

## OLD-AGE PROVISION: POLICY OPTIONS FOR CROATIA

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The Croatian system of old-age provision comprises a traditional public pay-as-you-go scheme and a mandatory funded scheme which will provide increasing amounts of supplementary pensions to those entering retirement in the future. Due to the continuing economic crisis, the public scheme is currently under enormous financial strain, with a sizeable impact on central government public finances. At the same time, the level of benefits deriving from the overall system is likely to become inadequately low in the long run. This calls for a mixed reform strategy with an appropriate timing, taking care of the financial viability as well as the adequacy of old-age provision.

### The current system

In Croatia,<sup>1</sup> public pensions are provided by a ‘Bismarckian’ pay-as-you-go scheme offering benefits that are related to earlier wages and to the length of individual work records. A funded ‘second pillar’ was added in 2002, which is financed from earnings-related contributions and operated by a number of private pension funds. When the scheme was introduced, participation in the second pillar was mandatory for individuals aged up to 40 years. Those aged between 40 and 50 years had a right to choose whether to participate or not, while those aged 50 years and older had to stay entirely with the first-pillar scheme. Full contributions to the public scheme amounted to 20 percent of taxable wages at that time and have remained constant since then. Those joining the mixed regime continue to pay the same rate, of which 5 percentage points are channelled to their private pension funds as a ‘second-

pillar allocation’.<sup>2</sup> Benefit entitlements acquired in the public scheme are adjusted accordingly, based on effective contributions of 15 percent of wages in all subsequent years.

The statutory retirement age is 65 for males, while it is increasing from 60 to 65 for females between 2011 and 2030. Afterwards, the age threshold will be further increased to 67, for males and females alike, until 2038. Benefit assessment is based on a point system translating individual work records and life-time earnings into pension entitlements. Benefits are up-rated twice a year based on a mixed indexation rule (50 percent CPI inflation, 50 percent nominal wage growth).

The public pension scheme is not very generous in terms of average annual benefits provided,<sup>2</sup> but it is generous in granting access to pensions relatively early. The number of beneficiaries amounts to 130 percent of the population of pensionable age. Conversely, almost 20 percent of the population aged 20 to 64 are receiving some kind of pension benefits. The support ratio (i.e. the number of active members per beneficiary) is currently no more than 1.2, down from 3.0 in 1990. Also, the system provides minimum pensions that are relatively generous, at least when compared to average pensions.

Total expenditure of the first-pillar scheme amounted to 11.1 percent of GDP in 2014. However, contributions cover only about 55 percent of expenditure. The actual current cost rate (i.e. the contribution rate which would balance the budget) is correspondingly higher: including the second-pillar allocation of 5 percentage points, it is no less than 32.5 percent of taxable wages. Therefore, the public scheme regularly receives a subsidy from the central-government budget, amounting to 5.0 percent of GDP in 2014. The size of this subsidy compares unfavourably to the current budget deficit of 5.7 percent of GDP. In fact, the scheme has imposed a substantial burden on central-



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<sup>1</sup> For descriptions of the system, see Nestić and Rašić Bakarić (2008); Šonje (2011) or MISSOC (2015).

<sup>2</sup> In 2014, the gross level of benefits (defined as average old-age pensions divided by current average taxable wages) has been about 32 percent (which is very low by international standards – see OECD 2015). The figure derives from data kindly provided by Croatian Pension Insurance (*Hrvatski zavod za mirovinsko osiguranje, HZMO*). They are also used as an important input for long-term projections presented in below.

government finances virtually each year since 2000, the latter being under pressure also for other reasons in the current situation of a lasting crisis.

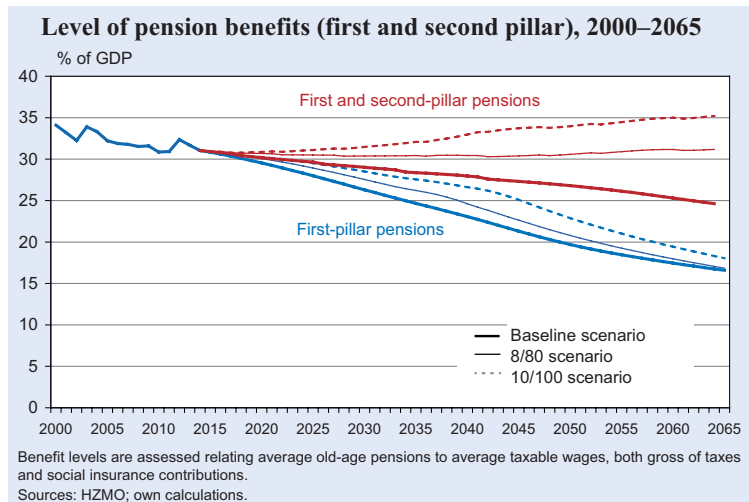
In addition, Croatia is currently faced with the prospects for a strong ageing process by which old-age dependency may roughly double over the next five decades. It may thus be highly surprising that, under current rules, public pension expenditure as a share of GDP is likely to decline considerably over the same time period

(see Figure 1). Following strong fluctuations since 2000, which were due first to significant GDP growth and then to the Great Recession, simulations for a ‘baseline scenario’<sup>3</sup> indicate that the current peak of this expenditure ratio will disappear within a few years. From 2020 onwards, the ratio will continue to decline for more fundamental reasons, with an accelerated speed in the period between 2030 and 2040.

Another important result displayed in Figure 1 relates to the state subsidy paid to the first-pillar pension scheme. Current levels of around 5 percent of GDP clearly indicate the strained situation of public pension finances. If the total contribution rate (including the second-pillar allocation) remains unchanged, the subsidy is projected to decline in line with public pension expenditure, reaching 4 percent of GDP around 2020, 2 percent around 2040

<sup>3</sup> For the underlying assumptions, see Appendix.

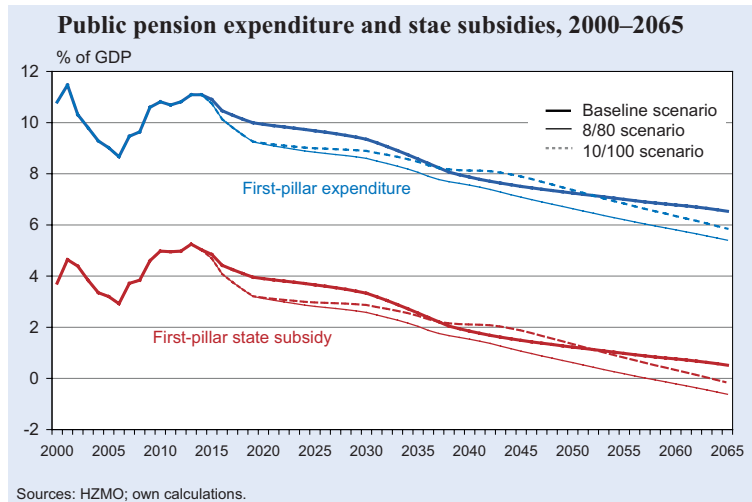
Figure 2



and only 0.5 percent at the end of the projection horizon.

To some extent, these seemingly favourable long-term trends are driven by the on-going shift towards a partially funded system by which public pensions become less important over time. However, they also result from a continuous erosion of benefit levels that is definitely not compensated by the expected increase in second-pillar pensions. Figure 2 illustrates that the gross level of public pension benefits has been low already in recent years, modified by a few discretionary changes with transitory effects. From a current 32 percent of average taxable wages it will continue to decline to less than 25 percent until 2035, less than 20 percent until 2050 and just above 15 percent at the end of the projection horizon. Supplementary funded pensions will mitigate this trend, lifting the reduction to 25 percent by 2065.

Figure 1



### Options for reforms

Pension policy in Croatia is thus facing a twofold challenge. On the one hand, cutting costs is necessary in the short run to get the system out of the current financial strain. On the other hand, increasing benefit levels will become an issue at some point in time to ensure sustainability as well as adequacy of old-age provision in the long run. As a result, appro-

ropriate reforms have to be multi-faceted, and the timing of reforms will also matter.

A problem which needs to be addressed immediately is the current huge inflow of working-age individuals into disability pensions and early retirement. Measures that are suited to deal with this problem are tighter eligibility criteria for disablement and a higher age for first claiming old-age pensions. Another change that should start taking effect soon and fully unfold over the next few decades is a further increase in the statutory pension age. The latter would have relatively weak effects in the short run, but very strong ones in the long run. In a scenario resulting from reforms of this kind, state subsidies could be reduced much faster than in the 'baseline' case and would fall to zero around 2060.

However, while this result sounds like good news with respect to budgetary effects and fiscal sustainability, it is still based on a level of public pension benefits which declines considerably throughout the projection period and a reduction in the total benefit level deriving from both pillars by close to 20 percent. Basically, there are two ways of keeping up future benefit levels. Supplementary funded provisions could be strengthened by increasing the second-pillar allocation. Alternatively, the level of public pension benefits could be stabilized by replacing the current, mixed rule for benefit up-ratings with stronger, or even pure, wage-indexation. Both approaches have their pros and cons.

Taking together these considerations, a mixed strategy for cutting pension expenditure in the short run and (re)increasing future benefit levels can be conceived of. It should combine a further shift towards partial pre-funding that is initiated soon and pursued unwaveringly with (temporary) increases in benefit up-ratings which can be used flexibly, depending on what the benefit level appears to require and what other circumstances allow for. To illustrate the potential effects, we look at two scenarios which are built on the baseline scenario (see, again, Appendix), modified by the following assumptions:

- Age specific rates of entry into disability pensions and early retirement are reduced (to 50 percent of their baseline values until 2019) and the unemployment rate declines (to 9 percent until 2019).
- The statutory pension age is increased (throughout the projection period) by an automatic link to on-

going increases in life expectancy which leads to a uniform age threshold for males and females at age 70 around 2060.

- Total contribution rates and second-pillar allocations are increased by 1 percentage point per year against current values (20 percent and 5 percent of taxable wages, respectively) starting from 2016; at least temporarily, the weight of nominal wage growth in the rule for benefit up-ratings (currently: 50 percent) is also increased; however, both these changes come in two possible variants:
  - (i) in the '8/80 scenario', second-pillar allocations reach 8 percent of taxable wages (in 2018), then remain constant; the weight of wage growth in benefit up-ratings goes up to 80 percent (until 2018), but back to 50 percent later on (from 2039 to 2041); and
  - (ii) in the '10/100 scenario', second-pillar allocations go up to 10 percent (until 2020), while the weight of wage growth becomes 100 percent (in 2020) and then goes down to 50 percent again (from 2042 to 2047).

Note that total contributions rates and second-pillar allocations always move in parallel, so that the effective contribution rate for the first-pillar scheme remains constant.

The impact of these reforms on public pension expenditure and on the state subsidy is included in Figure 1. Compared to the baseline scenario, both strategies lead to reductions in expenditure and in the subsidies needed to balance the scheme in the short to medium run. In the 8/80 scenario, public pension expenditure and state subsidies remain below those in the baseline scenario throughout. The difference becomes larger after 2040, due to the return to the old rule for benefit up-ratings, and the state subsidy falls to zero around 2055. In the 10/100 scenario, expenditure and subsidies exceed those in the baseline scenario between 2035 and 2050, when they may have become acceptably low in all the cases considered here. The reason is that benefit up-ratings are more generous in this period, amounting to pure wage indexation. As this rule is phased out in the 2040s, expenditure falls below corresponding baseline figures, and the state subsidy becomes zero shortly before the end of the projection horizon.

Figure 2 also displays the impact of these reforms on the (gross) level of average pension benefits – those provided by the public scheme as well as total benefits

deriving from both pillars. Our two scenarios have been deliberately designed to demonstrate the options arising in this respect. The 8/80 scenario stabilizes total pension benefits almost perfectly at their current level. The 10/100 scenario even leads to a long-term recovery of the benefit level, in case this is considered desirable.

### Policy proposals

The agenda developed here for possible reforms to improve the Croatian system of old-age provision consists of two types of measures: some which are suited to reduce the high level of pension expenditure in the near future and others which will avert the erosion of retirement income in the long run. Important measures of the first type are changes in eligibility rules for disability and early retirement, plus gradual increases in the retirement age which can be automatically linked to increases in life expectancy. Reforms of this kind need to be taken soon. Considering the budgetary situation of the current system and the strength of the ageing process, there are not many alternatives. Measures of the second type are further expansions of pre-funded pensions, probably complemented with more generous benefit up-ratings of unfunded pensions. These elements can be combined in various ways and with a timing that can be flexibly adjusted. The expansion of second-pillar contributions should not be postponed, as this is an element of reform which needs time to fully unfold its effects and can be really favourable.<sup>4</sup>

### References

European Commission and EU Economic Policy Committee (2014), *2015 Ageing Report: Underlying Assumptions and Projection Methodologies*, European Economy 8/2014.

MISSOC (2015), *Mutual Information System on Social Protection*, <http://www.missoc.org>.

Nestić, D. and I. Rašić Bakarić (2008), "From Work to Retirement: Pension System Incentives to Continued Labour Market Participation in Croatia", in: Vehovec, M. (ed.), *New Perspectives on a Longer Working Life in Croatia and Slovenia*, Zagreb: Ekonomski Institut and FES, 81–99.

OECD (2015), *Pensions at a Glance 2015*, Paris: OECD.

Šonje, V. (2011), *Pension Systems and Pension Reforms: Case of Croatia*, Arlington: USAID PFS Project.

Werdning, M. and M. Primorac (2016), *Old-age Provision: Policy Options for Croatia*, CESifo Working Paper 5761.

### Appendix: Assumptions for the long-term projections

Projections for the 'baseline' scenario are based on cohort-wise, year-by-year projections using the following assumptions (for many further details, see Werdning and Primorac 2016):

- The total fertility rate remains constant at 1.5 (children per woman) throughout the projection period; life expectancy at birth goes up to 87.6 years for females and to 82.7 years for males until 2060 (year-2013 figures are 80.7 and 74.0 years, respectively); net immigration is zero throughout the projection period.
- Participation rates by age and gender are projected into the future relying on cohort effects that are present in actual data.
- Entries into disability and early retirement are adjusted accordingly; age-specific disability risks are shifted to higher ages with each additional year of life on a one-for-one basis.
- Behavioural reactions to increases in the statutory retirement age imply that a one-year increase in the age threshold leads to one-year delays in actual retirement.
- Unemployment decreases to current estimates for the NAWRU (14.4 percent according to the European Commission's AMECO database) until 2019, thereby removing business-cycle dynamics from the long-term projections.
- Growth rates of labour productivity (and wages) are borrowed from projections for the '2015 Ageing Report' prepared by European Commission and EU Economic Policy Committee (2014), the average real growth rate being 1.8 percent p.a.
- Employment projections and productivity assumptions are combined to obtain simple projections for GDP as a macroeconomic background scenario.
- The real interest rate for government bonds is assumed to be 3 percent p.a.; the inflation rate is set to 2 percent p.a.
- The current legal framework for assessing and up-rating public pensions is modelled as it is. Accumulation and decumulation of second-pillar funds is re-constructed assuming that annuitization is actuarially fair.

<sup>4</sup> For further details of these recommendations and a few caveats, see Werdning and Primorac (2016).