

World Bank

Bulgaria: Ensuring Pension System Sustainability

Pension Reform Policy Note

September 2009¹

Main messages

- **The Bulgarian pension system has undergone significant and well designed reform in 2000-2003.** It increased retirement ages, curtailed early retirement programs, diversified the system into 2 pillar structure and introduced simple and fair benefit formula. Even though the disability program has experienced spillovers at the beginning of the reform, more recent administrative efforts of the NSSI have proven reasonably effective.
- **However, attempts to restore financial self-sustainability of the pension scheme were not as successful as envisaged.** Ad hoc pension increases have reduced benefit predictability and have contributed to unsustainable increase in pension spending. In the meantime contribution rates have been decreased severely, leading to a considerable reduction in revenues.
- **Projections presented in this note suggest that recently introduced government contributions are insufficient to achieve financial sustainability and introduce growing distortions into the financing system.** In the short-term the economic and financial crisis is starting to put significant pressures on the government budget constraining its ability to finance large pension deficits. Going forward, fiscal pressures are only going to increase with rapid aging of Bulgarian society. In addition, elderly poor are increasingly expected to lose pension coverage in the future at which time channeling state budget resources towards the pension system will tend to redistribute from the unsubsidized poor to the subsidized wealthier population.
- **Additional reforms to the system will be needed to meet these challenges.** While in the short-term the authorities should refrain from further ad-hoc pension increases, the following is a list of medium-term areas that might benefit from further revisions of pension legislature:

Policy directions

- Ensure automatic sustainable pension indexation mechanism free of ad hoc interventions;
- Attempt to further increase effective retirement age by reviewing early retirement rules and eliminating gender differences in retirement ages. A continued slow increase of retirement ages for both genders should also be considered;
- Further strengthen disability certification processes to respond to likely increase in disability claims due to the economic downturn;
- Strengthen long term financial planning, including revision of contribution rates which would be more compatible with long-term fiscal sustainability;
- Consider exit strategy for formalized Government contribution to the scheme;

¹ This note was prepared by Asta Zviniene with inputs from Boryana Gotcheva and Christian Bodewig.

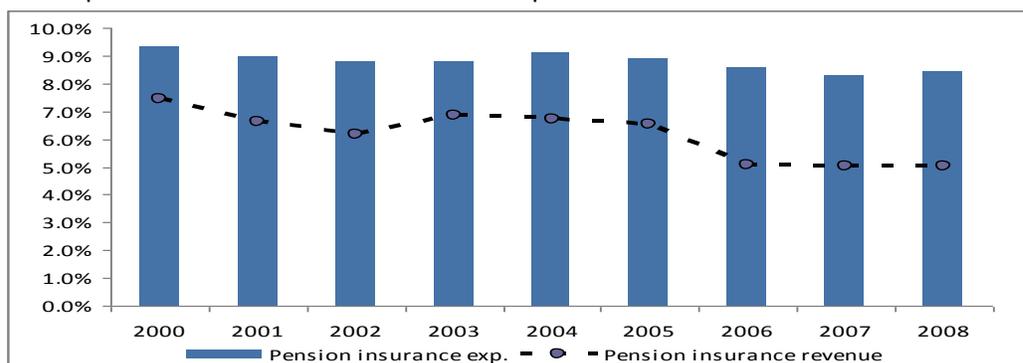
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Introduction: Recent financial performance of the pension system

Bulgaria's pension system has undergone significant and well designed reforms since 2000. Retirement ages were increased, early retirement programs were curtailed, and the system was diversified into a three pillar structure with simple and fair benefit formulas. Even though the disability program has initially experienced significant spillovers from the old age program due to the retirement age increase, more recent administrative efforts of the National Social Security Institute (NSSI) have proven reasonably effective to contain them.

However, attempts to restore financial self-sustainability of the pension scheme were not as successful as envisaged. The financial savings from the retirement age increase were countered by a large increase in the number of disability pensions from 2000 through 2004/2005, generous pension indexation, and ad hoc bonuses. The drastic reduction of contribution rates by six percentage points in 2006 has led to increased structural deficits that have had to be financed from the State budget general revenue. These deficits are compounded by an unusual policy of full tax exemption of the first and second pillars, and partial exemption of the third pillar (where contributions are partly exempt, investment income is fully exempt, and benefits are taxed). Finally, the economic and financial crisis is starting to put significant pressures on the government budget which has recently subsidized around 40 percent of pension spending.

Figure 1 **Only about 60 percent of pension spending is covered by contribution revenues**
Financial performance of Pension Insurance as percent of GDP



Source: NSSI

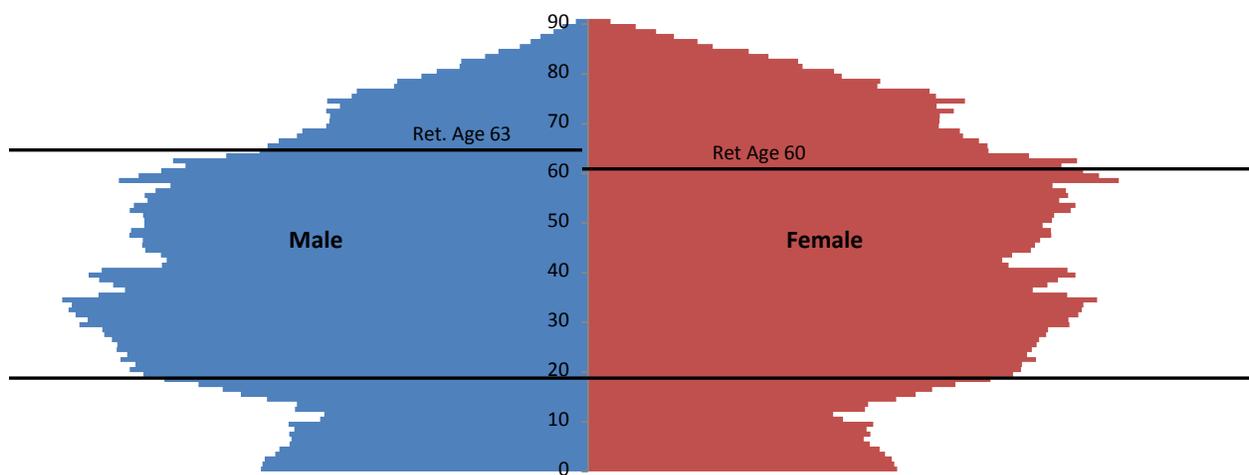
Fiscal discipline and further reform of the pension system are needed. In the future the recent tail winds of rapidly increasing coverage, high wage growth and the presence of still active baby boom generation are not likely to continue, suggesting that fiscal pressures on the scheme will only increase. The analysis presented in this note attempts to illustrate these likely future developments in greater detail and discuss the options to address them.

Future demographic challenges

The future of the pension system to a large extent depends on demographic developments that have already occurred. Figure 2 illustrates this by presenting the “population pyramid” of Bulgaria for the year 2009. The post war baby boomer generation aged 50-65 is only starting to retire and will continue to put an increasing burden on the pension system. By retiring, this generation will also remove 35% of current revenue base of the pension system. A similar chain of events will restart again in another 20 years when “echo boomers”, i.e. equally numerous children of the boomer generation currently aged 20-40 start to retire.

Central and Eastern Europe has experienced another adverse demographic shock triggered by the economic upheaval 20 years ago. This came in addition to the post-war baby boom experience which the region shares with most of the developed world. At the same time as baby boomers start to pressure the pension system, a sharp post-transition drop in fertility rates represented by very small cohorts of 0-20 year-olds will start having an effect on the pension system finances as well. These young people will enter labor markets in very small numbers and will be in no position to compensate for the lost taxable wage base withdrawn by baby boomers. Even if Bulgaria succeeds in substantially raising fertility rates, a small number of women entering prime childbearing ages means that future cohorts of children will continue to be small for many years to come.

Figure 2 **Numerous cohorts are about to retire and small cohorts about to enter labor force**
“Population Pyramid” of Bulgaria in 2009



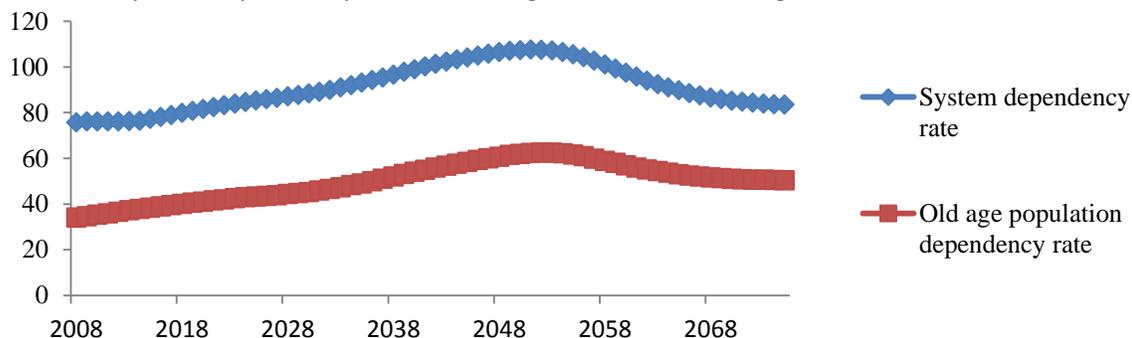
Source: WB demographic database

Dependency rates are expected to increase considerably over the coming decades. Old age population dependency rates, defined as number of elderly per 100 working age people, are important demographic summary statistics, and are presented in Figure 3 (derived from Figure 2 data combined with assumed moderate improvements in fertility and mortality rates). In 2009 each 100 people of working age had to support 35 retirees (represented in the figure by the initial value of the lower line). By 2050 this number is projected to rise to 62 elderly people, which adding children under the age 14 would amount to 93 dependants per 100 working age people. Unfortunately, these numbers significantly understate the problem as they assume productive age starting at 15, and do not account

for unemployment, early retirement or disability. The dependency rate actually experienced by pension system currently stands at 76 old age or disabled persons per 100 contributors projected to rise to 107 such beneficiaries by 2050. The situation is expected to start to improve somewhat from 2050 as new pensioner inflows slow down, reflecting smaller numbers of post-transition babies retiring. However, the improvement is expected to come at a cost of 25% of the elderly not being eligible to receive a meaningful pension due to the insufficient contribution periods.

Figure 3 Dependency rates are expected to increase significantly in the next 50 years

Population and system dependency rates assuming stable retirement ages



Source: WB demographic projections

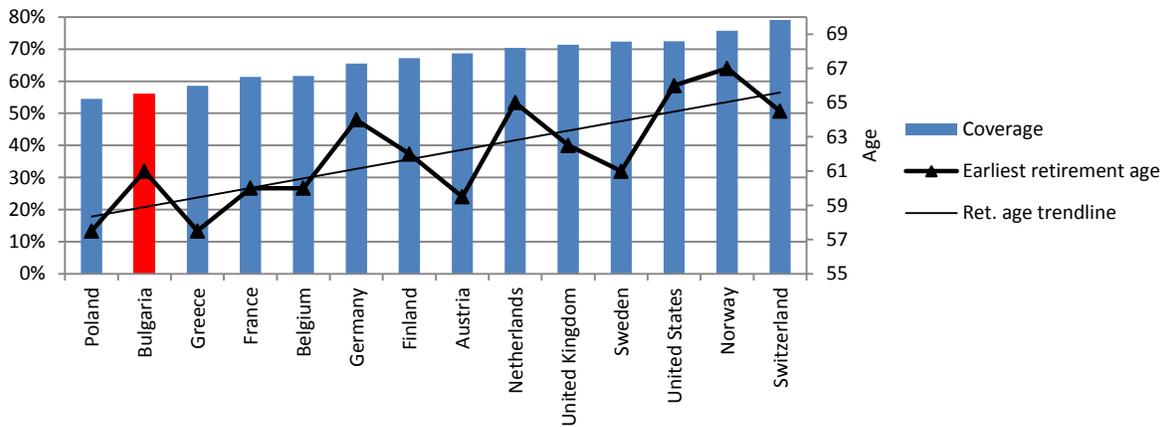
The Bulgarian pension system, like many pension systems in the region, will have to adjust to these adverse demographic developments. This will imply a combination of increased coverage of the working age population, higher contribution rates, lower benefits and further restrictions in retirement eligibility criteria. The earlier these actions are taken, the less painful they will be. The aim here is to try to lighten the financial burden of small future cohorts of contributors and spread it more widely to include as many “baby boomers” and “echo boomers” as possible by asking them to contribute a bit more, retire later and accept that their pensions might be lower than they have hoped for.

Challenges in increasing coverage

Short of increasing the retirement age, the potential for further coverage expansion is limited. It is often hoped that coverage expansion among the working age population can help mitigate the coming demographic shock. Figure 4 compares the percentage of the population aged 15-64 covered by the Bulgarian pension system with the same statistic in a few other selected developed economies (represented by blue bars). The figure appears to suggest that higher coverage rates can indeed be achieved, although no country in this group was able to exceed the 80 percent threshold. However, it is also clear from the chart that significantly higher coverage in more successful countries has mostly been achieved by setting higher retirement ages. In fact, Bulgaria will likely need to pursue this policy even more aggressively given its less favorable demographic situation compared to most of these developed countries.

Figure 4 Retirement age reform is the best way to expand coverage

Proportion of covered working age population (right axis) and early retirement age (left), 2005



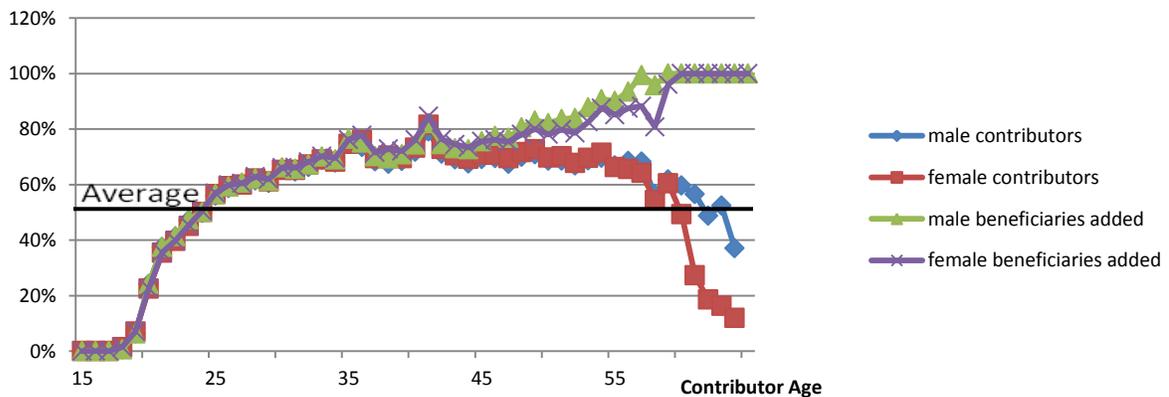
Source: World Bank pensions database

Coverage among the young is most limited, reflecting low employment rates among 15-24 year olds.

Figure 5 sheds some additional light on where the coverage gaps are. It depicts working age population currently actively contributing to the pension system or being covered by government contributions (unemployed, mothers on maternity leave, etc.) as a function of age. It shows that biggest coverage gaps are at younger ages. Of course, population aged 15 are much better served by attending schools, but young people aged between 25 and 35 should be the main target of any further efforts of coverage expansion.

Figure 5 There is very limited room to expand coverage

Proportion of working age population actively contributing or covered by the state (2009)

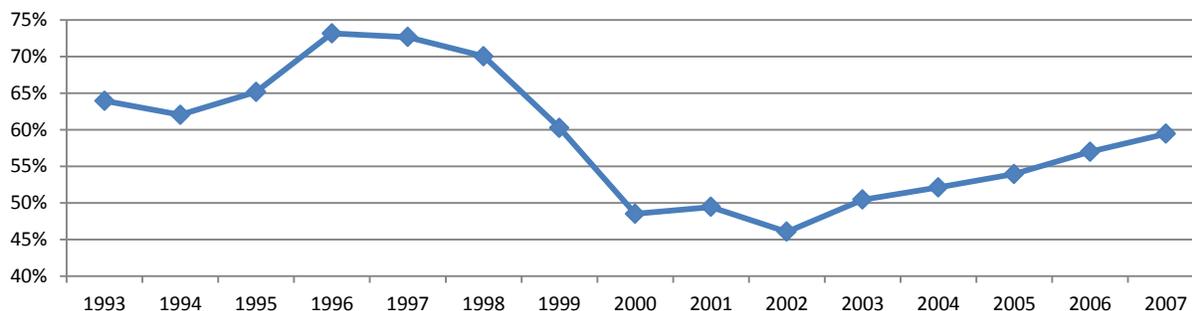


Source: NSSI data

The authorities have attempted to boost coverage in 2006, with little success, suggesting just how difficult expanding coverage is. The government drastically reduced contribution rates by 6 percentage points from January 1, 2006. It was expected that this reform could be revenue neutral, as a lower tax wedge on labor would induce expansion of coverage which in turn would compensate for lower

contribution rates. Figure 6 clearly demonstrates that the expected additional boost in coverage did not materialize. Bulgaria can be congratulated for its ability to steadily increase coverage since 2002, although part of this increase can probably be attributed to the high growth rates of the economy and the steadily increasing retirement age. However, the sheer absence of any additional increase, even insignificant, from the trend line in 2006 or 2007 in the face of a significant reduction in contribution rates is telling of the effect of this particular policy change.

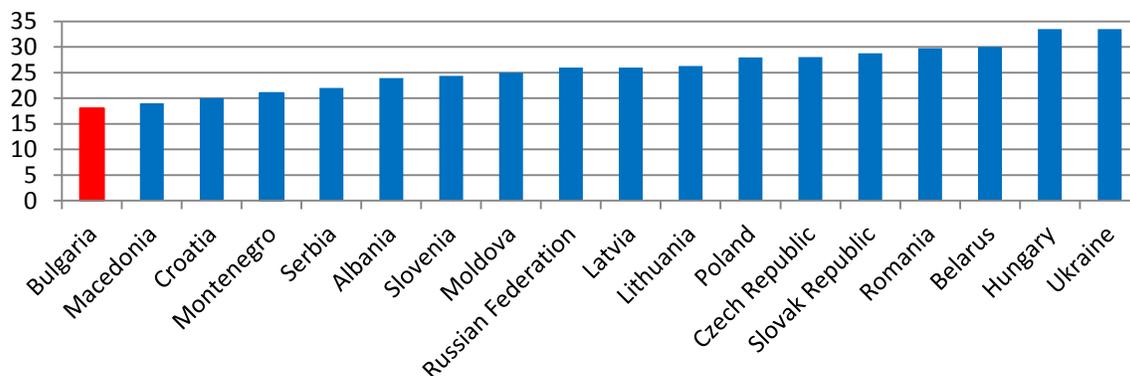
Figure 6 No effect on coverage after reduction in contribution rates in 2006
Proportion of insured working age population



Source: NSSI data

Having failed to increase coverage, the reform of 2006 has caused a dramatic decrease in revenues as discussed earlier and shown in Figure 1. Moreover, this and subsequent moves to reduce contribution rates has put them at the lower end of the regional spectrum (Figure 7). Therefore, any further cuts in pension contribution rates should be carefully evaluated in light of the recent experience and projected fiscal needs of the pension system. These projections will be discussed later in this note.

Figure 7 Contribution rates in Eastern Europe
Pension contribution rates in selected countries from Eastern and Central Europe, 2009.



Source: WB survey of ECA pension systems

Changing retirement behaviors

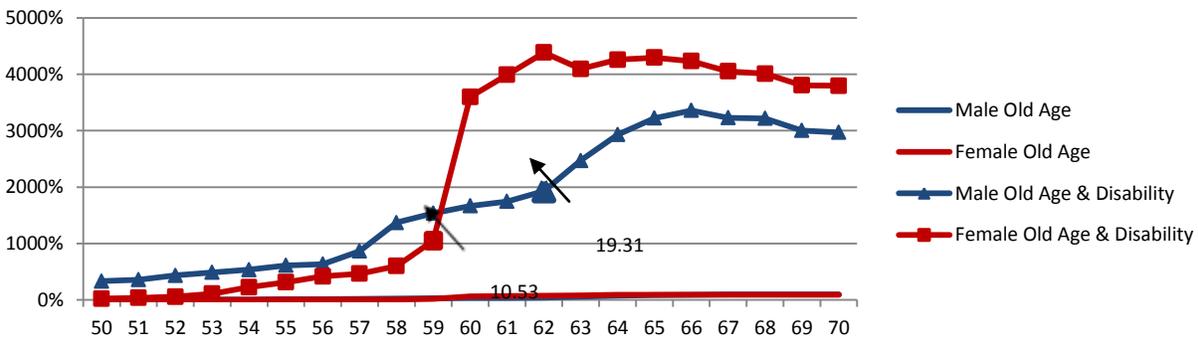
Increasing the effective retirement age is a much more promising parametric reform. Even though often difficult politically, policies to increase retirement ages are technically considerably more effective.

They offer multiple benefits to all involved as the taxable wage base expands, beneficiary numbers go down, and pension levels go up due to longer pension right accrual periods. This in turn reduces the pressure for unscheduled pension revisions and bonuses and lowers the cost of the minimum pension guarantee.

Recent increases in statutory retirement ages in Bulgaria will contribute to easing financial pressures for the pension system, but further increases may be necessary. The transition to a new statutory retirement age resting point was completed in year 2009, although retirement ages of 60 and 63 are still low by OECD standards where statutory retirement ages of 65 for both men and women have become the norm and where individual countries are gradually raising it to 67. The gender difference in retirement ages in Bulgaria is especially hard to justify, as life expectancy of women at age 60 stands at 20.32 years and is more than 4 years longer than that of men at the same age.

Even more importantly, a significant number of people still draw either disability or early retirement pensions before reaching the statutory retirement age. Figure 8 demonstrates that some 57 percent of men and 36 percent of women are already in receipt of some pension (for old age or disability) by the time they reach retirement age – a staggering number. The proportion of early retirees, excluding disabled, currently stands at 40 percent for men and 18 percent for women. These numbers are expected to see a natural decline, as the list of contributors eligible to retire early has been cut to 25 percent of what it was in 2000. However, people who have accrued early retirement rights before 2000 will continue to exit the labor force prematurely for many more years to come. In addition, some groups will continue to be eligible for early retirement. For example, teachers can retire 3 years earlier, with a reduction of their pension equal to 0.2 percent per month of advanced retirement which covers only about half of the costs of early retirement that NSSI incurs in these instances.

Figure 8 Many Bulgarians draw pensions before reaching statutory retirement age
Age distribution of old age and disability retirees in 2009

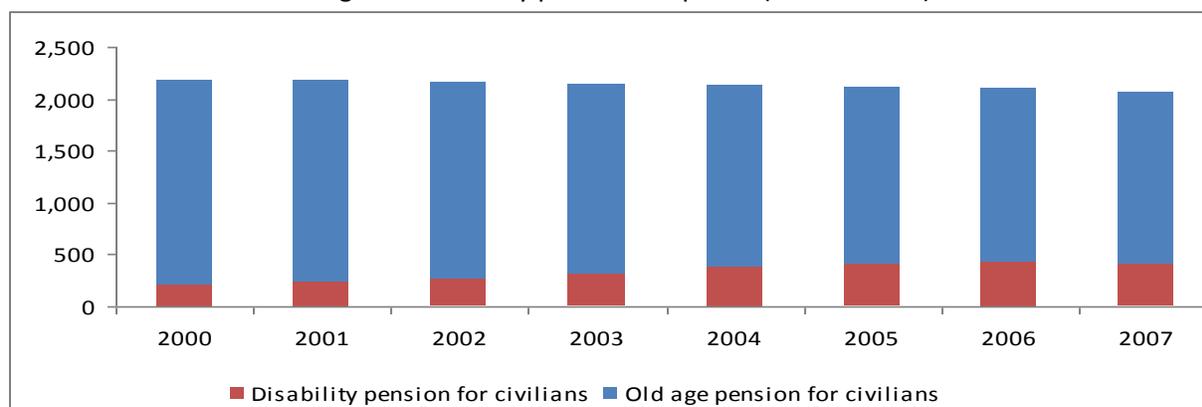


Source: NSSI data.

Previous attempt to increase effective retirement ages initially delivered mixed results. The introduction of higher statutory retirement ages between 2000 and 2009 has coincided with a significant spillover from old age to disability program as shown in Figure 9. While NSSI appears to have stabilized the growth of disability benefits, the pressure on the disability program is expected to remain high as early retirement provisions continue to be phased out and unemployment spikes due to the economic crisis.

Figure 9 **Significant spillover from old age to disability program occurred starting in 2000**

Evolution of number of old age and disability pension recipients (in thousands)



Source: NSSI data.

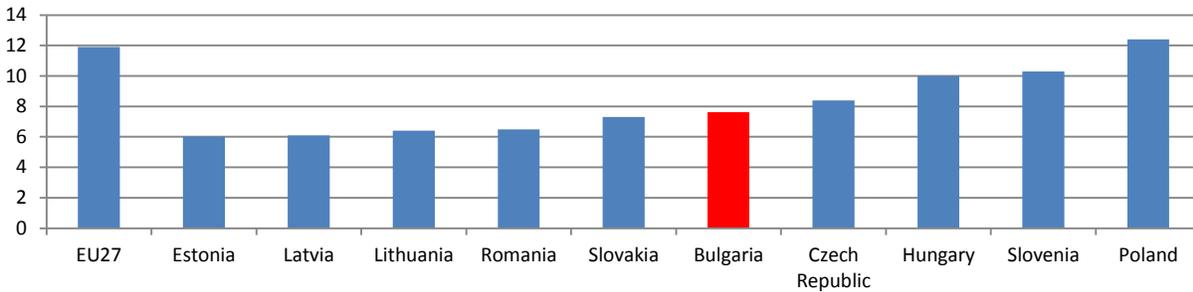
While administrative capacity to control the costs of the disability program seems to have increased, the incentive structure to claim disability would benefit from a review. In the majority of social insurance schemes worldwide disability pensions are lower than regular old age pensions. This is also true in Bulgaria, where in 2007 the average old age pension stood at BGN 177.23 and disability pension at BGN 140.69. However, disabled are also eligible for the social disability pension supplement of around BGN 30, practically equalizing both kinds of pensions and increasing the incentive to pursue disability certification in borderline cases.

Trends in benefit levels

Pension spending in Bulgaria is in the middle range among the new Member States and significantly below EU27 average (Figure 10). This latter result is expected. Facing better demographic and coverage conditions, the more advanced Western European economies can afford higher pension spending, although they too are experiencing significant fiscal pressures. Central and Eastern European countries are much better comparators for Bulgaria. That said, Bulgaria with its much lower pension contribution rates should probably also find itself at the lower end of the spending spectrum (although big pension increases since 2006, when this data was collected, are likely to have moved Bulgaria towards the right in Figure 10).

Figure 10 **Bulgaria's pension spending is on a higher side considering low contribution rates**

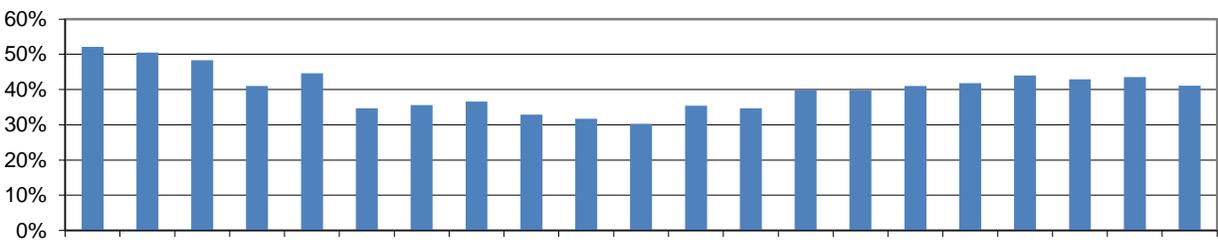
Pension spending as percent of GDP, 2006



Source: Eurostat

Departing from the set indexation rule, unscheduled ad hoc pension increases have raised concerns about sustainability of the system. The past evolution of average old age benefit level in comparison to average wage is presented in Figure 11. It shows that throughout the last decade pensions have grown at a similar rate compared to wages and by 2007 stood at just above 40 percent of the average wage. This relative stability is hard to reconcile with provisions in the pension indexation law which prescribes that, from the year 2000, pensions are indexed only to 50 percent of real wage growth. In reality, from time to time decisions overriding the indexation rule through different adjustments and end-of-year bonuses have been taken in an ad-hoc manner. For example, unscheduled pension increases of about 20 percent were implemented in 2009. Such practices contribute to the fiscal non-sustainability of the pension system, undermine predictability of pension benefits and by so doing negatively affect contribution compliance. In the future the fiscal space for such unscheduled increases is going to be much more constrained as demographic and economic developments start to pressure pension and state budgets.

Figure 11 Pension benefits have been growing in line with wages since year 2000
Ratio of average old age pension to average insured wage

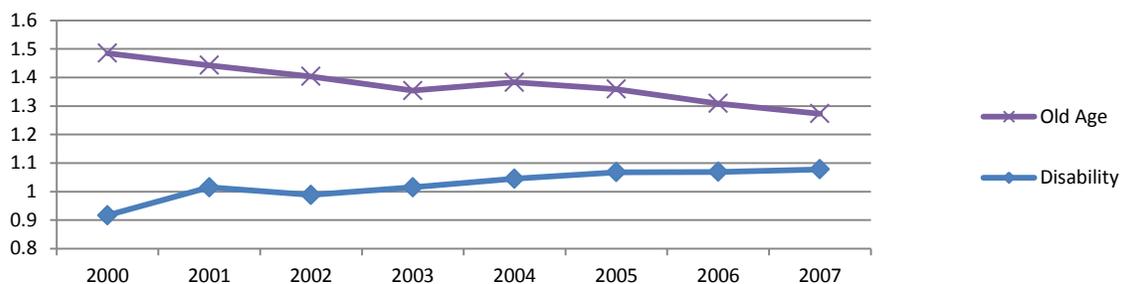


Source: NSSI data

If left untouched, pension levels will naturally start to decline in the future. This is not only due to the less generous “Swiss” indexation of pensions prescribed by the law. Figure 12 demonstrates that pension coefficients, one of the determinants of the pension amount in the benefit formula, for newly retiring old age pensioners have been steadily declining (and the gap between old age and disability pensions narrowing). They are being brought down by lengthening the wage averaging period and phasing out the generous valuation of pension rights accrued in the pre-reform period. This trend alone is expected with time to bring down replacement rates by about 20 percent.

Figure 12 Pension coefficients are declining for newly retiring old age pensioners

Average individual pension coefficients for newly granted pensions

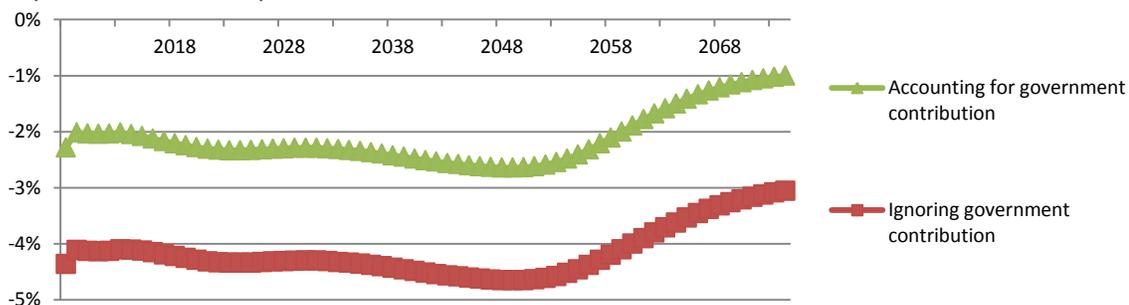


Source: NSSI data

Current and projected financing needs of Bulgarian pension system

This section presents projections using World Bank pension simulation software PROST and 2009 NSSI data, in order to estimate future pension system financing needs. It was conservatively assumed that real GDP growth will be -5 percent in 2009, zero percent in 2010 and will increase to a steady state 3 percent per year by 2014. The wage bill share of GDP is projected to remain stable. Pensions are assumed to be indexed to wage growth in line with the most recent practices, although will be left to decline by 20 percent for reasons discussed above. Finally, coverage rates of the working age population are assumed to remain constant. Under these assumptions gradually declining pension coefficients would be able to neutralize adverse demographic trends and to keep pension spending at around 7 percent of GDP until 2050. Figure 13 presents the final results of this analysis in the form of projected pension deficits.

Figure 13 A 12 percent government contribution will not be sufficient to cover the projected deficit
Projected pension deficits as percent of GDP



Source: World Bank projections

The newly introduced formalized government support to the pension system is unlikely to solve fiscal sustainability problems and might create distortions. Since January 1, 2009 the Government has been providing a 12 percent matching contribution, in combination with a further reduction of pension contribution rates. Figure 13 demonstrates that this “explicit” government support would be enough to cover only half of the deficits projected for the next few decades.

In addition, Government contributions introduce distortions to the system which are going to grow in the future. While Government contributions today are not particularly distortive given that the pension scheme covers most of the old population along the whole income spectrum, significant coverage

contraction among elderly poor is expected which would greatly increase such distortions in the future. This is because during the last two decades unemployment and informal employment have left a sizable proportion of the population, mostly poor, with very sporadic contribution histories which will translate into very small pensions and often into no pension at all. At the time when these people reach the retirement age, shifting significant Government resources to the program that excludes a big proportion of lifetime poor will tend to redistribute scarce resources from the unsubsidized poor to the subsidized wealthier population. Therefore, it is important that a longer term plan be developed to put the pension system on the self-sustainable basis, financed solely by private sector contributions.

Policy Recommendations

To summarize, in the absence of further pension reforms, the projected stability of pension system finances can only be achieved through high and distorting government subsidies and decreasing pensions. Some of the options to address these problems are summarized below. A renewed reform agenda could address the longer term sustainability concerns as well as increase pensions in a more predictable manner.

In the Short Term

- Refrain from further ad-hoc pension increases
- Consider cuts in contribution rates only if accompanied by reforms to improve the long-term sustainability of the pension system.
- Consider exit strategy for formalized Government contribution to the scheme.
- Further strengthen disability certification processes to respond to likely increase in disability claims due to the economic downturn.

In the Medium Term

- Attempt to further increase effective retirement age by reviewing early retirement rules and eliminating gender differences in retirement ages. A continued slow increase of retirement ages for both genders should also be considered;
- Review the rules and incentives for disability retirement so that disability pensions are in practice lower than regular old age pensions.
- Improve long-term financial planning in the Ministry of Finance.
- Unless appropriate mitigation can be implemented, an increase in contribution rates should not be ruled out.