to 55 years	285,883	20.80
From 56 years	40,434	2.90
Total	1375,770	100.00

Source: Association of retirement management companies

Table 4: Distribution of assets in the II. pillar at the end of 2016

Bonded guaranteed pension funds	5743.81 mil. €	82.74%
Mixed non-guaranteed pension funds	63.8 mil. €	0.92%
Equity non-guaranteed pension funds	756.26 mil. €	10.89%
Indexed non-guaranteed pension funds	377.77 mil. €	5.44%
Total	6941.64 mil. €	100%

Source: Own processing according to Ministry of Labor, Social Affairs, and Family of the Slovak Republic data

Expenses for retirement pension benefits will slightly decline until 2030. The decline is caused mainly by linking the retirement age to the expected lifetime from 2017 and subsequent lower number of newly granted pensions. Therefore the Slovak pension model predicts fewer new pensions each year until 2030. After 2030 the number of new retirees due to demographic reasons should grow again. More retirees and increasing life expectancy cause significant increase of expenses for retirement pension benefits after 2030 (IFP, MF, 2015, p. 3-4).

In our opinion, negative trends in demographic indicators can be reversed or mitigated through population policy, addressed support of family and migration, but also increasing the level of education and, of course, higher employment. The results of these policies can increase the fertility rates and migration that will help averting the terrible trend, however it is necessary to recognize that these interventions will not eliminate the negative trends, but will probably only ease them.

Saving duration is one of the other important factors that affect the amount of retirement pension benefits the recipient will receive. During the saving period the person saves finances on a personal pension account in a retirement management company that are appreciated. The longer the saving period, the higher the balance on the personal pension account, which also depends on the valorization rate of pension assets (Šipikalová and Pongrácz, 2016, p. 90-92).

The appreciation rate is also affected by the extent of willingness to undertake risk on financial markets. Since Slovak savers show low financial literacy in a number of statistics, this is also reflected in their willingness to take risks.

The choice of pension fund for which the person decides depends mainly on his or her willingness/unwillingness to undertake various risks. High risk means high appreciation, but on the other hand the possibility of significant decrease of the fund's value. Pension funds with a low risk profile (bond pension fund and mixed pension fund) have the lowest potential return, while pension funds with a high risk profile (index pension fund and equity pension fund) have highest potential returns, but on the other hand also the highest potential losses.

5. CONCLUSION

Over the upcoming decades, demographic changes will increasingly affect the sustainability of public expenses. Increase in life expectancy, relative increase of the number of retirees compared to the population in a productive age, and lower number of born children, will affect mainly areas such as retirement pension benefits, healthcare, long-term care, and education.

In order to strengthen the financial sustainability of the pension system, the Slovak Republic will have to again incorporate so-called automatic stabilizers in the calculation of pension

Table 5: Payment of lifetime retirement pension from the II. Pillar

Type of lifetime pension	Share of contracts from 536 contracts on lifetime pension (%)	Reduction of the annuity compared to lifetime pension "without combinations" (%)
Without combinations	71	-
1-year probate coverage	8	-4
2-year probate coverage	18	-8
Increasing	1	-24
Increasing and 1-year probate coverage	0	-28
Increasing and 2-year probate coverage	1	-31

Source: Own processing according to Ministry of Labor, Social Affairs, and Family of the Slovak Republic data

entitlements. However this will reduce the compensation rate, which will have a negative impact on living standards of Slovak pensioners. Most authors call automated balancing mechanisms rational mechanisms, since they make the pension reform process more rational and professional. A series of rational rules is set in advanced, but subsequently they will be automatically applied only in specific situations, where legislature would hardly be able to introduce the necessary measures. Automated balancing mechanisms are transparent and predictable. It is clear how to carry out the necessary regulatory interventions, and who will bear the costs (Independent, 2010. p. 6).

Aging of the population, which is viewed by the economists as a threat that will have far-reaching and irreversible consequence, can be actually viewed as progress in many scientific disciplines. It is not possible to abstract from the impact of population aging on the pension system, but this impact cannot be considered as tragic and irreversible. Individual states have to focus their attention and adapt their systems and policies, not only pension systems to expected, but also unexpected events that can significantly influence the life situation of individual classes of society (Sika, 2013).

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