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Bulgarian Pension System – Is It A Sustainable Social Security Structure in The Long Term

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Abstract

Bulgarian pension system consists of three pillars. The first one functions on a pay-as-you-go principle and is a mandatory one, the second and third pillars are fully funded. The insurance into the second column is compulsory and that into the third one is voluntary. The unfavorable demographic trends in the country have an adverse effect on the pay-as-you-go part of the system. At the same time the minor accumulation of resources into the second and third pillar makes the sustainability of the pension system under question especially in the long term. The current research is trying to put some light on this issue by following the reforms made in the recent years and the tendencies concerning the government decisions on each of the pillars of the pension system. The paper is structured in two parts. The first one focuses on the pay-as-you-go part of the system and the factors that influence its financial health. The second one concentrates on the current problems of the funded component of the pension system and the way it must be strengthened in the long term to effectively support the dominant state pension system. Further reforms are needed to raise the sustainability of the pension system as a social security structure in the long term.

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INTRODUCTION

The PAYG part of the pension system in Bulgaria has been effectively supplemented by fully funded columns since the beginning of 2000's. Following the model promoted by the World Bank in the mid 1990's, the policymakers in Bulgaria introduced pension insurance similar to that in a number of countries in Central and Eastern Europe. The insured individuals in Bulgaria were given the opportunity to save and to accumulate resources for their future retirement. The long-term goal of the implemented reform is to achieve an income replacement rate at around 70%-75% of the final salary of the insured person. The second pillar of the system takes the form of two types of pension funds: universal and occupational. All persons born after 31.12.1959 must insure themselves in universal pension fund, while all individuals working under the first and second labor category (i.e. working in hard working conditions) must insure themselves in occupational pension fund. This rule was a little bit relaxed in 2015 when the insured individuals into the second pillar of the system were given the opportunity to opt out of the funded component of the pension system and to contribute only into the first pillar. The third pillar of the system is supplementary voluntary pension insurance, wherein all participants can choose to make additional contributions for supplementary benefits. The sustainability of the pension system in the country depends on further development of each of the pillars. The fully funded mandatory pillar of the pension system in Bulgaria has been existing for almost 20 years. The fully funded voluntary pension pillar is even older (the first voluntary pension funds in Bulgaria started their activity in the mid 1990's). In the early 2000's these two new pillars of the pension scheme were seen as supplementary elements of the pay-as-you go part of the system that would allow future generation retirees achieve replacement rates adequate to their pre-retirement income. The world financial crises of 2008 changed the attitude toward the pension funds in Bulgaria. That could easily be seen by the promoted policy of the governments since then. The funded part of the pension system is not seen as a priority element anymore.

REVIEW OF THE LITERATURE

According to Davis (1995) the funded component of the pension system if structured in a proper way, could support effectively the PAYG part of the system in a time of consistent population aging. Blake (2006) also considers funded pillars of the pension system as a must if government really wishes to effectively manage the risk of poverty among the elderly. Szczepanski (2015) notes that in a situation of demographic aging state PAYG pension systems "cannot guarantee the level of benefits and financial security in old age as was possible in the 1980's and 1990's". Daneva (2018) notes that this type of reform is needed in countries with high emigration rates, where the deficits of the PAYG part of the system tend to become constant. In a research of Manov (2003) for the private pension funds it is shown the positive relationship between contributions paid into a personal pension account and the wish for paying those contributions on the "real wage". The fully funded pension insurance is seen as a method for managing the grey sector in economy. However, Orzag and Stigliz (2001) consider the funded component of the pension system as not suitable for all the countries. They disagree with many of the ideas in the main report of the World Bank (1994) which was the basis for promoting the private pension schemes in Central and East European countries. According to them the administrative costs are too high and many of the countries do not have capacity to manage this type of schemes. Szczepanski (2015) also notes that many of the supposed advantages of the private pension schemes did not materialize in practice and significant normative changes were needed in order to raise the effectiveness of the second and third pillar of the system.

METHODS

For the purpose of the analyses statistical data is used for the development of the demographic tendencies in the country and their impact on the PAYG part of the pension system. The reforms regarding fully funded pension pillar are researched and analysed with the aim to put some light on the possibilities of this part of the pension system to contribute effectively to the sustainability of the pension system in the long term.

Pay-As-You-Go (Payg) Pillar of The Bulgarian Pension System In 2020 – Reforms, Problems and Challenges

The main motives about the reform made in the late 1990's were closely related to the unfavorable prognosis regarding the future demographic trends in the country influenced by both the high emigration rates of young individuals in the mid 1990's and the expected low birth rates in the coming years. The old-age dependency ratio (the ratio between the individuals aged 65 and more and individuals aged between

15 and 65) constantly rises.

Table 1. Old Age Dependency ratio in Bulgaria (2007 – 2019)

Year	Dependency ratio in Bulgaria (2000-2019)
2007	25,0
2008	25,2
2009	25,4
2010	25,9
2011	27,8
2012	28,5
2013	29,3
2014	30,2
2015	31,1
2016	31,8
2017	32,5
2018	33,2
2019	33.8

Source: National Statistical Institute in Bulgaria (www.nsi.bg)

The ratio between the number of pensioners and the number of those individuals who contribute to the system is also quite unfavourable. It is not a surprise that the share of pensioners constantly rises in relation to the whole population and to the insured individuals.

Table 2. Number of pensioners, insured individuals and population in Bulgaria (2007-2017)

Year	Number of pensioners (in thousands)	Number of insured individuals (in thousands)	Number of population (in thousands)	Relative share pensioners/insured individuals	Relative share pensioners/population
2007	2252	2863.5	7659.8	78.6%	29.4%
2008	2214.9	2851.2	7623.4	77.7%	29.1%
2009	2192.5	2829.8	7585.1	77.5%	28.9%
2010	2191.9	2831.5	7534.3	77.4%	29.1%
2011	2199.6	2765.7	7416.1	79.5%	29.7%
2012	2217.6	2770	7305.9	80.1%	30.4%
2013	2195.9	2729.8	7265.1	80.4%	30.2%
2014	2181.9	2735.1	7223.9	79.8%	30.2%
2015	2177.7	2755.9	7178.0	79.0%	30.3%
2016	2180.9	2765.1	7127.8	78.9%	30.6%
2017	2172.8	2779.8	7075.9	78.2%	30.7%
2018	2162.9	2790.2	7025.0	77.5%	30.8%

Source: National Social Security Institute (www.nssi.bg)

The numbers of the above table indicate that financing of the pay-as-you-go column of the pension system is not an easy process. The ratio between the contributing workers and pensioners is almost 1:1 which means that the sustainability of the future deficits of the state pension insurance system is out of question. This could easily be turned into a significant crisis of the pay-as-you-go part of the system. This gloomy perspective is a fundamental factor that presumably must force the government to introduce additional reforms into the funded part of the pension system in order to further strengthen it financially. The basic idea behind the reform made in the late 1990's is still actual in 2020. However, after the financial crisis of 2008 the government stopped all of the reforms needed to support the funded part of the pension system (the envisaged gradual increase of the contribution rate, the multifund system, the detailed regulation of the pay-out phase). It even adopted a regulation change that allowed insured individuals to transfer their resources into the first pillar of the pension system. The basic factor that made possible behavior like this was the economic growth realized in the years after 2008. The unprecedented growth of the insurable income and the tax revenues lets government finance the pay-as-you-go part of the system and even increase the pension benefits of the current pensioners. The return to the pay-as-you-go part of the system depends on two factors - the growth rate of the average earnings (which determines the growth in total contributions) and the ratio between contributing workers and pensioners (dependency ratio). The return to the funded part of the system depends on the rate of return on accumulated assets and the "passivity" ratio (number of years in retirement relative to the working age) (Aaron's rule). Many empirical studies (Davis, 1995) show that under certain normal circumstances the return on financial assets exceeds the growth rate of average earnings which means that if equality is assumed between the dependency ratio and the passivity ratio, the return to the funded pension system must exceed that to the pay-as-you-go one. However, in Bulgaria, the opposite is true for the period (2002-2019).

Table 3. Insurable income and contributory rate for pension for the period 2002-2019

Year	Average monthly contributory income (euro)	Rate of increase of average monthly contributory income	Yield realized by pension funds
2002	132.81		10.58%
2003	143.55	8.09%	10.99%
2004	157.89	9.99%	11.92%
2005	169.55	7.39%	7.86%
2006	181.25	6.90%	8.31%
2007	203.58	12.32%	15.67%
2008	255.93	25.72%	-20.76%
2009	283.65	10.83%	7.22%
2010	291.61	2 .80%	5.18%
2011	303.78	4.18%	-0.96%
2012	316.01	4.02%	7.49%
2013	331.69	4.96%	4.50%
2014	349.39	5.34%	5.70%
2015	371.40	6.3%	1.37%
2016	393.73	6.01%	4.01%
2017	416.70	6.68%	6.09%
2018	455.00	8.32%	-4.15%
2019	504.40	10.86%	6.45%

Source: National Social Security Institute, www.nssi.bg Financial Supervisory Commission, www.fsc.bg – statistics, insurance market (value of 1 pension unit UNIDEX for the last working day of each calendar year for the period 2005-2019)

The basic reason behind the cited high growth rate of the average income is the existence of extremely low basis in the late 1990's. In 1997, the average wage in the country equals $63.92. The growth rate of the average income is a result from the growth rate of the economy.

Table 4. GDP, Growth of GDP and Inflation rate in Bulgaria (2000-2019)

Year	GDP, mln. euro	% growth	Inflation rate	Real growth
2000	14 380			
2001	15 843	10,18%	4,82%	5,11%
2002	17 419	9,95%	3,81%	5,91%
2003	18 733	7,54%	5,64%	1,80%
2004	21 066	12,46%	3,98%	8,15%
2005	24 040	14,12%	6,45%	7,20%
2006	27 410	14,02%	6,49%	7,07%
2007	32 444	18,37%	12,48%	5,23%
2008	37 217	14,71%	7,76%	6,46%
2009	37 400	0,49%	0,56%	-0,07%
2010	38 044	1,72%	4,53%	-2,69%
2011	41 252	8,43%	2,75%	5,53%
2012	42 033	1,89%	4,25%	-2,26%
2013	41 885	-0,35%	-1,59%	1,26%
2014	42 875	2,37%	-0,88%	3,27%

2015	45 675	6,53%	-0,38%	6,93%
2016	48 620	6,45%	0,09%	6,35%
2017	52 309	7,59%	2,77%	4,69%
2018	56 086	7,22%	2,67%	4,43%
2019*	60 674	8,18%	3.82%	4,20%

Source: National Statistical Institute in Bulgaria (www.nsi.bg). *2019 GDP data is a prognosis)

If the size of the economy is measured by using data for the realized GDP for the period 2000 – 2019, the conclusion is that Bulgarian economy almost tripled for that period. This is the basic reason why the government can finance the promised pension benefits and at the same time postpone reforms needed for strengthening the funded components of the pension system. However, the crises of the pay-as-you-go part of the system could be seen quite well if the budget of the state pension system is taken into consideration.

Table 5. Budget of the State PAYG Pension Fund (thousands euro)

Year	Revenue	Expenses	Deficit	Year	Revenue	Expenses	Deficit
2002	1 053 438	1 507 915	-30,14%	2011	1 576 099	3 440 775	-54,19%
2003	1 236 585	1 600 872	-22,76%	2012	1 500 770	3 564 282	-57,89%
2004	1 285 491	1 763 583	-27,11%	2013	1 692 897	3 850 580	-56,04%
2005	1 236 399	1 946 351	-36,48%	2014	1 723 721	3 974 404	-56,63%
2006	1 187 306	2 129 118	-44,23%	2015	1 780 841	4 095 209	-56,51%
2007	1 317 640	2 293 997	-42,56%	2016	1 941 680	4 271 086	-54,54%
2008	1 560 631	2 597 717	-39,92%	2017	2 230 717	4 382 906	-49,10%
2009	1 716 268	3 216 613	-46,64%	2018	2 610 417	4 657 449	-43,95%
2010	1 333 735	3 448 400	-61,32%	2019	2 967 203	4 934 954	-39.87%

Source: National Social Security Institute, www.nssi.bg

The above numbers show that the deficit of the pension fund of the State social security system is enormous. There is a slight decrease in the last years mostly due to the growth of the average earnings and the new retirement conditions (higher pension age and length of service). In these circumstances the government is forced to use part of the revenues collected via general taxation to finance the pension benefits of the current retirees. In this sense one may assert that pensioners in Bulgaria finance almost 50% of their pension benefit by paying their taxes. Having in mind the extremely low pension benefits, the worsening demographic structure and the huge deficit of the state pension system, the implication is obvious - pay-as-you-go part of the pension system in the country is not a sustainable social security structure in the long term. Of course, its existence is out of question, but the amount of the pension benefit is not to be adequate to the preretirement income of the pensioner and the risk of poverty among individuals within this group of society is significant. From this point of view the government must continue making reforms that could strengthen financially the pension system. Any delayed efforts now could cost more in the future.

The Fully Funded Pillar – Could It Efectively Support The Payg Part of The Pension System in Bulgaria

Two basic arguments are stated by some officials as problems of the second pillar of the pension system: first, the accumulation of resources into individual accounts is small for a number of insured individuals and second, the stock exchange in Bulgaria is still characterized by lack of instruments, low turnover and many possibilities for manipulation. So, could private pension funds in Bulgaria raise the sustainability of the pension system in the country in the long term?

Why the accumulation of funds into individual accounts is considered as low? There is a special rule in Bulgarian social security legislation, which specifies the reduction of the so called individual coefficient[1] for those individuals who have right to pay contributions into the second pillar of the system (all persons born after 31.12.1959). The idea here is straightforward – those who make contributions into private pension fund receive part of their pension benefit by the second pillar, that's why the pension amount obtained by the first pillar should be reduced. This approach seems fair since the contribution rate for the first pillar was lowered for those born after 31.12.1959 and the deduction was forward to the private

[1] Individual coefficient is a special ratio between the contributory income of the insured and the average national contributory income. The higher the coefficient is, the bigger the pension amount will be.

pension fund. In this way the second pillar of the system was supposed to support financially the pay-as-you-go column in the long term. The problem comes from the methodology applied for reducing the individual coefficient elaborated still at the beginning of the reform. It prescribes that the individual coefficient must be corrected with a ratio that roughly equals the contribution rate for the first pillar for those born before 01.01.1960 and the contribution rate for the second one for those born after 31.12.1959. This methodology could be valid only if the pay-as-you-go part of the system were able to finance the whole amount of pension benefits using money collected via pension contributions. The reality is somehow different - almost 50% of the amount of the pension benefits is covered by subsidy from the state budget. The accumulated funds into individual accounts are not enough if they must compensate for a reduction that is not proportionate to the real contributions paid for both of the pillars. If one considers the strong subsidy that comes from the state budget, then the amount of the real contribution for the first pillar must be almost twice as much as its current figure. In other words, there is no clear implication just from the fact that universal pension funds could not compensate the insured individuals for the reduction of the first pillar pension benefit, that they haven't been managed effectively. In theory it is even possible the government to equalize the contributions paid for the first and for the second pillar making them 5% (the percentage applied for the second pillar) and then to ask pension funds to bear 50% of the financial burden for the payment of the pension benefits. In addition, those individuals who first are going to receive pension benefits from the second pillar of the pension system were in their mid 40's when they started effectively to accumulate money into their personal accounts. At that time almost half of their length of service had been passed. In reality, these individuals are not going to have enough money to finance pension benefit proportionate to the envisaged reduction but this have nothing in common with the management of the pension funds and their rule for the future of the Bulgarian pension system.

The second argument against the funded component of the pension system regards the illiquid and underdeveloped stock exchange in the country. The opponents of the private pension funds state that it is not possible to have financially strong funded pension system without well-developed and transparent capital market. As a matter of fact, this argument is a robust one. It is true that still pension funds cannot rely on the capital market in the country to trade actively financial instruments. The lack of deep and liquid market means that pension funds in the country do not have adequate market valuation for many of the instruments in their portfolios. The pay-out phase is coming closer and if the sale of a significant part of the portfolios is put under pressure, this could mean severe problems both for the pension companies and the insured individuals. Due to a number of factors[2] pension funds in Bulgaria have not been able to contribute effectively for a significant development of the stock exchange – something that was observed, for example, in Chile, after the initial start of the funded pension system in 1980's. However, the significance of this argument should not be exaggerated. Bulgaria is part of the EU and currently Bulgarian pension funds have access to all European stock exchanges and to all instruments traded on them. The investment regulations do not differentiate between Bulgarian corporate instruments and European Union ones. The current portfolio structure of the Bulgarian pension funds could be considered as a balanced one with many instruments traded abroad and evaluated correctly at the market. At the same time, the fact that Bulgarian corporate instruments are not traded actively does not mean that they do not bear yield for their owners. Currently many of the bonds issued by private companies are just held until maturity bringing an extra yield for the low liquidity they have. Regarding the equities, possessed by the funds – the risk here is much higher but also their potential for growth and expected return. Many shares, traded at the Bulgarian stock exchange could be viewed as undervalued having price/book ratio at around one. Pension funds can really benefit from their equity holdings, but they must well know the core business of the chosen companies and exert continuous control on them.

Both stated arguments against the funded component of the pension system are not of such scale to undermine the idea that funded elements could contribute to the sustainability of the pension system in the country. At the same time there are some additional reforms that must be done as soon as possible if funded component is seen as a long-term solution of the current systemic problems of the pension system. First, Bulgarian pension insurance companies keep on managing just one portfolio of assets without considering the investment horizon of the insured individuals. The so called multi-fund system has been discussed for a decade and it is still not introduced in practice. Second, the pay-out phase of the universal pension funds must be elaborated in detail in the next few months. The first insured individuals that have right to receive pension benefits by the second pillar pension funds are going to retire in 2021. There is still legislative vacuum on this very important and specific issue. Third, if pension funds are to be used as an element of the long-term future of the Bulgarian pension system, there is a clear need to reduce the political risk on which they are currently exposed. After almost two decades of operation it became

[2] Tough regulation rules, 2008 financial crises, the policy of zero interest rates promoted by the Central banks in the last years.

obvious that private pension companies are exposed to a significant political risk as well. The ruling political party can change the rules of the game in such a way that it can motivate insured individuals to replace their insurance from one pillar into the other and vice versa. The pension system in the country is exposed to a few risks but the political one seems to be the most important one. The wish for attracting voters in the short term makes politicians avoid important but sometimes painful reforms. If the above mentioned issues are effectively addressed, then funded component of the pension insurance could be seen more obviously as supplementary part of the PAYG system in the long term. And only if each of the pillars of the pension system in Bulgaria continue to exist, the sustainability of the system is to be raised for the next generation retirees.

CONCLUSION

Bulgarian pension insurance system has a modern structure but at the same time its sustainability in the long term is problematic. The worsening demographic structure deteriorates the pay-as-you-go part of the system. At the same time, many delayed reforms regarding the pension funds in the country make them vulnerable on current market conditions and populist political decisions. If adequate pension amounts are set to be an important goal for the future generation retirees, then all pillars of the pension system are needed. Current workers' savings are going to be an important part of their future income. Pension funds could be viewed as only one of the possible vehicles for saving, but currently they are among the most transparent financial institutions in the country and if policymakers manage to raise their efficiency by implementing some additional reforms, they could really turn into a crucial element of the future pension system in Bulgaria.

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