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IBS Policy Paper
From research to public policy

WILL THE POLISH PENSION SYSTEM GO BANKRUPT?

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Main message

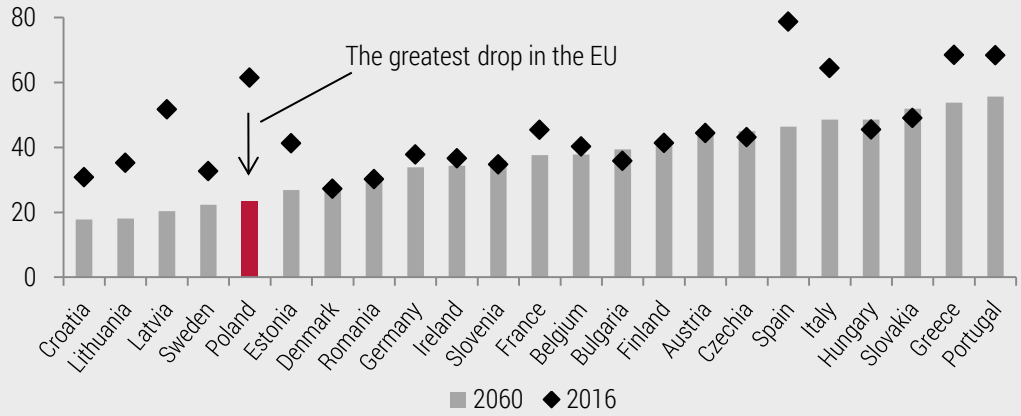
Despite the projected rapid ageing of the population in the coming decades, the Polish pension system will remain solvent. Until 2060 pension expenditure, as a percentage of GDP, will remain at the current level. The most important factor that will reduce the impact of demography on pension expenditure will be a drop in pension benefits (relative to salaries). The consequence will be an increase in relative poverty among the elderly, and at the same time a growing pressure to raise benefits. Public policy can respond to these challenges in three ways: a) by freeing the system's parameters (retirement age, the minimum pension) from being a factor in current political decisions; b) by supporting longer participation in the labour market; and c) by encouraging people to save for their retirement outside the main pillar of the system. But public policy in Poland is currently heading in the opposite direction. Factors such as the retirement age, the quality of healthcare, and the availability of early childcare are not conducive to greater participation in the labour market. In turn, voluntary systems (Employee Capital Plans, Individual Pension Accounts, Individual Pension Security Accounts) do not guarantee payment of benefits up to the death of the insured person, and therefore do not create pension savings *sensu stricto*.

Key facts

- 68 – the number of people aged 65+ per 100 working-age people (aged 15 to 64) in Poland in 2060. Currently, this number is about 25.
- 11% of GDP – pension expenditure in Poland. According to the European Commission's forecast, this figure will remain at this level until 2060.
- 24% – the average pension replacement rate in Poland in 2060. In 2016, this figure was 61%. Poland will record the greatest drop in the average replacement rate among all EU countries.
- 2/3 – the proportion of pensions which in 2060 will account for minimum or lower pension benefits with the retirement age at 60/65. With the retirement age at 67 for both sexes, the ratio will be around 1/4.

By 2060 Poland will witness the greatest drop in the replacement rate in the EU

Replacement rates in EU countries – 2016 vs 2060



For source information and comments on the diagram, see the note under Figure 4 on page 5.

Introduction

The prospect of a rapidly ageing population in the coming decades raises concerns within the public discourse in Poland about the future solvency of the country's pension system, which is a pay-as-you-go system, i.e. it is based on the assumption that pension benefits are financed by contributions paid by the working part of the population. In a situation where a significant increase in the number of people at retirement age and a simultaneous decrease in the number of people at working age is expected, doubts arise as to whether such a pension system can guarantee the payment of benefits in the future.

The aim of this study is to answer the question of how such ageing of the population will affect pension expenditure in Poland. Our analysis is based on a forecast of expenditure related to the ageing of the population prepared by the European Commission. The forecast of pension expenditure until 2060 is presented in relation to GDP: this indicator shows the burden of pension expenditure versus the income generated in the economy. We do not analyse incomes from contributions, as we think that the distinction between the degree to which pension expenditure is financed from contributions and the degree to which it is financed from taxes is less important than what proportion of national income will be allocated to this purpose.

Contrary to current concerns, the pension system in Poland in the upcoming decades will remain solvent. Until 2060, pension expenditure will remain at a level similar to now, despite the rapid ageing of the population. The most important factor preventing an increase in pension expenditure will be a drop in the level of pension benefits. The average replacement rate (the ratio between a person's first pension and their last salary) will fall by more than double in Poland, which will be the largest fall among all EU countries. This decline is a prerequisite for maintaining the stability of the system, given the rapidly progressing demographic changes.

The greatest challenge for public policy will not be the solvency of the pension system, but the growing number of pensioners receiving low benefits. In its response to this challenge, public policy should:

- Link retirement age to life expectancy, and the minimum pension to the minimum subsistence figure, which will help to remove the decision concerning the basic parameters of the pension system from current political disputes.
- Support extending the period of labour market participation by promoting healthy lifestyles and lifelong learning, as well as guaranteeing institutional care for young children and the elderly.
- Encourage voluntary pension savings by modifying existing voluntary savings schemes so that they can guarantee the payment of benefits until the death of the insured person.

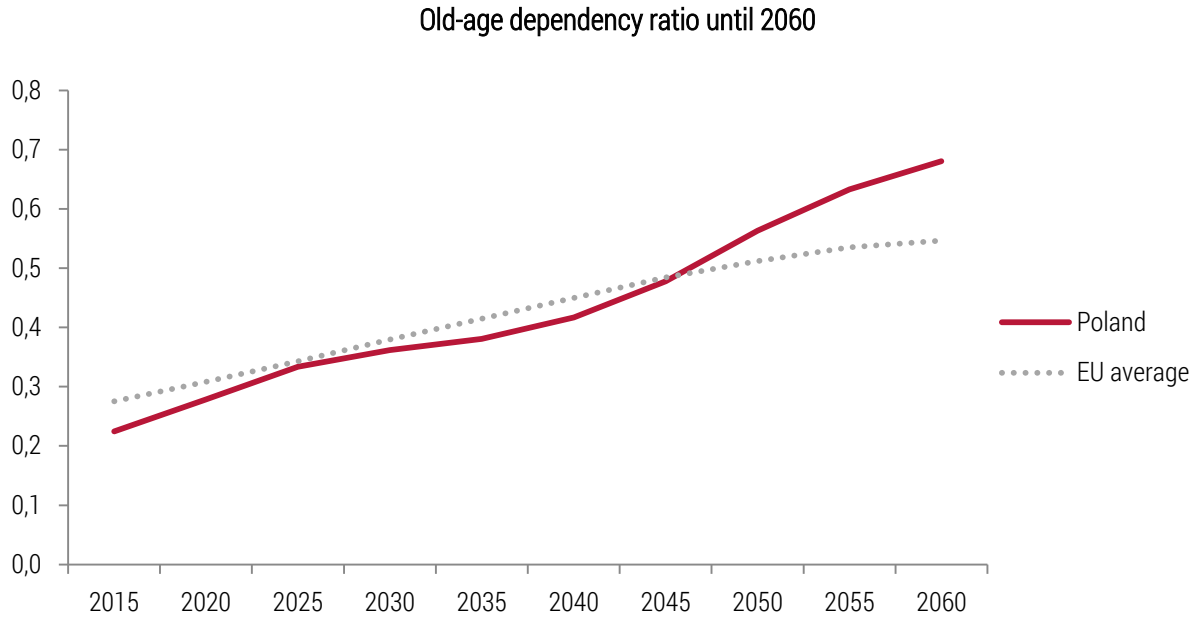
This study consists of four chapters. The first one presents Poland's demographic prospects. The second chapter shows forecasts concerning the development of pension expenditure. Chapter three presents a closer look at the forecast levels of replacement rates. In chapter four, we indicate what uncertainties are associated with the forecasts shown. Finally, we present the most important conclusions from our analysis for public policy.

1. By 2060, the share of senior citizens in the Polish population will increase significantly

In the next few decades, Poland will have one of the fastest ageing populations in the world. Today, the population of our country is still relatively young: the median age is about 40 years old (half the population is younger and half older than this value). There are only four European Union countries where this median is lower (data from 2015). By 2040, the median age in Poland will grow by more than 10 years. In no other EU country will this increase be so high. In 2040, Poland will be in a small group of 11 countries in the world whose median age will be higher than 50 years old.

The ageing of the population will significantly change the proportions between the number of working-age and post-working-age individuals in the economy. By 2060 the number of people aged 15 to 64 will have decreased by 40%: from 27 million to 16 million. At the same time, the population of those aged 65+ will have almost doubled: from 6 to 11 million. The old-age dependency ratio, which shows the proportion between those two groups, will grow from 0.2 to 0.7 (Figure 1). This means that in 2060, for every 100 working-age people, there will be approximately 70 at the post-working age. Consequently, the number of pensioners in the economy will increase, and the number of working people will fall. Today, there are two working persons per one pensioner, but in 2016 there will be only one.

Figure 1. In the coming decades, the share of senior citizens in the Polish population will grow very quickly



Comments: The graph shows the proportion between the number of post-working-age people (65+) to the number of working-age people (aged 15 to 64).

Source: our own elaboration based on the UN's demographic forecast.

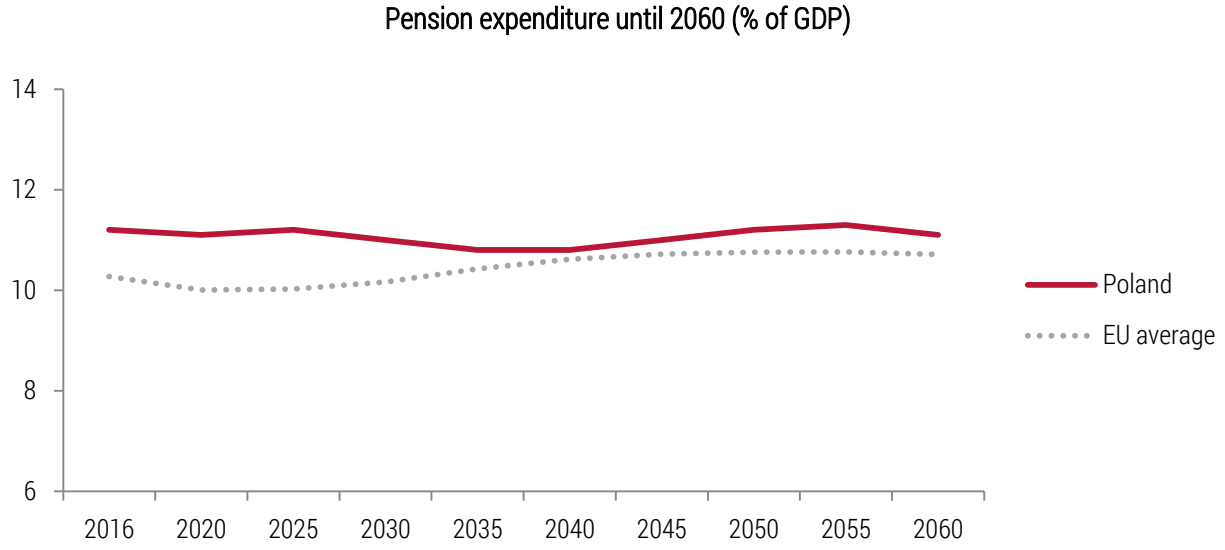
2. Forecasts do not predict any significant increase in pension expenditure in Poland

In the coming decades, pension expenditure in Poland will remain at a similar level to now. In the years 2016–2060, it will oscillate at around 11% of GDP (Figure 2). This may seem surprising in the context of the demographic forecasts presented in the previous paragraphs. No radical change in the amount of pension expenditure is a feature not only of Poland, but also of most EU countries. In the forecast horizon, pension expenditure in the EU countries will rise on average by as little as 0.5% of GDP, and only in three cases will the increase be higher than 3% of GDP. In most EU countries, the negative impact of demographic change on pension expenditure will be offset by other factors: a decrease in pension benefits, a later effective retirement age, or an increase in the participation in the labour market in particular age groups.

Box 1. What constitutes pension expenditure?

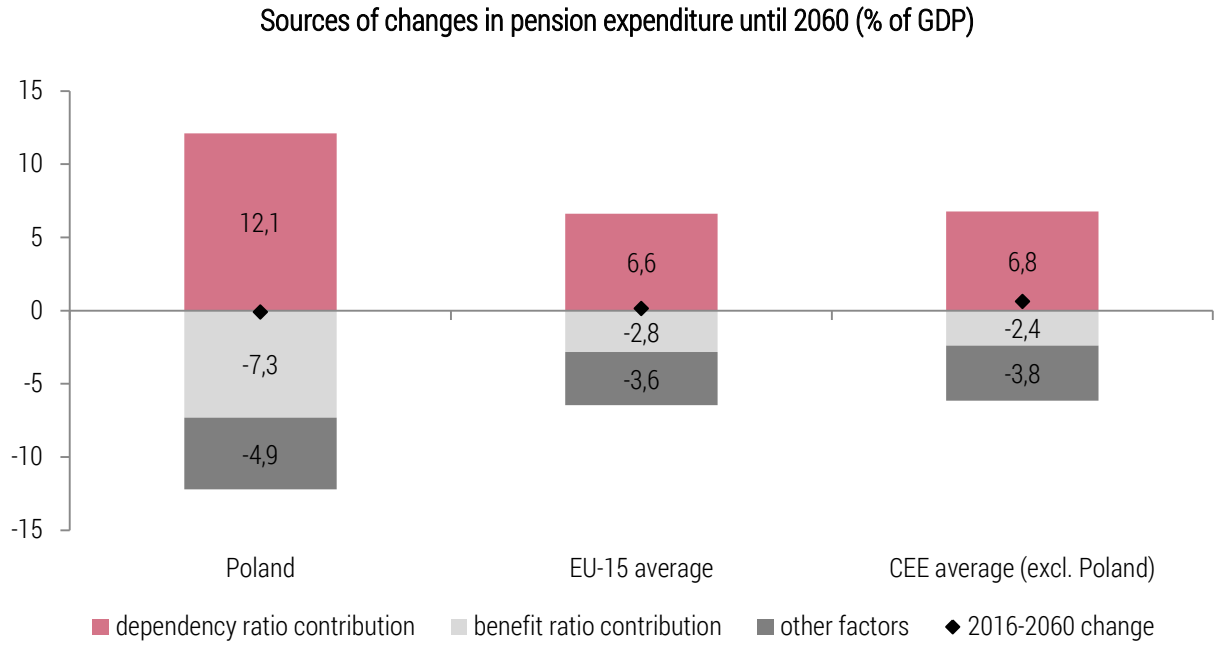
In the study of the European Commission that forms the basis for this analysis, pension expenditure is defined as all public expenditure on pensions and equivalent cash benefits granted over a long period of time. They include not only 'typical' retirement benefits, but also pre-retirement benefits and allowances, and disability and survivors' pensions (so-called widows' pensions). Pension expenditure includes both expenditure from the public pension scheme and from separate schemes (benefits for farmers, miners, uniformed services, judges, prosecutors, etc.).

Figure 2. Despite the ageing of the population, pension expenditure in Poland will remain at a level similar to now



Source: our own elaboration based on: European Commission (2018). The 2018 Ageing Report. Economic and Budgetary Projections for the EU Member States (2016–2070).

Figure 3. The negative impact of demographics on pension expenditure will be offset by other factors; in Poland, mainly by falling replacement rates



Source: our own elaboration based on: European Commission (2018). The 2018 Ageing Report. Economic and Budgetary Projections for the EU Member States (2016–2070).

Factors that will affect the development of pension expenditure in Poland can be divided into three groups: demographic changes, changes in the amount of pension benefits, and others. Their impact on the pension expenditure until 2060 is shown in Figure 3.

The ageing of the population will have a strong impact on the increase in pension expenditure; within the EU, the impact will be greatest in Poland. By 2060, the forecast increase in pension expenditure in Poland resulting from demographic changes (assuming that other factors remain unchanged) is expected to reach 12% of GDP. Therefore, if changes in pension expenditure resulted only from demographics, in the next decades they would more than double: from 11% of GDP in 2016 to 23% of GDP in 2060. In no other EU country is demography so important in the forecast, although in all EU countries the direction of influence of this factor is positive (the average is less than 7% of GDP).

The most important factor preventing increases in pension expenditure in Poland will be a drop in the level of pension benefits (in relation to salaries). By 2060, this factor will reduce pension expenditure by more than 7% of GDP, which is much more than the EU average amounting to 3% of GDP (more on this subject in the next chapter). Among all the factors that will contribute to the reduction in pension expenditure, of greatest importance is restricting the possibility of receiving benefits before reaching the statutory retirement age (60/65). Actions taken in the last dozen years have resulted in a gradual decrease in the number of relatively young benefit recipients; for example, forecasts for the 55–59 age group say that the percentage of pension beneficiaries will drop from the current level of 21% to 13% in 2030, and further to 9% in 2060 (European Commission 2018).

3. The largest drop in replacement rates in the EU will take place in Poland

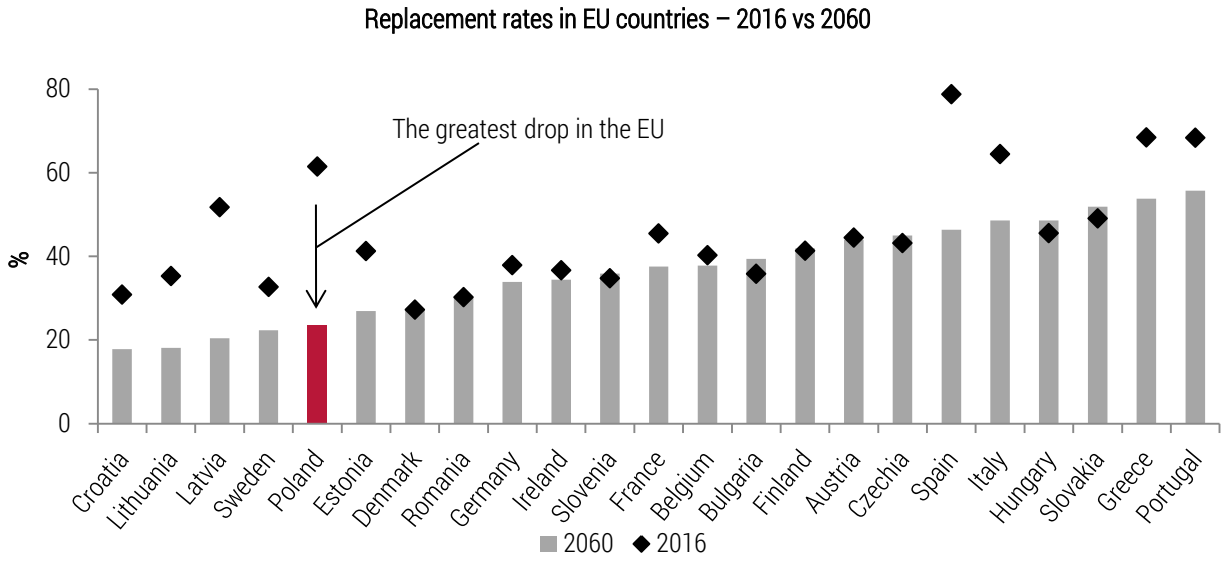
Poland will have the greatest variances in the EU with regard to replacement rates between different generations. Today, the average replacement rate is around 60% (a definition of the replacement rate is presented in Box 2), which is one of the highest values in the EU. However, in the coming decades, there will be a sharp decline in the average replacement rate: it will drop to 28% in 2040 and to 24% in 2060 (Figure 4). Replacement rates will fall in most EU Member States, but nowhere will the scale of this fall be as great as in Poland, where it will reach almost 40 percentage points. In 2060, Poland will record one of the lowest average replacement rates among EU countries.

Box 2. What is the replacement rate?

The replacement rate shows the average amount of the first pension as a percentage of the last remuneration before retirement. Therefore, it measures the extent to which a pension replaces income from work.

This indicator is calculated as the ratio of the average pension of individuals who receive a pension for the first time in a given year to the average salary of the individuals retiring in the economy.

Figure 4. Poland will experience the largest fall in the EU of the average pension compared to final salary



Comments: The replacement rate shows the average amount of the first pension in comparison with the amount of the last remuneration for work (gross values). The diagram does not include Cyprus, Luxembourg, or Malta.

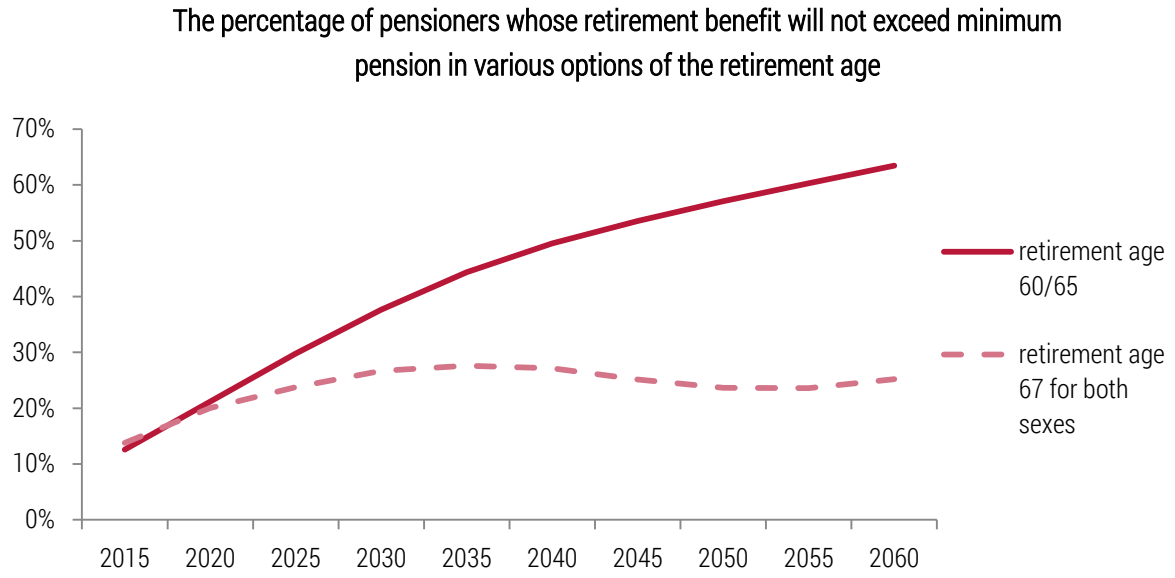
Source: our own elaboration based on: European Commission (2018). The 2018 Ageing Report. Economic and Budgetary Projections for the EU Member States (2016–2070).

A drop in the replacement rates is one of the conditions for maintaining the solvency of the Polish pension system in the context of a rapidly ageing population. A significant part of today's benefits has been calculated on the basis of the rules that were applicable in the previous system (or contains a component of the previous system: the so-called initial capital), which results in a relatively high level of benefits in comparison with

remuneration in the economy. Maintaining this level in the future would lead to a significant increase in pension expenditure, and, simultaneously, an increase in taxes and/or contributions. Over the years, however, the share of benefits will increase as a result of the calculation rules of the pension system established in 1999.

In the new system, the amount of benefits received will depend on the value of the contributions we pay into the system and the expected number of years during which we receive benefits. To increase future benefits in this system, pension contributions would have to be raised or the period of contribution payment would have to be extended. The first action would reduce net remuneration today and would have negative consequences for the labour market (for example, it would reduce the willingness to take up legal employment). In turn, three factors are important for the length of the period of making contribution payments: age of entry into the labour market, the length of career breaks, and the age of economic deactivation.

Figure 5. The amount of pension benefits is highly dependent on the moment of retiring



Source: Malec, M., Tyrowicz, J. (2017). Niski wiek emerytalny, wysoka cena. IN: Lewandowski, P., Rutkowski, J. (ed.). Starzenie się ludności, rynek pracy i finanse publiczne w Polsce. Warszawa: European Commission Representation in Poland.

In the Polish pension system, retirement age is a key parameter affecting the level of the replacement rate. It determines the expected number of months for which the pensioner will be receiving his or her pension (i.e. the number of months by which the accumulated pension capital is divided). The later we retire, the greater the capital raised and, at the same time, the shorter the period over which it is divided. The significance of this factor is illustrated by the simulation shown in Figure 5. With the retirement age at 60 for women and 65 years for men, almost 2/3 of all pensions in 2060 will be minimum pensions or lower. This problem will affect women in particular, who (generally speaking) have lower salaries during their careers, a shorter contribution payment period, and a longer period of receiving benefits than men. With the retirement age at 67 for both sexes, the percentage of pensions not exceeding the minimum retirement benefit is significantly lower: in 2060 it amounts to around 25%. The factors that reduce the projected replacement rates in Poland are also the relatively late age of entry into the labour market in the case of young people and long career breaks (especially in the case of women who are occupied with housekeeping and raising children). Specific rules for paying contributions in

certain forms of employment are also important. For example, people who have periods of working on civil law contracts will receive pensions that are about 15–20% lower than people who have worked on employment contracts throughout their entire careers (Lewandowski et al. 2016a).[1]

Voluntary retirement-saving instruments in their current form will not lead to a permanent increase in the amount of pension benefits. None of the three systems which should encourage saving for old age – IKE, IKZE, and PPK (Individual Pension Accounts, Individual Pension Security Accounts, and Employee Capital Plans, respectively) – provides the possibility of a lifetime annuity (in each of the cases above, payment may be a one-off occurrence or spread over several instalments). Therefore, these savings will not constitute pension savings in the strict sense of the phrase, as their basic feature is securing the insured person's income until his or her death. In the case of PPK, the most important of the voluntary instruments, after the age of 60, the majority of the funds collected will be paid in instalments spread over 10 years. At the end of that period, the pensions of the beneficiaries of the PPK will drop. Thus, this instrument fails to address the problem of low pension benefits and possible poverty among people aged 70+ (and may even exacerbate the problem of poverty in this age group; see Tyrowicz i Rutkowski 2018).

4. Public policy may have a significant impact on the implementation of forecasts

The forecasts presented in the previous chapters are based on certain assumptions, some of which result from the adopted state policy and specific statutory regulations. However, public policy and regulations may be subject to change, fundamentally undermining the fulfilment of forecasts.

Immigration may to some extent limit the pace of ageing of the Polish population. The demographic projections presented in the first chapter assume a balance of migration approximately equal to zero. In the event of a significant influx of immigrants to Poland, the future old-age dependency (the ratio of the number of people aged 65+ to the number of people at working age) could be smaller. It is worth noting, however, that in order to significantly slow down the ageing of the population in Poland, massive immigration would be necessary. With the migration balance close to zero, by 2060 the number of people at working age will drop in Poland by as many as 11 million. An increased number of working-age people also would not significantly affect pension expenditure (at least not in the short term), but would affect the amount of income from taxes and premiums.

The growing number of older people with relatively low pensions will put pressure on raising benefits, especially the minimum pension. The European Commission's forecast assumes that the minimum pension in Poland will be valorised in accordance with the current regulations (i.e. by the sum of inflation and 20% of real wage growth) for 10 years from the start of the forecast, and later in accordance with the wage growth rate. This assumption seems reasonable, but the reality is that the political premises (the growing share of older people in the population of potential voters) may speed up the pace of raising the minimum pension. This, in turn, will lead to an increase in the forecast pension expenditure.

[1] Incomplete contributions paid from civil law contracts also aggravate the future balance of the pension system (mainly because of the higher percentage of people who will receive the minimum pension) –by approximately PLN 5 billion per year (at 2015 prices, forecast until 2050) according to estimates; see Lewandowski et al. 2016b.

The amount of future pension benefits will depend to a large extent on regulations concerning retirement age. The European Commission's publication adopted a retirement age of 60 for women and 65 for men for the entire forecast horizon. This is in line with the regulations adopted in Poland in 2017, but at the same time it is low in comparison with other EU countries (this applies especially to women). According to the data and comments from chapter 3, possible future increases in the retirement age will result in higher replacement rates and a lower percentage of people with the minimum pension.

Conclusions and policy implications

The rapid ageing of the Polish population in the coming decades will destabilise the pension system and reduce the level of pension benefits relative to wages. The level of pension expenditure as a share of GDP will not change much, as most of the systemic adjustment to population ageing will be through the fall in retirement benefits (in relation to wages).

Challenges remain for public policy in this area. On the one hand, the above forecast will be fulfilled only if the current rules shaping the Polish system continue to be in force, and in particular, if politicians are able to withstand the pressure to increase benefits (e.g. the minimum pension) that may be exerted by the growing group of older people and pension claimants. On the other hand, public policy cannot remain indifferent to forecasts of a substantial decline in replacement rates, and thus an increase in the poverty level among the elderly is likely.

In order to respond to these problems, the following actions can be taken:

1) **Changes in the retirement age and the minimum pension amount should be based upon objective indicators.**
   - The retirement age should be related to life expectancy. This would help to avoid political disputes on this topic. For example, the OECD proposes extending the retirement age by 2/3 of every increase in life expectancy, so by 8 eight months for every year's increase in life expectancy. The potential benefits of such reform (GDP growth, and in consequence, household income growth) for Poland would be the largest among the 35 OECD member countries (Guillemette and Turner 2018).
   - The level of minimum pension should be related to the level of minimum subsistence threshold. The increasing share of pensioners with relatively low pensions will raise the significance of regulations concerning the minimum pension in public debate. The current method of calculating the minimum pension doesn't account for the extent to which this benefit fulfils its role, which is to secure the material needs of the elderly at a certain minimum level.
2) **Policies aimed at supporting longer working lives should be improved and expanded.** The risk of poverty among the elderly can be reduced, and pension levels can be increased by expanding the total period of contribution payments by individuals.
   - In the case of people approaching retirement age, two key factors contribute to early labour market withdrawal: poor health and a lack of skills. Public health programmes aimed at disease prevention and improving the health of workers are critical for raising the retirement age effectively. Increasing private spending on work-related ill-health prevention, for instance by allowing firms to use funds collected in the Social Benefit Funds (*Zakładowy Fundusz Świadczeń Socjalnych*) to cover additional health checks and

disease-prevention programmes, would also help. Moreover, obsolete skills can push workers nearing retirement age out of the labour market. Public policy can respond to this problem by increasing participation in life-long learning, promoting best practices in training, as well as providing local and regional authorities with up-to-date information about trends in the demand for skills.

- Low labour force participation as well as frequent and long interruptions in employment affect women in particular, including those bringing up children and caring for the elderly. Increasing their labour force participation depends on, inter alia, the development of care services: widely available, high quality institutional care for young children and long-term care for chronically ill elderly people.
- In the defined-contribution pension system, contributions paid at the early stage of careers have great importance for future pensions. The government should prevent abuse contracts that are not fully covered with pension contributions – in particular, bogus self-employment and civil law contracts – among young people.

3) **Modify voluntary retirement-saving instruments to guarantee a lifetime annuity.** This applies in particular to Employee Capital Plans (PPK) introduced in 2019, as well as to the announced transfer of funds from Open Pension Funds to Individual Pension Accounts. Uncertainty about the number of years of life in retirement is one of the most important rationales for the existence of a universal pension system. PPK and other voluntary pension-saving instruments established by government do not respond to this uncertainty by guaranteeing the payment of benefits for only a limited period of time. Thus, in their current form, they do not provide a sustainable solution to the problem of low pensions in the future.

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Additional information

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